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MINITEC PROFILE SYSTEM



MINITEC PRODUCT LINE

PROFILE SYSTEM

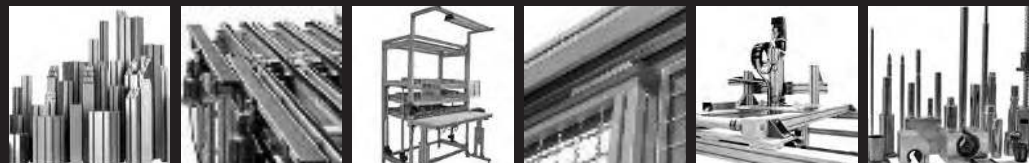
CONVEYORS

WORKPLACE SYSTEMS

MACHINE PROTECTION

TURN-KEY SOLUTIONS

LINEAR SYSTEM



PROFILE SYSTEM

MINITEC PROFILE SYSTEM

part no. 95.3010/2

	INFORMATION	4		CHAPTER 2	258
	The Company	4		2.1 – LINEAR MODUL LMS 90	260
	Technical Data	7		2.2 – LINEAR MODUL LMZ 90	265
CHAPTER 1	PROFILSYSTEM	14		2.3 – LINEAR SYSTEM LR	267
	1.1 – ALUMINIUM PROFILES	16		2.3.1 Module	267
	Profile sections	16		2.3.2 ComponentS	283
	Profile series Mini	25		2.4 – MINI-ADJUSTING UNITS	322
	Profile series 30	26		2.5 – ADJUSTING UNITS	326
	Profile series 45	34		2.6 – SLIDES	330
	1.2 – FASTENING ELEMENTS	64		2.7 – LINEAR SYSTEM LB	337
	1.3 – LINKS & HINGES	104		2.7.1 Modules	337
	1.4 – HANDLES, LOCKS & STOPS	120		2.7.2 Components	339
	1.5 – FEET, WHEELS, FLOOR FASTENINGS, SUPPORTS	146	CHAPTER 3	WORKPLACE SYSTEMS	352
	1.6 – FITTING OF PANEL ELEMENTS & ASSEMBLY POSSIBILITIES	170		3.1 – BASE FRAMES	357
	1.7 – EDGE-, COVER-, SLIDE- AND SEALING PROFILES	188		3.2 – HEIGHT-ADJUSTABLE TABLES	360
	1.8 – PRE-ASSEMBLED ELEMENTS FOR LIFTING AND SLIDING DOORS	204		3.3 – TABLETOPS	372
	1.9 – ELEKTRICAL INSTALLATION	226		3.4 – COUNTER CABINETS	377
	1.10 – DRIVE UNITS & CONTROL SYSTEM	241		3.5 – LIGHTING	385
	1.11 – PNEUMATIC	248		3.6 – ENERGY SUPPLY	392
	1.12 – HYDRAULIC	254		3.7 – ACCESSORIES	394
				3.8 – FOOTS RESTS	434
				3.9 – PNEUMATIC	437
				3.10 – KANBAN-SYSTEMS	440
				3.11 – MOUNTING DEVICE	452
				3.12 – ESD-ACCESSORIES	457
				3.13 – REQUESTS	471

CHAPTER 4	CONVEYORS	476
	4.1 – BELT CONVEYOR	478
	4.2 – ROLLER CONVEYOR	487
	4.3 – TIMING BELT CONVEYOR	492
	4.4 – CLEAN ROOM CONVEYORS	495
	4.5 – CONVEYOR 48	497
	4.6 – COMPONENTS	501
	4.7 – TRANSFER SYSTEM TSG	528
	4.8 – SEGMENTED CHAIN CONVEYOR GKF	545
	4.9 – FLEXIBLE ASSEMBLY LINES FMS	549
	4.10 – ROLLER CONVEYORS RMS	552
CHAPTER 5	SAFETY SYSTEMS	556
	5.1 – MACHINE PROTECTION	558
	5.2 – SAVEGUARD	563
	5.3 – NOISE PROTECTION	575
CHAPTER 6	LONGITUDINAL STOPS & VEHICLE EXTENSION	584
	6.1 – LONGITUDINAL STOPS	586
	6.2 – VEHICLE EXTENSION	588
CHAPTER 7	TOOLS & PROCESSING	590
	7.1 – TOOLS	592
	7.2 – PROCESSING	603

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MINITEC THE ART OF SIMPLICITY



THE COMPANY

MiniTec offers over 25 years of innovation. From modules to tailor-made all-round solutions. What began in 1986 with miniature linear guides has developed into a full service provider recognised all over the world, with more than 240 employees in 10 plants, over 60 partners and service bases worldwide and locations in Germany, France, Great Britain, Switzerland, Slovenia, Slovakia, Spain and the USA.

MODULAR CONSTRUCTION SYSTEM

Our modular system and our linear technology have a modular design on the same principle. With passion our designers and engineers pursue the principles that characterize all MiniTec products: maximum simplicity, no editing, unlimited applications with few components and complete compatibility. Our constant endeavor is to avoid meaningless product diversity.

Quick installation, avoiding of processing and reduction of inventory costs have highest priority. We also pay special attention to the ergonomic design of our components. Leading organizations worldwide use our components with success for work or automation equipment and for plant engineering and construction. In collaboration with leading research institutions, the system is constantly evolving with the latest requirements. Our customers benefit from our intensive

cooperation in scientific projects such as Smart Factory and the latest developments in workplace design. Pioneering research results therefor flow back early in our development process.

EXTENSIVE SERVICE

From the Profile System our engineers develop complete solutions for all industry sectors. Our customers benefit from the experience of our engineers. We guarantee quality and shortest delivery time by provision and continuous development of all skills in our house. Expert teams for problem analysis, development and design, electrical design, cabinet construction, installation and commissioning ensure economic and technically sophisticated solutions for every task of our clients. From resources about workplace design with conveyor systems to a complete production line. Everything from a single source, without interfaces.

QUALITY

To meet the demands of linear technology precision and exceed quality expectations, we invest in the latest machines and newest technologies and manufacturing techniques. Our quality management has been certified since 1996 according DIN EN ISO 9001:2008.

ENVIRONMENTAL PROTECTION

Our company mission stresses an active role in environmental protection and the conservation of our natural resources. As an example we locate our service partners in close proximity to our customers to avoid long transits. Our environment management system is certified according: DIN EN ISO 14001:2009.

MINITEC THE ART OF SIMPLICITY



HEALTH AND SAFETY

Since 2006, MiniTec was certified in occupational health and safety assesment series with OHSAS 18001.

CORPORATE RESPONSIBILITY

MiniTec is aware of its social responsibility. Knowing this, we create quality jobs at our locations, allowing young people a future-oriented education and offer all employees opportunities for training and advancement. We are deliberately focusing on skilled employees over 50, providing a diverse age and experience structure of our workforce.

SECURE PROCESSES

Our organization meets the strict criteria of the customs authorities and is certified to AEOC 115,021th As AEO, our customers benefit from related customs simplifications.

CAD-SUPPORT

On our website www.minitec.de 3D CAD data are available for all components to download. Moreover, our CAD tool iCADassembler contains a vollständigen e-catalog with CAD data.



Our Quality, Environmental and Safety Policy applies to all plants..



Customs Simplifications

MINITEC iCADassembler



Our CAD tools are the logical complement to the hardware of our modular construction system. All requirements of planning and execution are comprehensively considered. The combination of components and software opens up the full potential for efficient, flexible, and modern engineering. iCADassembler is a CAD tool of the latest generation we offer our customers free of charge.

The tool include electronic catalogs, automatic part lists and configurators for common applications such as ergonomic workstations, linear axis, belt conveyors, roller conveyors or protective devices.

With iCADassembler construction time is reduced by at least 60% while avoiding mistakes.

Take advantage of the functionality of iCADassembler!

ADVANTAGES

- System independent 3D design tool for MiniTec components
- Time savings for the user of about 60 percent
- Planning and design of components and systems regardless of CAD software
- CAD functionality without own CAD software
- Easy operation with special anchor line snaps and drag&drop
- Direct interfaces to all major CAD systems such as Mechanical Desktop, ProEngineer, SolidWorks, Solid Edge, MegaCAD many others.
- More than 180 data output formats in 2D and 3D
- Automated construction module for: linear axis, skids, conveyors, jobs
- Automatic parts lists
- Integrated plausibility check
- Automatic processing drawings

By popular demand MiniTec offers regular training for iCADassembler. In one-day seminars we teach the features of this powerful tools with practical exercises.

The courses are led by our experienced technicians and take place at individually agreed dates.

TECHNICAL DATA

ALUMINIUM PROFILE

MATERIAL

AlMgSi 0,7 Zustand T66	EN-AW-6063 T66
Specific Weight	2.75 g / cm ³
Material-N°	3.3206.72 (artificially aged)
Tenacity (pressing direction)	min. R _m = 245 N / mm ²
0,2 % twist boundary	min. R _{p 0,2} = 200 N / mm ²
Ductile yield A 5	> 10%
Ductile yield A 10	> 8%
Modulus of elasticity	E: 70000 N / mm ²
Shear modulus	G: 27000 N / mm ²
Expansion hardness	ca. 75 HB 2.5 / 187.5
Heat extension	23.8 · 10 ⁻⁶ K ⁻¹

SURFACE

Eloxal E6/EV1, natur anodized	
Layer thickness	ca. 10 µm
Layer hardness	250 - 350 HV

TOLERANCES

	DIN EN 12020 T 1 + 2
Outer dimensions	0.2 bis 0.4 mm
Straightness deviation	max. 1.5 mm / 2 m
Flatness deviation	max. 1.5 mm / 2 m

Generally we confirm half the values according to the tolerances of DIN EN 12020 part 2.

PROFILE SERIES/
BASIC GRID

Profile series	MINI	30	45
Core boring	4.5 ±0.15	7.5 - 0.3	
Standard thread	M5	M8	

All profiles of the individual profile series are developed from the same grid. The tread grooves are uniform. All profiles can be combined with each other.

The M8 thread is formed with non-cutting thread formers. It can be drilled up to M12. The M5 thread is shaped automatically by screwing in a screw.

TECHNICAL DATA

VA-PROFILES

MATERIAL

X5 Cr Ni 18-10	stainless steel, DIN EN 10 088
Spezifisches Gewicht	7.9 g / cm ³
Material-N°	1.4301 (kalt gewalzt)
Tenacity (pressing direction)	min. R _m = 540 N / mm ²
0,2 % twist boundary	min. R _{p0,2} = 230 N / mm ²
Ductile yield	> 35%
Modulus of elasticity	E: 200 000 N / mm ²
Shear modulus	G: 80 000 N / mm ²
Brinell hardness	220 - 260 HV
thermal expansion	11.5 · 10 ⁻⁶ mm/°K

SURFACE

bare

TOLERANCES

DIN ISO 2768 - c	
Outer dimensions	± 0,3 mm
Straightness deviation	0.001 x L

CORE BORING

uniform 7.5 - 0.6 mm

Thread M8 is made with a tap.

GRID

Basic grid 45 mm

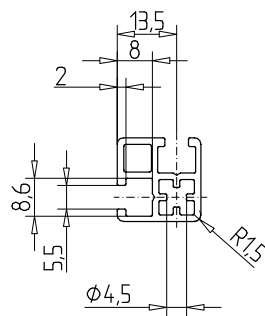
Due to its identical groove the profile 45 x 45 VA is fully compatible with the aluminum profile system.

TECHNICAL DATA

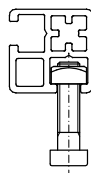
PROFILE SERIES MINI

GROOVES A system for profiles 11 to 19 mm. The grooves are identical for all profiles. Groove width: 5.4 + 0.3 mm.

BASIC DIMENSIONS

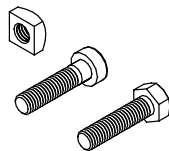


LOAD CAPACITY



F = 1000 N

USABLE SCREWS AND NUTS

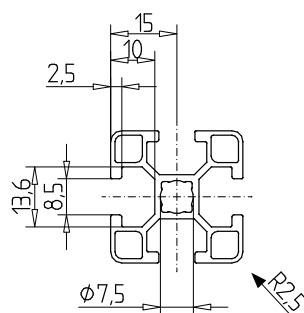


TECHNICAL DATA

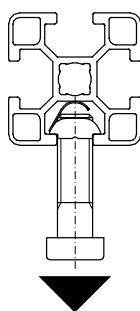
PROFILE SERIES 30

GROOVES A system for profiles 16 to 60 mm. The grooves are identical for all profiles. Groove width: 5.6 - 0.3 mm.

BASIC DIMENSIONS

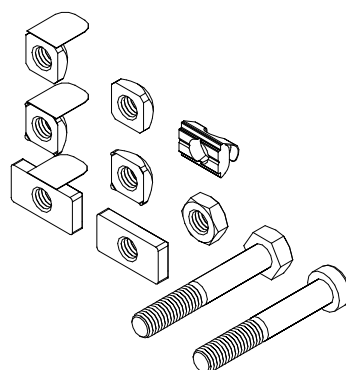


LOAD CAPACITY



$F = 2600 \text{ N}$

USABLE SCREWS AND NUTS



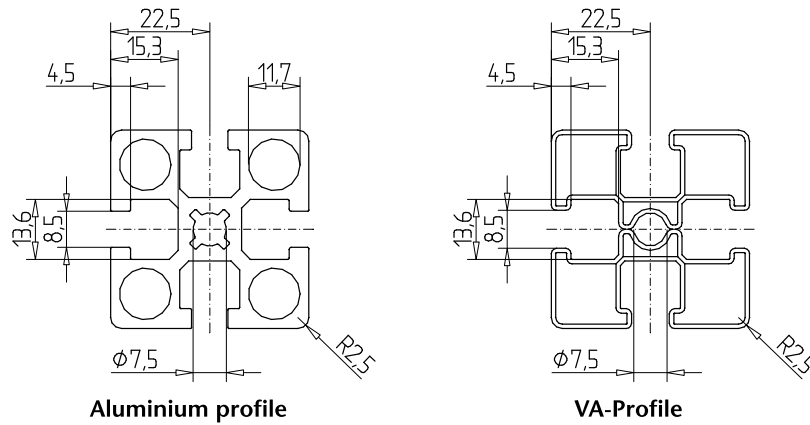
TECHNICAL DATA

PROFILE SERIES 45

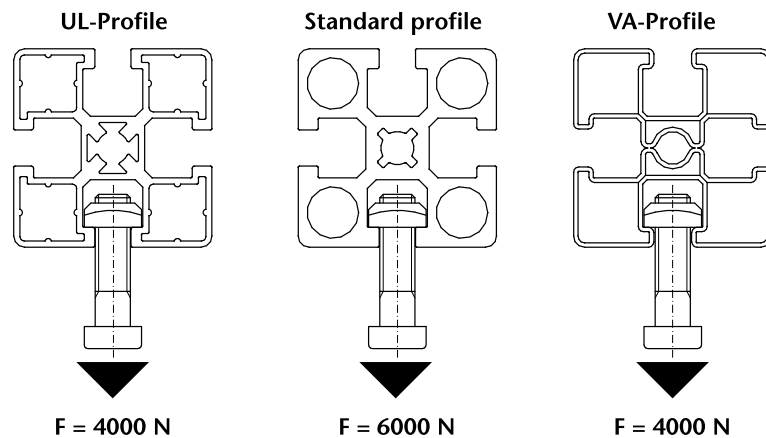
GROOVES

A system for profiles 19-270 mm. All grooves are uniform. Groove width: 8.5 to 0.3 mm. The grooves are designed to accommodate DIN-head screws M8 with 13 mm diameter and nuts with outside dimension 13 mm. Square and hexagonal nuts and screws are secured against rotation.

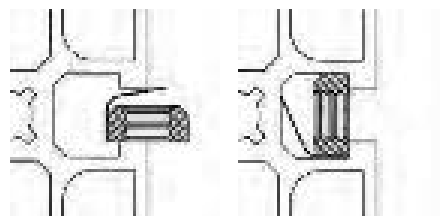
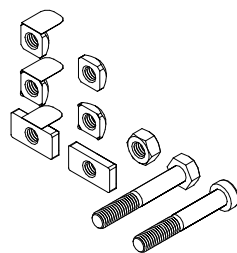
BASIC DIMENSIONS



LOAD CAPACITY



USABLE SCREWS AND NUTS

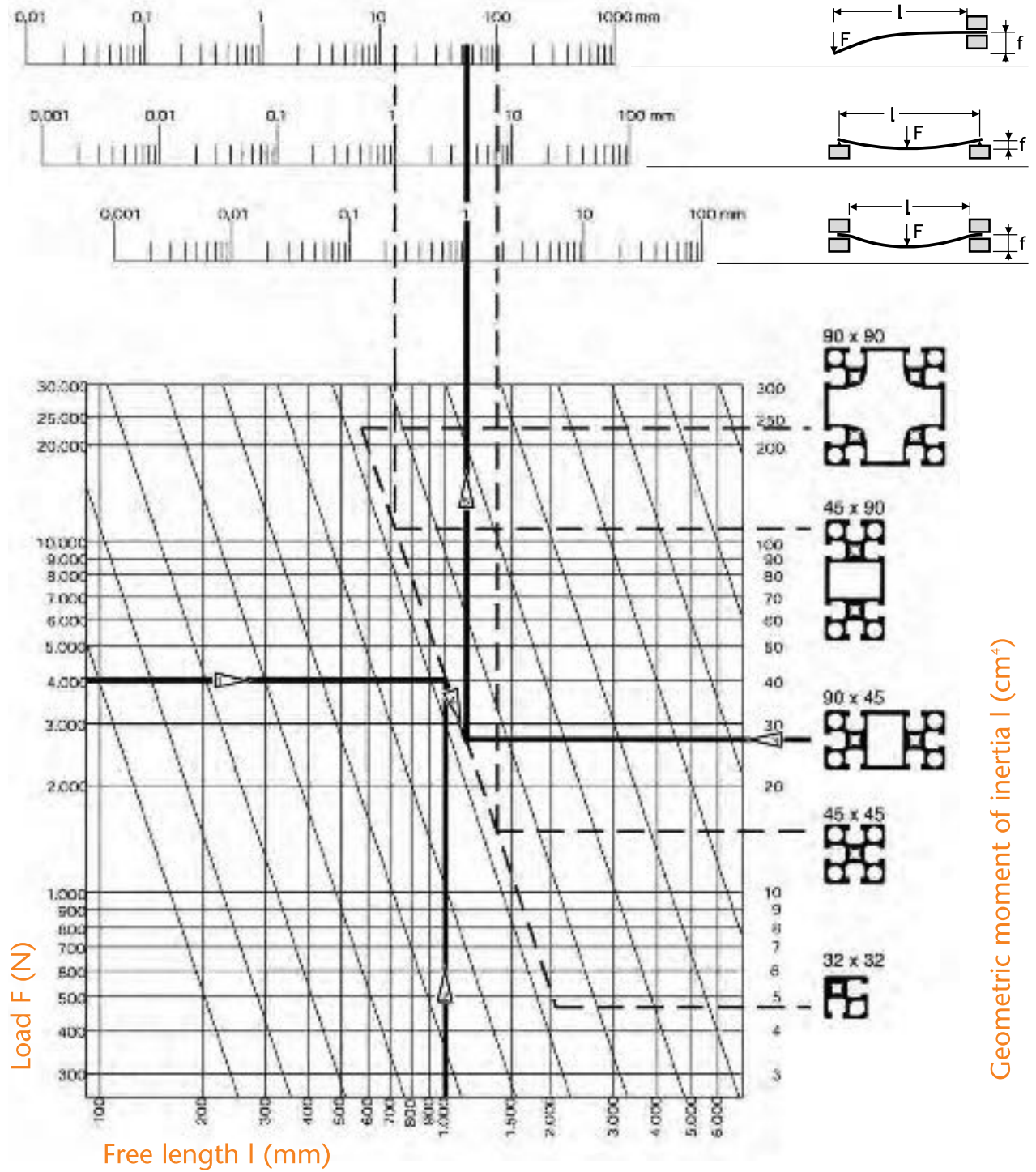


Sliding nuts can be swiveld in at any point of the profile.

TECHNICAL DATA

DETERMINATION OF THE DEFLECTION OF MINITEC-ALUMINUM PROFILES

Deflection f (mm), calculated for static load in form of a point as shown below



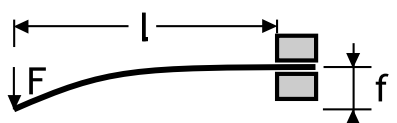
TECHNICAL DATA

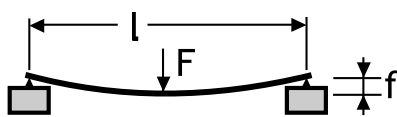
DETERMINATION OF THE DEFLECTION OF MINITEC-ALUMINUM PROFILES

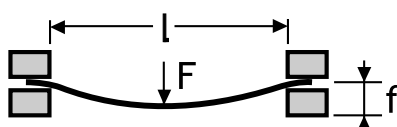
The following formulas and examples of calculation are for static load in the form of a point. For the determination of other load, please use the equations in the relevant literature. In particular we want to point out that reduced values should be used for dynamic loads.

CALCULATION OF DEFLECTION OF MINITEC PROFILES

EXAMPLE f = Deflection [mm]
 F = Load [N]
 L = Free length [mm]
 I = geometrical moment of inertia [cm⁴]
 E = Modulus of elasticity: Aluminium 70 000 N / mm²
 Steel 200 000 N / mm²

EXAMPLE 1  $f = \frac{F \times L^3}{E \times I \times 3 \times 10^4}$ [mm]













EXAMPLE 2  $f = \frac{F \times L^3}{E \times I \times 48 \times 10^4}$ [mm]

EXAMPLE 3  $f = \frac{F \times L^3}{E \times I \times 192 \times 10^4}$ [mm]

The above mentioned equations are easy to calculate using the diagram on the previous page. Follow the steps in the given row for the respective value.

Deflection (f)	1	2	3	4	5
Max. load (F)	3	5	2	4	1
Profile determination (section)	1	2	5	4	3
Free length (L)	3	5	1	4	2

1

	16 25 26 34	1.1 ALUMINIUM PROFILES PROFILE SERIES MINI PROFILE SERIES 30 PROFILE SERIES 45
	64	1.2 FASTENING ELEMENTS
	104	1.3 LINKS & HINGES
	120	1.4 HANDLES, LOCKS, STOPS
	146	1.5 FEET, WHEELS, FLOOR FASTENINGS, SUPPORTS
	170	1.6 FITTING OF PANEL ELEMENTS ASSEMBLY POSSIBILITIES
	188	1.7 EDGE-, COVER-, SLIDE- AND SEALING PROFILES
	204	1.8 PRE-ASSEMBLED ELEMENTS FOR LIFTING AND SLIDING DOORS
	226	1.9 ELECTRICAL INSTALLATION
	241	1.10 DRIVE UNITS AND CONTROL SYSTEM
	248	1.11 PNEUMATIC
	254	1.12 HYDRAULIC

PROFILE SECTIONS PROFILE SERIES MINI AND 30

PROFILE SERIES MINI



19 x 11
20.1074/0



19 x 19
20.1075/0

PROFILE SERIES 30



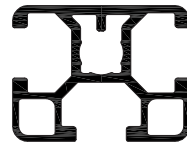
23 x 16
20.1115/0



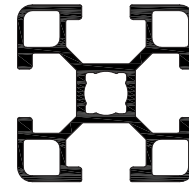
16 x 30
20.0983/0



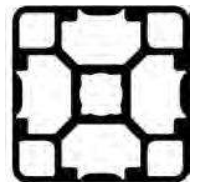
23 x 23
20.1116/0



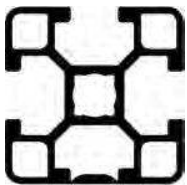
23 x 30
20.1117/0



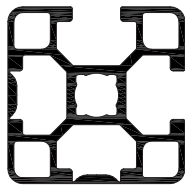
30 x 30
20.1068/0



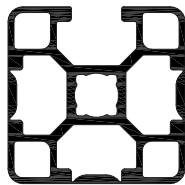
30 x 30 G
20.1141/0



30 x 30 1G
20.1139/0



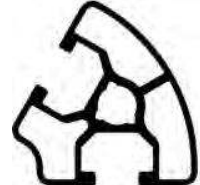
30 x 30 2G
20.1124/0



30 x 30 3G
20.1085/0



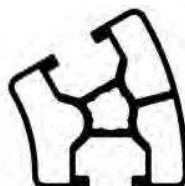
30 R 90°
20.1125/0



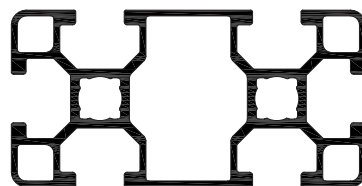
30 R 60°
20.1136/0



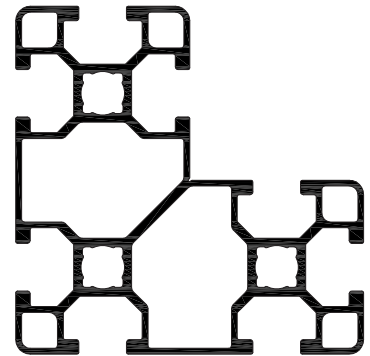
30 R 45°
20.1135/0



30 R 30°
20.1134/0



30 x 60
20.0994/0



60 x 60 x 30
20.0982/0

PROFILE SECTIONS PROFILE SERIES 45



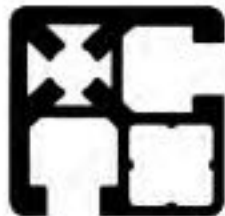
19 x 32
20.1000/0



19 x 45
20.1001/0



45 x 19
20.0993/0



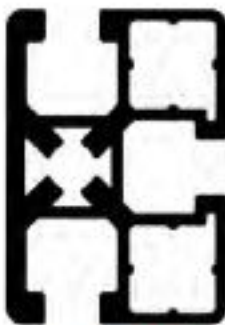
32 x 32 UL
20.1064/0



32 x 32 F
20.1054/0



Clamp profile 32 x 32
20.1070/0



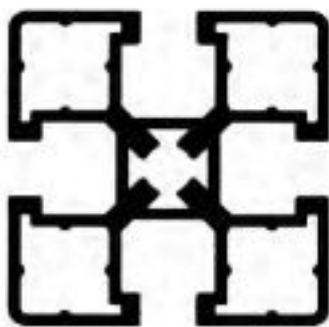
45 x 32 UL
20.1065/0



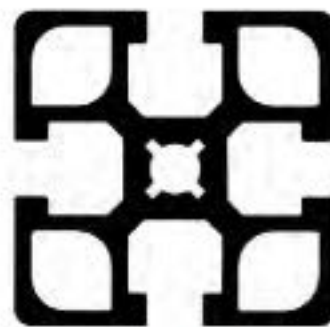
45 x 32 F
20.1055/0



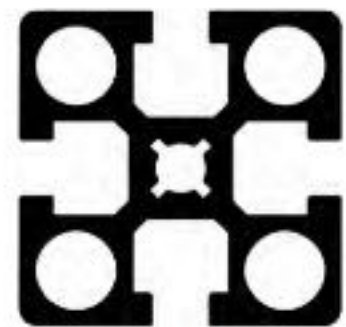
Clamp profile 45 x 32
20.1053/0



45 x 45 UL
20.1063/0

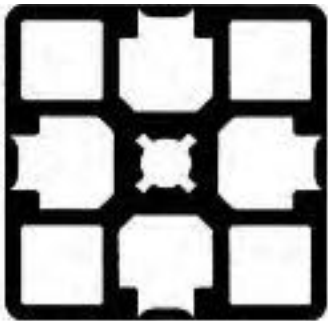


45 x 45 F
20.1033/0

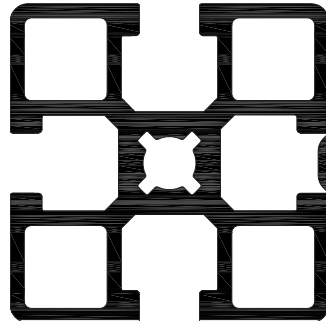


45 x 45
20.1006/0

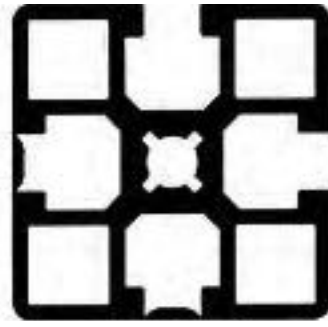
PROFILE SECTIONS PROFILE SERIES 45



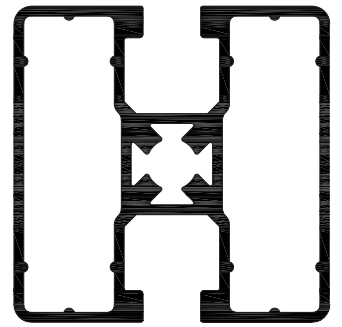
45 x 45 G
20.1028/0



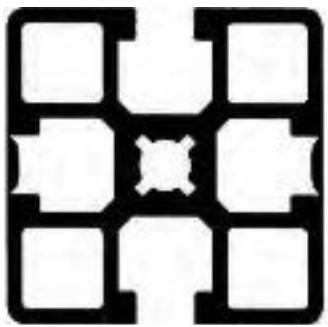
45 x 45 1G
20.1126/0



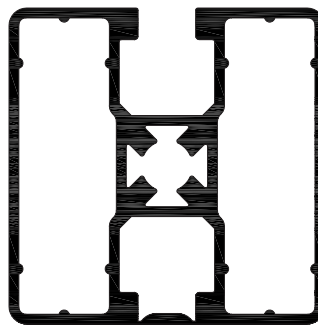
45 x 45 2G
20.1072/0



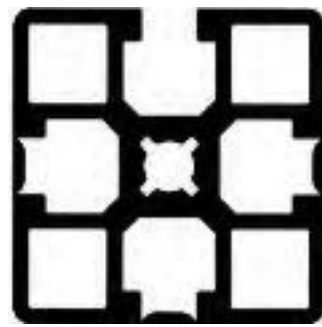
45 x 45 UL 2GG
20.1122/0



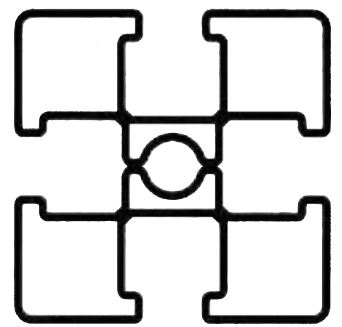
45 x 45 2GG
20.1099/0



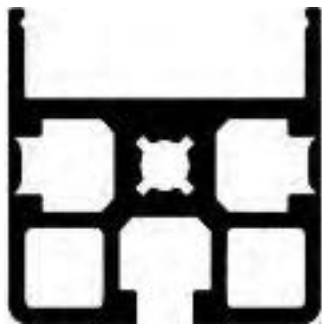
45 x 45 UL 3G
20.1123/0



45 x 45 3G
20.1048/0



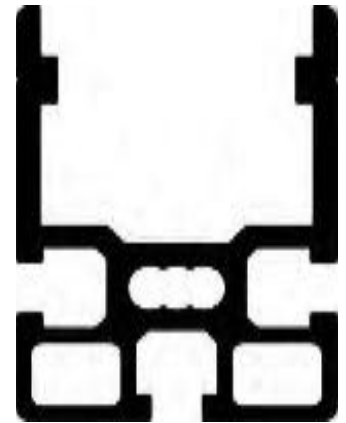
45 x 45 VA
20.2000/0



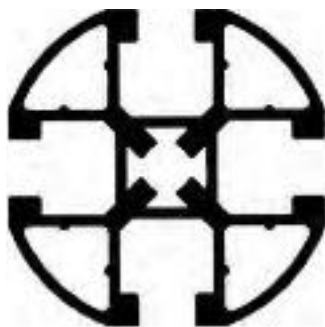
45 x 45 R
20.1046/0



**Cover profile
for 45 x 45 R**
20.1037/0



**Profile height
adjustable**
20.1143/0



45 R 4
20.1120/0



45 R 90°
20.1069/0

PROFILE SECTIONS PROFILE SERIES 45



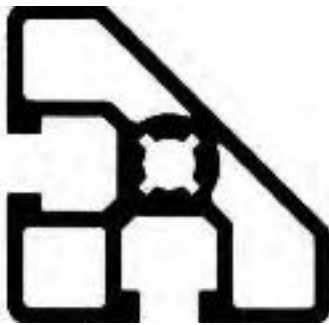
45 R 60°
20.1096/0



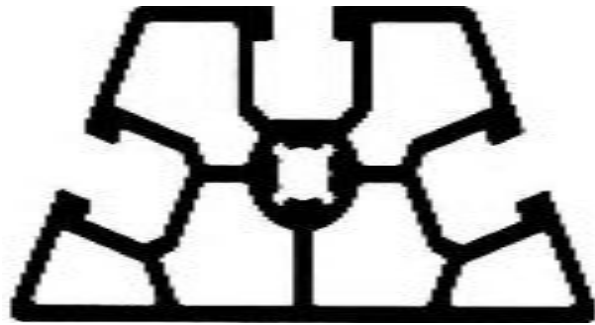
45 R 45°
20.1095/0



45 R 30°
20.1094/0



45/45°
20.1029/0



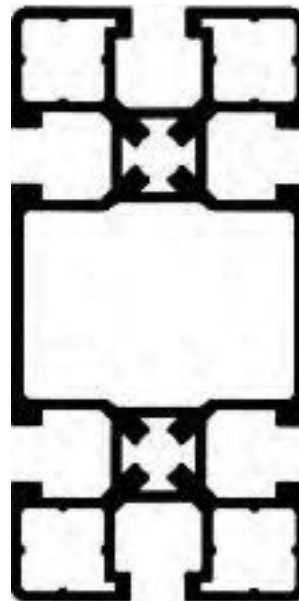
45/22,5°
20.1030/0



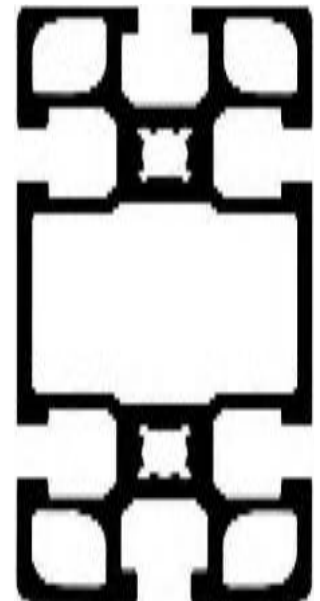
19 x 90
20.0995/0



90 x 32 UL
20.1066/0

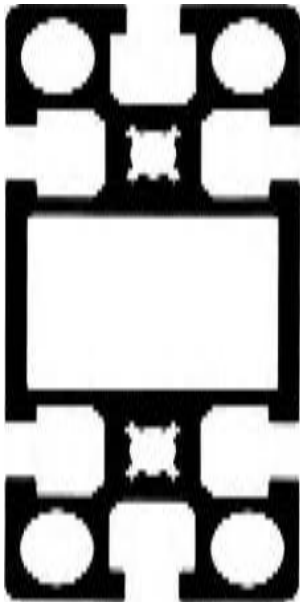


45 x 90 UL
20.1067/0
000152

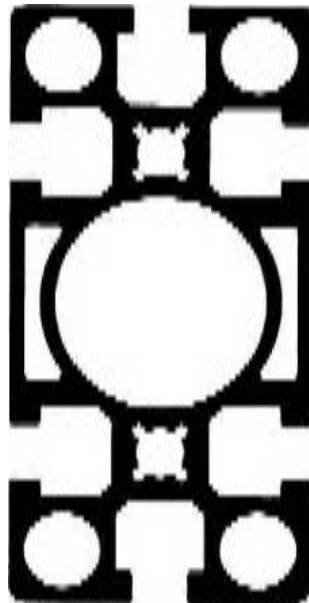


45 x 90 F
20.1032/0

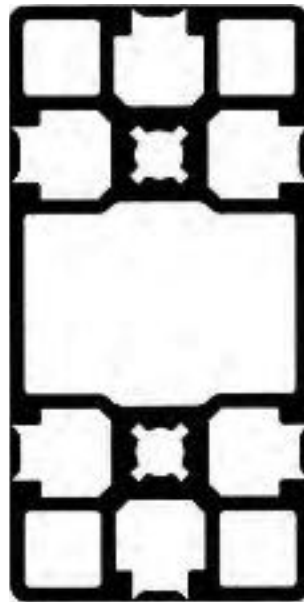
PROFILE SECTIONS PROFILE SERIES 45



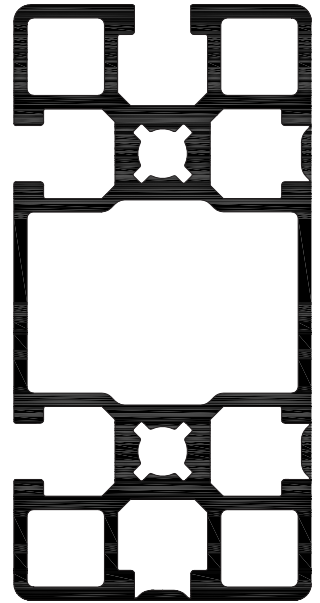
45 x 90
20.1009/0



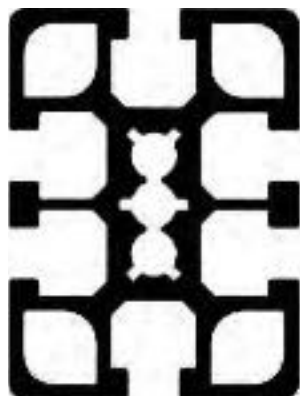
45 x 90 S
20.1017/0



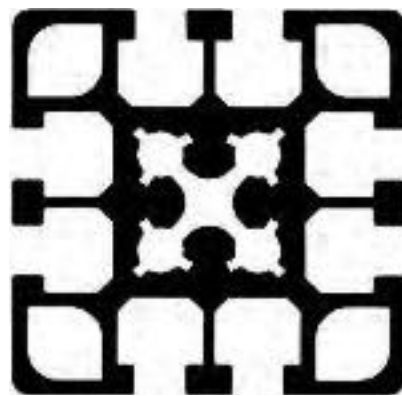
45 x 90 G
20.1015/0



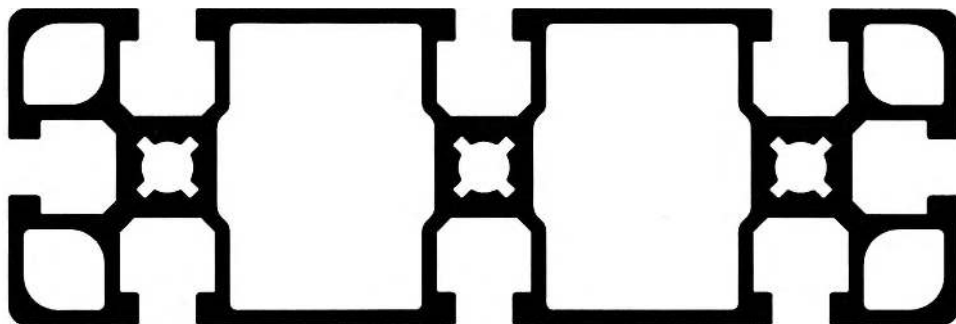
45 x 90 2G
20.1081/0



45 x 60 F
20.1023/0

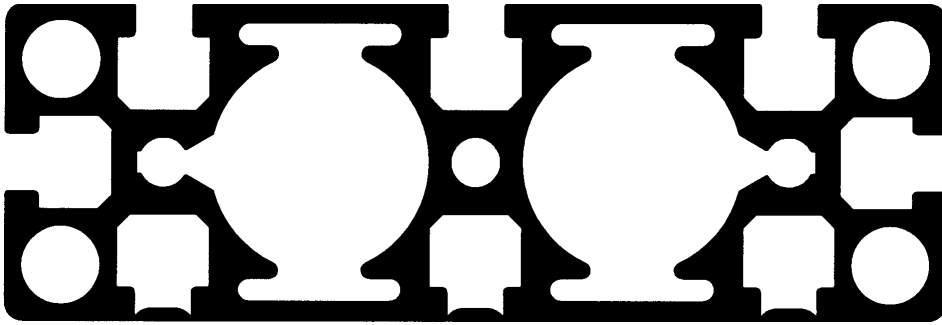


60 x 60 F
20.1049/0

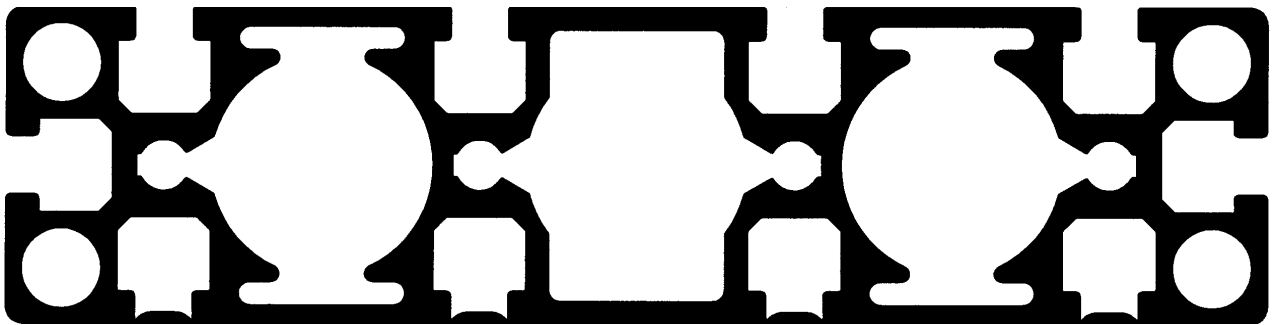


45 x 135 F
20.1087/0

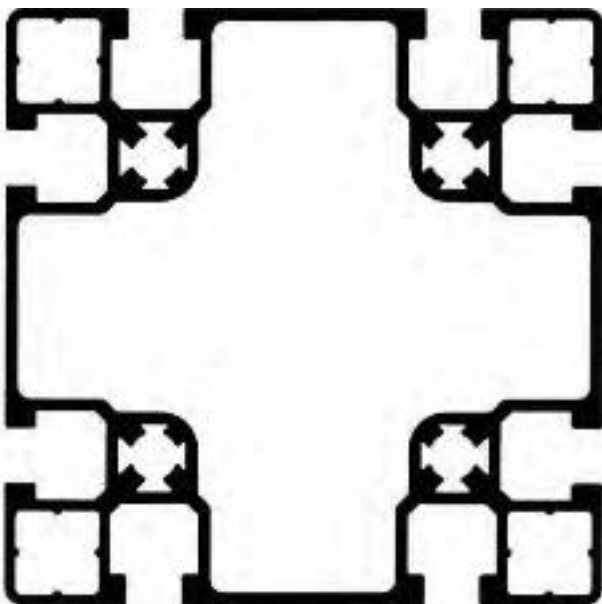
PROFILE SECTIONS PROFILE SERIES 45



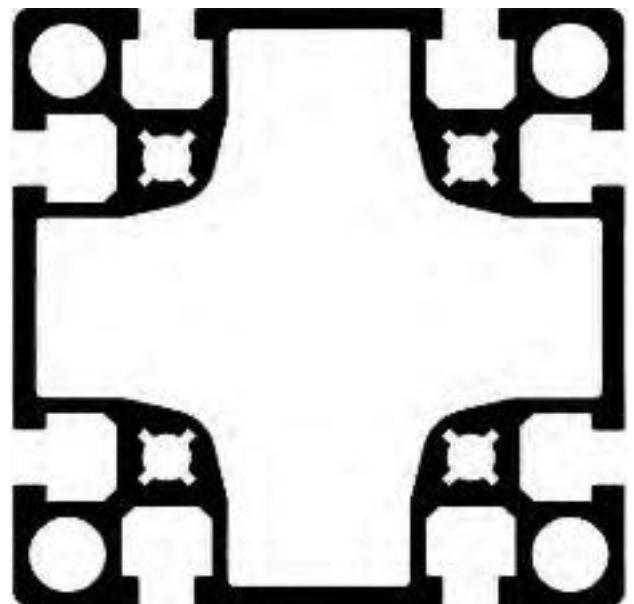
45 x 135 1G
20.1078/0



45 x 180 1G
20.1079/0

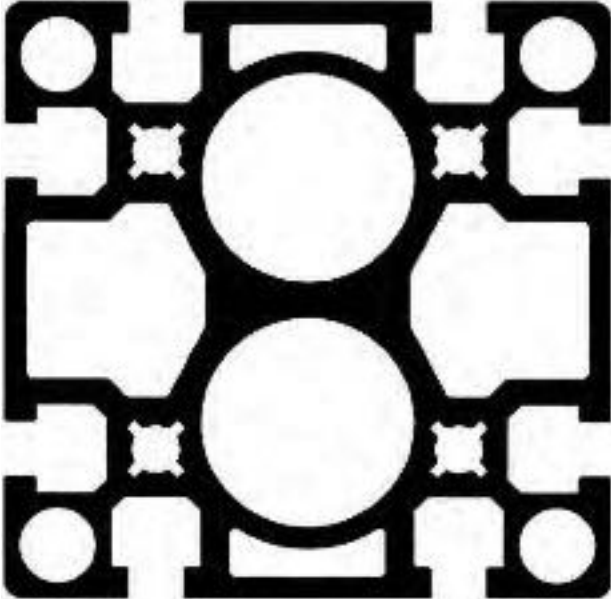


90 x 90 UL
20.0999/0

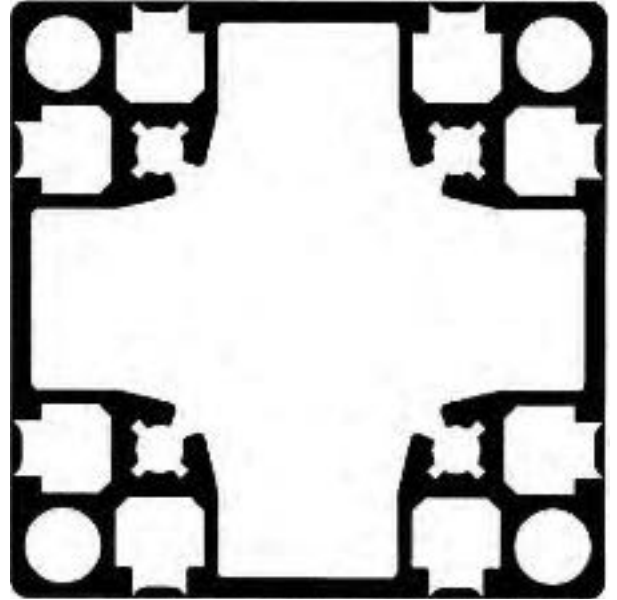


90 x 90 L
20.1010/0

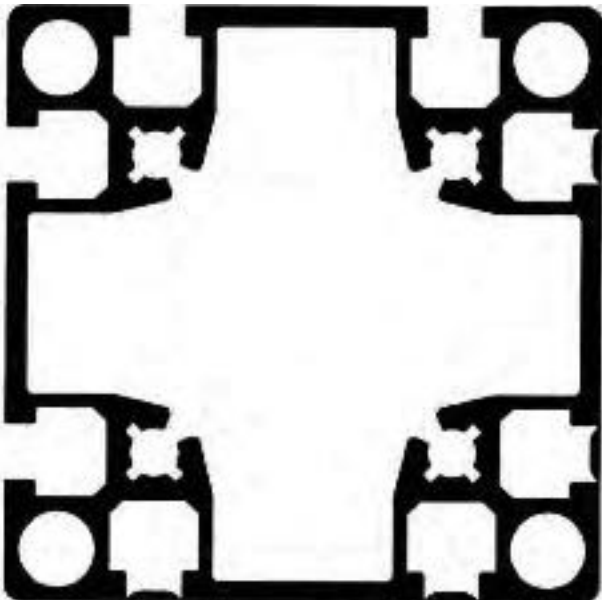
PROFILE SECTIONS PROFILE SERIES 45



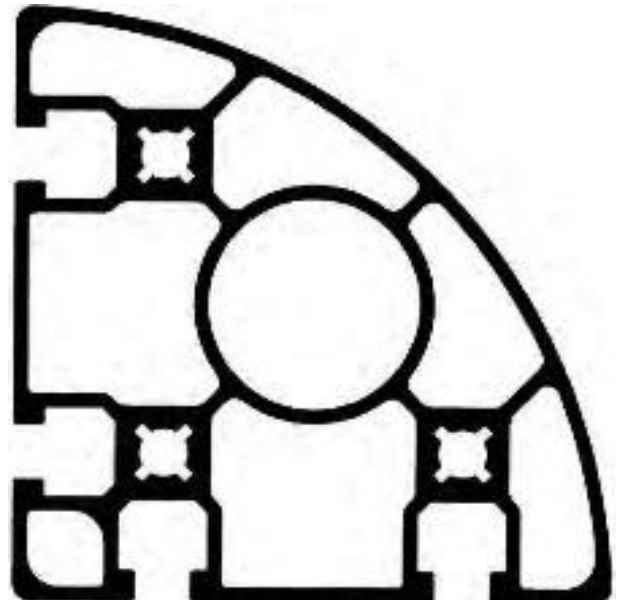
90 x 90 S
20.1019/0



90 x 90 G
20.1082/0

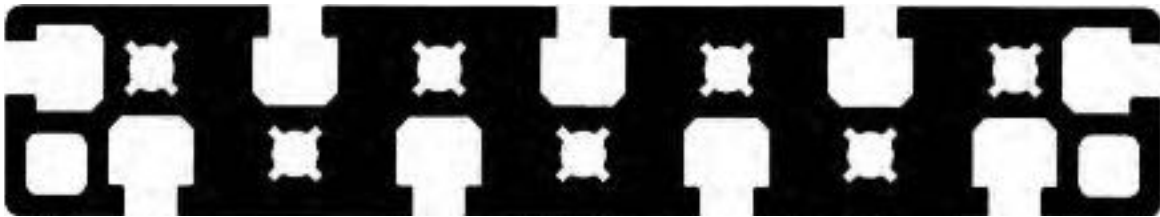


90 x 90 2G
20.1044/0

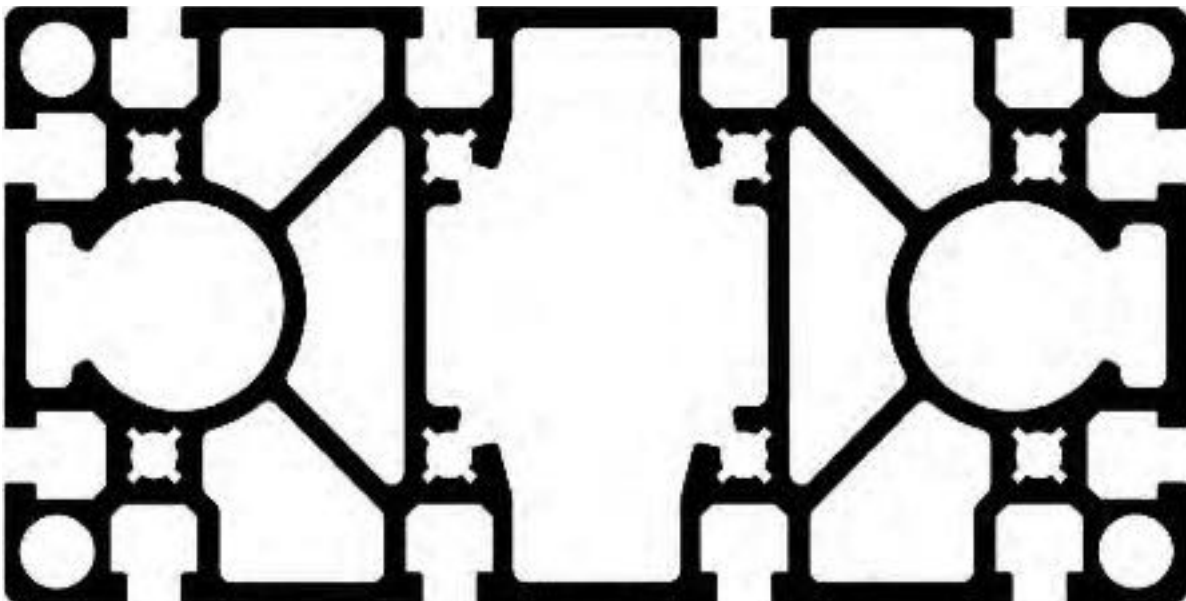


90 R 90°
20.1091/0

PROFILE SECTIONS PROFILE SERIES 45

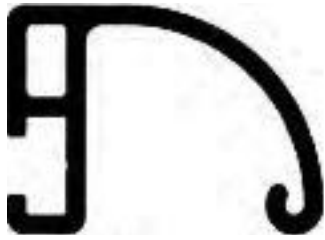


32 x 180
20.1016/0



90 x 180 S
20.1013/0

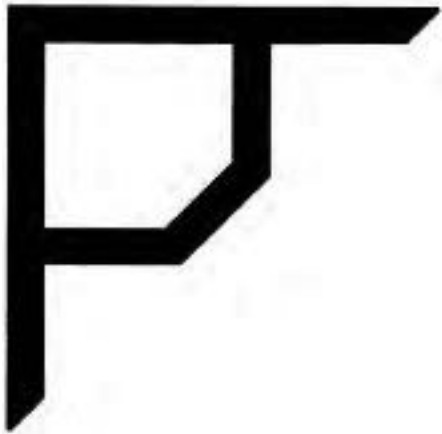
PROFILE SECTIONS PROFILE SERIES 45



Handle profile
20.1045/0



Handle profile 32
20.1088/0



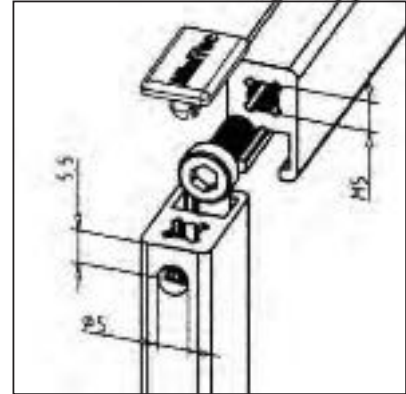
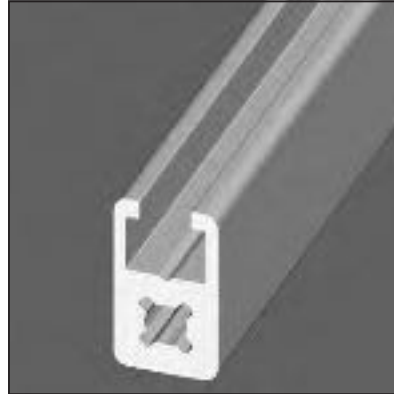
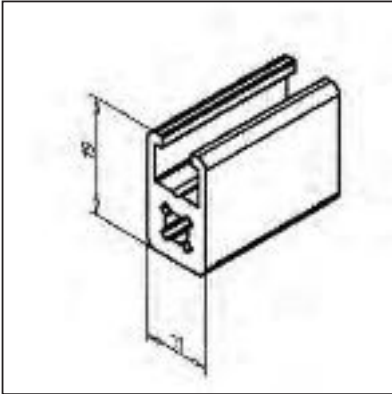
Angular profile 89 x 89
20.1011/0

270 x 19
20.1077/0



PROFILE 19 X 11

part no. 20.1074/0



TECHN. DATA / ITEMS SUPPLIED

- lx =	0,327 cm ⁴
- ly =	0,166 cm ⁴
- wx =	0,287 cm ³
- wy =	0,302 cm ³
- Slot dimension and core hole for thread M5	
- Weight	0,326 kg/m
- Length	6 m

APPLICATIONS

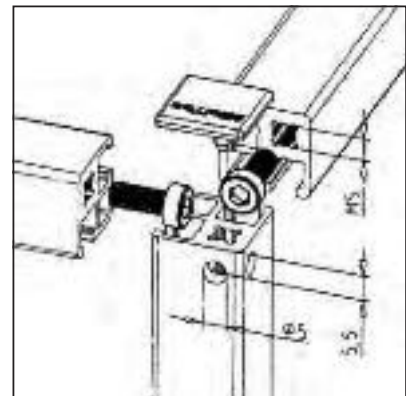
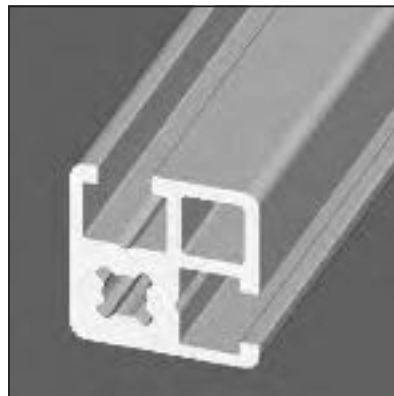
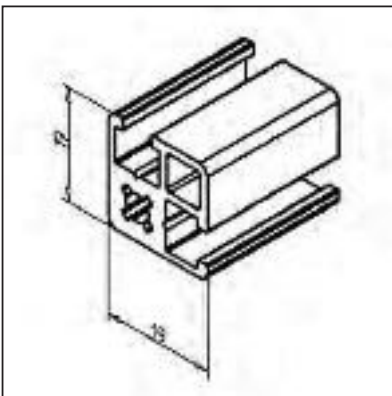
- Small guards and constructions
- Suitable end cap grey: **part no. 22.1030/1**

ASSEMBLY

- Screw-connection 11, **part no. 21.1574/1**
- Square nut M5 for profile series MINI **part no. 21.1382/0**

PROFILE 19 X 19

part no. 20.1075/0



TECHN. DATA / ITEMS SUPPLIED

- lx =	0,570 cm ⁴
- ly =	0,570 cm ⁴
- wx =	0,543 cm ³
- wy =	0,543 cm ³
- Slot dimension and core hole for thread M5	
- Weight	0,460 kg/m
- Length	6 m

APPLICATIONS

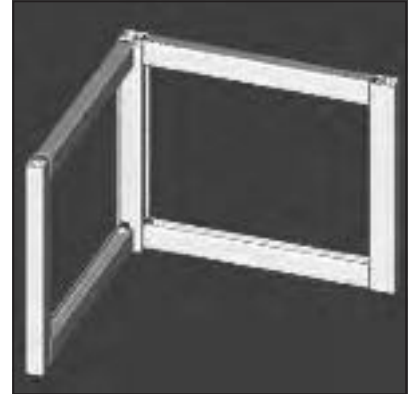
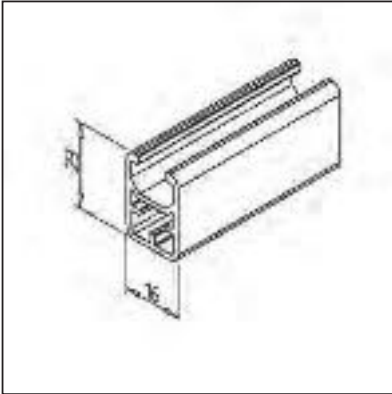
- Small guards and constructions in which very small profiles are required
- Suitable end cap grey: **part no. 22.1031/1**

ASSEMBLY

- Screw-connection 11, **part no. 21.1574/1**
- Square nut M5 for profile series MINI **part no. 21.1382/0**

PROFILE 23 X 16

part no. 20.1115/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	0,602 cm ⁴
- Iy =	0,442 cm ⁴
- wx =	0,472 cm ³
- wy =	0,552 cm ³
- Weight	0,341 kg/m
- Length	6 m
- Packing unit	72 m

APPLICATIONS

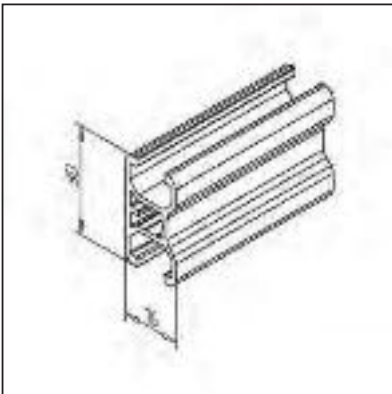
- Light constructions such as holders, protective devices, etc.

ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16
- Mount to this profile using square nuts 30 available in M4 / M5 / M6 / M8

PROFILE 16 X 30

part no. 20.0983/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	1,008 cm ⁴
- Iy =	0,479 cm ⁴
- wx =	0,672 cm ³
- wy =	0,544 cm ³
- Weight	0,382 kg/m
- Length	6 m
- Packing unit	72 m

APPLICATIONS

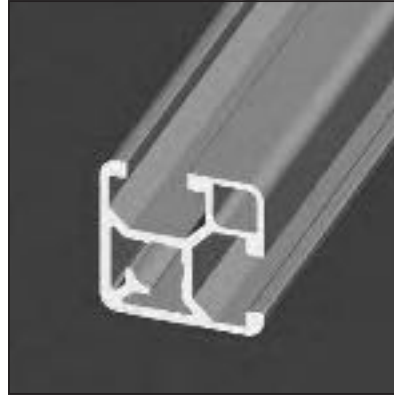
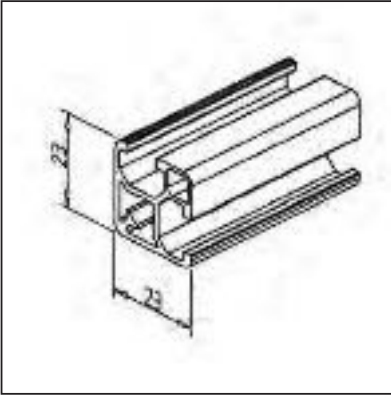
- Light constructions such as holders, protective devices, etc.

ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16
- Mount to this profile using square nuts 30 available in M4 / M5 / M6 / M8

PROFILE 23 X 23

part no. 20.1116/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	0,921 cm ⁴
- Iy =	0,921 cm ⁴
- wx =	0,729 cm ³
- wy =	0,729 cm ³
- Weight	0,443 kg/m
- Length	6 m
- Packing unit	72 m

APPLICATIONS

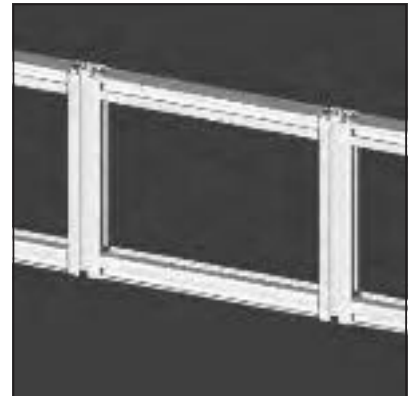
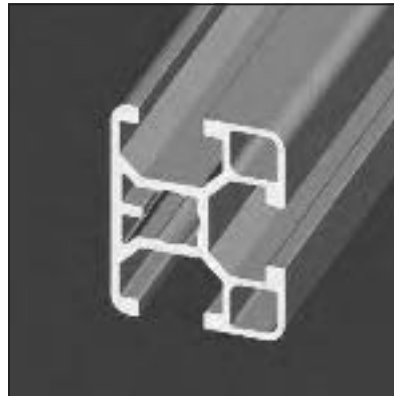
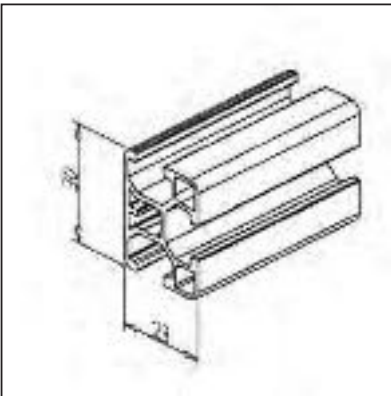
- Light constructions such as holders, protective devices, etc.

ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16
- Mount to this profile using square nuts 30 available in M4 / M5 / M6 / M8

PROFILE 23 X 30

part no. 20.1117/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	1,565 cm ⁴
- Iy =	1,187 cm ⁴
- wx =	1,043 cm ³
- wy =	0,975 cm ³
- Weight	0,524 kg/m
- Length	6 m
- Packing unit	72 m

APPLICATIONS

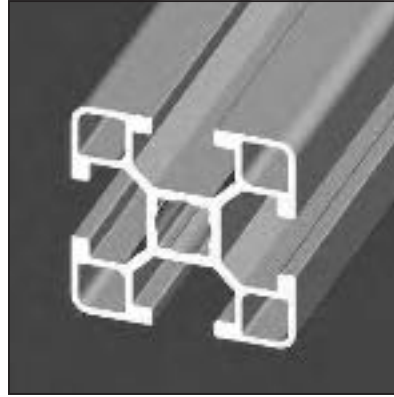
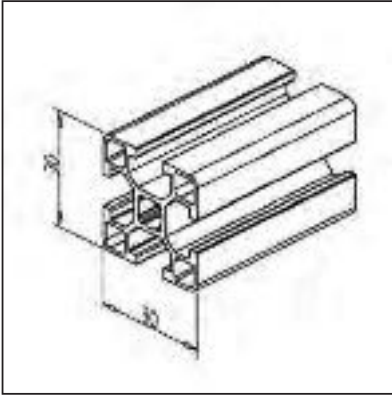
- Light constructions such as holders, protective devices, etc.

ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Mount to this profile using square nuts 30 available in M4 / M5 / M6 / M8

PROFILE 30 X 30

part no. 20.1068/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	2,133 cm ⁴
- Iy =	2,133 cm ⁴
- wx =	1,422 cm ³
- wy =	1,422 cm ³
- Weight	0,652 kg/m
- Length	6 m
- Packing unit	54 m

APPLICATIONS

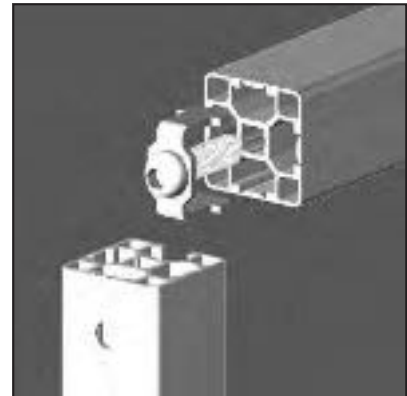
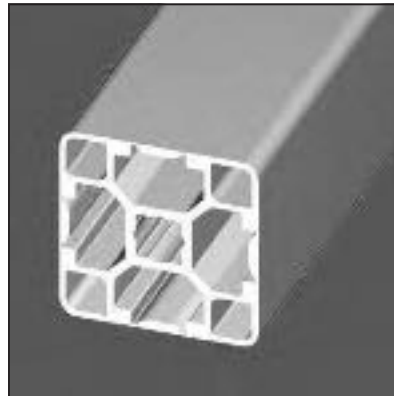
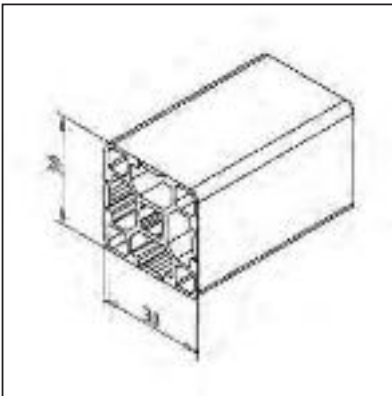
- Light constructions such as holders, protective devices, etc.

ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Mount to this profile using square nuts 30 available in M4 / M5 / M6 / M8

PROFILE 30 X 30 G

part no. 20.1141/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	2,554 cm ⁴
- Iy =	2,554 cm ⁴
- wx =	1,702 cm ³
- wy =	1,702 cm ³
- Weight	0,749 kg
- Length	6 m
- Packing unit	54 m

APPLICATIONS

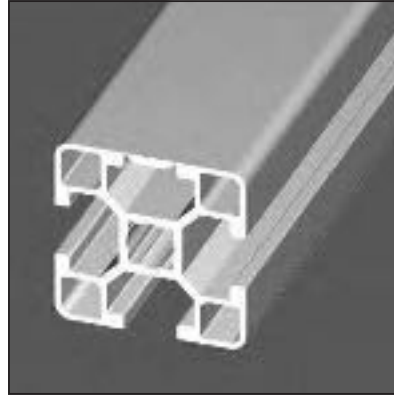
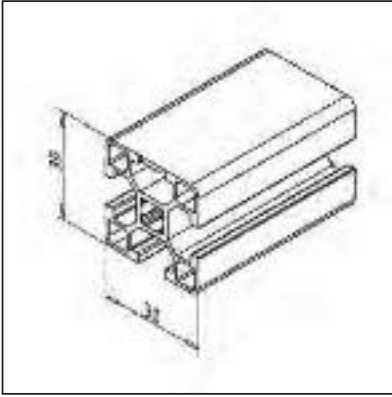
- Light constructions such as holders, protective devices, etc.
 - Particularly useful in the food industry, in medical engineering and for the filling of beverages, where strict hygienic standards are set

ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Mount to this profile using square nuts 30 available in M4 / M5 / M6 / M8

PROFILE 30 X 30 1G

part no. 20.1139/0

**TECHN. DATA / ITEMS SUPPLIED**

- Ix =	2,311 cm ⁴
- Iy =	2,112 cm ⁴
- wx =	1,481 cm ³
- wy =	1,408 cm ³
- Weight	0,666 kg/m
- Length	6 m
- Packing unit	54 m

APPLICATIONS

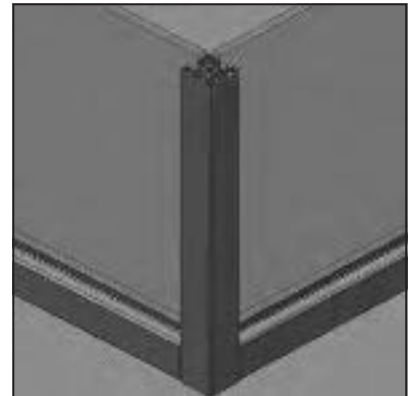
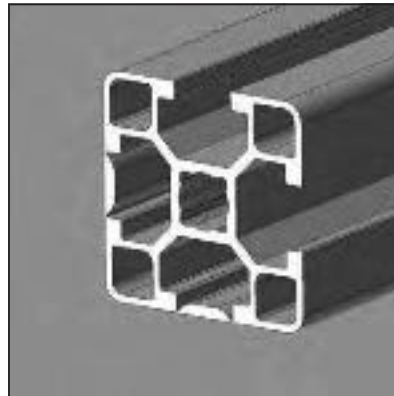
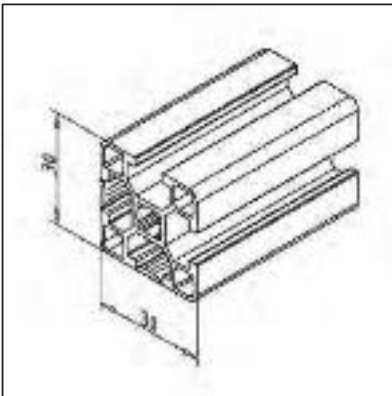
- Light constructions such as holders, protective devices, etc.
- Particularly useful in the food industry, in medical engineering and for the filling of beverages, where strict hygienic standards are set

ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Mount to this profile using square nuts 30 available in M4 / M5 / M6 / M8

PROFILE 30 X 30 2G

part no. 20.1124/0

**TECHN. DATA / ITEMS SUPPLIED**

- Ix =	2,334 cm ⁴
- Iy =	2,334 cm ⁴
- wx =	1,501 cm ³
- wy =	1,501 cm ³
- Weight	0,695 kg/m
- Length	6 m
- Packing unit	54 m

APPLICATIONS

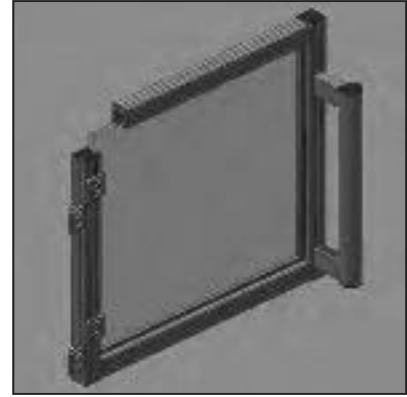
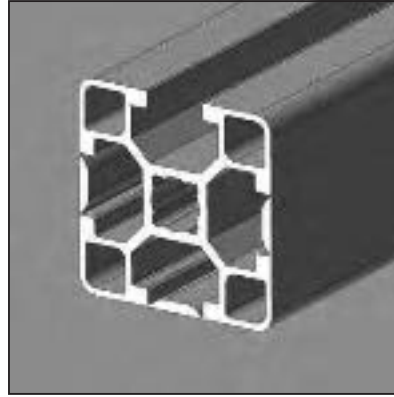
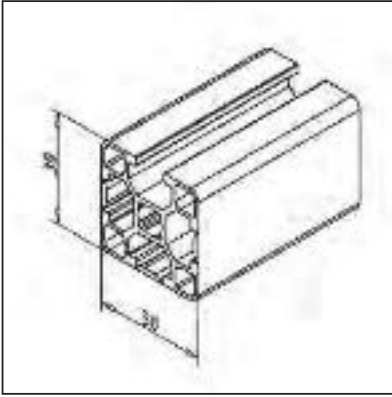
- Light constructions such as holders, protective devices, etc.
- Particularly useful in the food industry, in medical engineering and for the filling of beverages, where strict hygienic standards are set

ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Mount to this profile using square nuts 30 available in M4 / M5 / M6 / M8

PROFILE 30 X 30 3G

part no. 20.1085/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	2,321 cm ⁴
- Iy =	2,537 cm ⁴
- wx =	1,493 cm ³
- wy =	1,691 cm ³
- Weight	0,722 kg/m
- Length	6 m
- Packing unit	54 m

APPLICATIONS

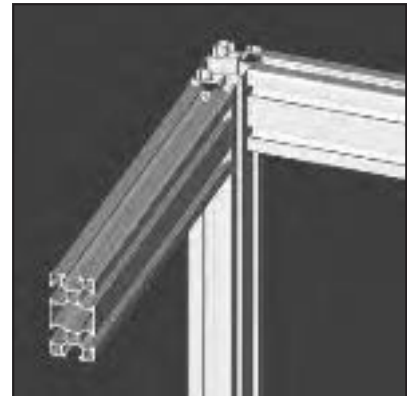
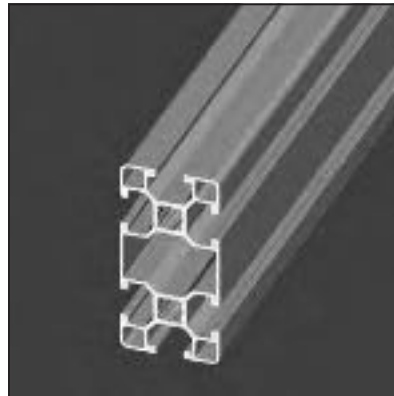
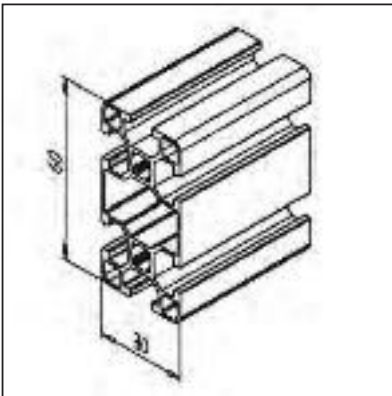
- Light constructions such as holders, protective devices, etc.
- Particularly useful in the food industry, in medical engineering and for the filling of beverages, where strict hygienic standards are set

ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Mount to this profile using square nuts 30 available in M4 / M5 / M6 / M8

PROFILE 30 X 60

part no. 20.0994/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	14,898 cm ⁴
- Iy =	3,792 cm ⁴
- wx =	4,966 cm ³
- wy =	2,528 cm ³
- Weight	1,069 kg/m
- Length	6 m
- Packing unit	54 m

APPLICATIONS

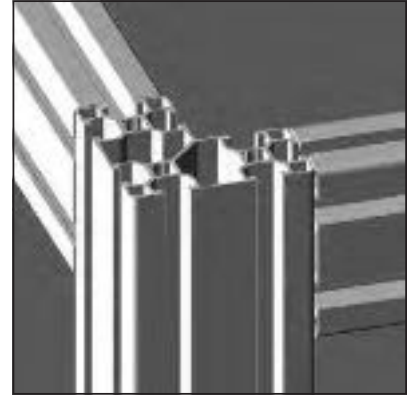
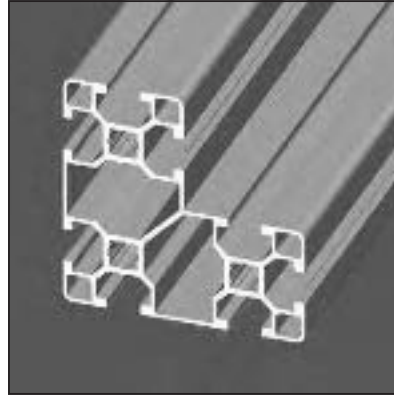
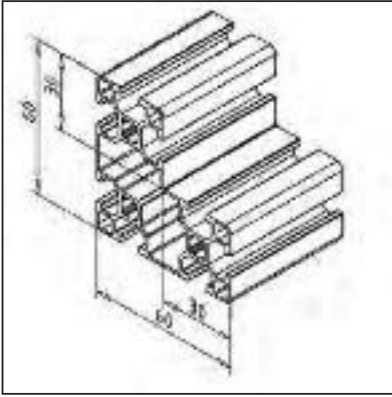
- Light constructions such as holders, protective devices

ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Mount to this profile using square nuts 30 available in M4 / M5 / M6 / M8

PROFILE 60 X 60 X 30

part no. 20.0982/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	19,107 cm ⁴
- Iy =	19,107 cm ⁴
- wx =	5,572 cm ³
- wy =	5,572 cm ³
- Weight	1,534 kg/m
- Length	6 m
- Packing unit	36 m

APPLICATIONS

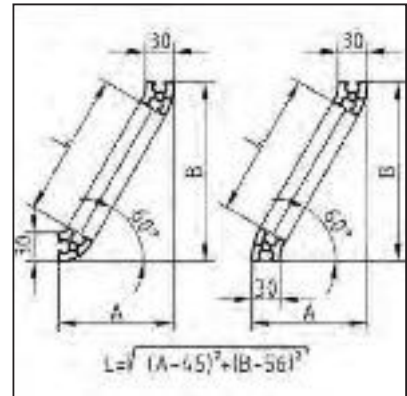
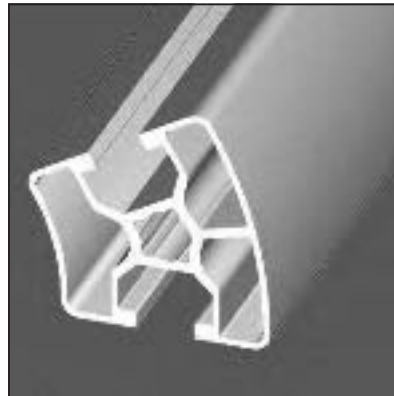
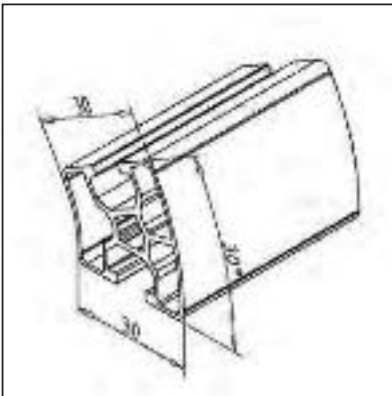
- Light construction
- Tables
- Racks
- Framework constructions
- Bracings

ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Mount to this profile using square nuts 30 available in M4 / M5 / M6 / M8

PROFILE 30 R 30°

part no. 20.1134/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	1,939 cm ⁴
- Iy =	1,909 cm ⁴
- wx =	0,982 cm ³
- wy =	1,006 cm ³
- Weight	0,601 kg/m
- Length	6 m
- Packing unit	72 m

APPLICATIONS

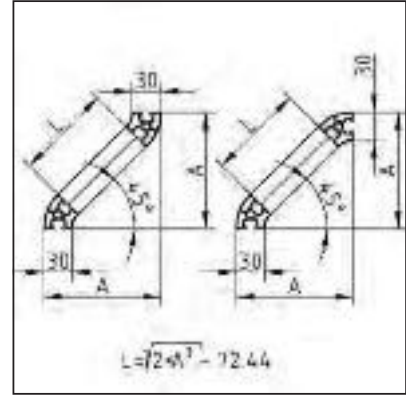
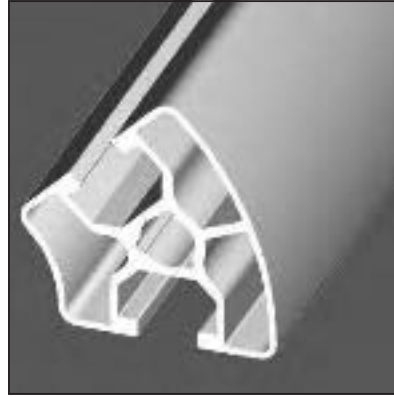
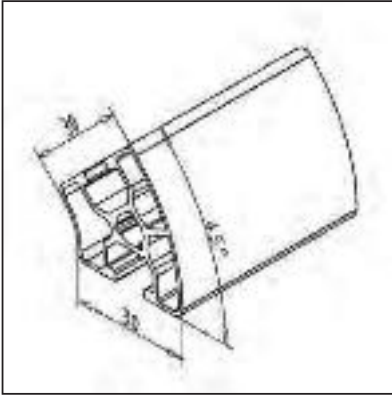
- Light construction
- Tables
- Racks
- Framework constructions
- Bracings

ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Mount to this profile using square nuts 30 available in M4 / M5 / M6 / M8

PROFILE 30 R 45°

part no. 20.1135/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	1,909 cm ⁴
- Iy =	1,812 cm ⁴
- wx =	0,924 cm ³
- wy =	0,951 cm ³
- Weight	0,601 kg/m
- Length	6 m
- Packing unit	72 m

APPLICATIONS

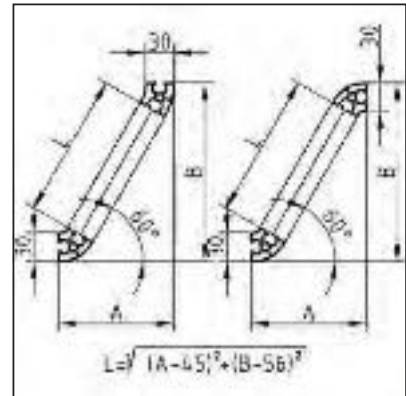
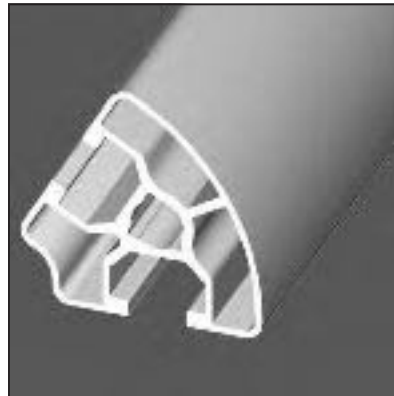
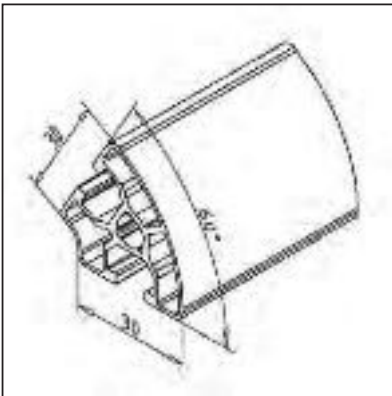
- Light construction
- Tables
- Racks
- Framework constructions
- Bracings

ASSEMBLY

- Power-lock fastener 30 / N 30,
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Mount to this profile using square nuts 30 available in M4 / M5 / M6 / M8

PROFILE 30 R 60°

part no. 20.1136/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	1,847 cm ⁴
- Iy =	1,721 cm ⁴
- wx =	0,904 cm ³
- wy =	0,951 cm ³
- Weight	0,590 kg/m
- Length	6 m
- Packing unit	72 m

APPLICATIONS

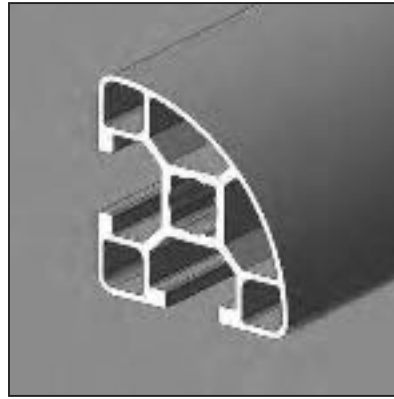
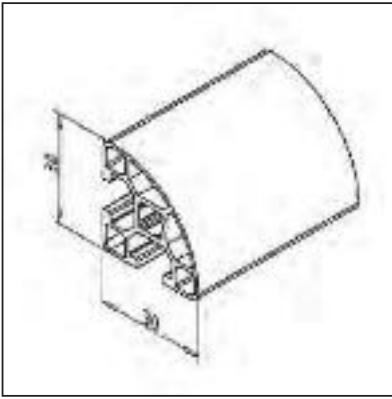
- Light construction
- Tables
- Racks
- Framework constructions
- Bracings

ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30
- Mount to this profile using square nuts 30 available in M4 / M5 / M6 / M8

PROFILE 30 R 90°

part no. 20.1125/0

**TECHN. DATA / ITEMS SUPPLIED**

- Ix =	1,847 cm ⁴
- Iy =	1,721 cm ⁴
- wx =	0,904 cm ³
- wy =	0,951 cm ³
- Weight	0,590 kg/m
- Length	6 m
- Packing unit	72 m

APPLICATIONS

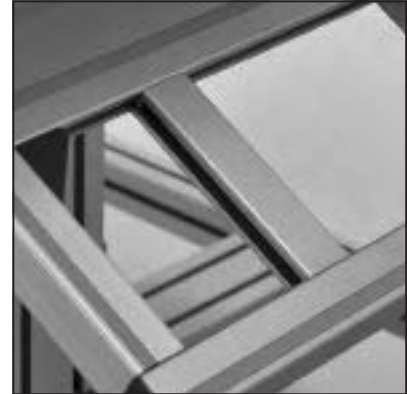
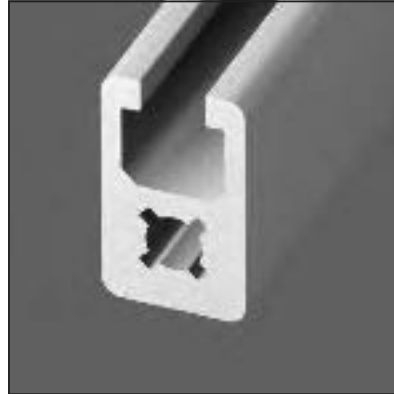
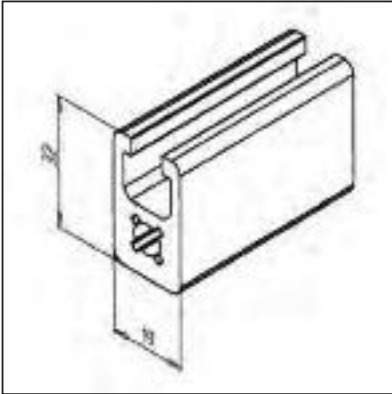
- Light construction
- Tables
- Racks
- Framework constructions

ASSEMBLY

- Power-lock fastener 30 / N 30
- Mitre connector 30
- Screw connection 30
- Angle 16 / 30 / 30 R 90°
- Mount to this profile using square nuts 30 available in M4 / M5 / M6 / M8

PROFILE 19 X 32

part no. 20.1000/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	3,102 cm ⁴
- Iy =	1,526 cm ⁴
- wx =	1,651 cm ³
- wy =	1,606 cm ³
- Weight	0,987 kg/m
- Length	6 m
- Packing unit	60 m

APPLICATIONS

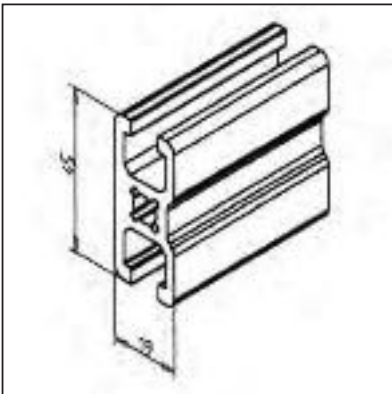
- Light constructions
- Panel frames
- Light supports
- Grip rails

ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 GD-Z
- Bolt-fastener 15
- Screw connection

PROFILE 19 X 45

part no. 20.1001/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	6,173 cm ⁴
- Iy =	1,843 cm ⁴
- wx =	2,743 cm ³
- wy =	1,836 cm ³
- Weight	1,101 kg/m
- Length	6 m
- Packing unit	60 m

APPLICATIONS

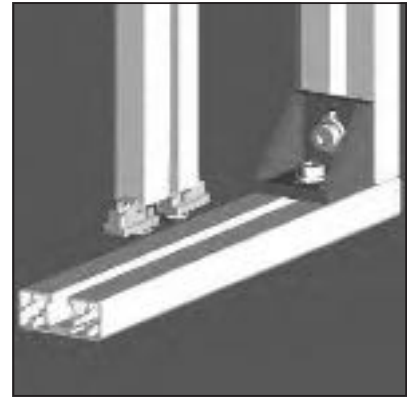
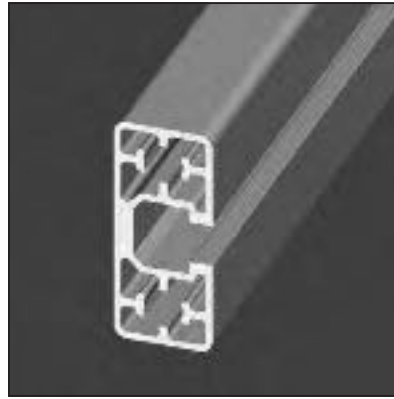
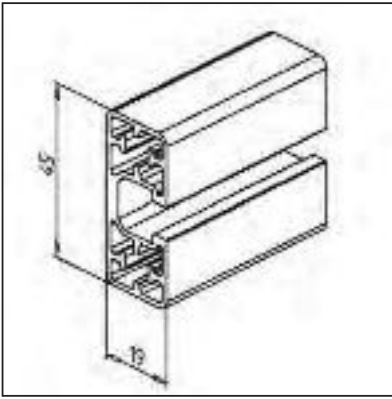
- Light supports, Bracings
- Light constructions
- Panel frames
- Shelves

ASSEMBLY

- MiniTec power-lock fastener
- Angle 19
- Bolt-fastener 15
- Screw connection

PROFILE 45 X 19

part no. 20.0993/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	6,106 cm ⁴
- Iy =	1,384 cm ⁴
- wx =	2,71 cm ³
- wy =	1,45 cm ³
- Weight	0,814 kg/m
- Length	6 m
- Packing unit	72 m

APPLICATIONS

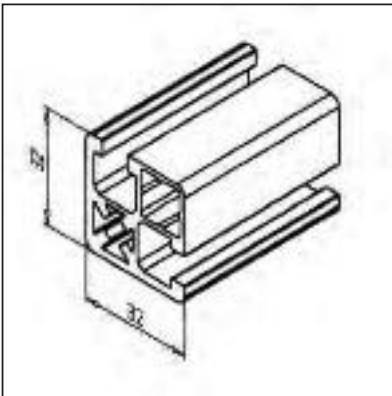
- Weight-optimized constructions
- Light constructions
- Light sliding windows
- Support plates
- Base plates

ASSEMBLY

- Side 19 mm: MiniTec Power-lock fastener 45 F **part no. 21.0818/0**
- Side 45 mm: angle, power-lock fastener N or bolt-fastener

PROFILE 32 X 32 UL

part no. 20.1064/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	4,100 cm ⁴
- Iy =	4,100 cm ⁴
- wx =	2,267 cm ³
- wy =	2,267 cm ³
- Weight	1,052 kg/m
- Length	6 m
- Packing unit	48 m

APPLICATIONS

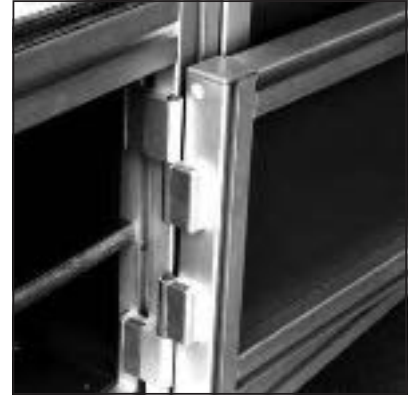
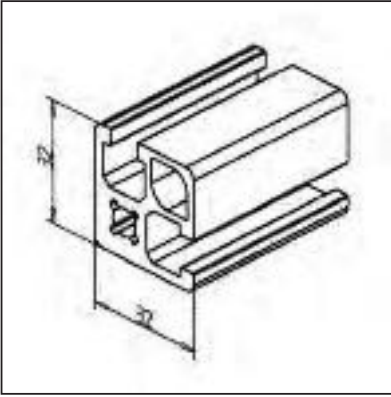
- Light constructions
- Tables
- Horizontal or vertical sliding doors
- Bracings

ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 GD-Z **part no. 21.2078/0**
- Bolt-fastener 15 **part no. 21.1024/0**
- Screw connection

PROFILE 32 X 32 F

part no. 20.1054/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	4,825 cm ⁴
- Iy =	4,825 cm ⁴
- wx =	2,703 cm ³
- wy =	2,703 cm ³
- Weight	1,288 kg/m
- Length	6 m
- Packing unit	48 m

APPLICATIONS

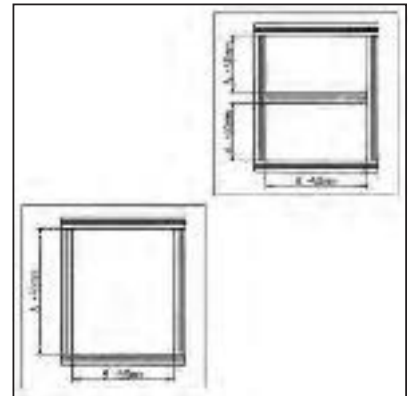
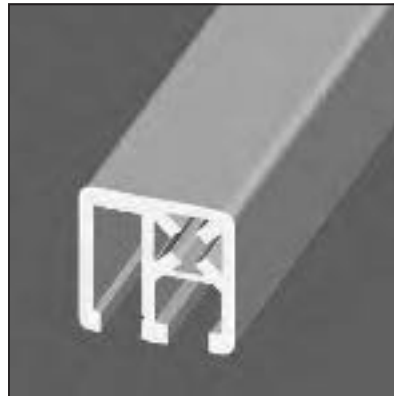
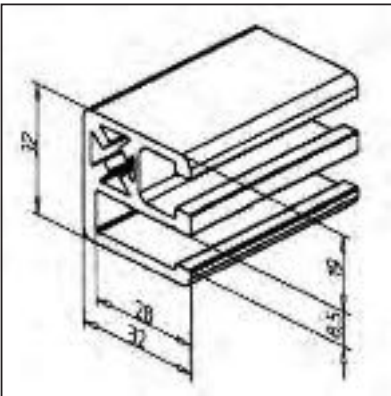
- Light constructions
- Tables
- Horizontal or vertical-sliding doors
- Bracings

ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 GD-Z, **part no. 21.2078/0**
- Bolt-fastener 15, **part no. 21.1024/0**
- Screw connection

CLAMP PROFILE 32 X 32

part no. 20.1070/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	5,024 cm ⁴
- Iy =	4,418 cm ⁴
- wx =	3,041 cm ³
- wy =	2,398 cm ³
- Weight	1,211 kg/m
- Length	6 m
- Packing unit	48 m

APPLICATIONS

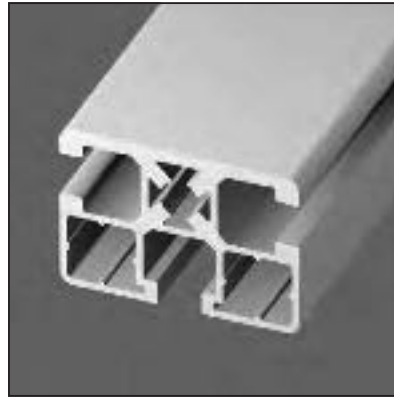
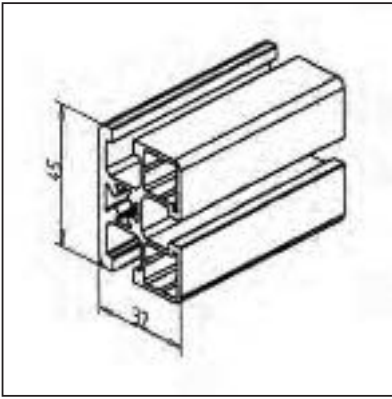
- All types of safety equipment
- For clamping surface elements such as corrugated mesh, panels or plates up to a thickness of 8 mm
- For large flexible panels, split panel into sections using a center bar of clamp profile 45x32

ASSEMBLY

- MiniTec power-lock fastener; no bores required
- No cut-outs in surface elements required
- Premount 3 sides of the frame
- Insert surface element and mount last profile strut
- Push in distance profile on the inside or knock in with a flat tool
- For panel elements < 4 mm mount additional insert seal
- Distance profile **part no. 22.1039/0** see page 182

PROFILE 45 X 32 UL

part no. 20.1065/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	8,292 cm ⁴
- Iy =	5,178 cm ⁴
- wx =	3,685 cm ³
- wy =	2,815 cm ³
- Weight	1,257 kg/m
- Length	6 m
- Packing unit	48 m

APPLICATIONS

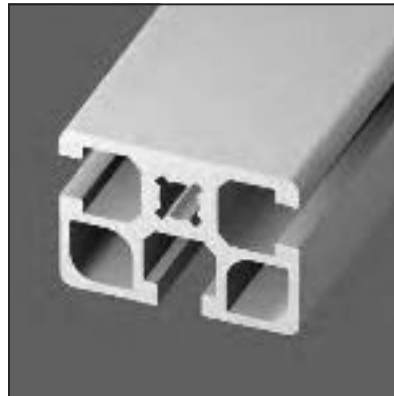
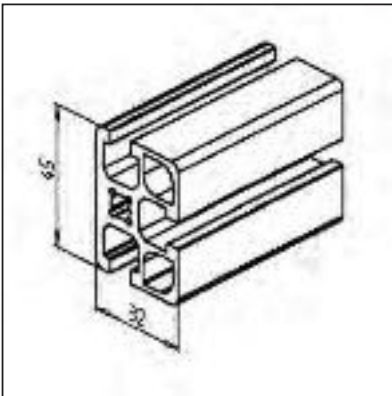
- General constructions
- Light constructions
- Tables
- Racks
- Sliding doors

ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90 GD-Z
- Bolt-fastener 15 / 20
- Screw connection

PROFILE 45 X 32 F

part no. 20.1055/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	10,189 cm ⁴
- Iy =	6,499 cm ⁴
- wx =	4,528 cm ³
- wy =	3,762 cm ³
- Weight	1,588 kg/m
- Length	6 m
- Packing unit	48 m

APPLICATIONS

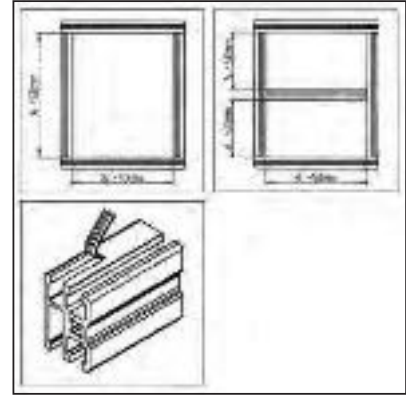
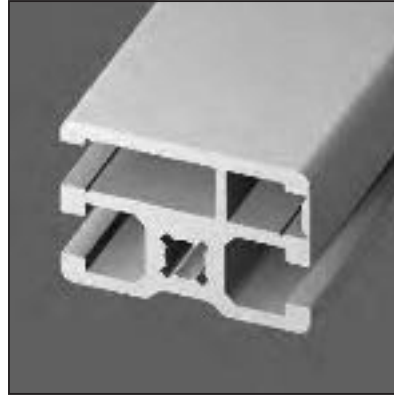
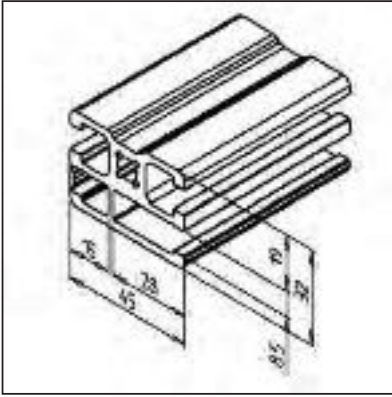
- General constructions
- Tables
- Racks
- Sliding-doors
- Rails

ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90 GD-Z
- Bolt-fastener 15 / 20
- Screw connection

CLAMP PROFILE 45 X 32

part no. 20.1053/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	6,465 cm ⁴
- Iy =	9,521 cm ⁴
- wx =	3,999 cm ³
- wy =	4,119 cm ³
- Weight	1,615 kg/m
- Length	6 m
- Packing unit	48 m

APPLICATIONS

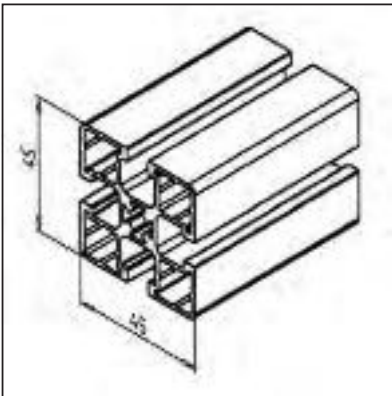
- All types of safety equipment
- Extra deep 28mm slot for fixing panels & wire mesh up to 8mm thick
- For large flexible panels, split panel into sections using a center bar of clamp profile 45x32

ASSEMBLY

- MiniTec power-lock fastener
- No cut-outs in surface elements required
- Premount 3 sides of the frame
- Insert surface element and mount last profile strut
- Push in distance profile on the inside or knock in with a flat tool
- For panel elements < 4 mm mount additional insert seal
- Distance profile **part no. 22.1039/0** see page 182

PROFILE 45 X 45 UL

part no. 20.1063/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	9,953 cm ⁴
- Iy =	9,953 cm ⁴
- wx =	4,423 cm ³
- wy =	4,423 cm ³
- Weight	1,445 kg/m
- Length	6 m
- Packing unit	54 m

APPLICATIONS

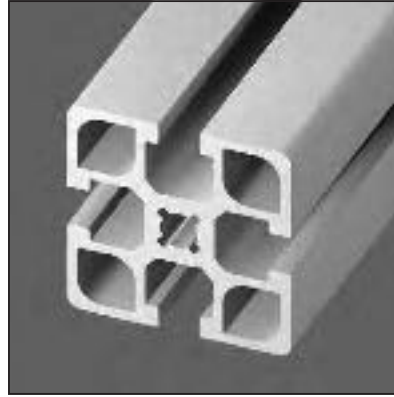
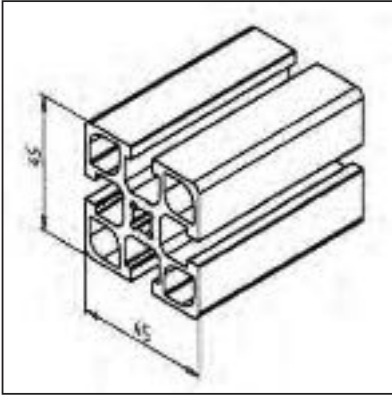
- General weight, optimized engineering structures
- General constructions

ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90 GD-Z
- Bolt-fastener 20
- Screw connection

PROFILE 45 X 45 F

part no. 20.1033/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	14,172 cm ⁴
- Iy =	14,172 cm ⁴
- wx =	6,298 cm ³
- wy =	6,298 cm ³
- Weight	2,005 kg/m
- Length	6 m
- Packing unit	36 m

APPLICATIONS

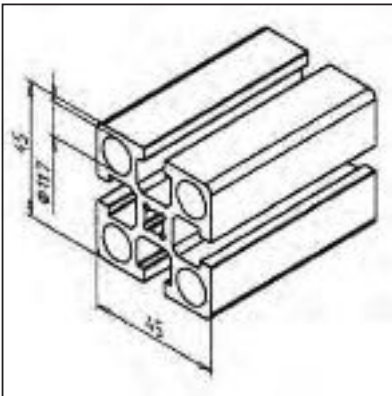
- General constructions

ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90 GD-Z
- Bolt-fastener 20
- Screw connection

PROFILE 45 X 45

part no. 20.1006/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	15,934 cm ⁴
- Iy =	15,934 cm ⁴
- wx =	7,081 cm ³
- wy =	7,081 cm ³
- Weight	2,205 kg/m
- Length	6 m
- Packing unit	36 m

APPLICATIONS

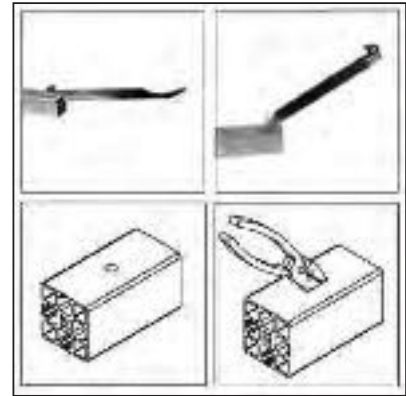
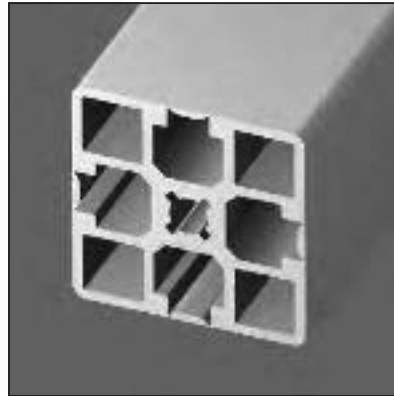
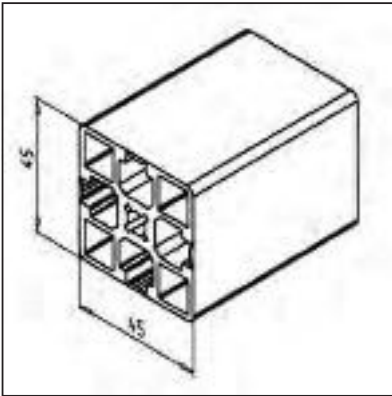
- General constructions
- Compressed air piping
- Linear guides

ASSEMBLY

- MiniTec power-lock fastener
- Angle 25 / 45, bolt-fastener, screw connection
- Bores Ø 11,7 mm reborable for piping thread G 1/4" for connection of blanking screws or pneumatic elements
- Lateral connections G 1/8" direct into the profile.

PROFILE 45 X 45 G

part no. 20.1028/0



TECHN. DATA / ITEMS SUPPLIED

- lx =	14,087 cm ⁴
- ly =	14,087 cm ⁴
- wx =	6,261 cm ³
- wy =	6,261 cm ³
- Weight	1,997 kg/m
- Length	6 m
- Packing unit	36 m

APPLICATIONS

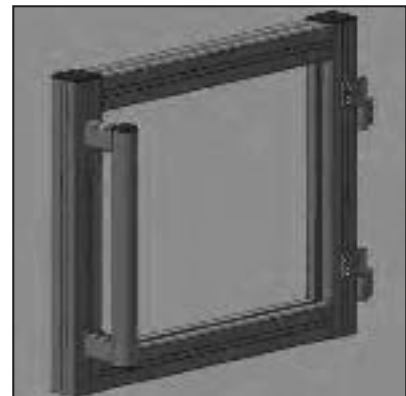
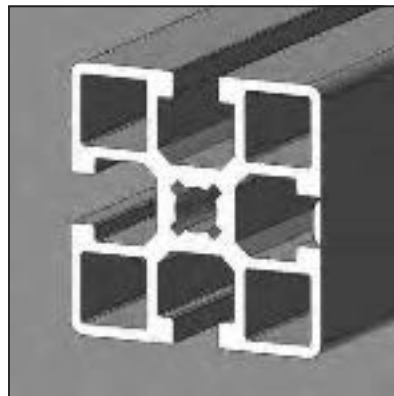
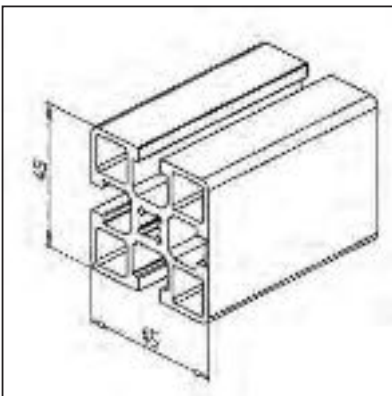
- General constructions, particularly for use in the food industry, in medical engineering and for the filling of beverages, where strict hygienic standards are set
- Grooves can be closed with the aluminium cover profile L, **part no. 20.1021/0**, when opened too far
- Silicon sealings for profile connections on request

ASSEMBLY

- For tightening the MiniTec power-lock fastener, the groove cover must be opened by tear-off lever **part no. 26.0815/0** at the profile end. Opening can be covered with end cap profile G **part no. 22.1056/1**
- Angle 25 / 45
- The grooves can be opened up to any length with the tear-off lever **part no. 26.0815/0**

PROFILE 45 X 45 1G

part no. 20.1126/0



TECHN. DATA / ITEMS SUPPLIED

- lx =	13,617 cm ⁴
- ly =	14,091 cm ⁴
- wx =	6,052 cm ³
- wy =	6,262 cm ³
- Weight	1,897 kg/m
- Length	6 m
- Packing unit	36 m

APPLICATIONS

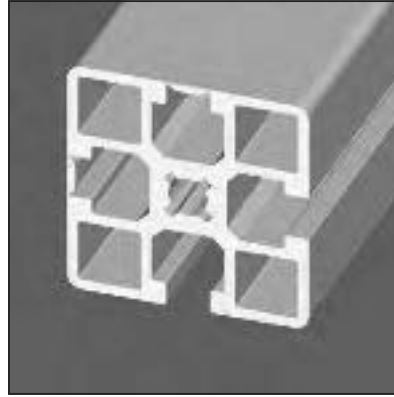
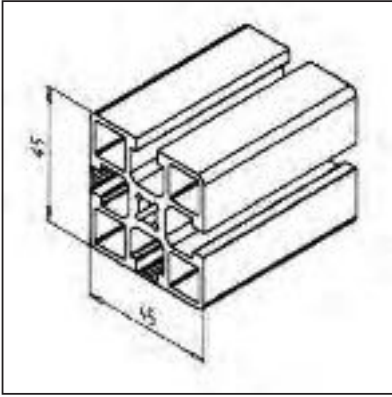
- Groove cover can be torn out
- General constructions, particularly for use in the food industry, in medical engineering and for the filling of beverages, where strict hygienic standards are set
- Opened groove can be closed with the aluminium cover profile L, **part no. 20.1021/0**
- Silicon sealings for profile connections on request

ASSEMBLY

- For tightening power-lock fastener, the groove cover must be opened with tear-off lever, **part no. 26.0815/0** at the profile end
- Cover opened groove with end cap G **part no. 22.1056/0**
- Angle 25 / 45

PROFILE 45 X 45 2G

part no. 20.1072/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	13,549 cm ⁴
- Iy =	13,549 cm ⁴
- wx =	5,938 cm ³
- wy =	5,938 cm ³
- Weight	1,925 kg/m
- Length	6 m
- Packing unit	36 m

APPLICATIONS

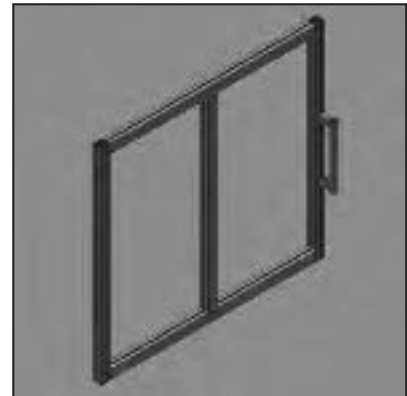
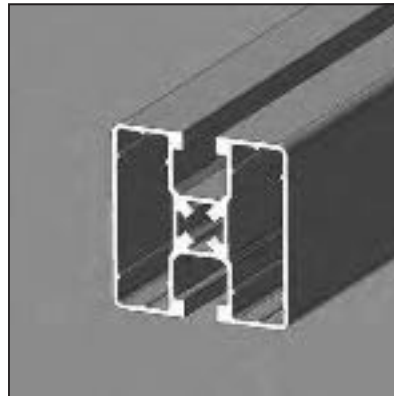
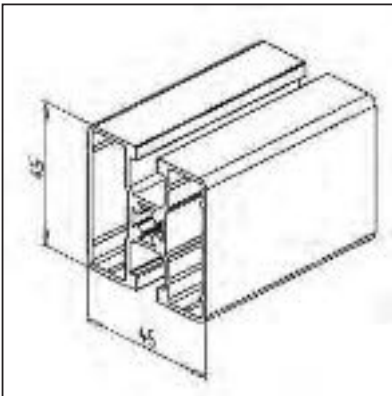
- General engineering structures, particularly for use in the food industry, in medical engineering and for the filling of beverages, where strict hygienic standards are set
- Grooves can be closed with the aluminium cover profile L, **part no. 20.1021/0**, when opened too far
- Silicon sealings for profile connections on request

ASSEMBLY

- For tightening power-lock fastener, the groove cover must be opened with tear-off lever, **part no. 26.0815/0** at the profile end
- Cover with end cap G **part no. 22.1056/1**
- Angle 25 / 45

PROFILE 45 X 45 UL 2GG

part no. 20.1122/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	9,974 cm ⁴
- Iy =	8,553 cm ⁴
- wx =	4,432 cm ³
- wy =	3,801 cm ³
- Weight	1,254 kg/m
- Length	6 m
- Packing unit	54 m

APPLICATIONS

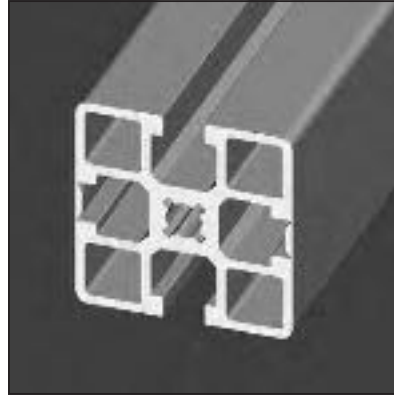
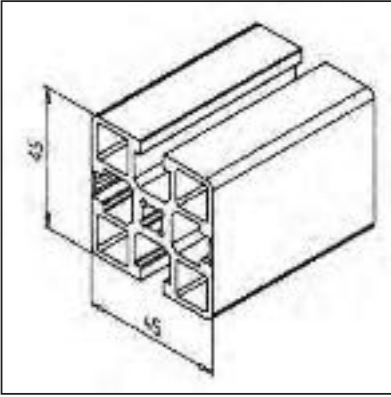
- Weight optimized constructions
- General constructions, particularly for use in the food industry, in medical engineering and for the filling of beverages, where strict hygienic standards are set
- Silicon sealings for profile connections on request

ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90
- Bolt-fastener 20
- Screw connection

PROFILE 45 X 45 2GG

part no. 20.1099/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	13,069 cm ⁴
- Iy =	14,045 cm ⁴
- wx =	5,808 cm ³
- wy =	6,242 cm ³
- Weight	1,925 kg/m
- Length	6 m
- Packing unit	36 m

APPLICATIONS

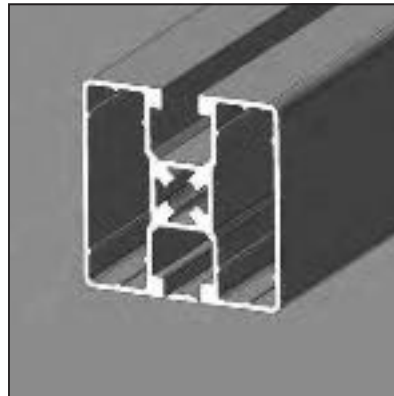
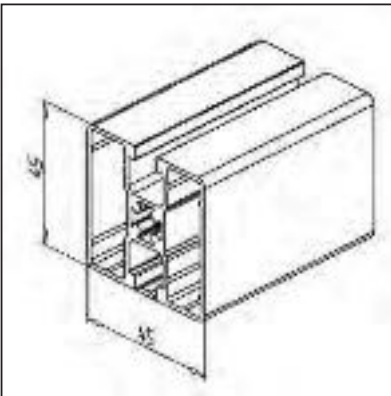
- General constructions, particularly for use in the food industry, in medical engineering and for the filling of beverages, where strict hygienic standards are set
- Grooves can be closed with the aluminium cover profile L, **part no. 20.1021/0**, when opened too far
- Silicon sealings for profile connections on request

ASSEMBLY

- For tightening power-lock fastener, the groove cover must be opened with tear-off lever, **part no. 26.0815/0** at the profile end
- Cover with end cap G **part no. 22.1056/1**
- Angle 25 / 45

PROFILE 45 X 45 UL 3G

part no. 20.1123/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	10,44 cm ⁴
- Iy =	8,557 cm ⁴
- wx =	4,64 cm ³
- wy =	3,803 cm ³
- Weight	1,281 kg/m
- Length	6 m
- Packing unit	54 m

APPLICATIONS

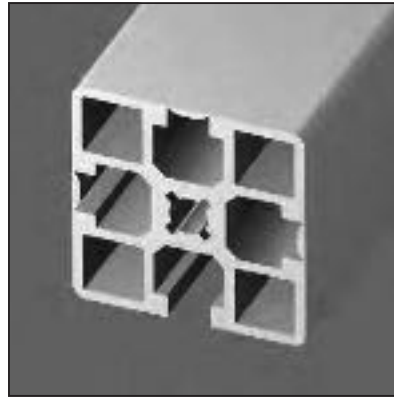
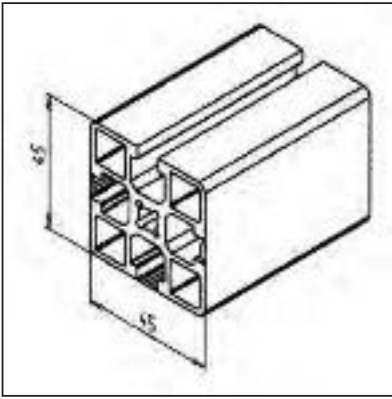
- Groove cover can be torn out
- Weight optimized constructions
- General constructions, particularly useful in the food industry, in medical engineering and for the filling of beverages, where strict hygienic standards are set
- Silicon sealings for profile connections on request

ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90
- Screw connection

PROFILE 45 X 45 3G

part no. 20.1048/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	13,554 cm ⁴
- Iy =	14,049 cm ⁴
- wx =	5,941 cm ³
- wy =	6,244 cm ³
- Weight	1,953 kg/m
- Length	6 m
- Packing unit	36 m

APPLICATIONS

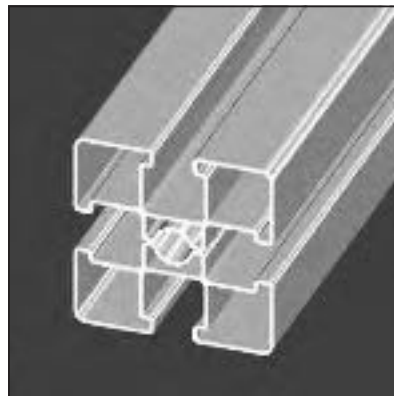
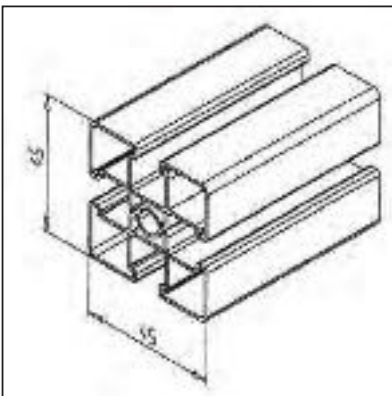
- General constructions, particularly useful in the food industry, in medical engineering and for the filling of beverages, where strict hygienic standards are set
- Grooves can be closed with the aluminium cover profile L, **part no. 20.1021/0**
- Silicon sealings for profile connections on request

ASSEMBLY

- For tightening power-lock fastener, the groove cover must be opened with tear-off lever, **part no. 26.0815/0** at the profile end
- Cover with end cap G **part no. 22.1056/1**
- Angle 25 / 45
- The grooves can be opened up to any length with the tear-off lever **part no. 26.0815/0**

PROFILE 45 X 45 VA

part no. 20.2000/0



TECHN. DATA / ITEMS SUPPLIED

- Material: WN DIN 1.4301 (x5 Cr Ni 18-10, SUS 304)	
- Ix =	6,47 cm ⁴
- Iy =	6,47 cm ⁴
- wx =	2,88 cm ³
- wy =	2,88 cm ³
- Weight	2,85 kg/m
- Length	6 m
- Packing unit	40 m

APPLICATIONS

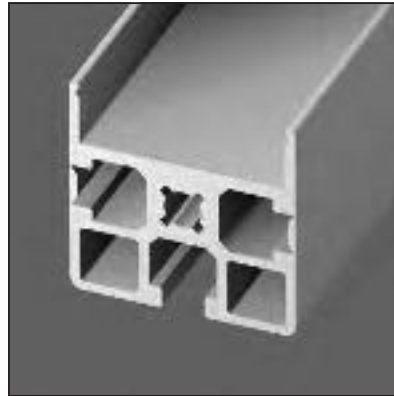
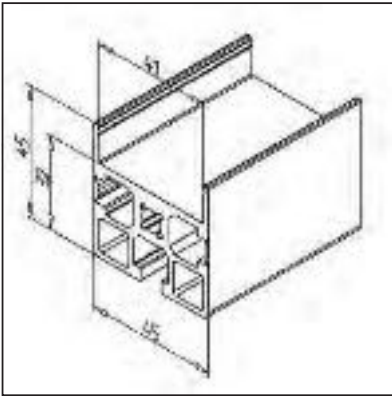
- Food and beverage industry
- Outdoor constructions
- Chemical industry
- Pharmaceutical industry
- High temperatures

ASSEMBLY

- Power-lock fastener H, **part no. 21.1018/1**
- Angles
- Screws M8, stainless

PROFILE 45 X 45 R

part no. 20.1046/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	8,296 cm ⁴
- Iy =	12,997 cm ⁴
- wx =	3,247 cm ³
- wy =	5,776 cm ³
- Weight	1,711 kg/m
- Length	6 m
- Packing unit	36 m

APPLICATIONS

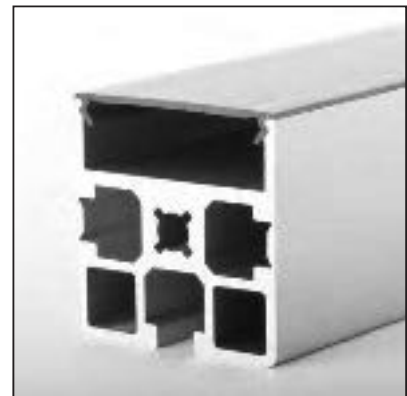
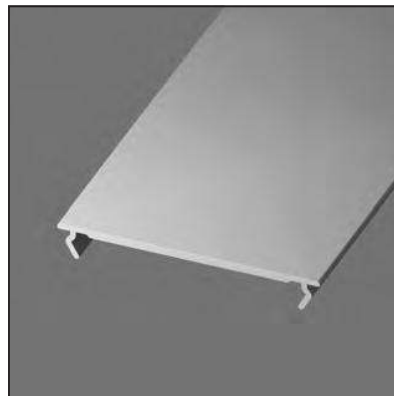
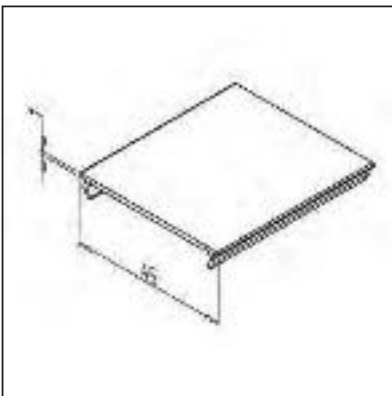
- Combination of constructional element and:
- Cable duct
- Guiding groove for belt conveyor
- Serpentine energy chain guide
- Multi-purpose conduit with snap on cover

ASSEMBLY

- MiniTec power-lock fastener
- The lateral grooves can be opened up to any length with the tear-off lever **part no. 26.0815/0**

COVER PROFILE 45 X 45 R

part no. 20.1037/0



TECHN. DATA / ITEMS SUPPLIED

- PVC impact resistant, grey	
- Weight	0,110 kg/m
- Length	2 m

APPLICATIONS

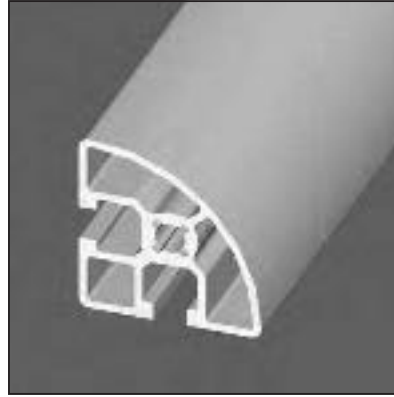
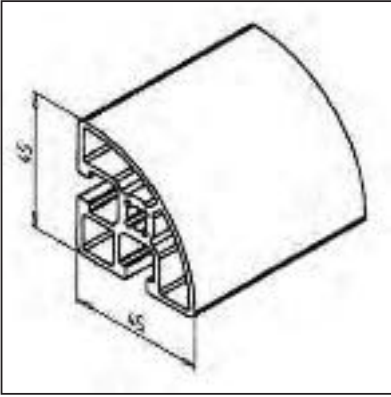
- Covering of profiles 45 x 45 R

ASSEMBLY

- Snaps onto profile 45 x 45 R

PROFILE 45 R 90°

part no. 20.1069/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	9,138 cm ⁴
- Iy =	9,138 cm ⁴
- wx =	3,581 cm ³
- wy =	3,581 cm ³
- Weight	1,478 kg/m
- Length	6 m
- Packing unit	48 m

APPLICATIONS

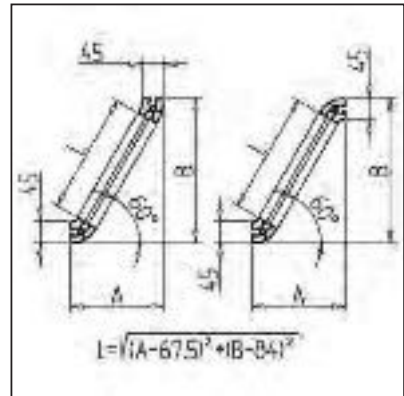
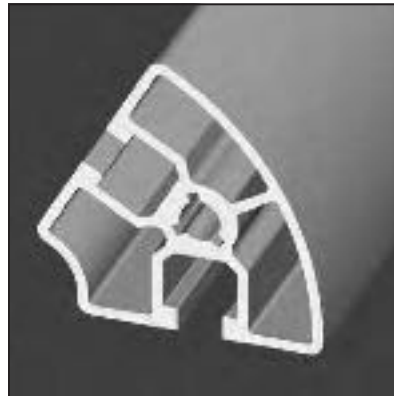
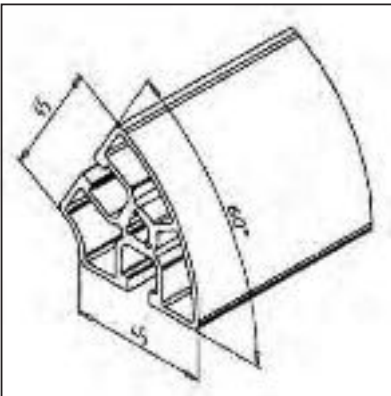
- Light construction
- Tables
- Racks
- Framework constructions

ASSEMBLY

- MiniTec power-lock fastener
- Angle 45 R 90°
- Cross bolt-fastener

PROFILE 45 R 60°

part no. 20.1096/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	11,446 cm ⁴
- Iy =	10,280 cm ⁴
- wx =	3,667 cm ³
- wy =	3,752 cm ³
- Weight	1,575 kg/m
- Length	6 m
- Packing unit	48 m

APPLICATIONS

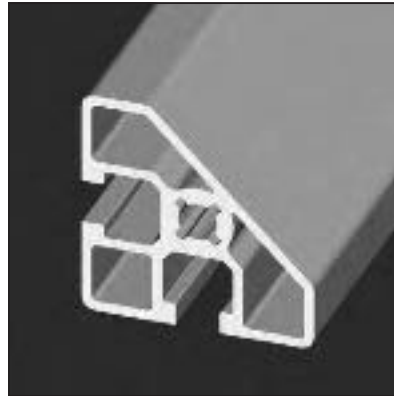
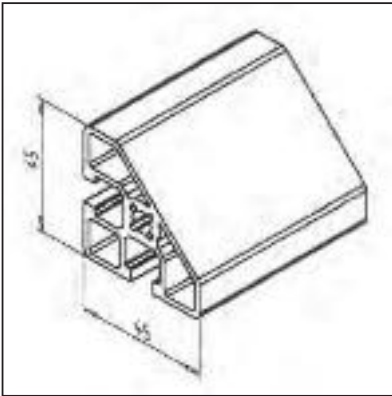
- Angled enclosures
- Tables
- Racks
- Framework constructions
- Bracings

ASSEMBLY

- MiniTec power-lock fastener
- Bolt-fastener

PROFILE 45 / 45°

part no. 20.1029/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	8,626 cm ⁴
- Iy =	8,626 cm ⁴
- wx =	3,315 cm ³
- wy =	3,315 cm ³
- Weight	1,443 kg/m
- Length	6 m
- Packing unit	48 m

APPLICATIONS

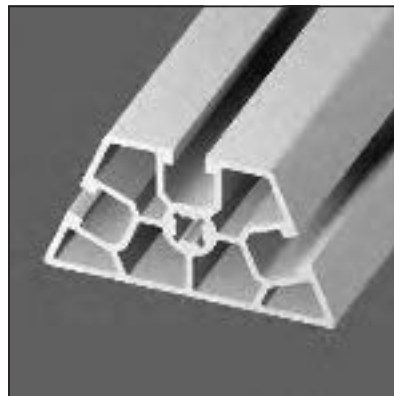
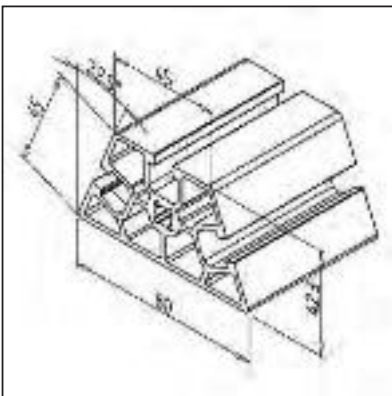
- Light construction
- Tables
- Framework constructions
- Bracings

ASSEMBLY

- MiniTec power-lock fastener
- Angle 45°
- Angle 45 / 90
- Bolt-fastener

PROFILE 45 / 22,5°

part no. 20.1030/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	14,506 cm ⁴
- Iy =	33,432 cm ⁴
- wx =	7,934 cm ³
- wy =	8,515 cm ³
- Weight	2,225 kg/m
- Length	6 m
- Packing unit	36 m

APPLICATIONS

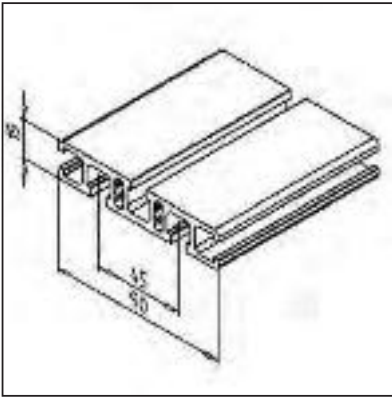
- Machine guards + angled enclosures
- Tables
- Connection of construction elements at an angle of 45°
- Bracings

ASSEMBLY

- MiniTec power-lock fastener
- Angle
- Bolt-fastener

PROFILE 19 X 90

part no. 20.0995/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	3,436 cm ⁴
- Iy =	45,455 cm ⁴
- wx =	3,493 cm ³
- wy =	10,101 cm ³
- Weight	1,919 kg/m
- Length	6 m
- Packing unit	48 m

APPLICATIONS

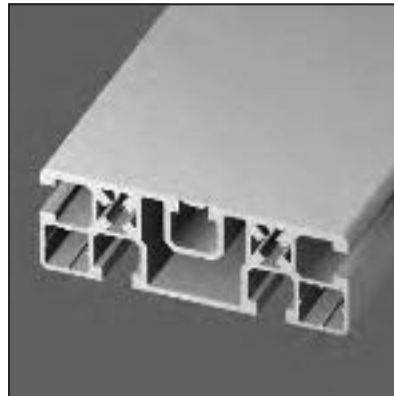
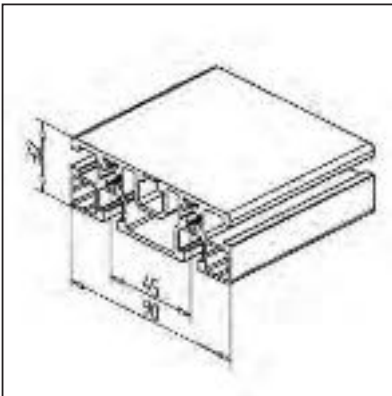
- Base plates
- Bearing surfaces
- Slide plate for linear guide
- Plates for floor fastening
- Showcases

ASSEMBLY

- Bolt-fastener
- Angle

PROFILE 90 X 32 UL

part no. 20.1066/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	10,627 cm ⁴
- Iy =	64,889 cm ⁴
- wx =	5,832 cm ³
- wy =	14,340 cm ³
- Weight	2,464 kg/m
- Length	6 m
- Packing unit	36 m

APPLICATIONS

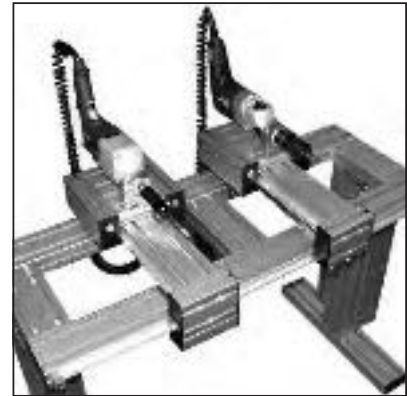
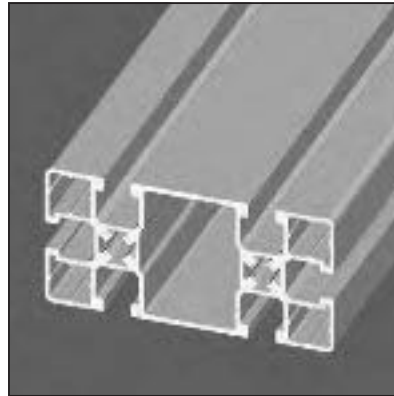
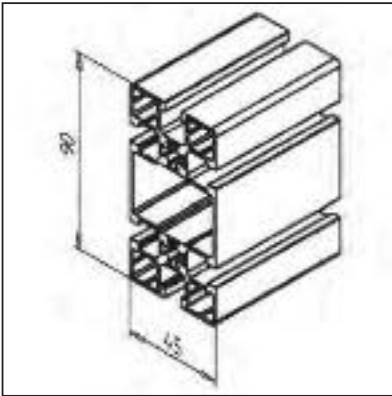
- General constructions
- General weight, optimized engineering structures
- Tables
- Racks
- Enclosures

ASSEMBLY

- MiniTec power-lock fastener
- Angle
- Screw connector
- The t-slot can be opened up to any length with the tear-off lever **part no. 26.0815/0**

PROFILE 45 X 90 UL

part no. 20.1067/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	73,907 cm ⁴
- Iy =	19,194 cm ⁴
- wx =	16,423 cm ³
- wy =	8,530 cm ³
- Weight	2,421 kg/m
- Length	6 m
- Packing unit	24 m

APPLICATIONS

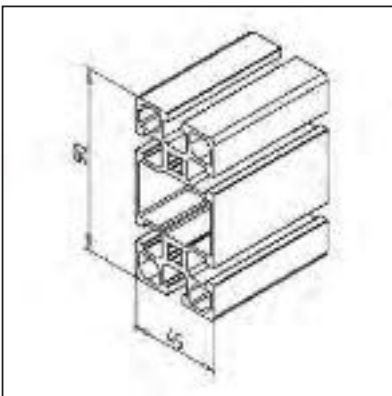
- General weight, optimized engineering structures
- Counterweighted sliding doors and devices

ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90 GD-Z
- Bolt-fastener 20
- Screw connection

PROFIL 45 X 90 F

part no. 20.1032/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	100,988 cm ⁴
- Iy =	24,340 cm ⁴
- wx =	22,441 cm ³
- wy =	10,818 cm ³
- Weight	3,134 kg/m
- Length	6 m
- Packing unit	24 m

APPLICATIONS

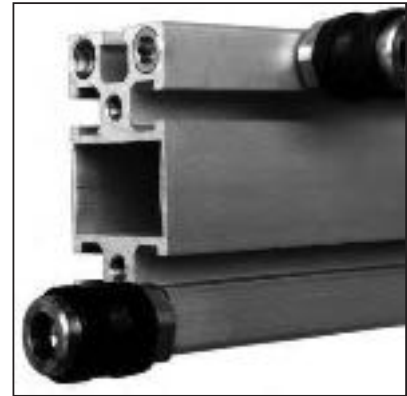
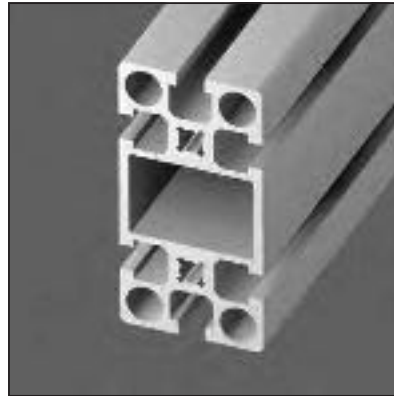
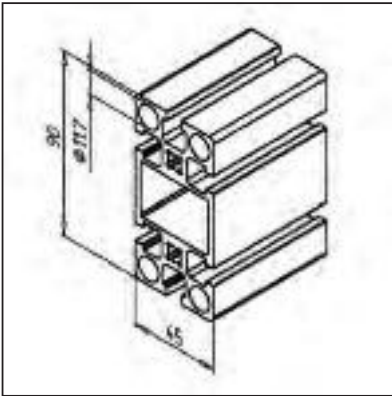
- General constructions
- Counterweighted vertical doors

ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90 GD-Z
- Bolt-fastener 20

PROFILE 45 X 90

part no. 20.1009/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	113,205 cm ⁴
- Iy =	28,584 cm ⁴
- wx =	25,156 cm ³
- wy =	12,704 cm ³
- Weight	3,667 kg/m
- Length	6 m
- Packing unit	24 m

APPLICATIONS

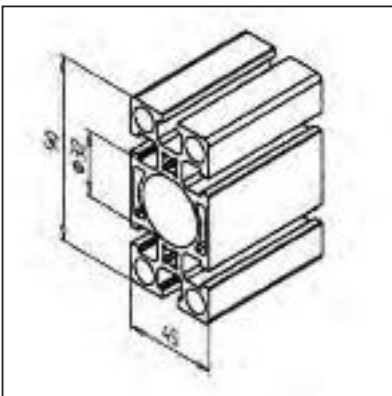
- General heavy duty construction
- 4 cavities for compressed air piping
- Cavity is not suitable for counterweights

ASSEMBLY

- MiniTec power-lock fastener
- Angle 25 / 45 / 90
- Bolt-fastener
- Bores Ø 11,7 mm reborable for piping thread G 1/4" for connection of blanking screws or pneumatic elements
- Lateral connections G 1/8" direct into the profile

PROFILE 45 X 90 S

part no. 20.1017/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	113,487 cm ⁴
- Iy =	30,719 cm ⁴
- wx =	25,219 cm ³
- wy =	13,653 cm ³
- Weight	3,860 kg/m
- Length	6 m
- Packing unit	24 m

APPLICATIONS

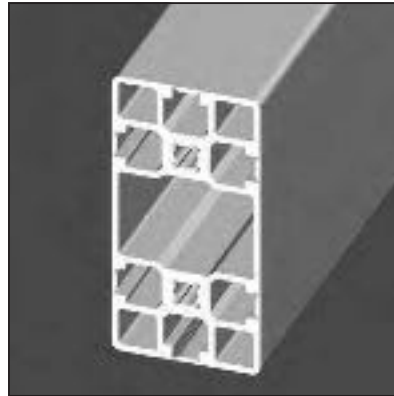
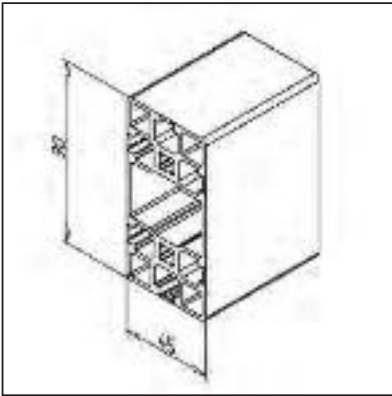
- General constructions
- Linear guides LB as slide
- Pillar guides
- Use as a compressed air line with connecting plate and seal kit
- Central bore Ø 32 mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders

ASSEMBLY

- MiniTec power-lock fastener
- Angle 45 / 90
- Screw connection

PROFILE 45 X 90 G

part no. 20.1015/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	101,241 cm ⁴
- Iy =	25,318 cm ⁴
- wx =	22,498 cm ³
- wy =	11,252 cm ³
- Weight	3,191 kg/m
- Length	6 m
- Packing unit	24 m

APPLICATIONS

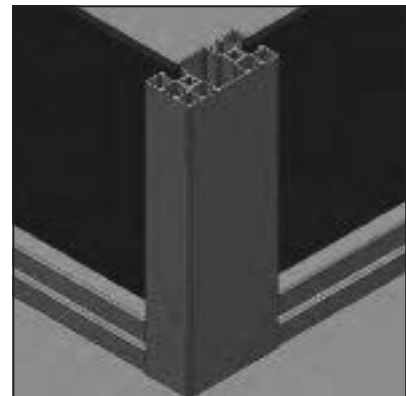
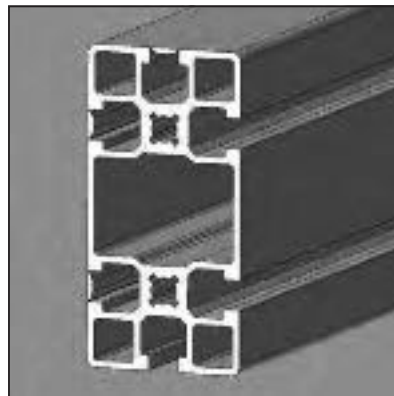
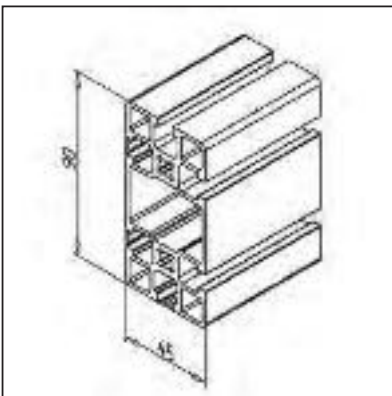
- General constructions, particularly useful in the food industry, in medical engineering and for the filling of beverages, where strict hygienic standards are set
- Cavity is suitable for counterweights

ASSEMBLY

- MiniTec power-lock fastener
- All 6 grooves can be opened up to the length desired
- Groove cover be removed using tear-off lever **part no. 26.0815/0**

PROFILE 45 X 90 2 G

part no. 20.1081/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	98,137 cm ⁴
- Iy =	24,317 cm ⁴
- wx =	21,808 cm ³
- wy =	10,807 cm ³
- Weight	3,108 kg/m
- Length	6 m
- Packing unit	24 m

APPLICATIONS

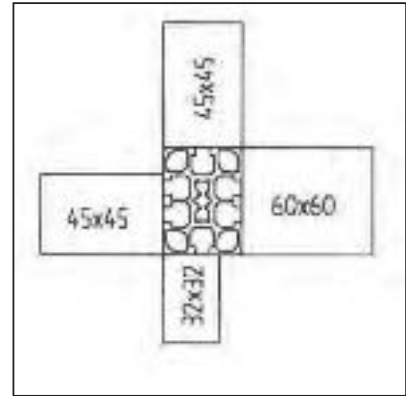
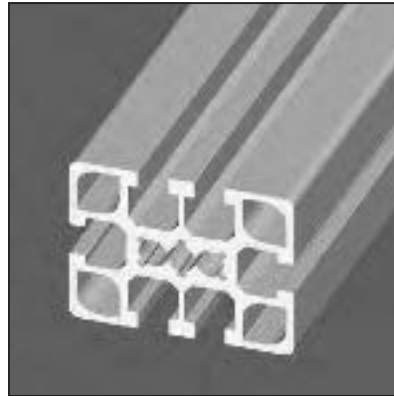
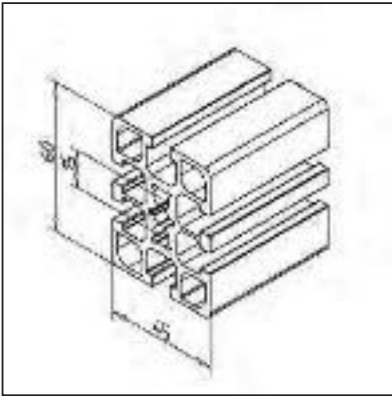
- Groove cover can be torn out
- General constructions, particularly useful in the food industry, in medical engineering and for the filling of beverages, where strict hygienic standards are set
- Cavity is suitable for counterweights

ASSEMBLY

- MiniTec power-lock fastener
- Groove cover be removed using tear-off lever **part no. 26.0815/0**

PROFILE 45 X 60 F

part no. 20.1023/0



TECHN. DATA / ITEMS SUPPLIED

- I _x =	32,068 cm ⁴
- I _y =	17,587 cm ⁴
- w _x =	10,689 cm ³
- w _y =	7,816 cm ³
- Weight	2,603 kg/m
- Length	6 m
- Packing unit	24 m

APPLICATIONS

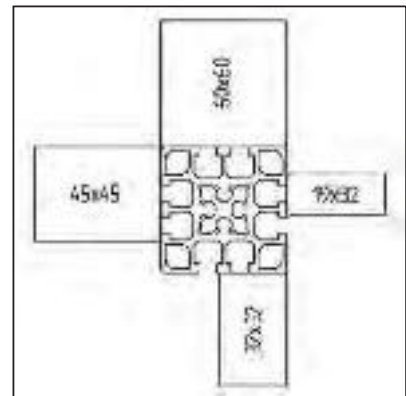
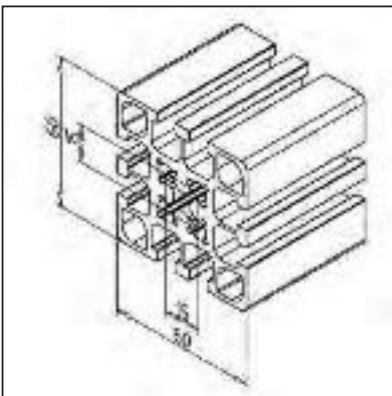
- Universal for general constructions
- Corner post in large guard units

ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90
- Central boring for thread M8

PROFILE 60 X 60 F

part no. 20.1049/0



TECHN. DATA / ITEMS SUPPLIED

- I _x =	40,715 cm ⁴
- I _y =	40,715 cm ⁴
- w _x =	13,571 cm ³
- w _y =	13,571 cm ³
- Weight	3,655 kg/m
- Length	6 m
- Packing unit	24 m

APPLICATIONS

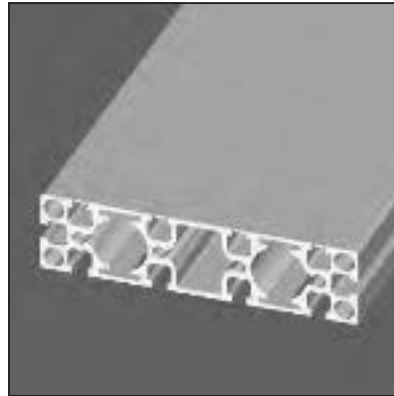
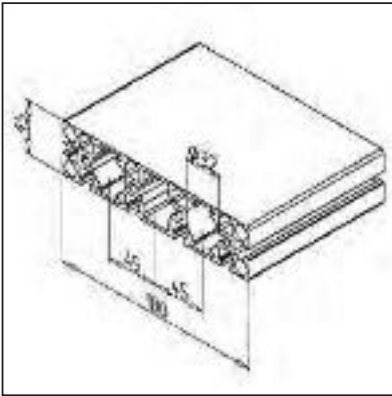
- Universal for general constructions
- Corner post in large guard units

ASSEMBLY

- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90
- Central boring for thread M10

PROFILE 45 X 180 1G

part no. 20.1079/0

**TECHN. DATA / ITEMS SUPPLIED**

- Ix =	61,015 cm ⁴
- Iy =	810,885 cm ⁴
- wx =	26,704 cm ³
- wy =	90,097 cm ³
- Weight	6,954 kg/m
- Length	6 m
- Packing unit	12 m

APPLICATIONS

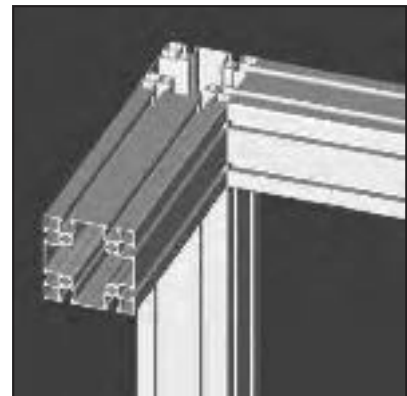
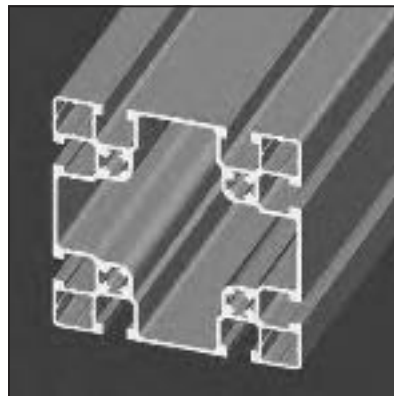
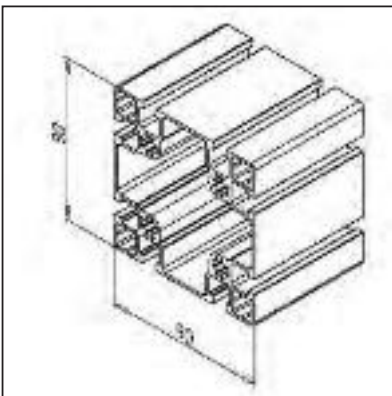
- General constructions, particularly useful in the food industry, in medical engineering and for the filling of beverages, where strict hygienic standards are set
- Linear guides LB as slide
- Central bore Ø 32 mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders

ASSEMBLY

- MiniTec power-lock fastener
- 4 closed t-slots can be opened up to any length with the tear-off lever
part no. 26.0815/0

PROFIL 90 X 90 UL

part no. 20.0999/0

**TECHN. DATA / ITEMS SUPPLIED**

- Ix =	132,001 cm ⁴
- Iy =	132,001 cm ⁴
- wx =	29,334 cm ³
- wy =	29,334 cm ³
- Weight	3,776 kg/m
- Length	6 m
- Packing unit	12 m

APPLICATIONS

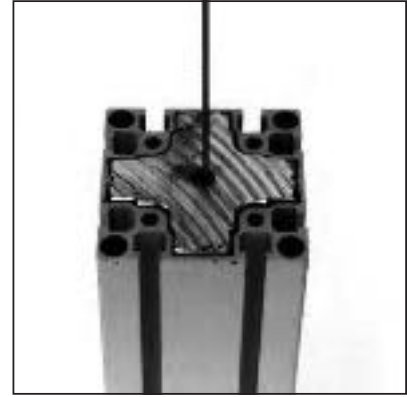
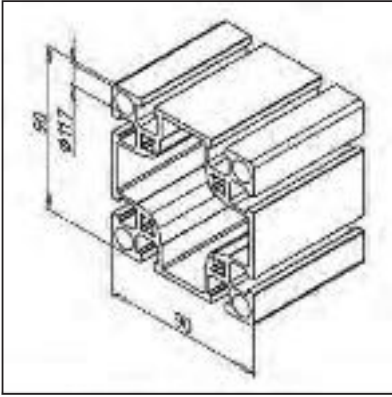
- Weight optimized constructions
- Cavity is suitable for counterweights

ASSEMBLY

- MiniTec power-lock fastener
- Angle 45 GD-Z or 90 GD-Z
- Screw connection
- Bolt-fastener

PROFILE 90 X 90 L

part no. 20.1010/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	186,260 cm ⁴
- Iy =	186,260 cm ⁴
- wx =	41,391 cm ³
- wy =	41,391 cm ³
- Weight	5,222 kg/m
- Length	6 m
- Packing unit	12 m

APPLICATIONS

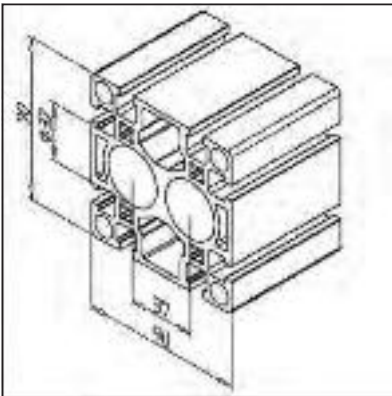
- General heavy duty applications
- Cavity is suitable for counterweights

ASSEMBLY

- MiniTec power-lock fastener
- Angle 45 GD-Z or 90 GD-Z
- Screw connection
- Bolt-fastener 20

PROFILE 90 X 90 S

part no. 20.1019/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	223,949 cm ⁴
- Iy =	208,888 cm ⁴
- wx =	49,766 cm ³
- wy =	46,419 cm ³
- Weight	7,514 kg/m
- Length	6 m
- Packing unit	12 m

APPLICATIONS

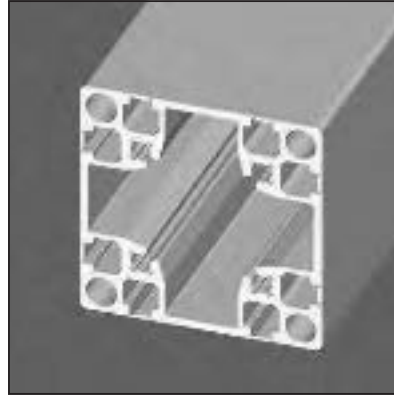
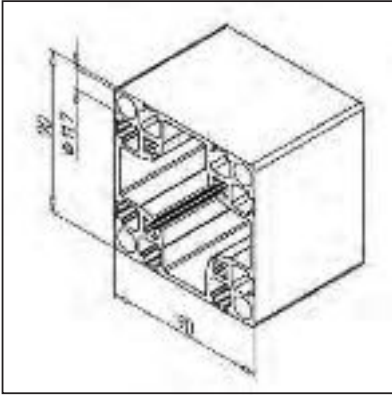
- General heavy duty constructions
- Linear guides LB as slide
- Central bore Ø 32 mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders

ASSEMBLY

- MiniTec power-lock fastener
- Angle 45 or 90
- Screw connection

PROFILE 90 X 90 G

part no. 20.1082/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	195,271 cm ⁴
- Iy =	195,271 cm ⁴
- wx =	43,393 cm ³
- wy =	43,393 cm ³
- Weight	5,329 kg/m
- Length	6 m
- Packing unit	12 m

APPLICATIONS

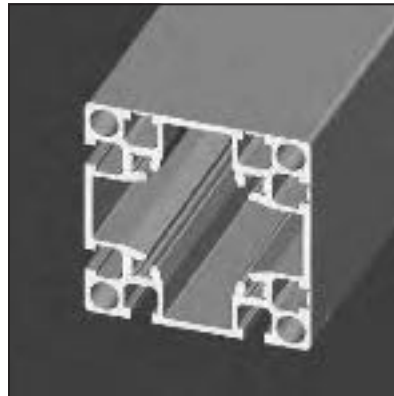
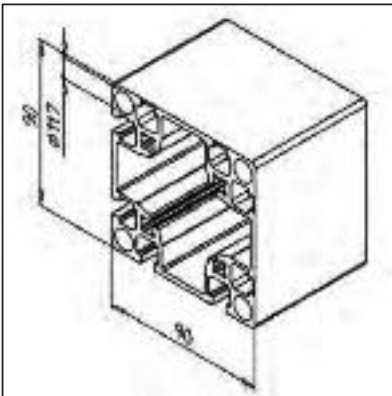
- Groove cover can be torn out
- General constructions, particularly useful in the food industry, in medical engineering and for the filling of beverages, where strict hygienic standards are set
- Cavity is suitable for counterweights

ASSEMBLY

- MiniTec power-lock fastener
- 8 closed t-slots can be opened up to any length with the tear-off lever **part no. 26.0815/0**

PROFILE 90 X 90 2 G

part no. 20.1044/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	190,169 cm ⁴
- Iy =	190,178 cm ⁴
- wx =	41,825 cm ³
- wy =	42,707 cm ³
- Weight	5,217 kg/m
- Length	6 m
- Packing unit	12 m

APPLICATIONS

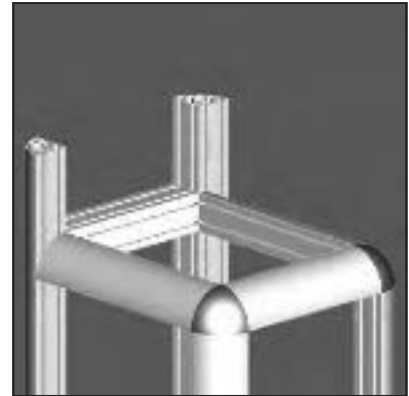
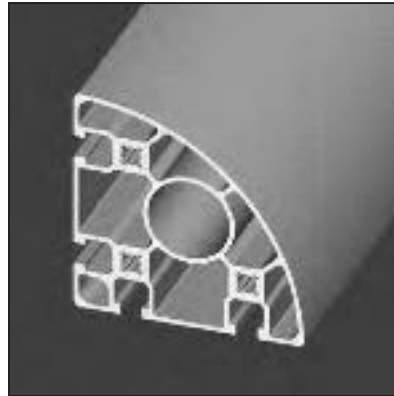
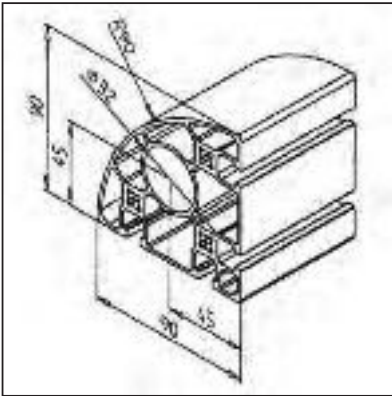
- Groove cover can be torn out
- General constructions, particularly useful in the food industry, in medical engineering and for the filling of beverages, where strict hygienic standards are set
- Cavity is suitable for counterweights

ASSEMBLY

- MiniTec power-lock fastener
- 4 closed t-slots can be opened up to any length with the tear-off lever **part no. 26.0815/0**

PROFILE 90 R 90°

part no. 20.1091/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	113,389 cm ⁴
- Iy =	113,389 cm ⁴
- wx =	21,874 cm ³
- wy =	21,874 cm ³
- Weight	4,265 kg/m
- Length	6 m
- Packing unit	12 m

APPLICATIONS

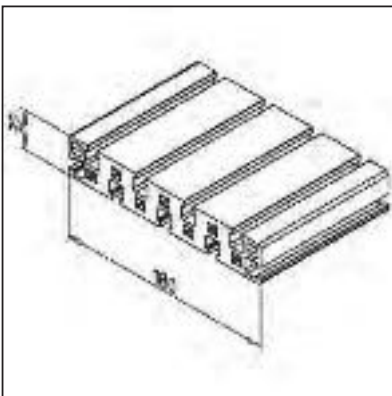
- Tables, frames
- General constructions

ASSEMBLY

- MiniTec power-lock fastener
- Angle
- Cross bolt-fastener
- Bolt-fastener
- End cap, **part no. 22.1021/1**
- Base and transport plate M10 - M20
- Corner Connection 90 R 90°

PROFILE 32 X 180

part no. 20.1016/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	33,804 cm ⁴
- Iy =	843,825 cm ⁴
- wx =	21,068 cm ³
- wy =	93,758 cm ³
- Weight	9,539 kg/m
- Length	6 m
- Packing unit	6 m

APPLICATIONS

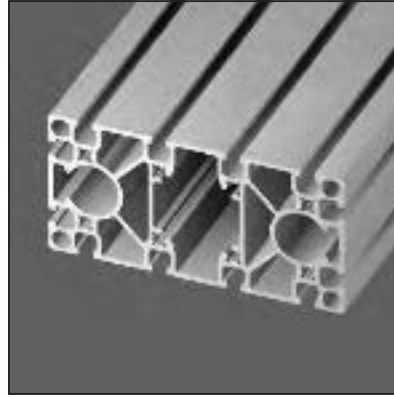
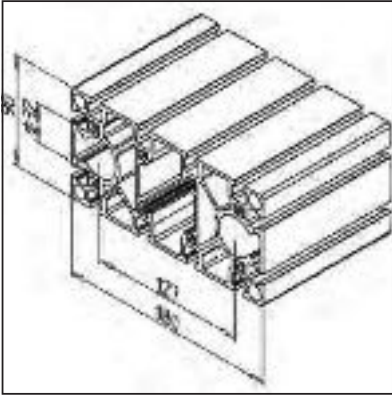
- Slides for MiniTec- linear system LR
- Clamping surfaces
- Base plate
- Heavy duty constructions

ASSEMBLY

- MiniTec power-lock fastener
- Angle 45 GD-Z or 90 GD-Z
- Screw connection

PROFILE 90 X 180 S

part no. 20.1013/0



TECHN. DATA / ITEMS SUPPLIED

- I _x =	376,784 cm ⁴
- I _y =	1421,865 cm ⁴
- w _x =	83,729 cm ³
- w _y =	157,983 cm ³
- Weight	11,482 kg/m
- Length	6 m
- Packing unit	6 m

APPLICATIONS

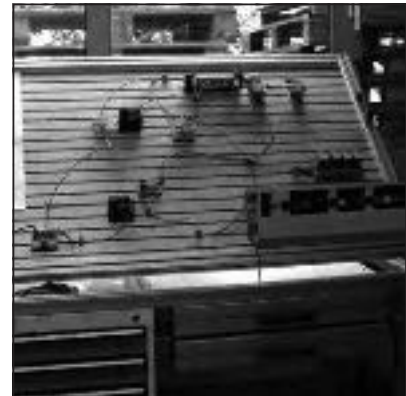
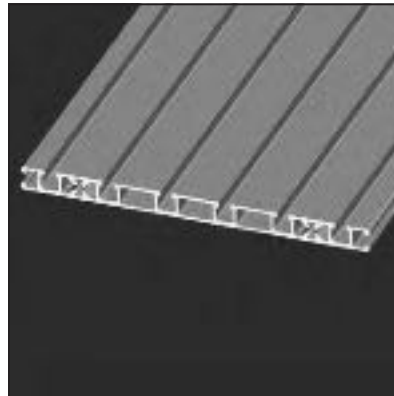
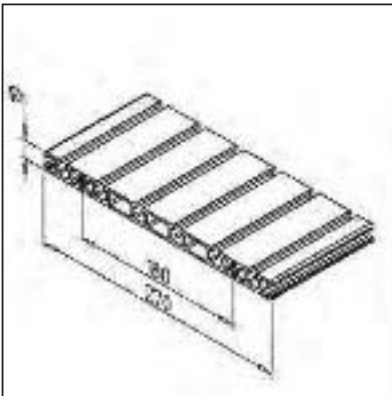
- General heavy duty constructions
- Linear guiding LB as slide
- Central bore Ø 32 mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders

ASSEMBLY

- MiniTec power-lock fastener
- Angle 45 or 90
- Screw connection

PROFILE 270 X 19

part no. 20.1077/0



TECHN. DATA / ITEMS SUPPLIED

- I _x =	10,348 cm ⁴
- I _y =	1352,197 cm ⁴
- w _x =	10,167 cm ³
- w _y =	100,162 cm ³
- Weight	5,612 kg/m
- Length	6 m
- Packing unit	18 m

APPLICATIONS

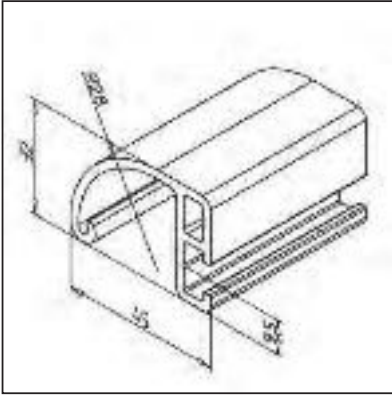
- Table tops
- Workstations
- Can be used for breadboard constructions in schooling and training projects - i.e. pneumatic, electronics, automatic-control with universal clamping socket, **part no. P20060/0**
- Demonstration units

ASSEMBLY

- MiniTec power-lock fastener
- Screw connection
- Bolt-fastener 15, **part no. 21.1024/0**

HANDLE PROFILE

part no. 20.1045/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	3,531 cm ⁴
- Iy =	7,654 cm ⁴
- wx =	1,985 cm ³
- wy =	2,856 cm ³
- Weight	0,890 kg/m
- Length	6 m

APPLICATIONS

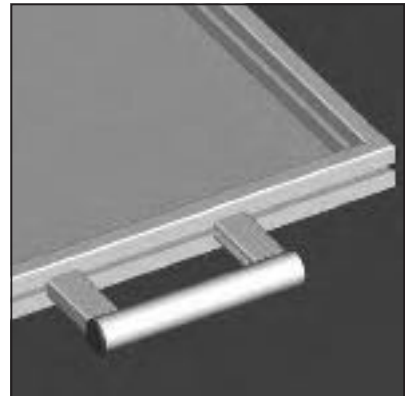
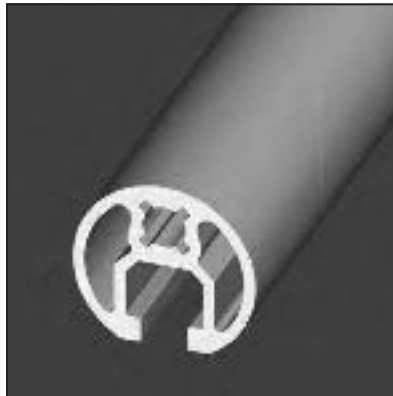
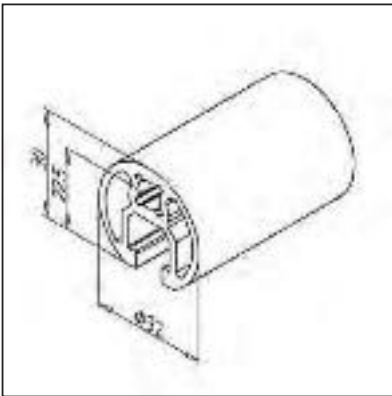
- Handles of different lengths
- Edges
- Table edges
- Cover ledge for cable, pneumatic conducts

ASSEMBLY

- Screw connection
- Mounting angle
- Lateral cover with end caps left **part no. 22.1055/0** and right **part no. 22.1054/0**

HANDLE PROFILE 32

part no. 20.1088/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	2,601 cm ⁴
- Iy =	2,636 cm ⁴
- wx =	1,682 cm ³
- wy =	1,649 cm ³
- Weight	0,911 kg
- Length	6 m
- Packing unit	84 m

APPLICATIONS

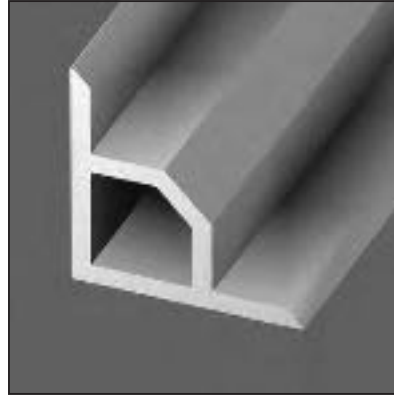
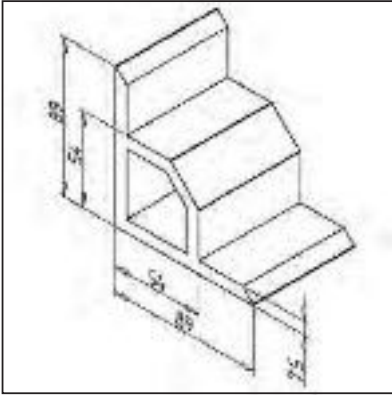
- Handles of different lengths for doors, drawers, handrails
- Edging of panel elements or posters up to 8 mm
- Horizontal profile for fixing of small roller conveyors

ASSEMBLY

- MiniTec power lock fastener
- Angle 19 GD, **part no. 21.1107/0**
- Bolt-fastener
- Screw connection
- Lateral cover with end cap for handle profile 32

ANGULAR PROFILE 89 X 89

part no. 20.1011/0

**TECHN. DATA / ITEMS SUPPLIED**

- Ix =	105,416 cm ⁴
- Iy =	105,416 cm ⁴
- wx =	17,413 cm ³
- wy =	17,413 cm ³
- Weight	4,868 kg/m
- Length	3 m
- Packing unit	36 m

APPLICATIONS

- Consoles
- Support surface
- Material for special mounting angles

ASSEMBLY

- Screws M8 x 20 and square nuts M8

PROFILE CAPS

SELF-LOCKING PROFILE CAPS FOR ALUMINIUM PROFILES

Profile caps for aluminium profiles fulfill important functional duties: Due to unprotected profile ends dirt and debris may intrude into the inside of the profiles which can lead to hygienic problems – not only in sensitive areas. Moreover, unprotected aluminium profiles do have sharp burrs – a possible but avoidable source for work accidents. All this is prevented by profile caps: The profiles remain clean and protected, the risk of cut injuries is minimized. Not least, they harmoniously complete the optics of the aluminium profiles.

However, in practice it is irritating for users if the mentioned functions are not ensured because of loose profile caps. MiniTec has recognized this problem and extends its portfolio with self-locking profile caps. These are fixed perma-

nently by means of an integrated lockplug. The resulting connection prevents the cap from being dissolved from the profile. It remains at the intended place – even under hardest stress and the most extreme conditions.

True to its motto “The Art of Simplicity” the use of MiniTec profile caps is quite simple: The lock pin is driven shortly inside the profile by means of a rubber hammer. Thereby, drillings or any further treatment becomes redundant. Additionally, removing the cap is just as simple as installing it: With the help of a pin of four millimeters of diameter the plugs can be struck inside the profile for the caps to be detached. Spare plugs that make the once removed profile caps reusable again are available separately.



Insert Cap



Hammer the pin



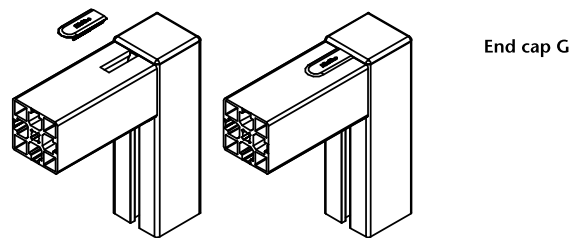
Profile stays clean and secured

PROFILE SECTION	ABS GREY	AL ANODIZED (fastening screw included)	VA
PROFILE SERIES MINI (Thickness 2 mm)			
19x11	22.1030/1		
19x19	22.1031/1		
PROFILE SERIES 30 (Thickness 3 mm)			
23x16	22.0994/1*		
16x30	22.0981/1*		
23x23	22.0992/1*		
23x30	22.0993/1*		
30x30	22.1146/1*	22.1149/2	
30R90°	22.1144/1*		
30R60°	22.1169/1*		
30R45°	22.1168/1*		
30R30°	22.1167/1*		
30x60	22.1134/1*		
60x60x30	22.0978/1*		
PROFILE SERIES 45 (Thickness 3 mm)			
19x32	22.1220/1*	22.1060/2	
19x45	22.1001/1*	22.1064/2	
45x19	22.1136/1*		
32x32	22.1002/1*	22.1062/2	
32x32 clamp profile	22.1032/1	22.1062/2	
45x32	22.1003/1*	22.1065/2	
45x32 clamp profile	22.1046/1	22.1065/2	
45x45	22.1004/1*	22.1067/2	22.1067/5
45R4	22.1137/1*		
45R90°	22.0996/1*	22.0996/2	
45R60°	22.1018/1*	22.1018/2	
45R45°	22.1017/1*	22.1017/2	
45R30°	22.1019/1*	22.1019/2	
Profile height adj.	22.0979/1		
45/45°	22.0995/1*		
45/22,5°	22.1052/1		
19x90	22.1014/1		
90x32	22.1061/1		
45x90	22.1007/1*	22.1068/2	
45x60	22.1058/1		
60x60	22.1057/1		
45x135	22.1049/1		
45x180	22.1048/1		
90x90	22.1069/1	22.1008/2	
90R90°	22.1021/1		
32x180	22.1059/1		
90x180	2x 22.1069/1	2x 22.1008/2	
270x19	3x 22.1014/1		
Handle profile	right 22.1054/0 left 22.1055/0		
Handle profile 32	22.1162/1*		

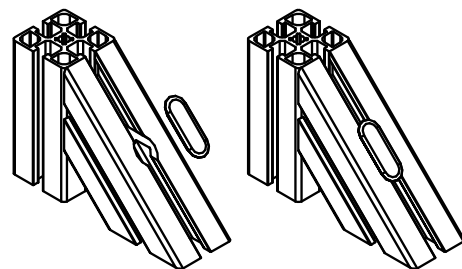
* With pin.

ACCESSORIES	MATERIAL	PART NO.
Flat head screw M8x10 for fixing caps made of aluminum or stainless steel	VA	21.1666/0
Replacement pins for caps with hammer taps (10 pack)	ABS grey	22.1009/1

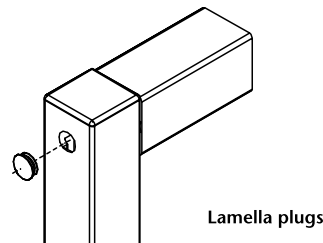
OTHER COVERS	MATERIAL	PART NO.
End cap G for G-Profile	PA6 grau	22.1056/0
End cap GL for G-Profile	PA6 grau	22.1208/1
Lamella plug 7	PE grau	22.1200/1
Lamella plug 9	PE grau	22.1201/1
Lamella plug 15	PE grau	22.1202/1
Lamella plug 22	PE grau	22.1209/1



End cap G

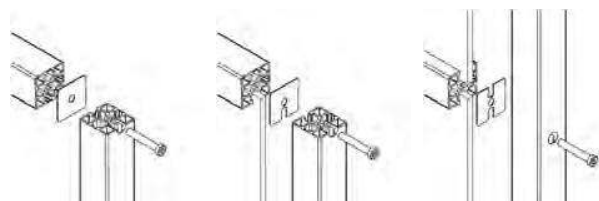


End cap GL



Lamella plugs

SEALING	MATERIAL	PART NO.
Seal plate 45	Silicone	24.1117/0
Seal plate 45 with slot	Silicone	24.1116/0
Seal plate 45 with double-slot	Silicone	24.1118/0



Seal plate 45

Seal plate 45 with slot

Seal plate 45 with double-slot

POWER-LOCK FASTENER

PROFILE CONNECTION WITHOUT MACHINING



Due to recent studies there is much optimization potential especially in connection technology for profile systems. The connection must be seen as a complete system.

The total cost of a connection is composed of a number of factors:

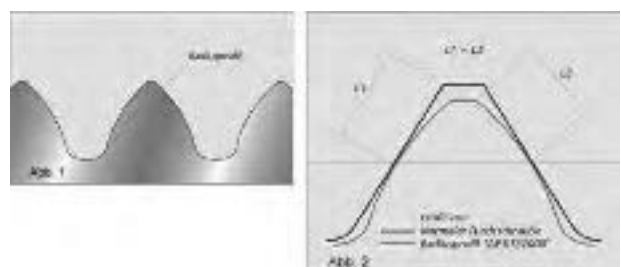
- Design and dimensioning of bores and threads
- Providing equipment and devices
- Procurement and management of drilling and threading tools
- Work Preparation
- Working time for drilling, threading
- Internal transport

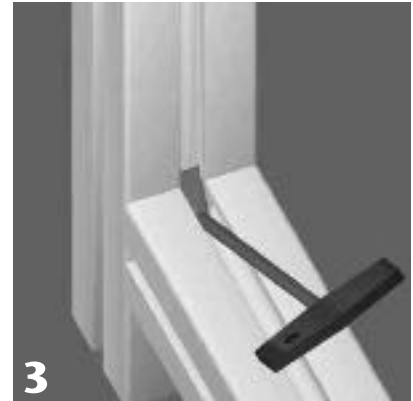
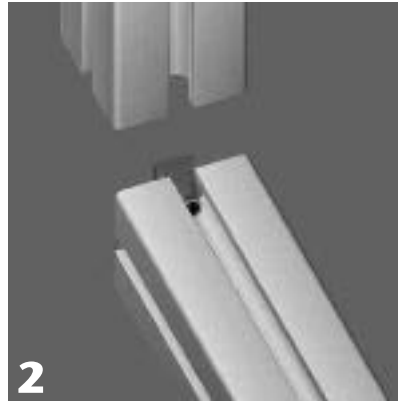
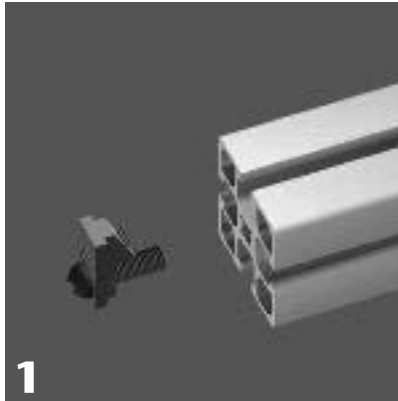
The decisive factor in this consideration is not the cost of the individual connectors. Fundamental cost factor is working time - both in design, production planning and workshop.

MiniTec power-lock fastener 45 SF

Apart from the cost and time advantage the MiniTec profile connector has numerous other benefits such as post-adjustability, ESD performance, ergonomic design and optical benefits. With self-tapping screws the MiniTec power-lock fastener has become even faster. The fastener is simply screwed on to the front side of the profile with the screw. With a standard cordless screwdriver this whole process takes a maximum of 3 seconds. There is no preparation for drilling, tapping, measuring or planning required.

Not only the economic superiority speaks for the MiniTec connector with self-tapping screw. Thanks to the trilobular socket shape combined with the radial profile shape of the thread flanks the new screws have low friction moments. The radial profile shape causes only little material displacement and reduces the amount of shaping work. Thus, the forming torque is lowered by up to 50%. This ensures controlled assembly and higher clamping forces with less clamping force scattering.





Easy three-step-assembly

ASSEMBLY

- 1 Slightly tighten pressure piece with screw M8 x 25 on the front side of the profile
- 2 Push profile 2 with its groove beneath the edges of the pressure piece until the desired position is reached
- 3 Tighten set screw M8 with hex screwdriver SW4.
Recommended tightening torque approximately 12 Nm

ADVANTAGES

- The corners of the profile connection remain free for panel elements
- The joint is invisible from the outside
- Secured against rotation
- Load capacity: 6000 N (UL Profile: 4000N)
- Cross connections can be easily implemented
- The compound is electrically conductive
- Ergonomically optimized

NAME	PART NO.	DESCRIPTION
Power-Lock fastener 45	21.1018/0	with filister screw M8/SW5
Power-Lock fastener 45 SF	21.0818/0	with self-tapping Torx screw M8/T40
Power-Lock fastener 45 H	21.1018/1	Cylindrical screw M8/SW5, Corrosion resistant version for use in corrosive environments
Power-Lock fastener 45 SF short	21.0020/0	with self-tapping Torx screw M8/T40, for profile connections with flush end cap
Power-Lock fastener 30	21.0014/0	with filister screw M8/SW5
Power-Lock fastener 30 SF	21.0016/0	with self-tapping Torx screw M8/T40
Power-Lock fastener 30 SF ESD	21.0037/0	with self-tapping Torx screw M8/T40

**TIP**

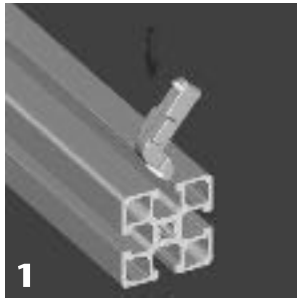
Impuls wrench part no. 26.0800/0
for joint-friendly work.

CROSS-CONNECTOR

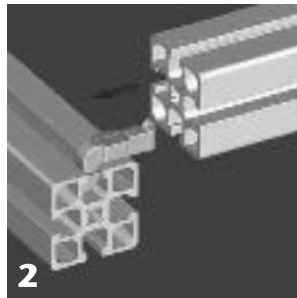
FRICITIONAL CONNECTION OF INTERSECTING PROFILES WITHOUT MACHINING



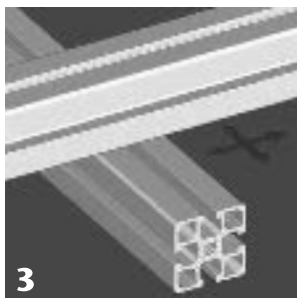
Both profiles are adjustable in direction of the groove.
Particularly suitable for the attachment of linear axes LR / LB to machine frames.



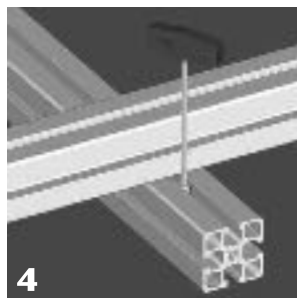
1



2



3



4

ASSEMBLY

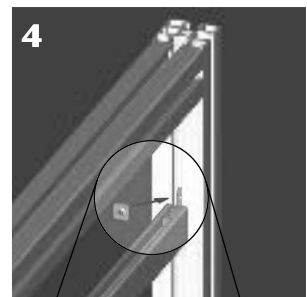
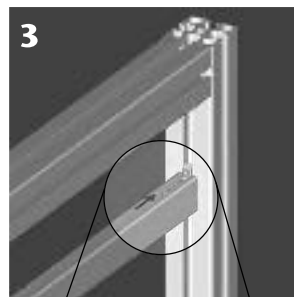
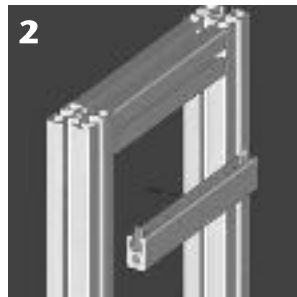
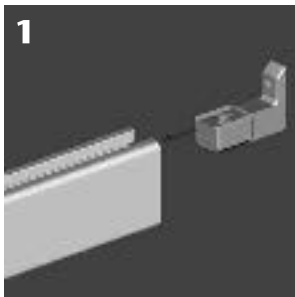
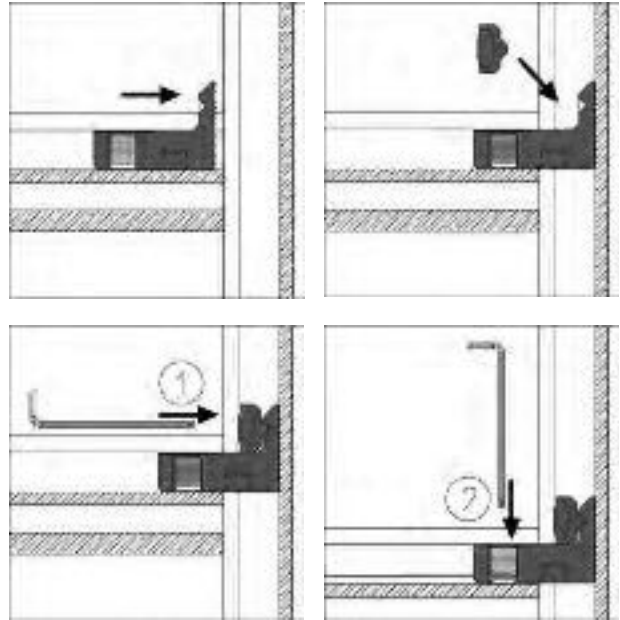
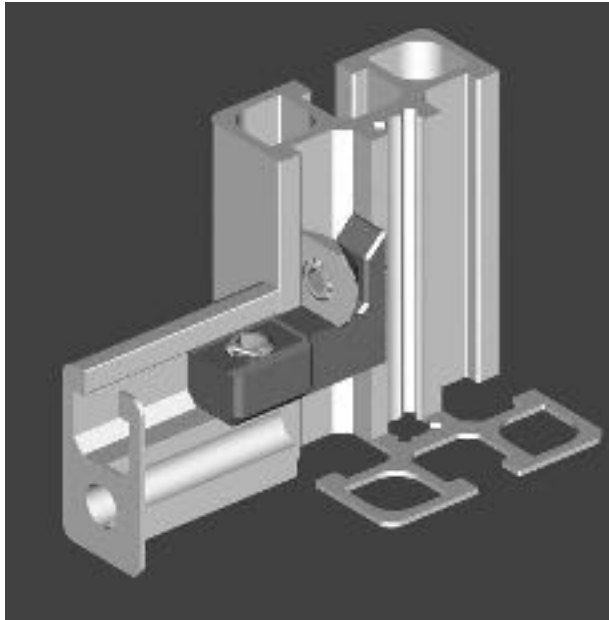
- 1 Swivel the connector into any existing base frame
- 2 Insert the profile to be connected over the connector
- 3 Position the brace profile
- 4 Tighten the set screw in the connector with a torque of 10 Nm

TIP

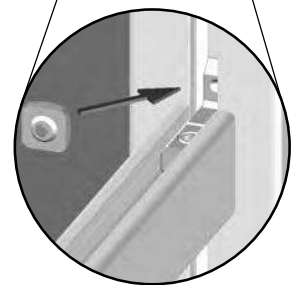
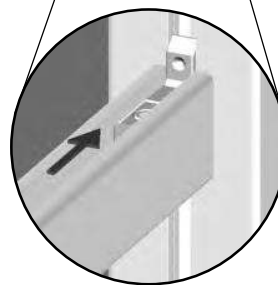
Slightly grease profiles at the contact points to avoid noise due to vibration.

POWER-LOCK FASTENER N

FOR SUBSEQUENT FITTING OF PROFILES INTO EXISTING FRAMES WITHOUT MACHINING

**ASSEMBLY**

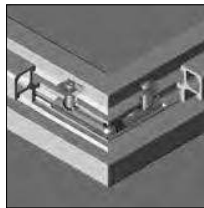
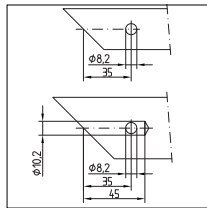
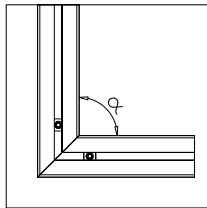
- 1** Insert Power-lock fastener N into profile
- 2** Set profile in the required position
- 3** Insert fastener in the existing profile
- 4** Slide nut over the L-shape end of the fastener and tighten with hex-key. Then tighten set screw (both 10 Nm).



MITRE CONNECTIONS

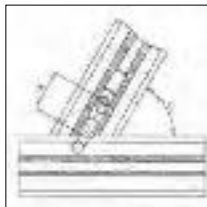
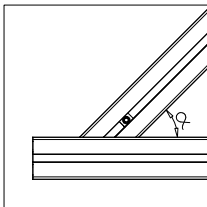
CONSTRUCTIONS WITH HIGH VISUAL DEMANDS

Mitre connections are used for high visual requirements on design. It should be noted that the capacity of these compounds are less than standard connectors. For heavily loaded structures mitre connections should not be used!



Mitre connector

for front side connection of profiles at any angle of 30° to 180°



Mitre connector N

for connecting profiles with the grooves of continuous profiles at any angle of 30° to 90°

NAME	PART NO.	DESCRIPTION
Mitre connector 45 for profiles series 30	21.1400/0	Drill Ø 10.2 mm bore in the profile core bore. Drill Ø 8.2 bore at the distance 36.5 mm from the profile end. Insert the mitre connector in both open profile ends, position the M8 square nut with the set screw, and tighten it.
Mitre connector 30 for profiles series 30	21.1890/0	Core bore needs no machining. Other installation steps like mitre connector 45.
Mitre connector N 45 for profiles series 45	21.1401/0	Drill Ø 10.2 mm bore in the profile core bore. Drill Ø 8.2 bore depending on the angle and at distance A from the profile end (see table). Insert the mitre connector in the open profile end, position the M8 square nut with the set screw and tighten it.
Mitre connector N 30 for profiles series 45	21.0945/0	Core bore needs no machining. Other installation steps like mitre connector N 45.

TIP

Drilling jig part no. 26.1050/0 for mitre connector 45
 Drilling jig part no. 26.1060/0 for mitre connector N45
 Drilling jig part no. 26.1063/0 for mitre connector 30
 Drilling jig part no. 26.1056/0 for mitre connector N30

Drilling jig for mitre connector N

Distance A (position of the lateral bore of the threaded pin) depends on the mitre angle. The exact amount is to be taken from the middle bore core drilling of the mitred profile to the middle of the drilling. To safely exclude dimensional errors and ensure the correct functioning of the connection, we recommend the use of our drilling jig for mitre connector N, part no. 26.1060/0.

Distances for common angles:

α	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°
A(mm)	21,0	22,9	24,8	25,9	27,0	27,6	28,2	28,6	29,0	29,2	29,4	29,45	29,5



Mitre connection N

Drilling jig for mitre connector

Distance A (position of the lateral bore of the threaded pin) for front-side connection of profiles is consistently 35 mm. The exact amount is to be taken from the middle bore core drilling of the mitred profile to the middle of the drilling. To safely exclude dimensional errors and ensure the correct functioning of the connection, we recommend the use of our drilling jig for mitre connector.



Use of MiniTec drilling jigs

Slide jig in central bore of the mitred profile to the stopper. Tighten with screw. Insert into profile with bore through the drilling guide inside the fixing screw.

BOLT AND BUTT FASTENER

SUBSEQUENT ASSEMBLY OF PROFILES INTO EXISTING FRAMES, EXTENSION OF PROFILES.

Bolt fastener

To compensate for the reduced capacity compared to our standard connector, bolt connectors should always be used in pairs. Note the weakening of the profile cross section.

Another criterion is the precise form of the connection bore. Deviations from the circular shape lead to reduction in the bearing surface of the connector. It is therefore necessary to process the connection bore on a milling machine.

This connection is not suitable for structures with air supply inside the profile (e.g. pneumatic applications)

Butt fastener

The processing of the profiles corresponds to processing for the bolt connectors. For the profile extension we recommend a combination of butt connectors and mounting strips made of steel.

Application

For rectangular connection of profiles

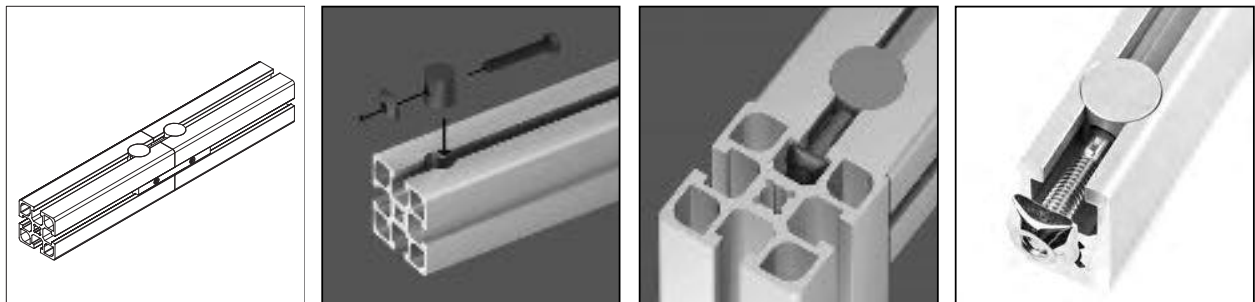
- Subsequent mounting of profiles into existing frames.
- Adjustable
- Extension of profiles

Processing

Step drilling $\varnothing 7 / \varnothing 20$ mm, resp. $\varnothing 9 / \varnothing 15$ mm depth: 16 mm, position: middle of the groove, 20 mm from profile end. Use drilling jig for positioning.

- 1 Insert hex screw M8 x 35 in bolt and – if possible – preassemble square nut into second profile
- 2 Insert bolt in step drilling and connect with square nut.
- 3 Pretighten with ball-headed key 5 A/F.
Final tightening with L-key 5 A/F.

- Recommended locking torque: 15 Nm
- Static load: 3500 N



NAME	PART NO.	DESCRIPTION
Bolt fastener 15	21.1024/0	For profile series 32 and narrow side 19 9x15 stepped bore, 16 mm deep, 22.5 mm from the end of profile
Bolt fastener 20	21.1021/0	For profile series 45 7x20 stepped bore, 16 mm deep, 22.5 mm from the end of profile
Butt fastener 20	21.1020/0	For profile series 45 7x20 stepped bore, 16 mm deep, 22.5 mm from both ends of profile



Drilling jig part no. 26.1092/0 for correct position of the stepped bore

SCREW CONNECTION

FORM-LOCKING CONNECTIONS WHICH MUST BE SECURED AGAINST DISLOCATION.

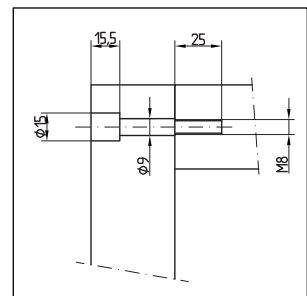
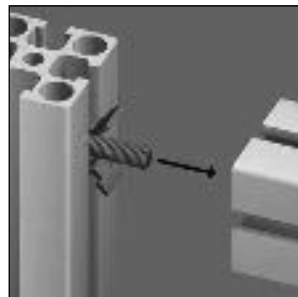
**Application**

- Constructions with high dynamic loads

Processing

Thread M8; step drilling $\varnothing 9 / \varnothing 15$ mm with drilling jig
Part no. 26.1092/0 for insert screw M8 x 50

- Position anti-twist lock in the groove
- Push the screw through anti-twist lock
- Screw in and tighten the screw into threaded connection profile
- Recommended locking torque: 20 Nm
- Static load: 18000 N



Stepped bore

TIP

Drilling jig part no. 26.1092/0
for correct position of stepped bore

MOUNTING ANGLES

EASY INSTALLATION WITHOUT MACHINING



- Angle aluminum die casting, powder coated, grey**
- No processing
 - retrofitting of profiles possible
 - adjustable



- Optional with cover**
- Caps made of oil resistant ABS, grey



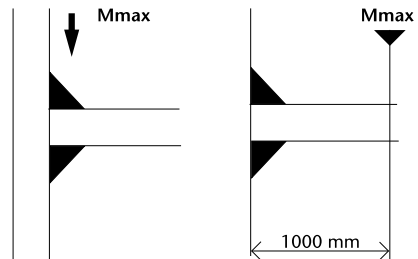
- ESD version**
- without powder coating
 - with ESD square nuts Z

Assembly

- Use mounting material from fastening kit.

LOAD CAPACITY

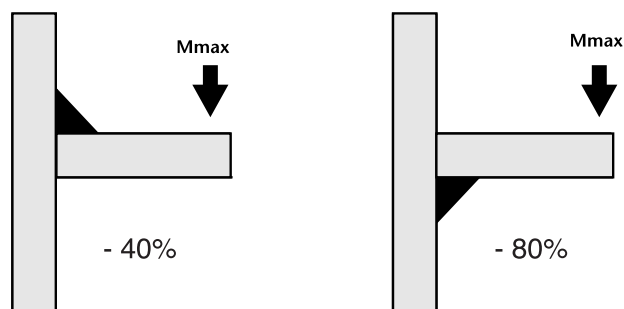
ANGLE	NUMBER OF SCREWS	Mmax (N)	Mmax (Nm)
Angle 19	2	3.600	280
Angle 25	2	3.600	280
Angle 45	2	3.600	280
Angle 45x90	4	7.200	560
Angle 90	8	14.400	1.120



All values include double safety.

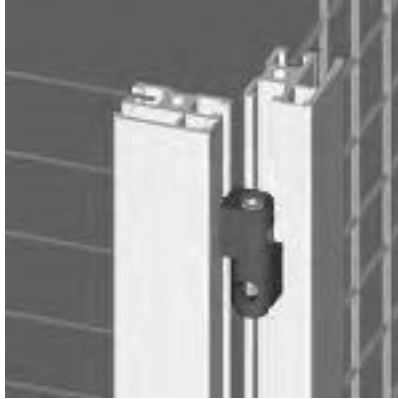
These values are valid only for angles mounted in pairs

If used one-sided, the load reduces as follows:

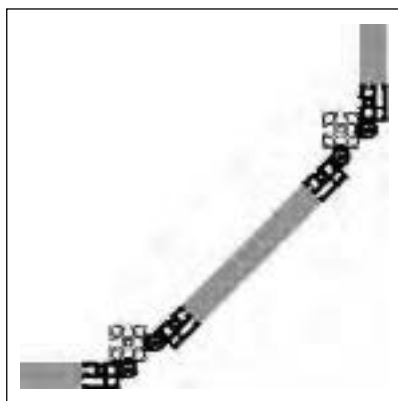
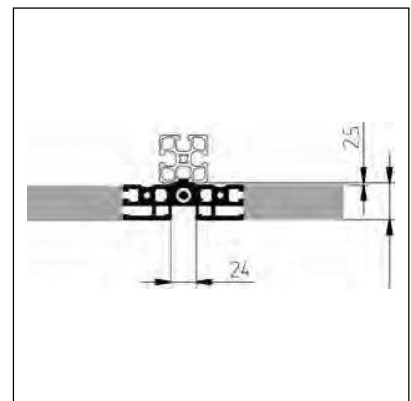
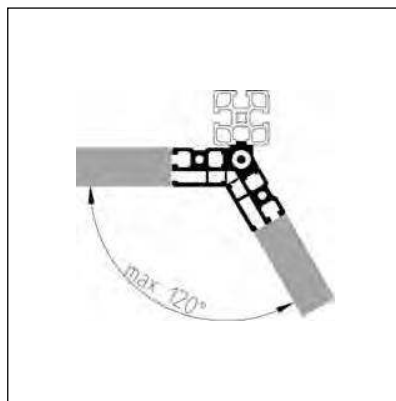
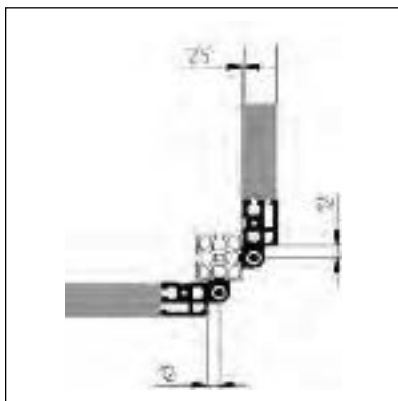


PROTECTIVE FIELD SUSPENSION, ADJUSTABLE ANGLE

CONNECTING PROTECTION FIELDS



MOUNTING POSSIBILITIES



SCREWS

OTHER STANDARDS AND DIMENSIONS ARE AVAILABLE ON REQUEST

CYLINDRICAL SCREWS

M8 with flat head and hexagon socket



THREAD	GALVANIZED	STAINLESS
M08 x 12	21.1264/0	
M08 x 16	21.1200/0	21.1200/1
M08 x 18	21.1268/0	
M08 x 20	21.1202/0	21.1202/2
M08 x 22	21.1280/0	21.2017/0
M08 x 24	21.1269/0	
M08 x 25	21.1204/0	21.1204/1
M08 x 30	21.1206/0	21.1206/1
M08 x 35	21.1208/0	21.1208/1
M08 x 40	21.1210/0	21.1210/1
M08 x 45	21.1211/0	
M08 x 50	21.1212/0	21.1212/1
M08 x 55	21.1877/0	
M08 x 60	21.1214/0	
M08 x 65	21.1299/0	
M08 x 70	21.1282/0	
M08 x 75	21.1392/0	
M08 x 80	21.1225/0	
M08 x 90	21.1226/0	
M08 x 100	21.1662/0	

M6 with flat head and hexagon socket

THREAD	GALVANIZED	STAINLESS
M06 x 12	21.1143/0	21.1143/1
M06 x 14	21.1367/0	
M06 x 16	21.1238/0	21.1238/1
M06 x 18	21.1239/0	
M06 x 20	21.1240/0	21.1340/1
M06 x 22	21.1265/0	
M06 x 25	21.1242/0	21.1242/1
M06 x 30	21.1243/0	21.1243/1
M06 x 35	21.1245/0	21.1693/0
M06 x 40	21.1247/0	21.1247/1
M06 x 45	21.1172/0	
M06 x 50	21.1171/0	21.1171/1
M06 x 55	21.1248/0	21.1248/1
M06 x 60	21.1154/0	
M06 x 65	21.1868/0	
M06 x 70	21.1591/0	

M5 with flat head and hexagon socket

THREAD	GALVANIZED	STAINLESS
M05 x 08	21.1193/0	
M05 x 10	21.1279/0	
M05 x 12	21.1220/0	21.1220/1
M05 x 16	21.1235/0	
M05 x 20	21.1222/0	
M05 x 25	21.1224/0	21.1224/1
M05 x 30	21.1237/0	21.1237/1
M05 x 35	21.2195/0	
M05 x 40	21.1284/0	21.1284/1
M05 x 45	21.1219/0	
M05 x 50	21.1691/0	
M05 x 55	21.1353/0	

COUNTERSUNK SCREWS

M8 with hexagon socket



THREAD	GALVANIZED	STAINLESS
M08 x 10	21.1552/0	21.1550/0
M08 x 12	21.1263/0	
M08 x 16	21.1513/0	21.1513/1
M08 x 20	21.1514/0	21.1514/1
M08 x 25	21.1520/0	
M08 x 30	21.1516/0	
M08 x 35	21.1947/0	
M08 x 40	21.1547/0	
M08 x 45	21.1645/0	
M08 x 50	21.1517/0	21.1517/1
M08 x 55	21.1546/0	
M08 x 60	21.1523/0	
M08 x 65	21.1949/0	
M08 x 70	21.1950/0	
M08 x 90	21.1946/0	

M6 with hexagon socket

THREAD	GALVANIZED	STAINLESS
M06 x 10	21.2219/0	21.2219/1
M06 x 12	21.1518/0	
M06 x 16	21.1506/0	21.1506/1
M06 x 20	21.1507/0	
M06 x 25	21.1566/0	
M06 x 30	21.1508/0	
M06 x 35	21.1509/0	
M06 x 40	21.1510/0	
M06 x 45	21.1951/0	
M06 x 50		21.2236/1
M06 x 55	21.1511/0	
M06 x 60	21.1512/0	
M06 x 65	21.2156/0	
M06 x 70	21.2134/0	

M5 with hexagon socket

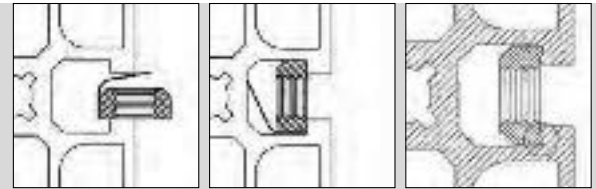
THREAD	GALVANIZED	STAINLESS
M05 x 10	21.1532/0	
M05 x 12	21.1543/0	21.1595/0
M05 x 14	21.1519/0	
M05 x 16	21.1503/0	21.1503/1
M05 x 18	21.1537/0	
M05 x 20	21.1504/0	
M05 x 25	21.1505/0	
M05 x 30	21.1482/0	
M05 x 35	21.2215/0	
M05 x 40	21.2127/0	
M05 x 45	21.1945/0	21.1945/1
M05 x 50	21.2123/0	

M4 with hexagon socket

THREAD	GALVANIZED	STAINLESS
M04 x 08	21.1500/0	
M04 x 10	21.1557/0	
M04 x 12	21.1948/0	
M04 x 16	21.1501/0	21.1501/1
M04 x 20	21.1502/0	
M04 x 25	21.1571/0	
M04 x 30	21.1203/0	

SQUARE NUTS, RHOMBUS NUTS AND SQUARE WASHERS

AVAILABLE FOR M3, M4, M5, M6 AND M8



with position-fixing

ESD conductive



Square nut M5 for profile series MINI

THREAD	GALVANIZED	STAINLESS
M5 x 08	21.1382/0	-



Square nut 30 with position-fixing

THREAD	GALVANIZED	STAINLESS
M8	21.1570/0	-
M6	21.1569/0	-
M5	21.1568/0	-
M4	21.1567/0	-

Square nuts can be pivoted at any point in the profile. When used in the vertical profile apply square nut with position-fixing. Can be pivoted like the standard square nut; the position-fixing holds the nut in the desired position.

Use square nuts M6 and M8 Z for ESD applications.

Square nuts

THREAD	GALVANIZED	STAINLESS
M8	21.1351/0	21.1351/1
M6	21.1330/0	21.1330/1
M5	21.1320/0	21.1320/1
M4	21.1310/0	21.1310/1
M3	21.1309/0	21.1309/1

Square nuts with position-fixing

THREAD	GALVANIZED	STAINLESS
M8	21.1351/2	21.1351/4
M6	21.1330/2	21.1330/4
M5	21.1320/2	21.1320/4
M4	21.1310/2	21.1310/4
M3	21.1309/2	21.1309/4

Square nut Z, ESD conductive

THREAD	GALVANIZED	STAINLESS
M8	21.1390/0	-
M6	21.1391/0	-
M5	21.1627/0	-

Square nut Z with position-fixing, ESD conductive

THREAD	GALVANIZED	STAINLESS
M8	21.1390/2	-
M6	21.1391/2	-
M5	21.1627/2	-



Square nut M8 L

THREAD	GALVANIZED	STAINLESS
M8	21.1368/0	-



Square nut M8 L with position-fixing

THREAD	GALVANIZED	STAINLESS
M8	21.1368/2	-



Rhombus nut F

(Thread M6 with pitch error for self-locking of screw connection)

THREAD	GALVANIZED	STAINLESS
M6	21.1354/0	-



Square washers

THREAD	GALVANIZED	STAINLESS
Square washer 8	21.1360/0	21.1360/1
Square washer 6	21.1363/0	-
Square washer 5	21.1362/0	-



Hex nut with flange, self-locking

THREAD	GALVANIZED	STAINLESS
M8	21.1334/0	-

SPECIAL SCREWS



Screws for power-lock fasteners

Fillister head screw	GALVANIZED	STAINLESS
M08 x 25	21.1189/0	-
M08 x 25 SF* self-tapping thread	21.1492/0	-



Screws for end caps VA/AL/LR

Flat head screw	GALVANIZED	STAINLESS
M08 x 10	-	21.1666/0

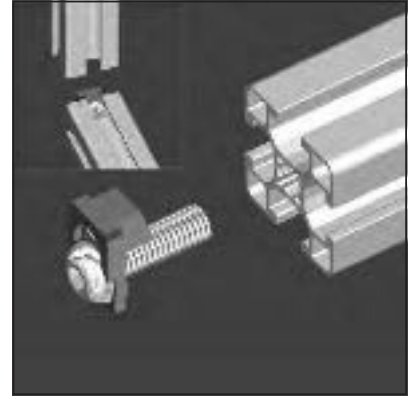
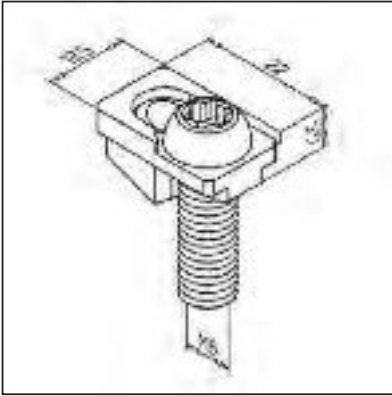


Screws for mounting surface elements

Flat head screw	GALVANIZED	STAINLESS
M06 x 12	21.2074/0	-
M06 x 16	21.1246/0	-
M06 x 20	21.1246/1	-

POWER-LOCK FASTENER 30 SF

part no. 21.0016/0



TECHN. DATA / ITEMS SUPPLIED

- Connecting element steel, zinc plated, chromated
- Self tapping torx screw T40
- Weight 0,020 kg
- **Power-Lock fastener 30 (standard) part no. 21.1014/0** with filister head screw A/F 5
- **Power-Lock fastener 30 SF ESD part no. 21.0037/0** with self - threading torx screw

APPLICATIONS

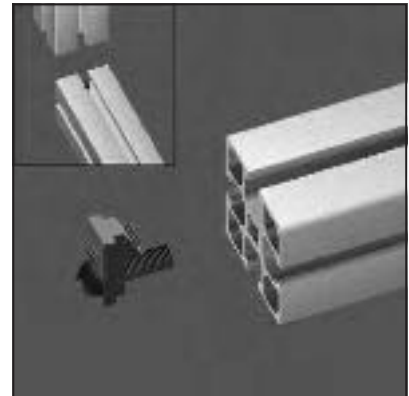
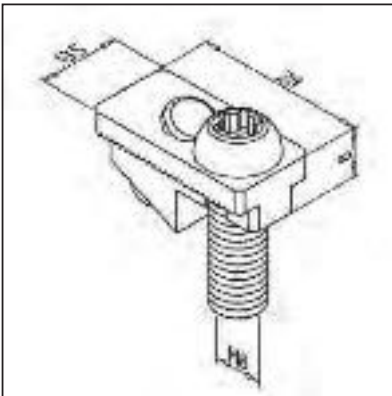
- Power-lock connection of profiles series 30
- Also suitable for cross joints

ASSEMBLY

- Mount fastener by hand onto profile face with torx wrench T40
- Tighten set screw M8 with key A/F 4
- Recommended locking torque: 12 Nm

POWER-LOCK FASTENER 45 SF

part no. 21.0818/0



TECHN. DATA / ITEMS SUPPLIED

- Connecting element steel, zinc plated, chromated
- 1 self tapping screw M8 x 25, galvanized
- Weight 0,029 kg
- **Power-Lock fastener 45 (standard) part no. 21.1018/0** with filister head screw A/F 5
- **Power-Lock fastener 45 H - stainless version part no. 21.1018/1** with cylinder head screw A/F 5

APPLICATIONS

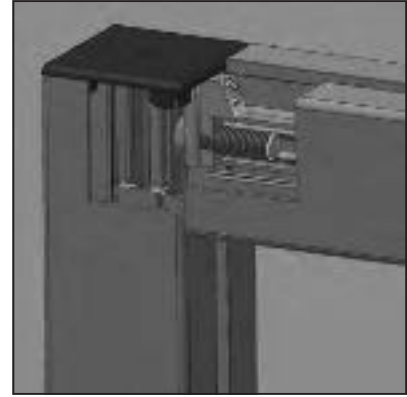
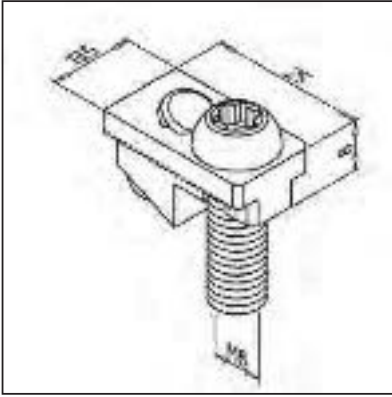
- Power-lock connection for all profiles, also suitable for crossjoints
- For larger profile sections several fasteners can be used
- **part no. 21.1018/0 and 21.0818/0** suitable for ESD applications

ASSEMBLY

- Mount fastener by hand onto profile face with torx wrench T40
- Tighten set screw M8 with key A/F 4
- Recommended locking torque 12 Nm

POWER-LOCK FASTENER 45 SF SHORT

part no. 21.0020/0

**TECHN. DATA / ITEMS SUPPLIED**

- 1 connecting element steel, zinc plated, chromated
- 1 fillister head screw M8 x 25
- Weight 0,028 kg

APPLICATIONS

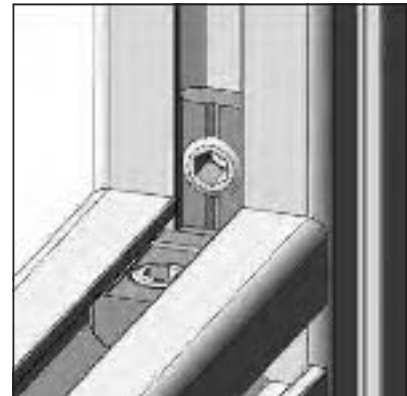
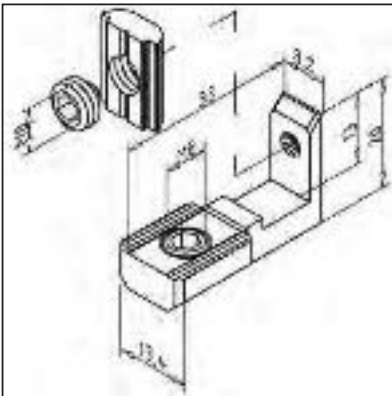
- For the Assembly of profiles with flush end cap

ASSEMBLY

- Mount fastener by hand onto profileface with torx wrench T40
- Tighten set screw M8 with key A/F 4
- Recommended locking torque 12 Nm

POWER-LOCK FASTENER N 30

part no. 21.0033/0

**TECHN. DATA / ITEMS SUPPLIED**

- 1 connecting element steel, zinc plated, chromated, with set screw M8
- 1 square nut M8 with pre-mounted screw
- Weight 0,025 kg

APPLICATIONS

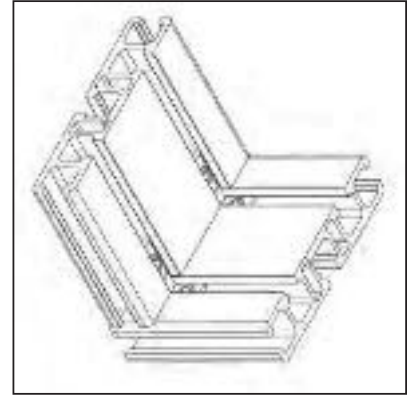
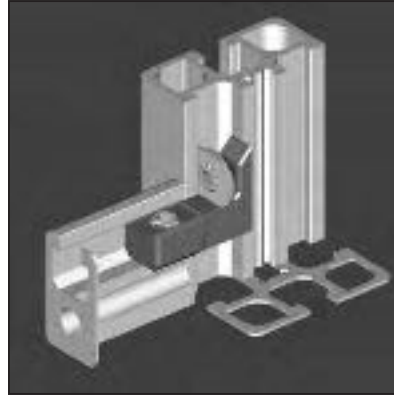
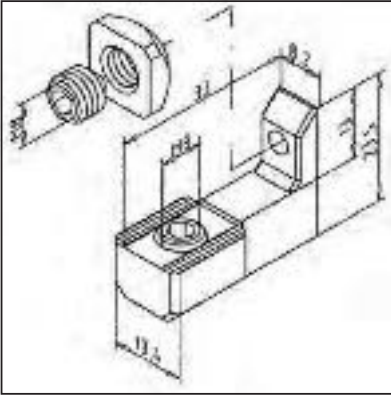
- Power-lock connection of profiles series 30
- Particularly for subsequent insertion of profiles into existing frames

ASSEMBLY

- Set profile with fastener in required position
- Slide square nut over the L-shape end of the fastener and tighten it
- Tighten set screw of fastener
- Recommended torque for both set screws: 10 Nm

POWER-LOCK FASTENER N 45

part no. 21.0918/0



TECHN. DATA / ITEMS SUPPLIED

- 1 connecting element steel, zinc plated, chromated, with set screw M8 x 10
- 1 Nut M8 with set screw M8 x 08
- Weight 0,036 kg/m

APPLICATIONS

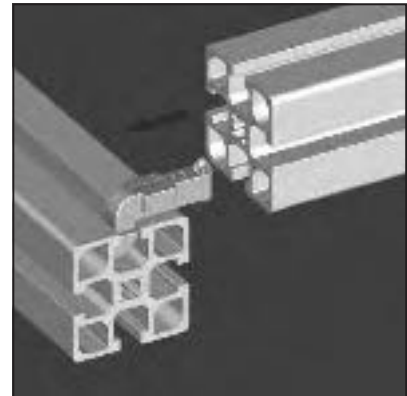
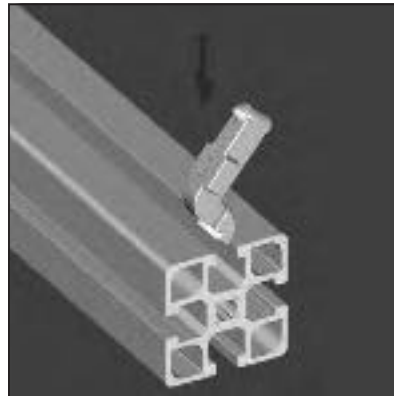
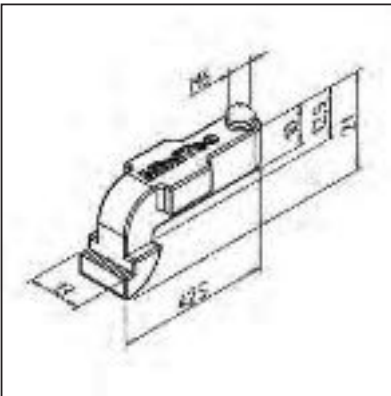
- Connects to all types of profiles
- Particularly for subsequent insertion of profiles into existing frames
- For profile sections bigger than 45 x 45 several fasteners can be used

ASSEMBLY

- Set profile with fasteners in required position
- Slide nut M8 over the L-shape end of the fastener and tighten with hex-key 4 A/F
- Tighten set screw M8 x 10 of fastener
- Recommended torque for both screws: 10 Nm

CROSS-CONNECTOR 45

part no. 21.0006/0



TECHN. DATA / ITEMS SUPPLIED

- 1 connecting element, steel, zinc plated, chromated, with preassembled set screw M6 x 16
- Weight 0,035 kg

APPLICATIONS

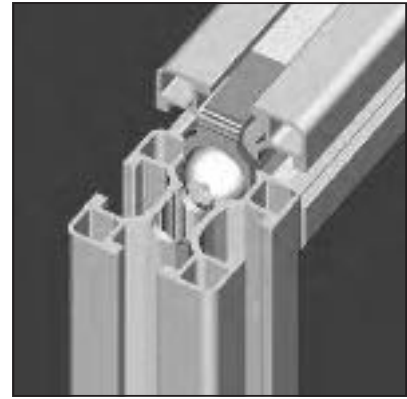
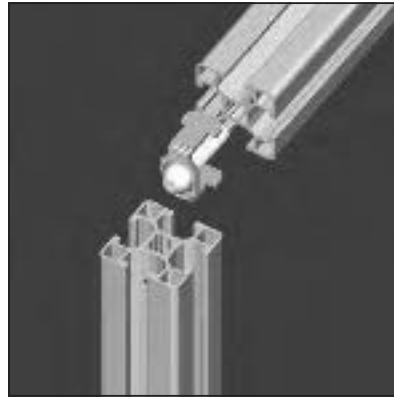
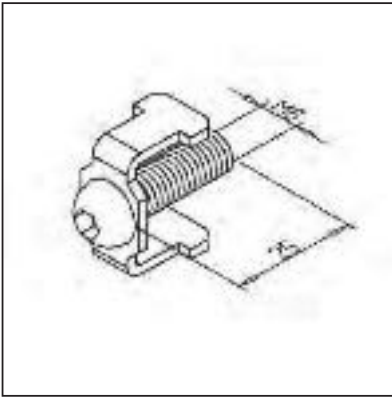
- For connecting all types of profile
- Particularly for subsequent insertion profiles into existing constructions
- For profile sections bigger than 45 x 45 several fasteners can be used
- Suitable for ESD applications

ASSEMBLY

- Swivel the connector into the existing frame
- Push the new profile over the connector
- Tighten set screw in connector with wrench size 3 to 10 Nm torque

SCREW-CONNECTION 30 N

part no. 21.1385/0

**TECHN. DATA / ITEMS SUPPLIED**

- Screw M8 x 25, zinc plated
- Locking device steel, zinc plated
- Weight 0,017 kg

APPLICATIONS

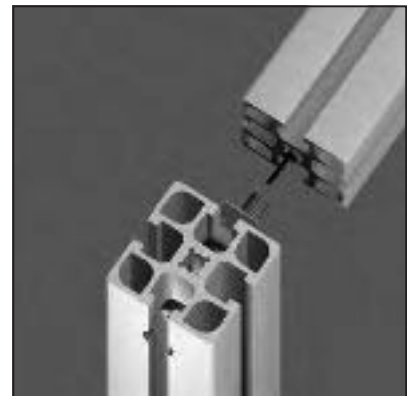
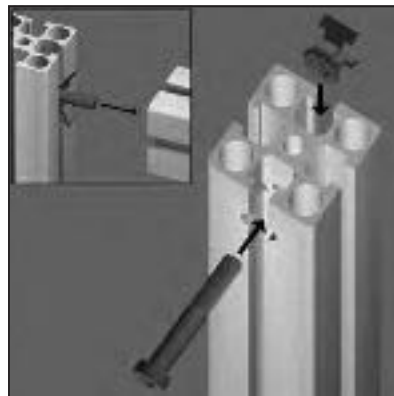
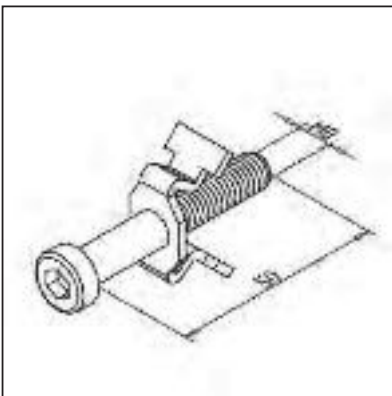
- Connection of profiles

ASSEMBLY

- Form thread M8 x 25 into core bore of the profile to be fixed
- Bore through-hole \varnothing 7 mm into second profile
- Preassemble screw and locking device to Profile 1 attach and insert into the groove by profile 2
- Tighten screw with allen-key through hole \varnothing 7 mm
- Recommended locking torque: 20 Nm

SCREW CONNECTION 45

part no. 21.1017/0

**TECHN. DATA / ITEMS SUPPLIED**

- Hex socket cap screw M8 x 50, zinc plated
- Locking device: steel, zinc plated
- Weight 0,027 kg

APPLICATIONS

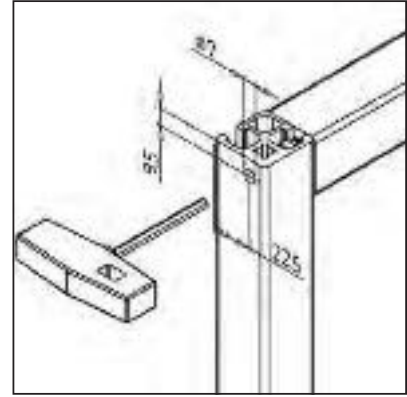
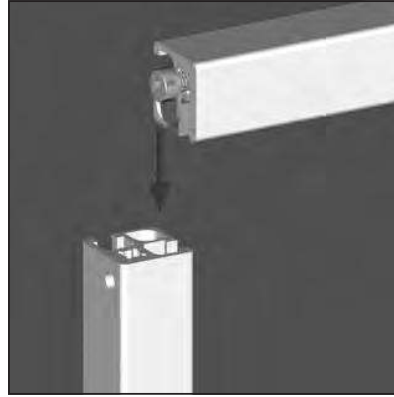
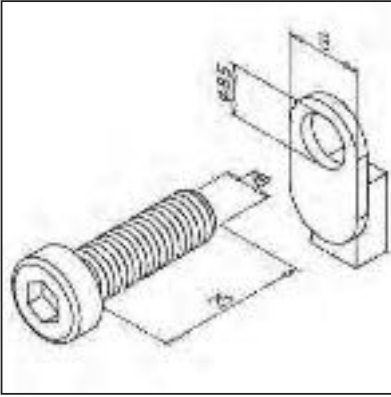
- Profile connections which must be secured against dislocation
- Secure connection all types of profiles

ASSEMBLY

- Form thread M8 x 25 into profile to be fixed
- Bore step-drilling \varnothing 9 x 15 at the position of required connection
- Insert the locking device into the groove and put the screw through the bore of the element
- Tighten the screw
- Recommended locking torque: 20 Nm
- see page 70

SCREW CONNECTION 32

part no. 21.1386/0



TECHN. DATA / ITEMS SUPPLIED

- Hex socket cap screw M8 x 25
- Anti-rotation device AL GD
- Weight 0,015 kg

APPLICATIONS

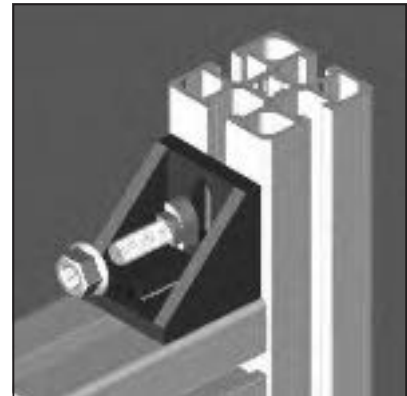
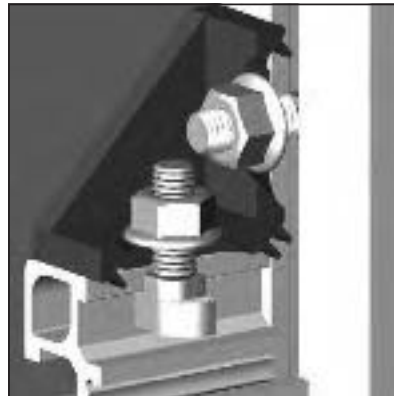
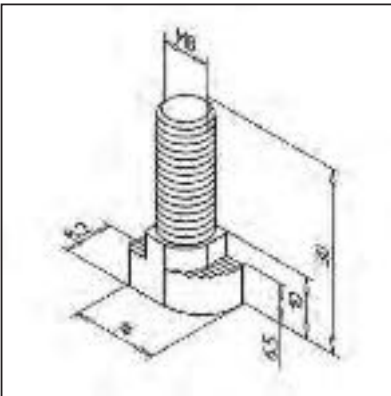
- Connection with effective anti-rotation function for profile series 32 and 19

ASSEMBLY

- Form a thread M8 with thread former
- Drill a through hole bore $\varnothing 7$ in profile 2
- Insert the anti-rotation device in profile 1 and connect with profile 2
- Tighten the screw with recommended locking torque: 20 Nm

HAMMER HEAD SCREW

part no. 21.1370/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- Weight 0,013 kg

APPLICATIONS

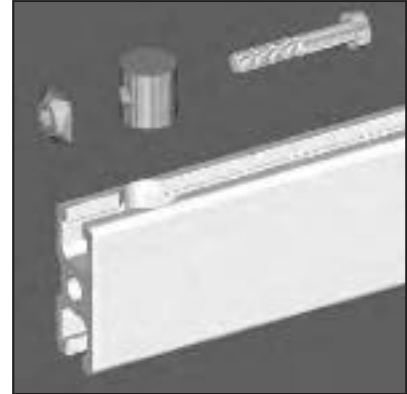
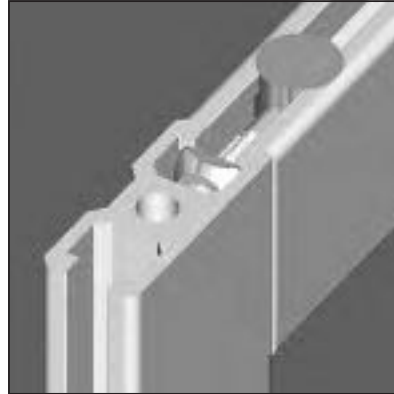
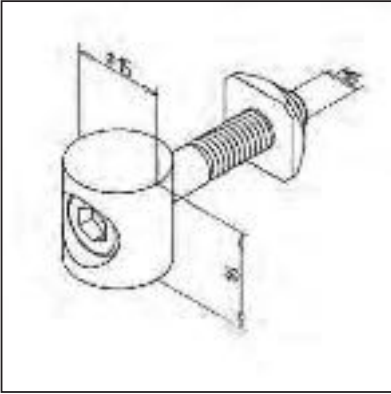
- Simple attachment of add-on parts or accessories on profiles
- Attachment of mounting angle
45 GD 45 x 90 GD-Z **part no. 21.1397/0**
45 GD **part no. 21.1133/0**
45 GD-Z **part no. 21.1349/0**
90 GD-Z **part no. 21.0978/0**

ASSEMBLY

- Insert hammer head screw into profile groove, tighten nut M8
- When tightening the nut, the hammer head will turn crosswise
- **Recommended nut:**
Self-locking flange hex nut **part no. 21.1334/0**

BOLT-FASTENER 15

part no. 21.1024/0



TECHN. DATA / ITEMS SUPPLIED

- 1 bolt aluminium
- Fastening kit
- Weight 0,032 kg

APPLICATIONS

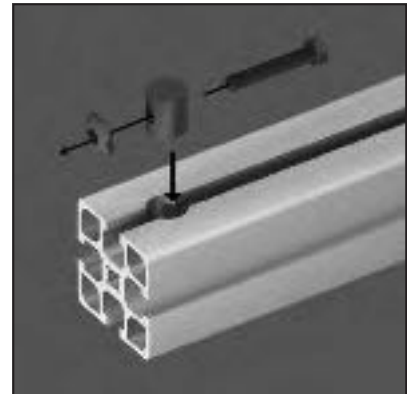
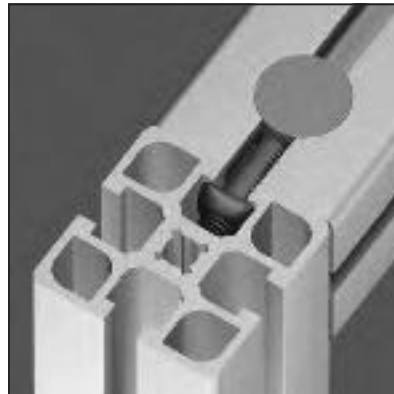
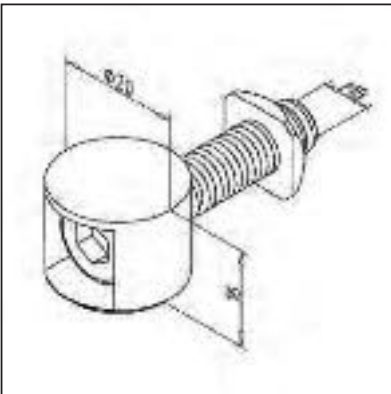
- For connection of profiles 19 and 32
- Particularly for subsequent insertion into existing constructions

ASSEMBLY

- Step drilling $\varnothing 9 \times 15$, depth 16 mm, positioned 22,5 mm from profile end to the middle of the groove
- Insert the bolt into the step drilling and pretighten by using ball-headed key 4 A/F
- Final tightening with L-key
- Recommended locking torque: 15 Nm
- See page 68

BOLT-FASTENER 20

part no. 21.1021/0



TECHN. DATA / ITEMS SUPPLIED

- 1 Bolt GD- Zn
- Fastening kit
- Weight 0,036 kg

APPLICATIONS

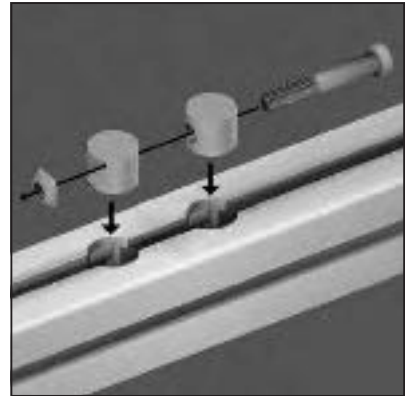
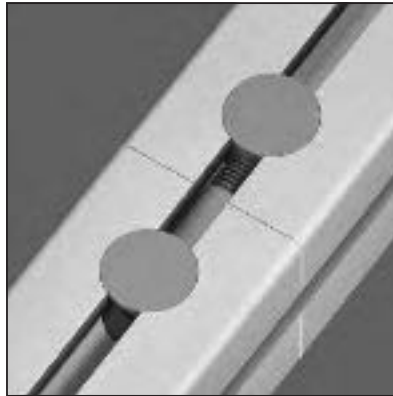
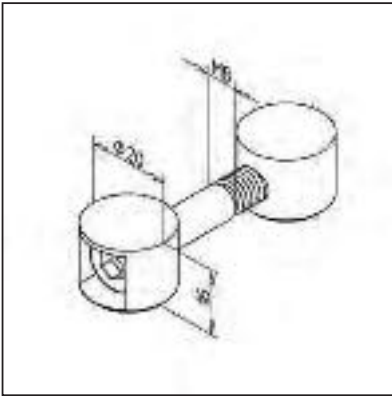
- For connection of all types of profiles
- Particularly for subsequent insertion into existing constructions
- For connection of profile 45 x 19

ASSEMBLY

- Step drilling $\varnothing 7 \times 20$ depth 16 mm, positioned 22,5 mm from profile end to the middle of the groove
- Insert the bolt into the step drilling and pretighten by using ball-headed key 5 A/F
- Final tightening with L-key
- Recommended locking torque: 15 Nm
- See page 68

BUTT FASTENER

part no. 21.1020/0



TECHN. DATA / ITEMS SUPPLIED

- 2 Bolts GD - Zn
- Fastening kit
- Weight 0,056 kg

APPLICATIONS

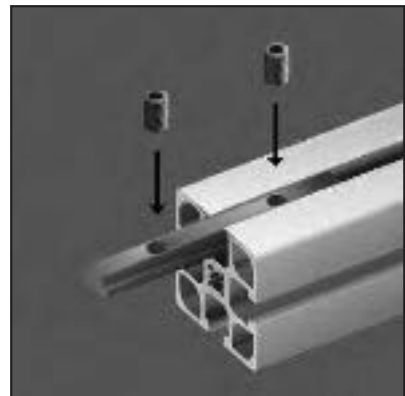
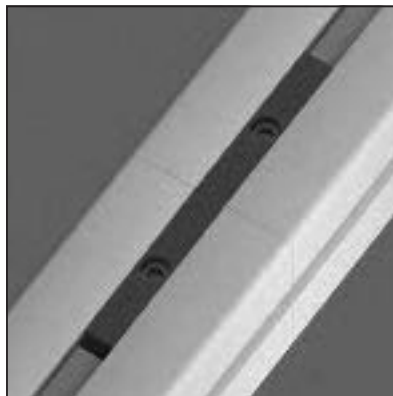
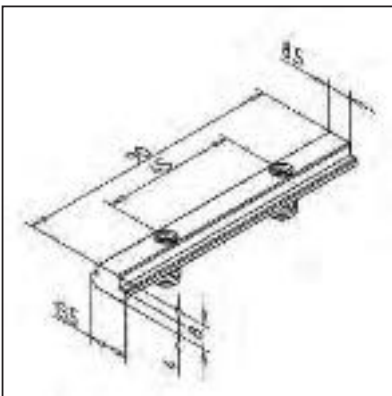
- Profile extension
- Butt connector

ASSEMBLY

- Step drilling $\varnothing 7 \times 20$ depth 16 mm, positioned 22,5 mm from profile end to the middle of the groove
- Insert the fastener and pretighten the screw with a ball-headed key 5 A/F
- Final tightening with L-key
- Recommended tightening torque 15 Nm
- See page 69

T-SLOT BAR 90

part no. 21.1029/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- 2 set screws M8 x 14, 4 A/F, zinc plated
- Weight 0,062 kg
- **Stainless version part no. 21.0992/0**

APPLICATIONS

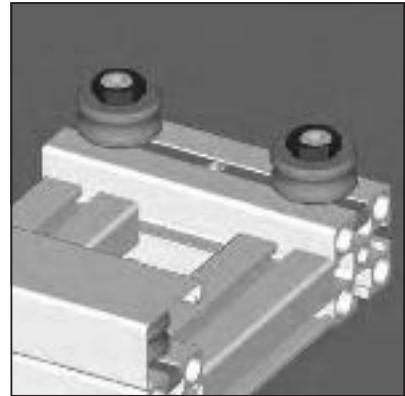
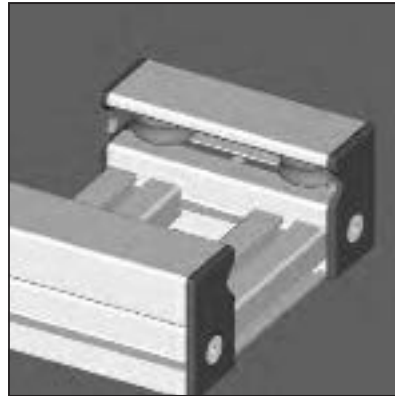
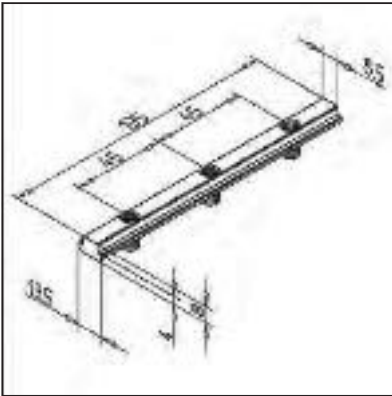
- Profile extension
- Fixing of bearings for linear guides

ASSEMBLY

- Insertion into the profile groove
- Clamp with set screw
- No processing required
- For larger profiles or heavy-duty applications use multiple t-slot bars

T-SLOT BAR 135

part no. 21.0988/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- 3 set screws M8 x 14, 4 A/F, zinc plated
- Weight 0,094 kg
- **Stainless version part no. 21.0987/0**

APPLICATIONS

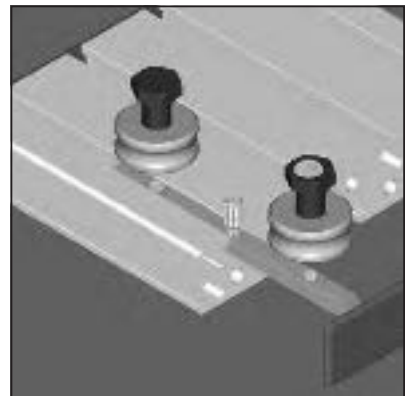
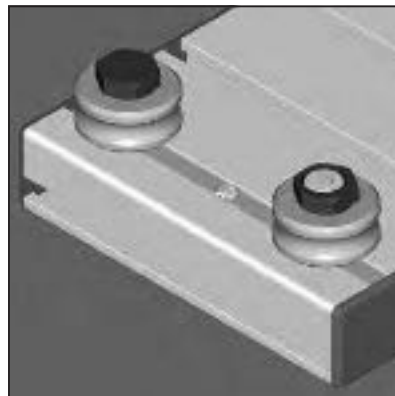
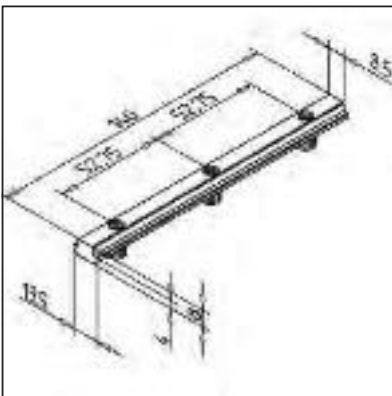
- Fixing of bearings in standard slide LW

ASSEMBLY

- Insertion into the profile groove
- No processing required

T-SLOT BAR 140

part no. 28.0026/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- 3 set screws M8 with hexagonal A/F 4, zinc plated
- Weight 0,096 kg
- **Stainless version part no. 28.0030/0**

APPLICATIONS

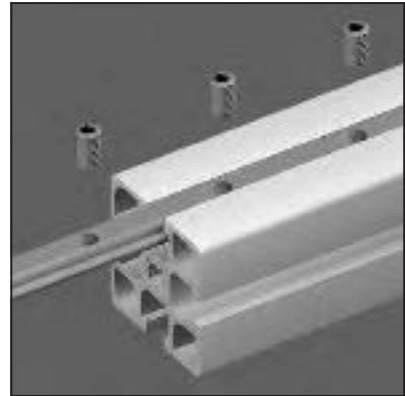
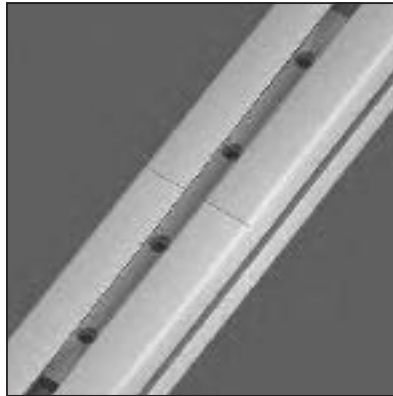
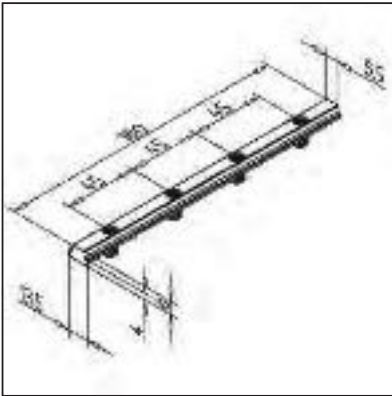
- Fixing of bearings in linear slides LW 32 E

ASSEMBLY

- Insertion into the profile groove
- No processing required

T-SLOT BAR 180

part no. 21.1101/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- 4 set screws M8 with hexagonal A/F 4, zinc plated
- Weight 0,125 kg
- **Stainless version part no. 21.0986/0**

APPLICATIONS

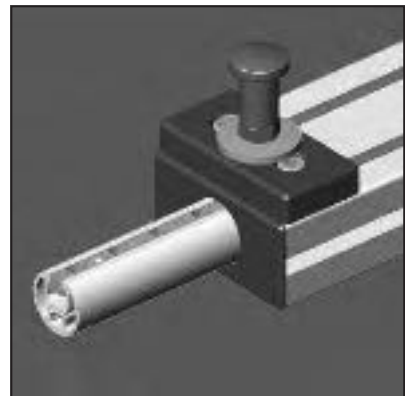
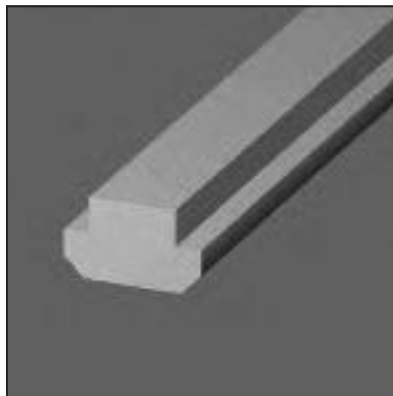
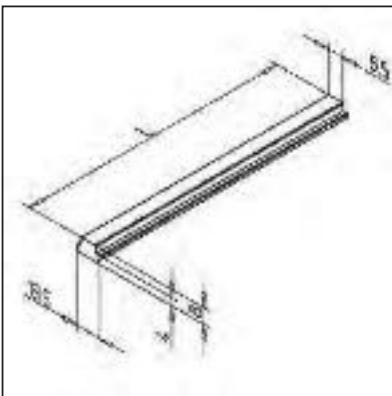
- Face fastening of profiles or ready-for-use elements
- Profile extension
- Fixing of bearings for linear guides

ASSEMBLY

- Insertion into the profile groove
- No processing required
- For larger profiles or heavy - duty applications use multiple t-slot bars

T-SLOT BAR PROFILE

part no. 21.1030/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, plain
- Weight 0,650 kg/m
- Length 3 m
- **Stainless version part no. 21.1030/1**

APPLICATIONS

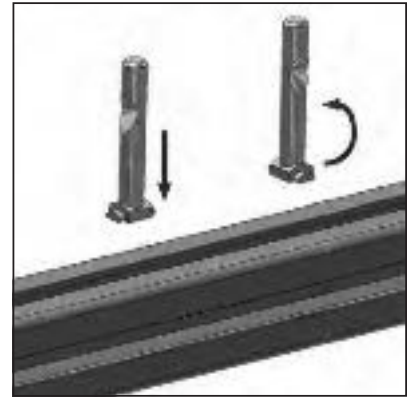
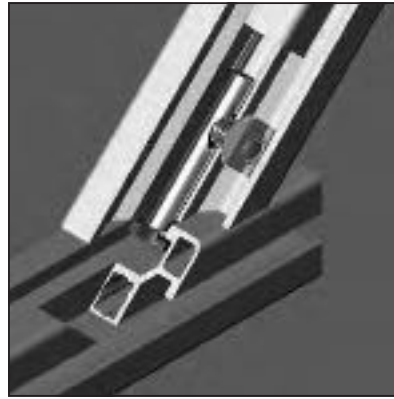
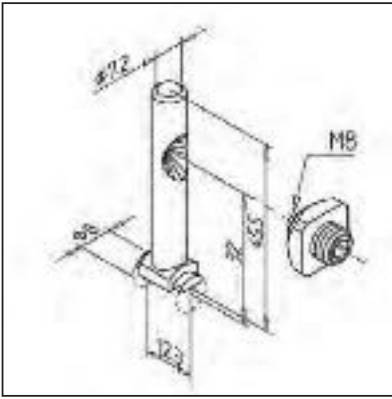
- Production of clamping ledges, connecting elements for special lengths
- Production of reinforcing elements
- Ledges with special perforation

ASSEMBLY

- Insertion into the profile groove

MITRE CONNECTOR N 30

part no. 21.0945/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- Fastening kit
- Weight 0,022 kg

APPLICATIONS

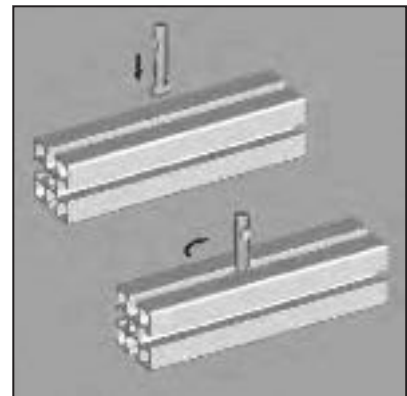
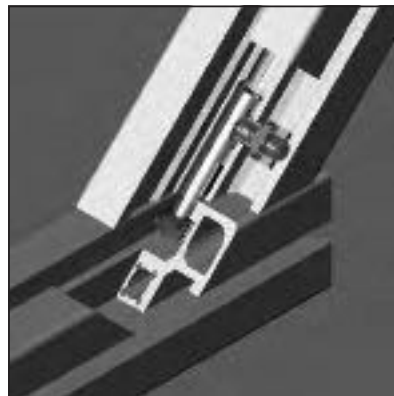
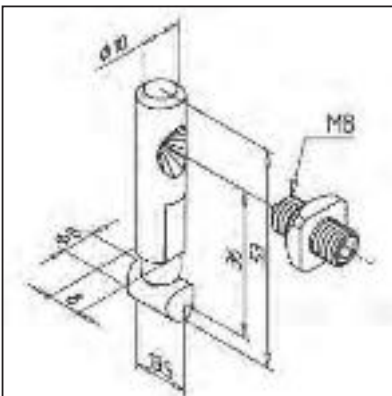
- Mitre connection of profiles on profile groove
- For subsequent fitting in the groove

ASSEMBLY

- Insert mitre connector N 30 into groove and core bore
- Use drilling jig for mitre connector N30 **part no. 26.1056/0**

MITRE CONNECTOR N 45

part no. 21.1401/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- Fastening kit
- Weight 0,035 kg

APPLICATIONS

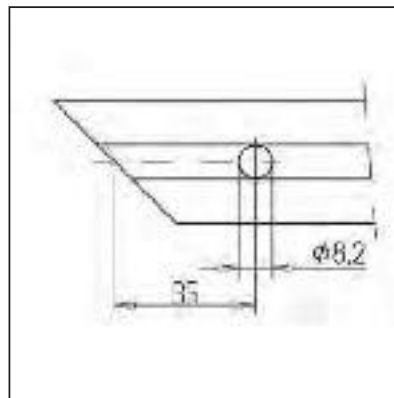
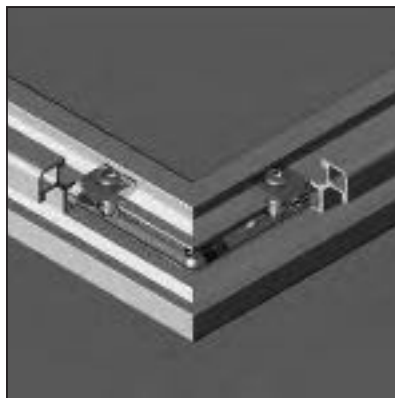
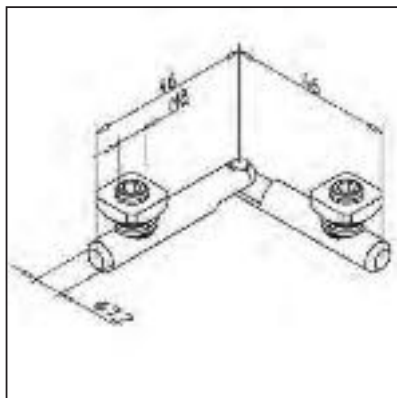
- Mitre connection of profiles on profile groove
- For subsequent fitting in the groove

ASSEMBLY

- Drill \varnothing 10,2 mm bore in the profile core bore
- Alternatively use drilling jig for mitre connector N 45 **part no. 26.1060/0 597**
- see page 597

MITRE CONNECTOR 30

part no. 21.1890/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- Fastening kit
- Weight 0,040 kg

APPLICATIONS

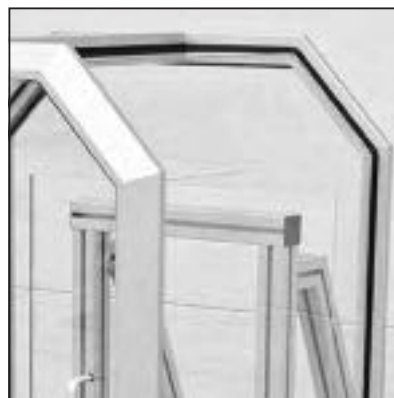
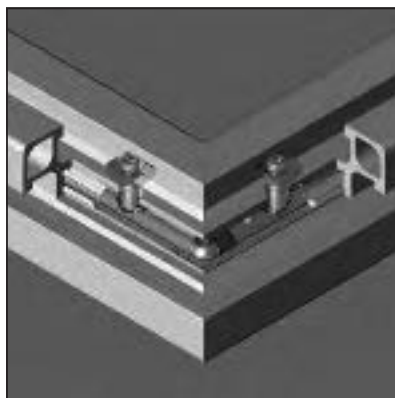
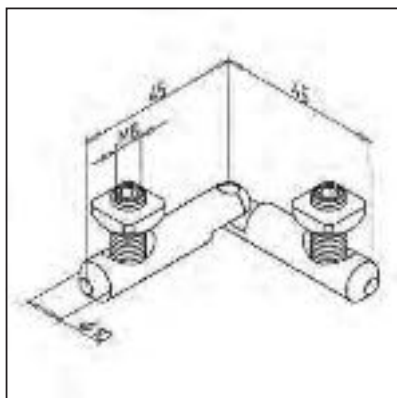
- Show cases
- Exhibition racks
- Displays
- Frames

ASSEMBLY

- Insert mitre connector 30 into both profile ends
- Position square nuts on top of the thread M8; tighten the connector with set screws M8
- Use drilling jig for mitre connector 30 **part no. 26.1063/0**
- see page 597

MITRE CONNECTOR 45

part no. 21.1400/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- Fastening kit
- Weight 0,065 kg

APPLICATIONS

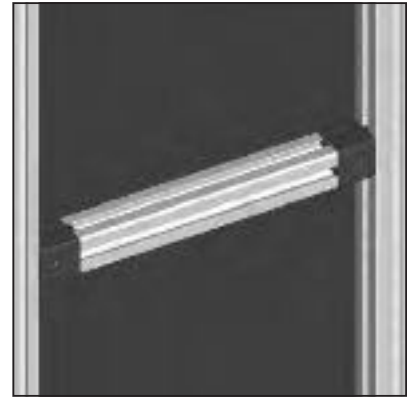
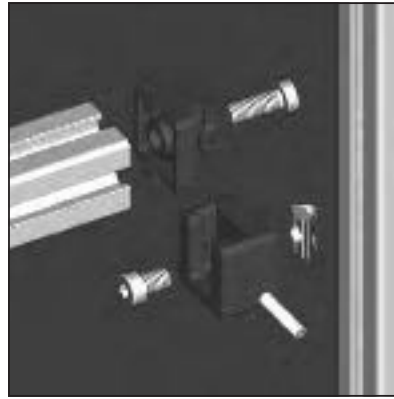
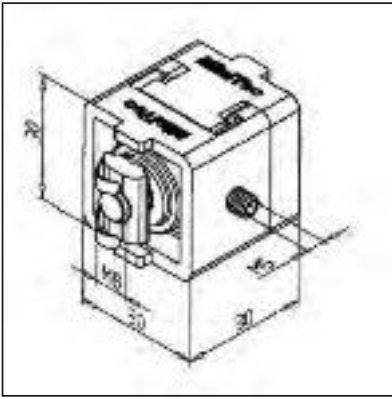
- Show cases
- Exhibition racks
- Displays
- Frames

ASSEMBLY

- Insert the mitre connector into both profile ends
- Position square nuts on top of the thread M8; tighten the connector with set screws M8
- Alternatively use drilling jig for mitre connector 45 **part no. 26.1050/0** see page 597

MOUNTING BRACKET 30

part no. 21.2068/0



TECHN. DATA / ITEMS SUPPLIED

- Polyamide, grey

- Fastening kit, unilateral for cross-tie and upright piece

- Weight 0,041 kg

APPLICATIONS

- Connection of profiles

- For subsequent insertion of profiles into existing constructions, relocatable in direction of the groove

- Removable attachments

ASSEMBLY

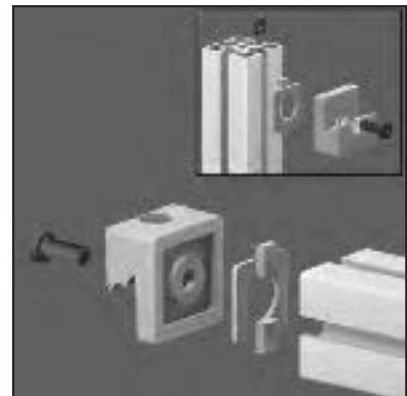
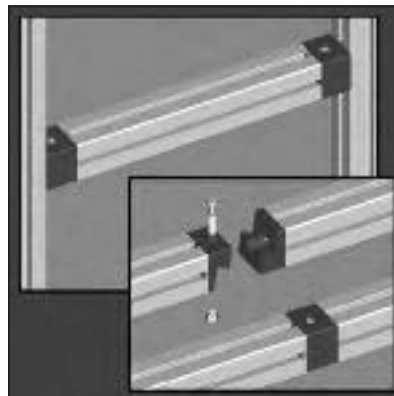
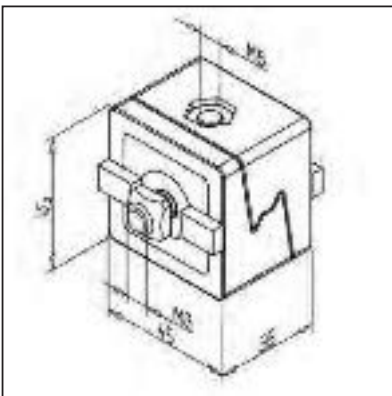
- Use fastening kit

- Insert cross-tie profile into T-solt

- For adjustment use set screw M5

MOUNTING BRACKET 45

part no. 21.1411/0



TECHN. DATA / ITEMS SUPPLIED

- GD- Zn, powder coated, grey

- Fastening kit

- Weight 0,428 kg

APPLICATIONS

- Connection of profiles

- For subsequent insertion of profiles into existing constructions, relocatable in direction of the groove

- Fixing of support surfaces

- Removable attachments

ASSEMBLY

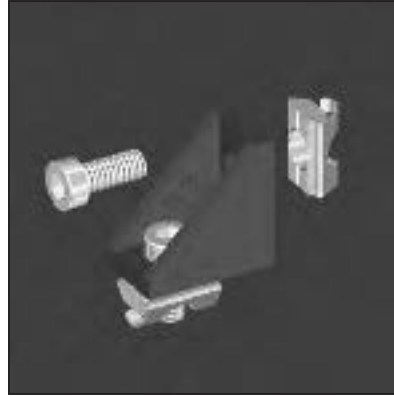
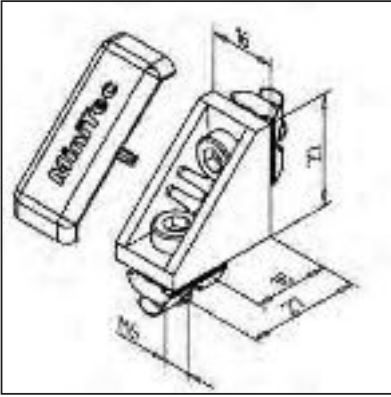
- Use fastening kit

- In case of mounting into vertical profiles, the use of square-nut M8 with position-fixing **part no. 21.1351/2** is recommended

- Recommended locking torque: 20 Nm

ANGLE 16 GD-Z

part no. 21.2077/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fastening kit
- **Conductive version part no. 21.2077/6**
- Weight 0,038 kg

APPLICATIONS

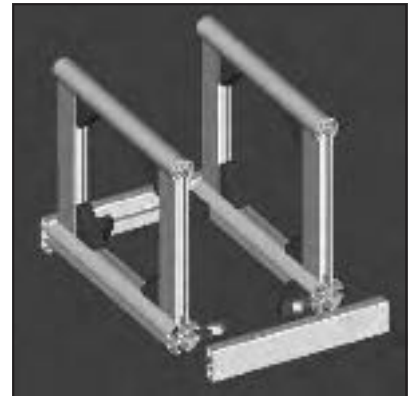
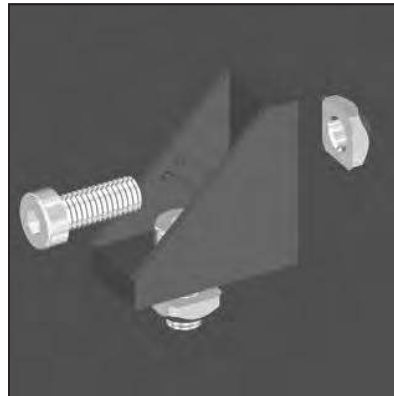
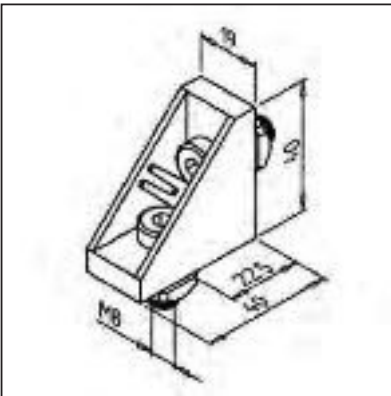
- Constructions made from profile series 16 or 23, subsequent insertion of profiles or components into existing constructions
- Fixing of panels, table-tops
- Reinforcement of constructions made from profile series 16 or 23

ASSEMBLY

- Use fastening kit
- Recommended locking torque: 8 Nm
- Suitable end cap MW 16 GD-Z, grey: **part no. 22.1138/1**

ANGLE 19 GD-Z

part no. 21.2078/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fastening kit
- **Conductive version part no. 21.2078/6**
- Weight 0,055 kg

APPLICATIONS

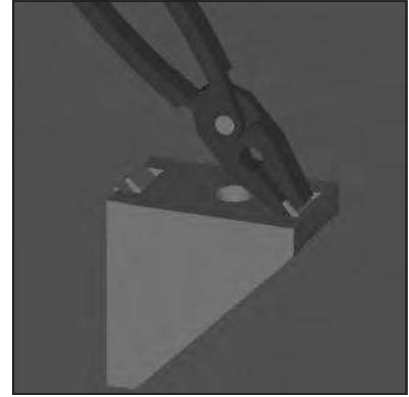
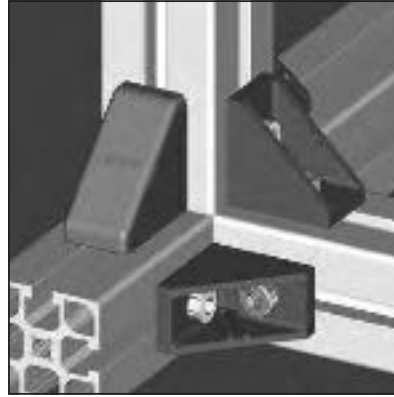
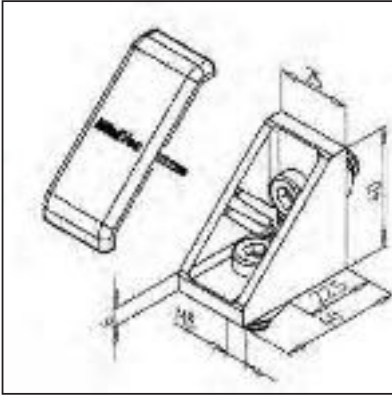
- Connection of profiles 19 and 32
- For subsequent insertion of profiles into existing constructions, relocatable in direction of the groove
- Fixing of bearing surfaces

ASSEMBLY

- Use fastening kit
- In case of mounting into vertical profiles, use of square-nut M8 with position-fixing, **part no. 21.1351/2**
- Suitable end-cap MW 19 GD-Z, grey **part no. 22.1139/1**
- Recommended locking torque: 20 Nm

ANGLE 25 GD-Z

part no. 21.0969/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fastening kit
- Removable centering tabs
- **Conductive version part no. 21.0969/6**
- Weight 0,066 kg

APPLICATIONS

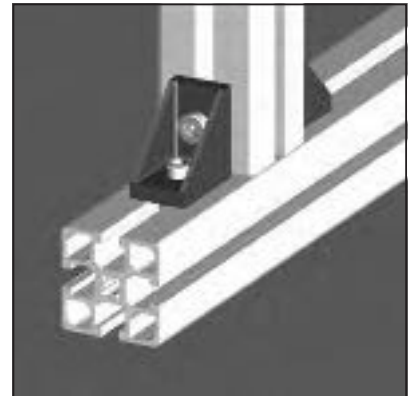
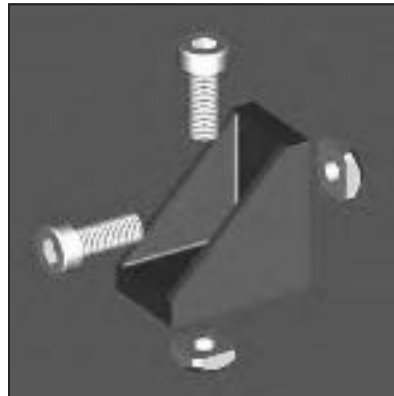
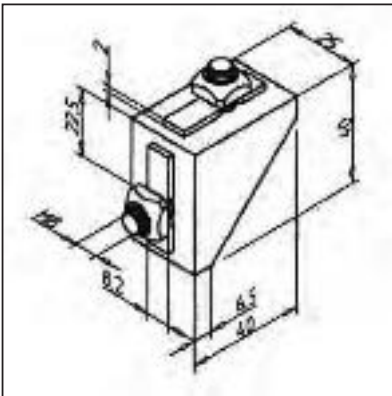
- General constructions, particularly for subsequent insertion of profiles into existing constructions
- Fixing of panel elements, table tops
- Strengthening of profile constructions

ASSEMBLY

- Use fastening kit
- If non-aligning grooves, break centering tabs with pliers
- For subsequent mounting into vertical profiles use square nut M8 with position-fixing **part no. 21.1351/2**
- End cap MW 25 GD-Z **part no. 22.0997/1**
- Recommended locking torque: 20 Nm

ANGLE 25 S

part no. 21.1134/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Locking device against torsion
- Fastening kit
- **Conductive version part no. 21.1134/6**
- Weight 0,066 kg

APPLICATIONS

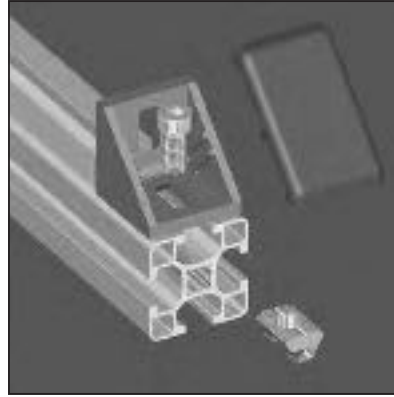
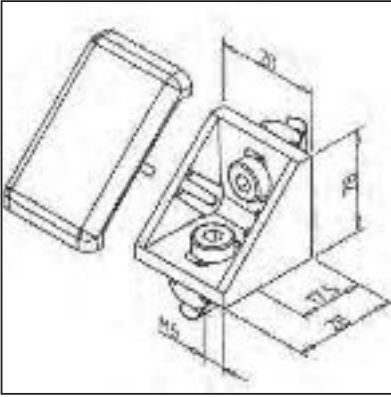
- General constructions, particularly for subsequent insertion of profiles into existing constructions
- Strengthening of profile connections

ASSEMBLY

- Use fastening kit
- For mounting into vertical profile use square nut M8 with position-fixing **part no. 21.1351/2**
- Recommended locking torque 20 Nm

ANGLE 30 GD

part no. 21.1347/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fastening kit
- **Conductive version part no. 21.1347/6**
- Weight 0,053 kg

APPLICATIONS

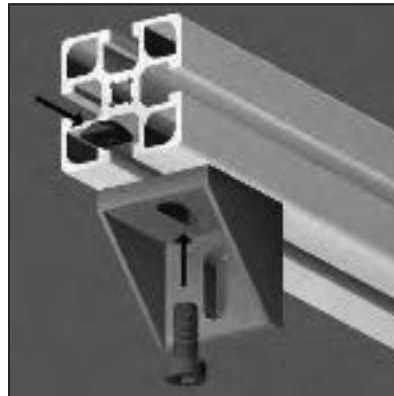
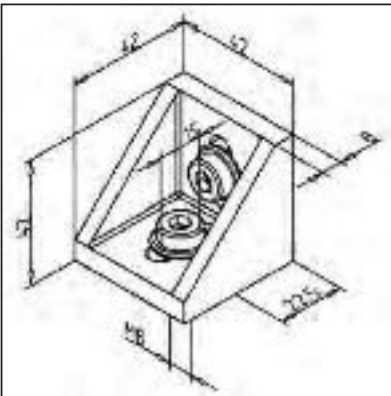
- Constructions made from profile series 30, subsequent insertion of profiles or components into existing constructions
- Fixing of panels, table-tops
- Reinforcement of constructions made from profiles series 30

ASSEMBLY

- Use fastening kit
- Recommended locking torque: 8 Nm
- Suitable end cap MW 30 GD-Z, grey: **part no. 22.1026/1**

ANGLE 45 GD

part no. 21.1133/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fastening kit
- **Conductive version part no. 21.1133/6**
- Weight 0,114 kg

APPLICATIONS

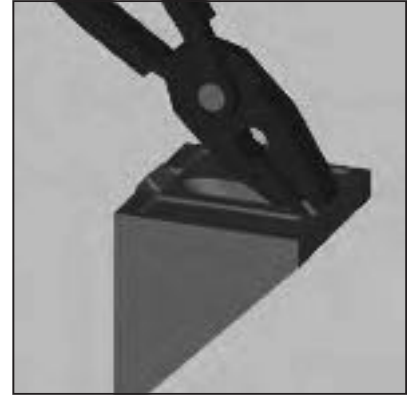
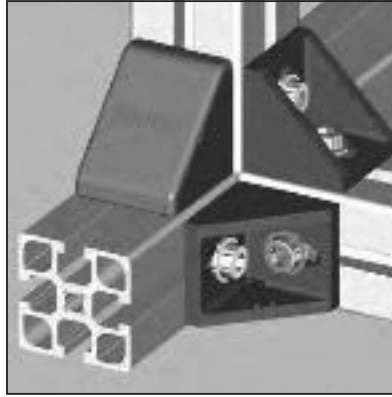
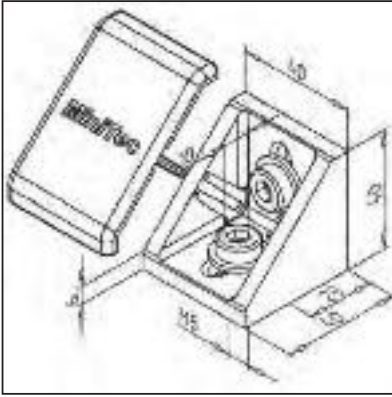
- General constructions, particularly for subsequent insertion of profiles into existing constructions
- Fixing of panel elements, table tops
- Strengthening of profile constructions

ASSEMBLY

- Use fastening kit
- For subsequent mounting into vertical profiles use square nut M8 with position-fixing **part no. 21.1351/2**
- Hammer head screw **part no. 21.1370/0** can be used
- Recommended locking torque 20 Nm

ANGLE 45 GD-Z

part no. 21.1349/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fastening kit
- Removable centering tabs
- Conductive version **part no. 21.1349/8**
- Weight 0,086 kg

APPLICATIONS

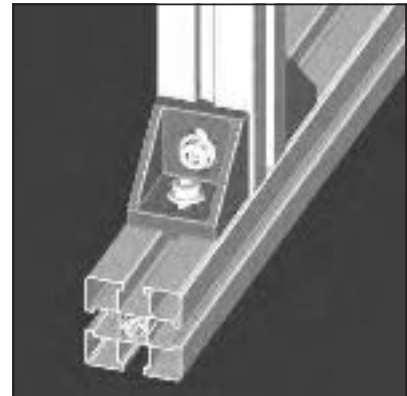
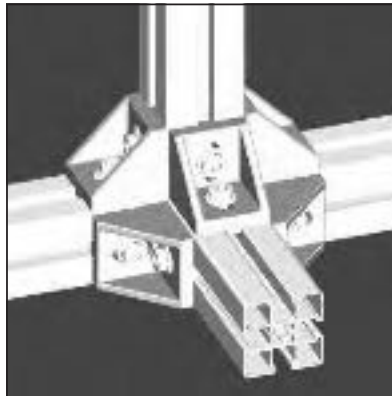
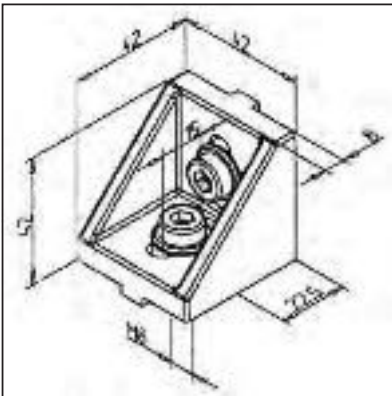
- General constructions, particularly for subsequent insertion of profiles into existing constructions
- Fixing of panel elements, table tops
- Strengthening of profile constructions

ASSEMBLY

- Use fastening kit
- If non-aligning grooves, break centering tabs with pliers
- For subsequent mounting into vertical profiles use square nut M8 with position-fixing **part no. 21.1351/2**
- Use hammer head screw **part no. 21.1370/0**
- Recommended locking torque: 20 Nm
- End cap MW 45 GD-Z **part no. 22.1024/1**

ANGLE 45 VA

part no. 21.0007/0



TECHN. DATA / ITEMS SUPPLIED

- Material: WN DIN 1.4301 X5 CR NI 18 - 10, SUS 304, stainless steel
- Fastening kit
- Weight 0,255 kg

APPLICATIONS

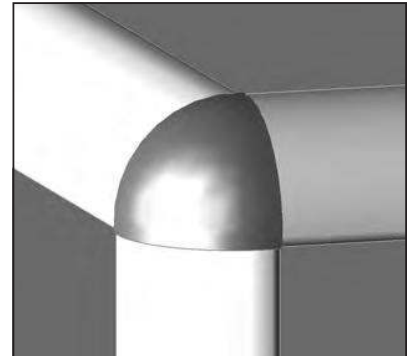
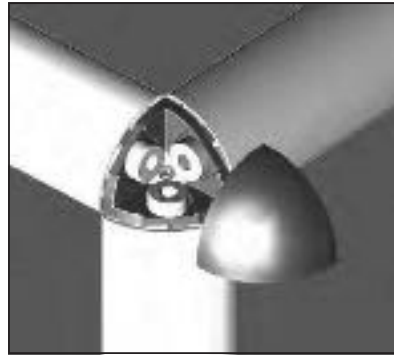
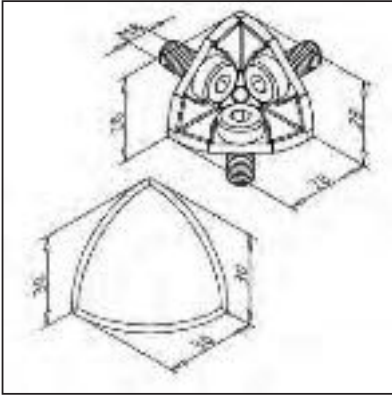
- General constructions, particularly suitable for subsequent insertion of profiles into existing constructions
- Strengthening of profile constructions

ASSEMBLY

- Use fastening kit
- For subsequent mounting into vertical profiles use square nut M8 with position fixing **part no. 21.1351/4**
- Recommended locking torque 20 Nm

ANGLE 30 R 90°

part no. 21.2109/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, nature

- End cap MW 30 R 90°, grey, **part no. 22.1143/1**

- Fastening kit

- Weight 0,043 kg

APPLICATIONS

- Corner fastening of profiles 30 R 90°

- Constructions for show cases, tables etc.

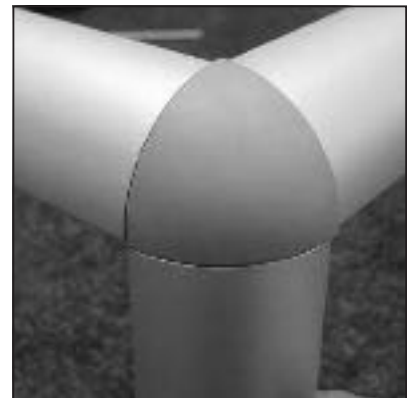
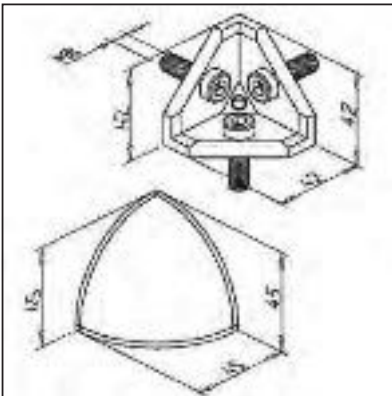
ASSEMBLY

- With mounting material from scope of supply in central drilling of the profile

- Clip on end cap

ANGLE 45 R 90°

part no. 21.1710/1



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, nature

- End cap MW 45 R 90°, grey, **part no. 22.1033/1**

- Fastening kit

- Weight 0,098 kg

APPLICATIONS

- Corner fastening of profiles 45 R 90°

- Constructions for show cases, tables etc.

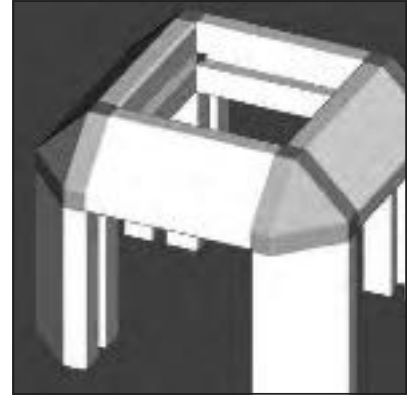
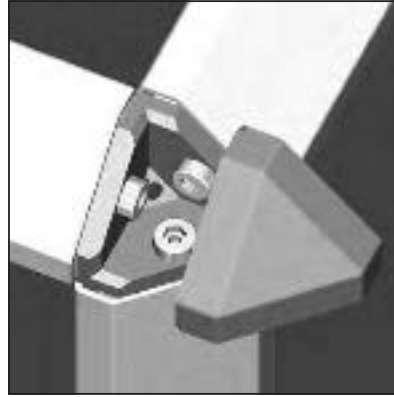
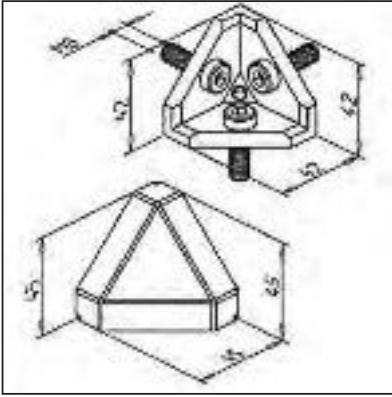
ASSEMBLY

- With mounting material from scope of supply in central drilling of the profile

- Clip into the end cap

ANGLE 45°

part no. 21.1708/1



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, nature
- End cap 45°/3, grey
- Fastening kit
- Weight 0,107 kg

APPLICATIONS

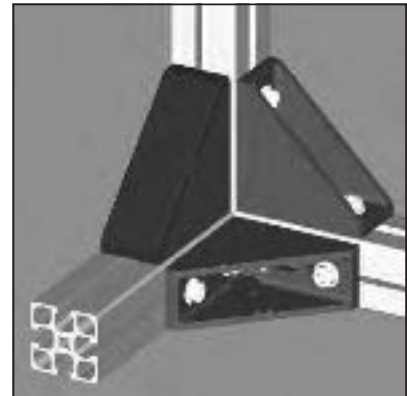
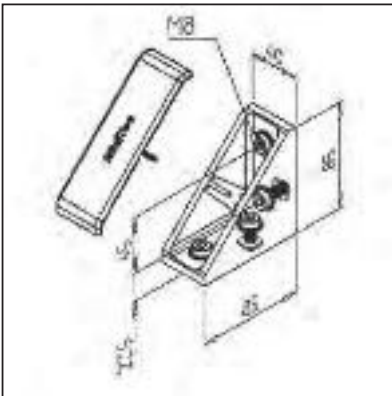
- Corner fastening of profiles 45 / 45°
- Constructions for show cases, tables etc.

ASSEMBLY

- With mounting material from scope of supply in central drilling of the profile
- Clip into the end cap

ANGLE 45 X 90 GD-Z

part no. 21.1397/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fastening kit
- Weight 0,281 kg
- **Conductive version part no. 21.1397/6**

APPLICATIONS

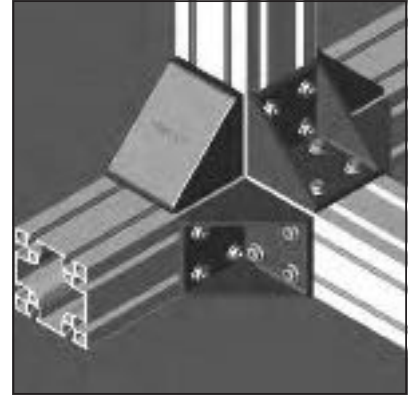
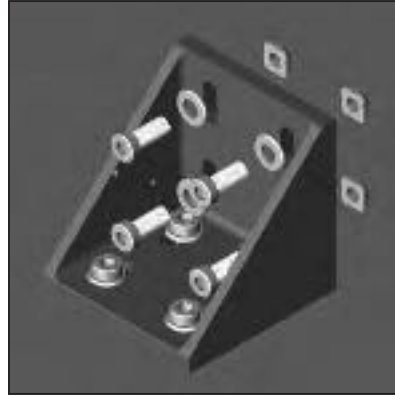
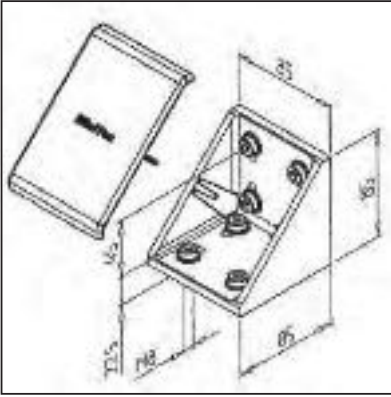
- General constructions, particularly for subsequent insertion of profiles into existing constructions
- Fixing of panel elements, table tops
- Strengthening of profile constructions

ASSEMBLY

- Use fastening kit
- For mounting into vertical profile use square nut M8 with position-fixing **part no. 21.1351/2**
- Recommended locking torque: 20 Nm
- Use hammer head screw **part no. 21.1370/0**
- Suitable end cap MW 45 x 90 GD-Z **part no. 22.0998/1**

ANGLE 90 GD-Z

part no. 21.0978/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fastening kit
- Weight 0,497 kg
- **Conductive version part no. 21.0978/6**

APPLICATIONS

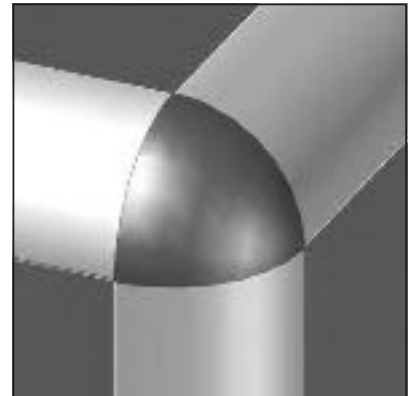
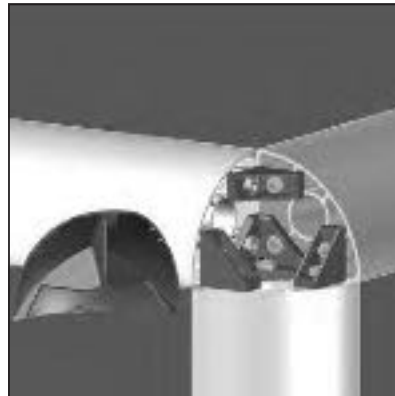
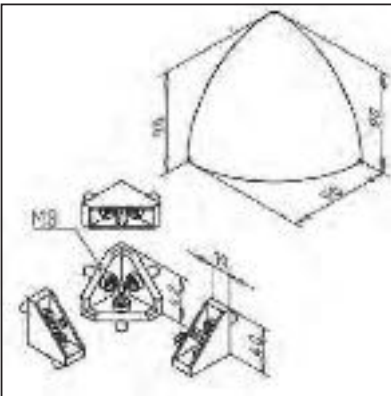
- For profiles 90 and 180
- General constructions, particularly for subsequent insertion of profiles into existing constructions
- Strengthening of all profile connections

ASSEMBLY

- Use fastening kit
- For subsequent mounting into vertical profiles use square nut M8 with position-fixing **part no. 21.1351/2**
- Hammer head screw can be used
- Recommended locking torque: 20 Nm
- Suitable end cap MW 90 GD-Z **part no. 22.0999/1**

CORNER CONNECTION 90 R 90°

part no. 21.2199/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD
- End cap MW 90 R 90°, grey, **part no. 22.0980/1**
- Angle 45°, **part no. 21.1708/2**
- Angle 19 GD-Z, **part no. 21.2078/2**
- Fastening kit
- Weight 0,267 kg

APPLICATIONS

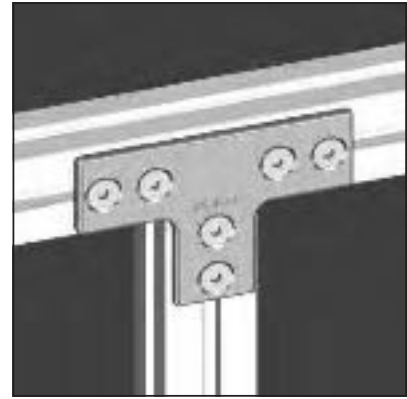
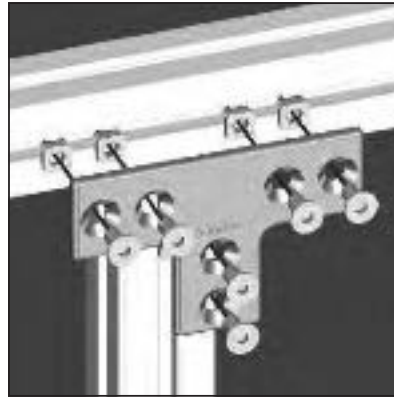
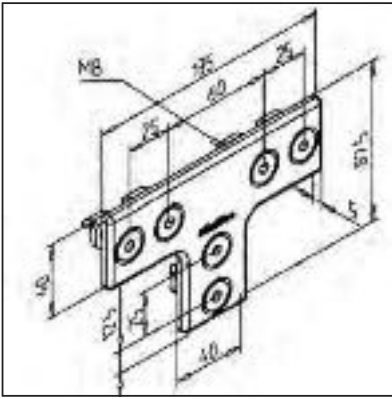
- Corner connections of profiles 90 R 90°
- Constructions for show cases, tables etc.

ASSEMBLY

- Fasten with screws from the fastening kit in central bore of the profile
- Clip into the end cap

T-SHEET VA

part no. 21.0019/0



TECHN. DATA / ITEMS SUPPLIED

- Sheet stainless steel
- Fastening kit
- Weight 0,259 kg

APPLICATIONS

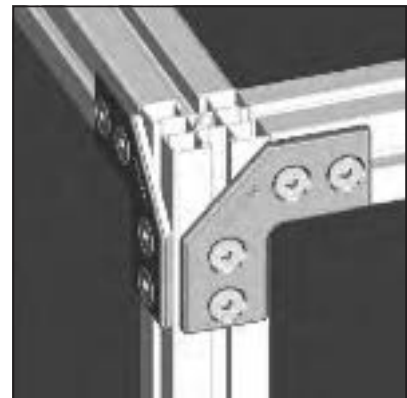
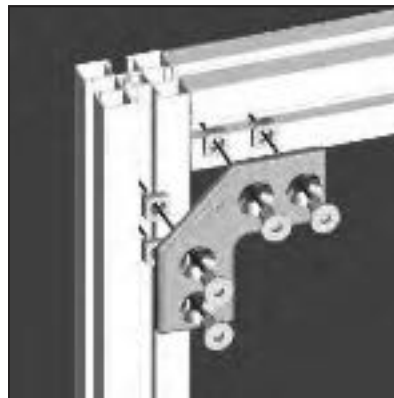
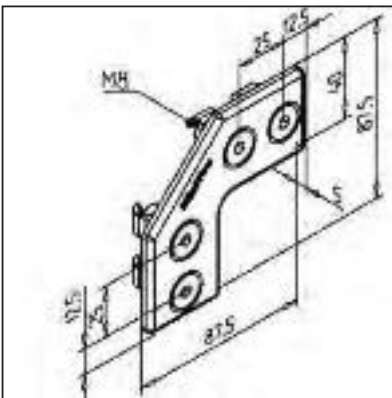
- Strengthening of profile constructions

ASSEMBLY

- Use fastening kit
- Use power-lock fasteners if tractive forces appear

ANGLE-SHEET VA

part no. 21.0018/0



TECHN. DATA / ITEMS SUPPLIED

- Sheet stainless steel
- Fastening kit
- Weight 0,163 kg

APPLICATIONS

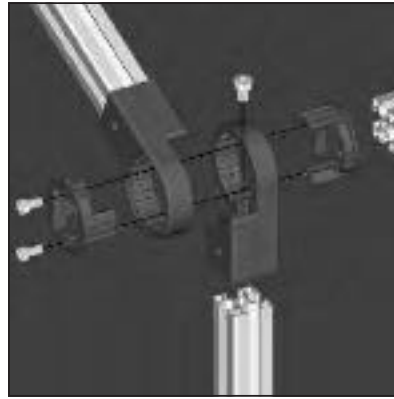
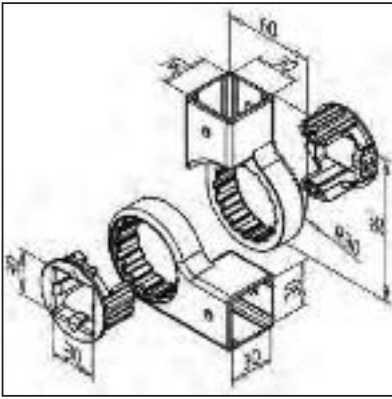
- Strengthening of profile constructions
- Also suitable for cross joints (double application)

ASSEMBLY

- Use fastening kit
- Use power-lock fasteners if tractive forces appear

MULTI CONNECTOR 30

part no. 22.1140/0



TECHN. DATA / ITEMS SUPPLIED

- ABS, grey
- Fastening kit
- Weight 0,135 kg

APPLICATIONS

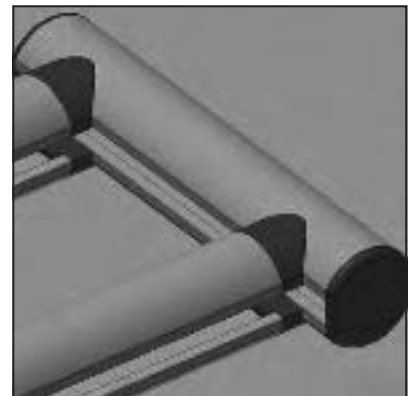
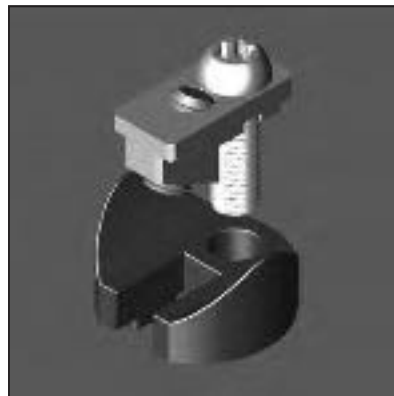
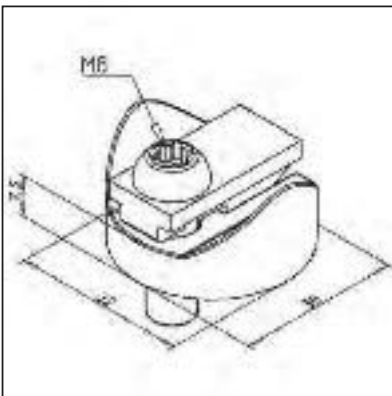
- Easy connection for profiles
- Angle adjustable in 22,5° raster

ASSEMBLY

- Attach swivel arm on face side of profile
- Insert socket from the side
- Insert other profile into socket and position it
- Secure it with 2 hex socket cap screws against movement

ADAPTER G32 / G32

part no. 21.0954/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fastening kit
- Weight 0,041 kg

APPLICATIONS

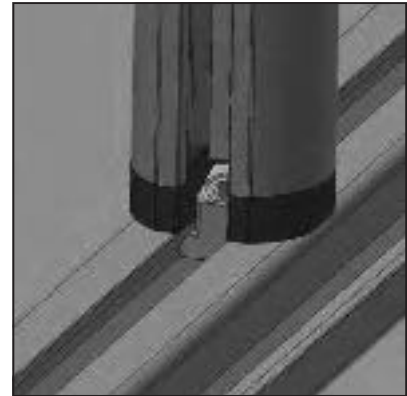
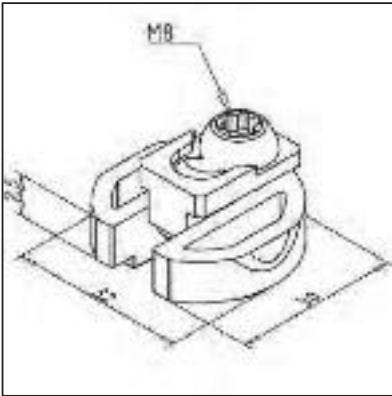
- For connection of handle profile 32 with handle profile 32

ASSEMBLY

- Screw on profile face and fasten with power-lock fastener
- Push in cross direction profile and attach it to the desired location

ADAPTER G32 / 30 X 30

part no. 21.0955/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium GD, powder coated, grey
- Fastening kit
- Weight 0,032 kg

APPLICATIONS

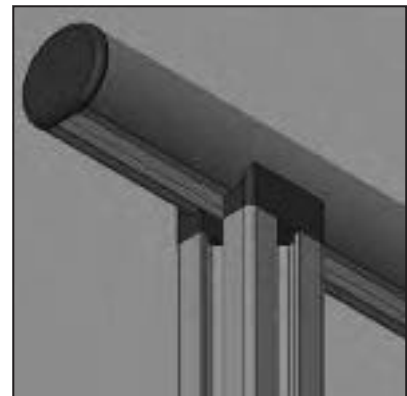
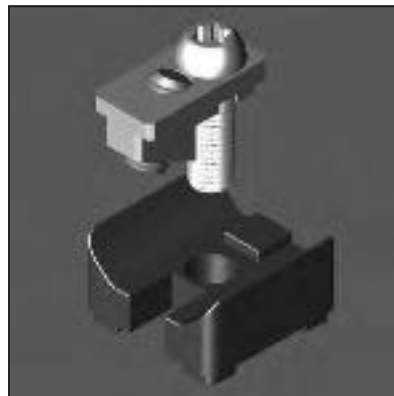
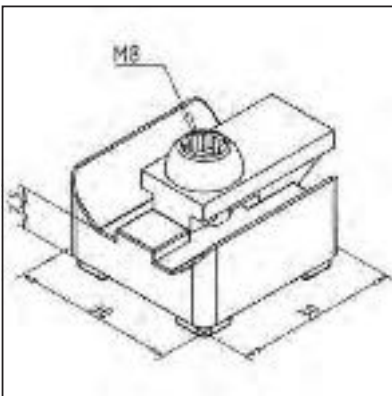
- For connection of handle profile 32 with profile 30 x 30

ASSEMBLY

- Screw on profile face and fasten with power-lock fastener
- Push in cross direction profile and attach it to the desired location

ADAPTER 30 X 30 / G32

part no. 21.0953/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium GD, powder coated, grey
- Fastening kit
- Weight 0,046 kg

APPLICATIONS

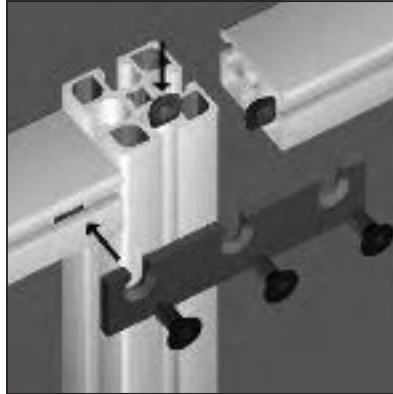
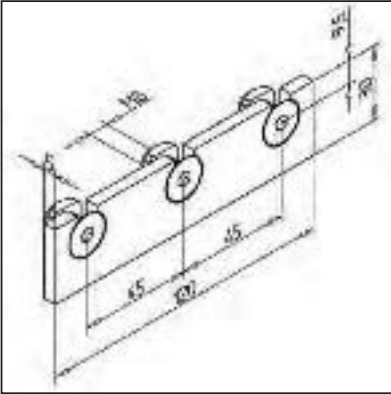
- For connection of profile 30 x 30 with handle profile 32

ASSEMBLY

- Screw on profile face and fasten with power-lock fastener
- Push in cross direction profile and attach it to the desired location

CONNECTING BAR

part no. 21.1113/0



TECHN. DATA / ITEMS SUPPLIED

- Bar steel, zinc plated
- Fastening kit
- Weight 0,156 kg

APPLICATIONS

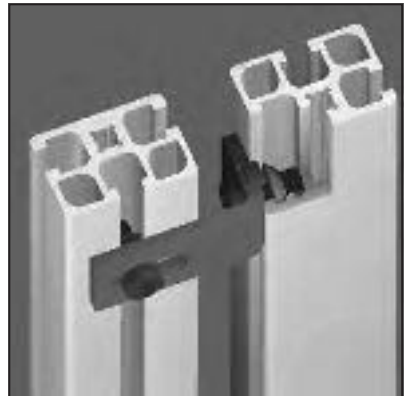
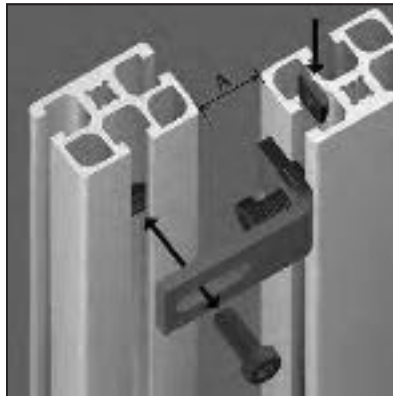
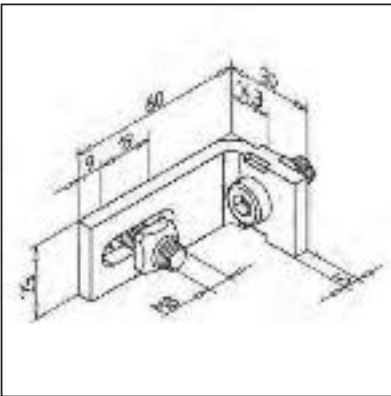
- Connection of different profiles
- Subsequent insertion of profiles into existing constructions

ASSEMBLY

- Use fastening kit
- No processing required

GUARD UNIT FIXING ANGLE 45 ST

part no. 21.1404/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- Fastening kit
- Weight 0,103 kg

APPLICATIONS

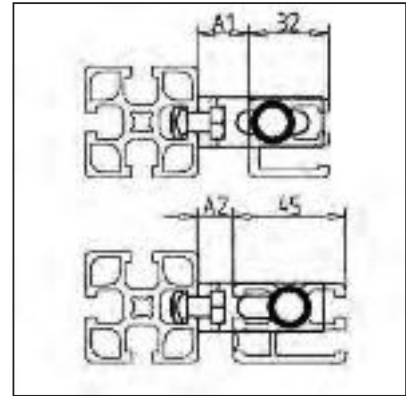
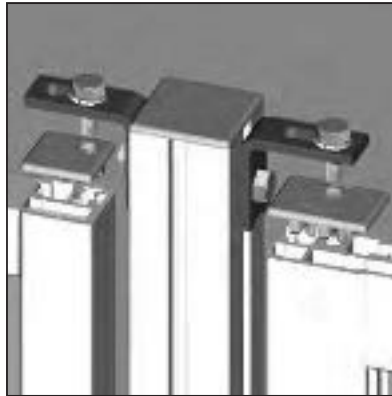
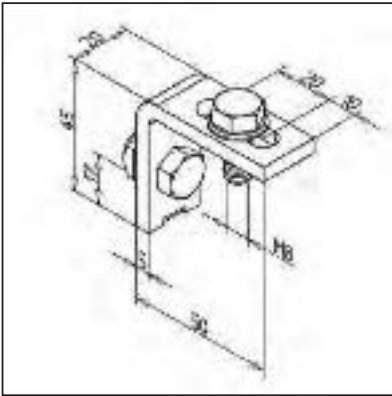
- Fixing of guards made from profile 45 x 32
- Usable in frames made from any profile
- Flush mounting of element

ASSEMBLY

- Use fastening kit
- No processing required
- First fix the angle to vertical profile, then screw guard unit from rear with angle
- A = 10 mm - 28 mm

GUARD UNIT FIXING ANGLE 19

part no. 21.1399/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- Fastening kit
- Weight 0,089 kg

APPLICATIONS

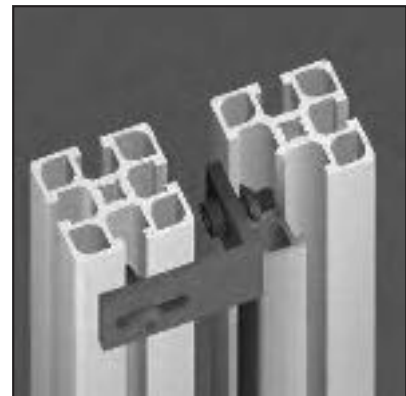
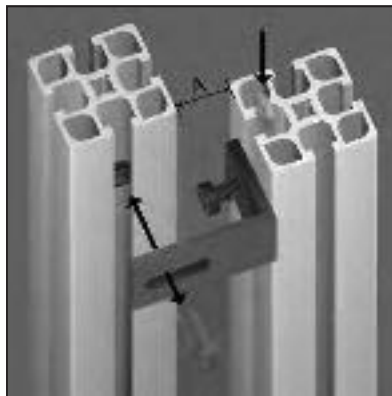
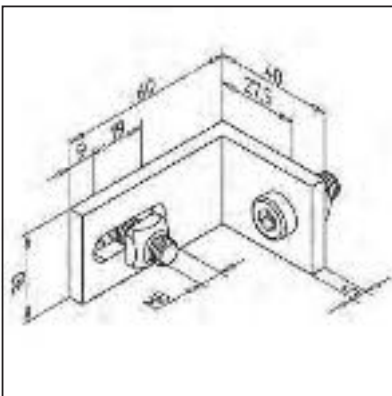
- Fixing of guards made from clamp-profiles 32 x 32 or 45 x 32 or from all other standard profiles
- Fixing of guards at any angle
- For clamp profile 32 x 32 use end cap part no. 22.1032/3
- For clamp profile 45 x 32 use end cap part no. 22.1046/3

ASSEMBLY

- Drill thread M8 x 20 in both ends of vertical profiles of the guard
- Insert guard in angles, adjust position of the angles and fix it (wrench 13)
- Fix guard with screws of fastening kit
- Alternatively: use snap bolts 25 part no. 21.1758/0 in lower threads of the guard for very quick assembly, fixing with upper screws only
- A1 = 10,5 mm - 30,5 mm
A2 = 10,5 mm - 17,5 mm

GUARD UNIT FIXING ANGLE 45 AL

part no. 21.1407/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural anodized
- Fastening kit
- Weight 0,067 kg

APPLICATIONS

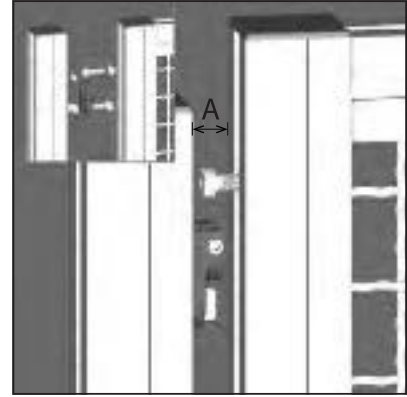
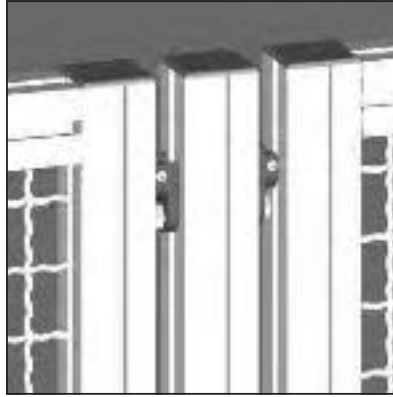
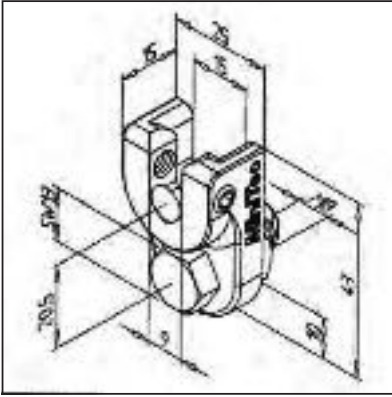
- Fixing of frame-elements made from profile 45 x 45
- Usable in frames made from any profile
- Flush mounting of element

ASSEMBLY

- Use fastening kit
- No processing required
- First fix the angle to vertical profile, then screw guard unit from rear with angle
- A = 10 mm - 28 mm

GUARD UNIT FIXING ANGLE GD-K

part no. 21.0008/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fastening kit
- Weight 0,039 kg

APPLICATIONS

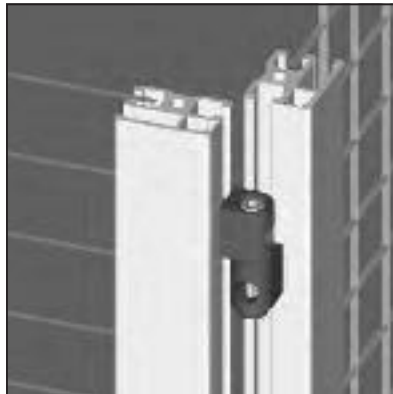
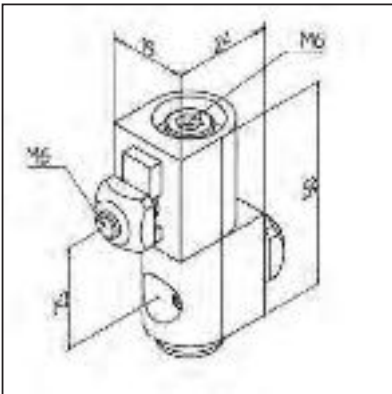
- Guards from all profiles
- Movable flaps
- It is also possible to mount the guards at the front when fitting the suspensions to the front of the post

ASSEMBLY

- Screw the guard suspension to the pillars
- Attach M8 x 25 cheese-head screws to the protective panel
- Hang the guard in place, and tighten the set screw using an Allen key from the rear
- $A = 16 \text{ mm} \pm 0.75$
- **Guard cannot be removed from outside**

GUARD UNIT WITH ADJUSTABLE FIXING ANGLE

part no. 21.1403/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fastening kit
- Weight 0,114 kg

APPLICATIONS

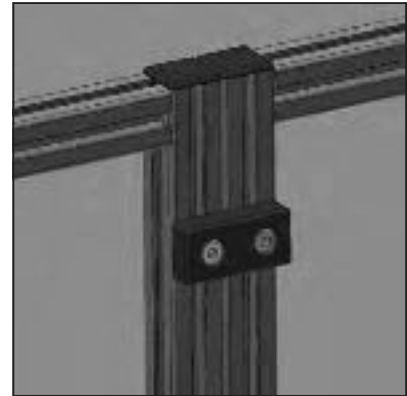
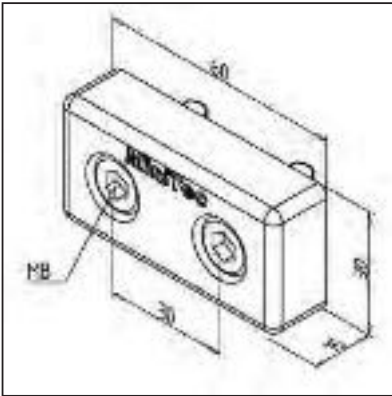
- Connection of profiles at any angle
- Erection of guard units at any angle

ASSEMBLY

- Mount the lower fixing half on the post and align it
- Mount the upper half on the guard unit and insert the guard unit
- Insert the cylinder head screw and tighten it with key 4 A/F. The inserted hexagon nut in the lower fixing half is secured against torsion
- See page 73

CONNECTING PLATE 30 X 60

part no. 21.2113/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fastening kit
- Weight 0,085 kg

APPLICATIONS

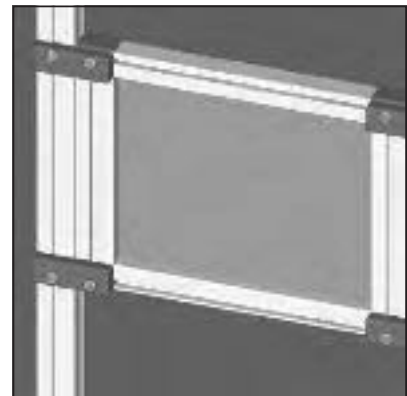
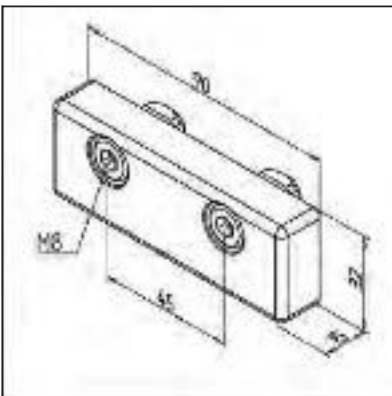
- Connection of two guards without gap
- Strengthening of guard units
- Connection of premounted units or modules

ASSEMBLY

- Use fastening kit; fasten on profile groove of save guard and pile

CONNECTING PLATE 90 X 32

part no. 21.1346/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fastening kit
- Weight 0,135 kg

APPLICATIONS

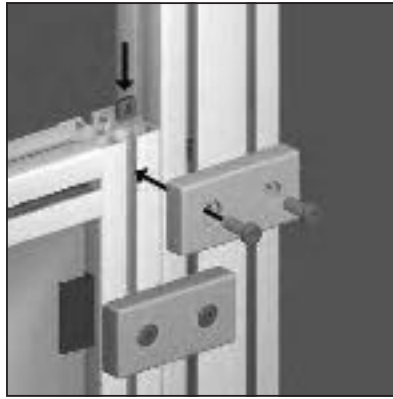
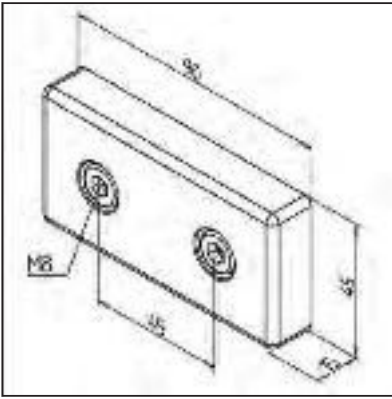
- Connection of two guards without gap
- Strengthening of guard units
- Connection of premounted units or modules

ASSEMBLY

- Use fastening kit

CONNECTING PLATE 45 X 90

part no. 21.1472/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fastening kit
- Weight 0,181 kg

APPLICATIONS

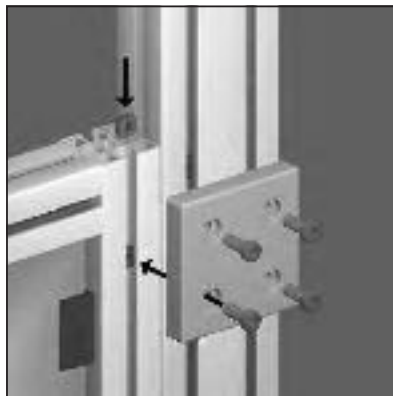
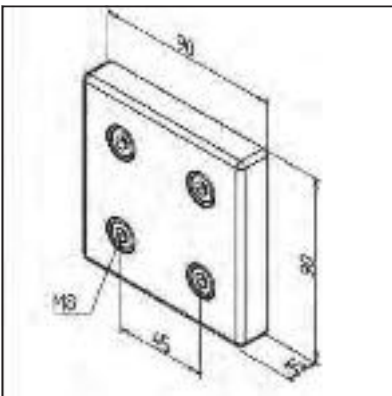
- Connection of guards without gap
- Strengthening of guard units
- Connection of premounted units or modules

ASSEMBLY

- Use fastening kit

CONNECTING PLATE 90 X 90

part no. 21.1473/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fastening kit
- Weight 0,366 kg

APPLICATIONS

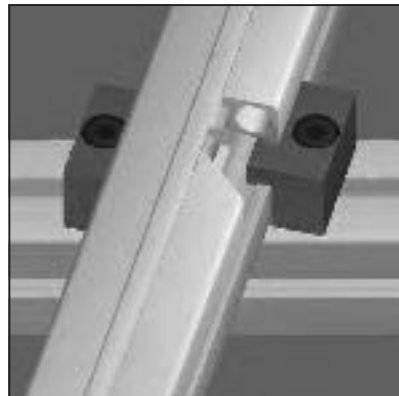
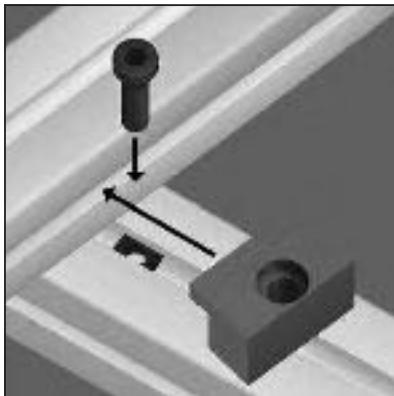
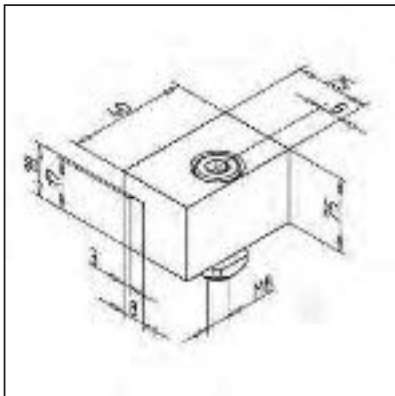
- Connection of guards without gap
- Strengthening of guard units
- Connection of premounted units or modules

ASSEMBLY

- Use fastening kit

CLAMPING CLAW

part no. 21.1027/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium anodized
- Fastening kit
- Weight 0,063 kg

APPLICATIONS

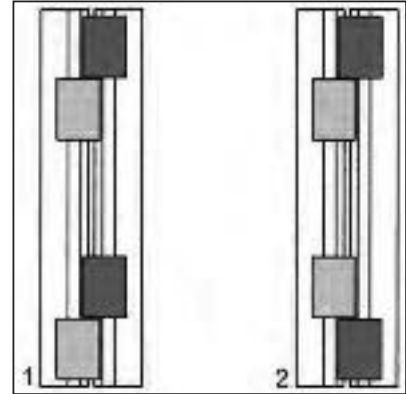
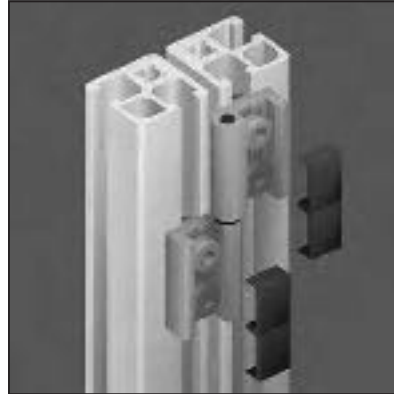
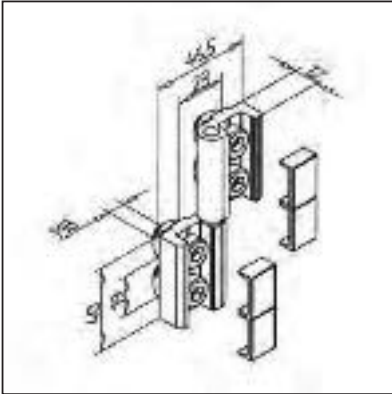
- Parallel connection of profiles at various angles

ASSEMBLY

- Use fastening kit
- No processing required

HINGE 19

part no. 21.1100/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural anodized with stainless steel cylinder
- Fastening kit
- End caps
- Weight 0,111 kg
- Load max. 400 N
- Order with position fixing nuts, part no. 21.1100/7

APPLICATIONS

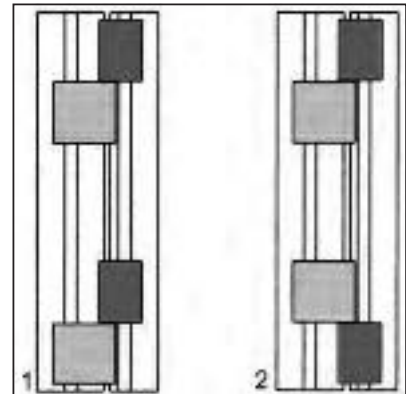
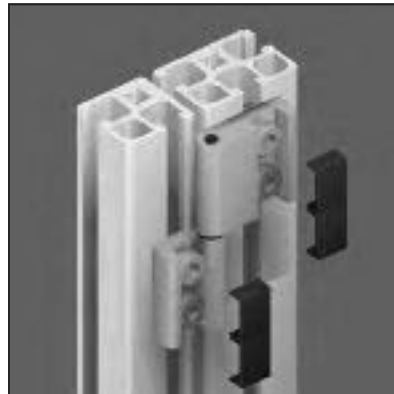
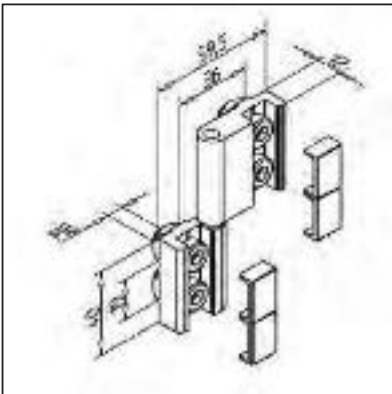
- Swing doors and lids
- Mount in reversed orientation for non lift removable or horizontal applications
- Connection of profiles 19 at various angles

ASSEMBLY

- Use fastening kit
- For fixing directly on panel elements or on profile surfaces we deliver hinge 19 without fixing element **part no. 21.1100/2**
- 1: lift removable
- 2: non lift removable

HINGE 32

part no. 21.1095/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural anodized with stainless steel cylinder
- Fastening kit
- End caps
- Weight 0,128 kg
- Load max. 400 N
- Order with position fixing nuts, part no. 21.1095/7

APPLICATIONS

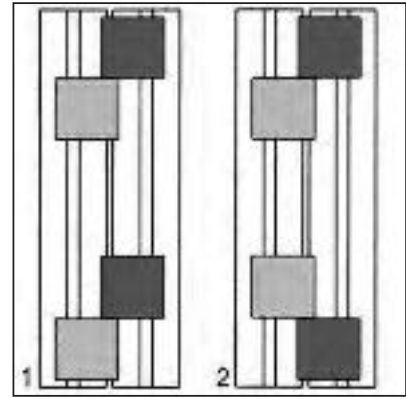
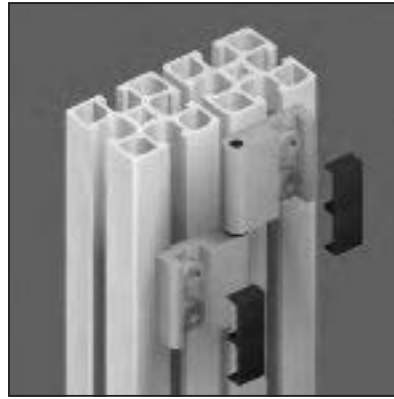
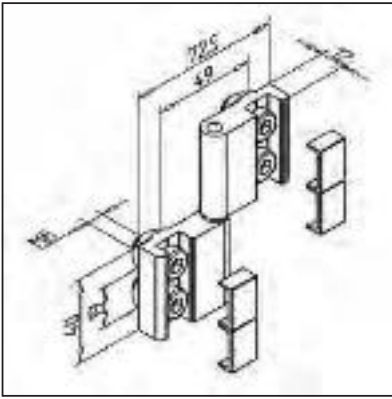
- Swing doors and lids
- Mount in reversed orientation for non lift removable or horizontal applications
- Connection of profiles 19, 32 and 45 at various angles

ASSEMBLY

- Use fastening kit
- For fixing directly on panel elements or on profile surfaces we deliver hinge 32 without fixing element **part no. 21.1095/2**
- 1: lift removable
- 2: non lift removable

HINGE 45

part no. 21.1096/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural anodized with stainless steel cylinder
- Fastening kit
- End caps
- Weight 0,145 kg
- Load max. 400 N
- Order with position fixing nuts, part no. 21.1096/7

APPLICATIONS

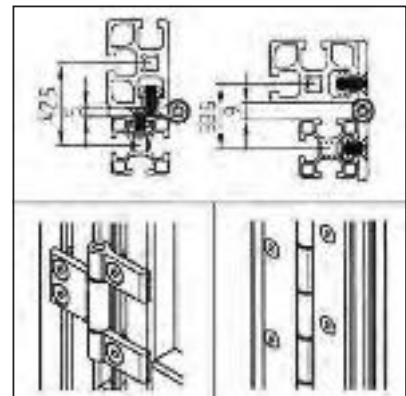
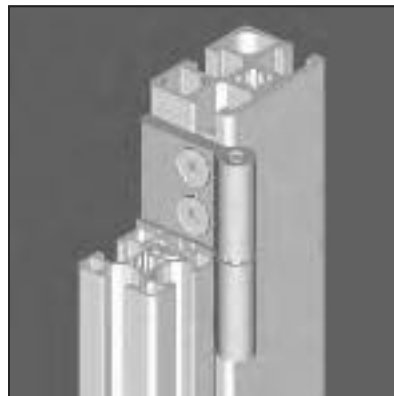
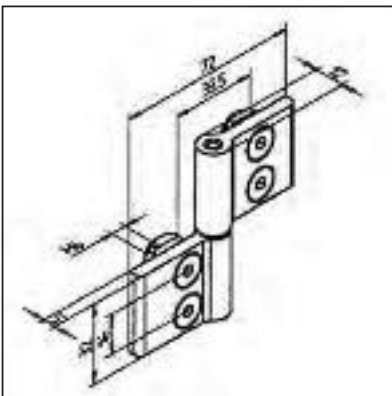
- Swing doors and lids
- Connection of profiles 45 at various angles
- Attachment of guards
- Mount in reversed orientation for non lift removable or horizontal applications

ASSEMBLY

- Use fastening kit
- For fixing directly on panel elements or on profile surfaces we deliver hinge 45 without fixing element **part no. 21.1096/2**
- 1: lift removable
- 2: non lift removable

HINGE L 19/30

part no. 21.1374/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural anodized, steel cylinder-bolt
- Fastening kit
- End caps
- Weight 0,089 kg
- Load max. 400 N

APPLICATIONS

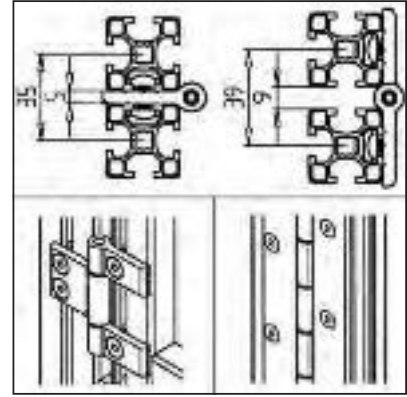
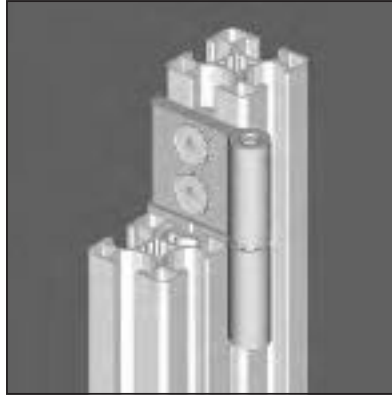
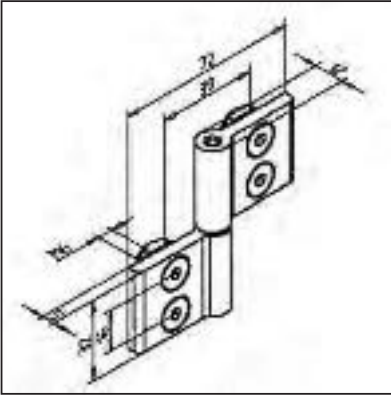
- Doors, lids, movable attached constructions on profiles 19, 32 and 45
- According to arrangement of hinges, lift removable or non-lift-removable constructions are possible
- Connection of profiles 19 and 30 at various angles

ASSEMBLY

- Use fastening kit
- For production of hinges in various length or bore distances or piano-hinges extrusion **part no. 20.0093/0** is available

HINGE L 30/30

part no. 21.1376/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural anodized, steel cylinder-bolt	
- Fastening kit	
- End caps	
- Weight	0,089 kg
- Load max.	400 N

APPLICATIONS

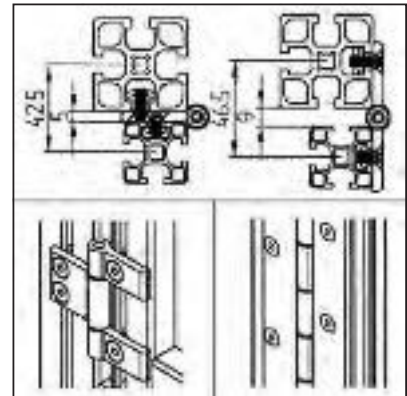
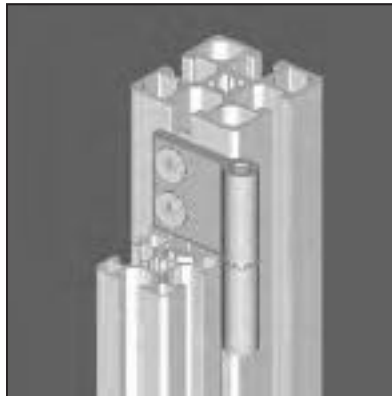
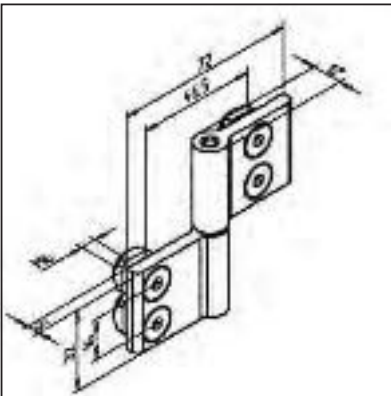
- Doors, lids, movable attached constructions
- According to arrangement of hinges, lift removable or non-lift-removable constructions are possible
- Connection of profiles 30 at various angles

ASSEMBLY

- Use fastening kit
- For production of hinges in various length or bore distances or piano-hinges extrusion **part no. 20.0093/0** is available

HINGE L 30/45

part no. 21.1377/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural anodized, steel cylinder-bolt	
- Fastening kit	
- End caps	
- Weight	0,089 kg
- Load max.	400 N

APPLICATIONS

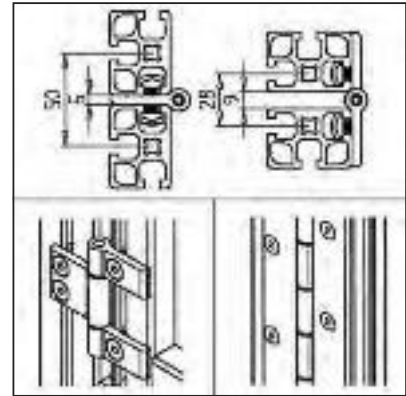
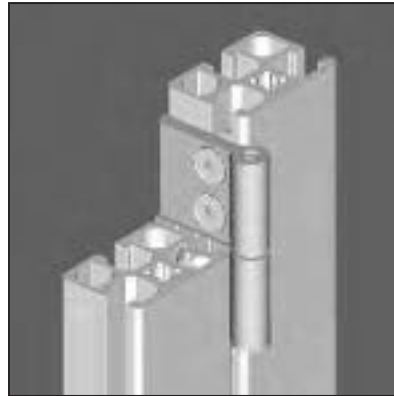
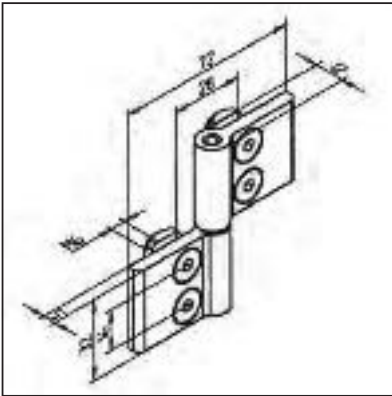
- Doors, lids, movable attached constructions
- According to arrangement of hinges, lift removable or non-lift-removable constructions are possible
- Connection of profiles 30 and 45 at various angles

ASSEMBLY

- Use fastening kit
- For production of hinges in various length or bore distances or piano-hinges extrusion **part no. 20.0093/0** is available

HINGE L 19/19

part no. 21.1373/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural anodized with stainless steel cylinder
- Fastening kit
- Weight 0,089 kg
- Load max. 400 N

APPLICATIONS

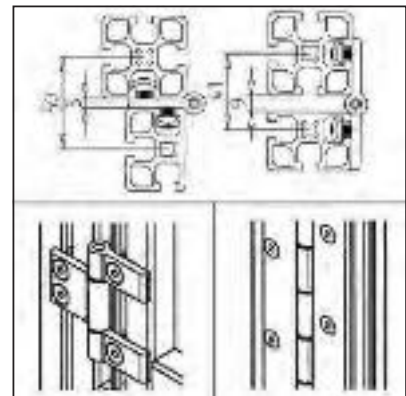
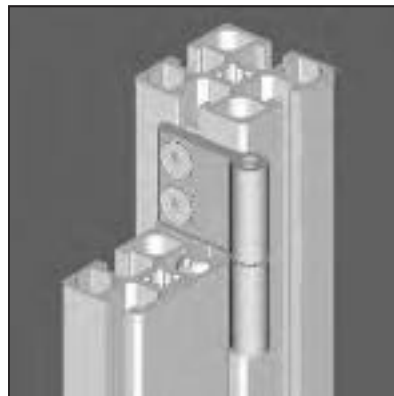
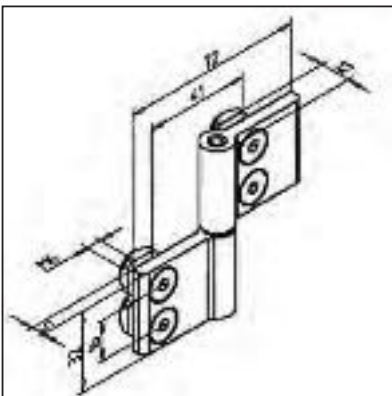
- Doors, lids, movable attachments at profiles 19 and 32
- Attachment of guards
- Mount in reversed orientation for non lift removable or horizontal applications
- Connection of profiles 19 at various angles

ASSEMBLY

- Use fastening kit
- For production of hinges at various length or piano-hinges is hinge-profile 5GB, **part no. 20.0093/0** available

HINGE L 19/45

part no. 21.1375/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural anodized with stainless steel cylinder
- Fastening kit
- Weight 0,089 kg
- Load max. 400 N

APPLICATIONS

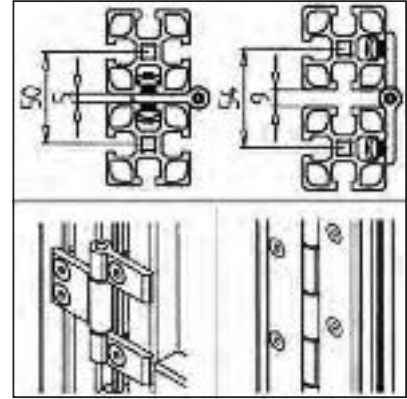
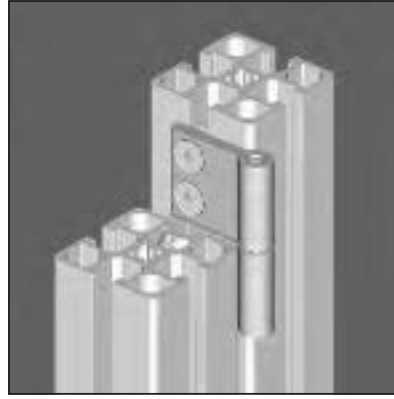
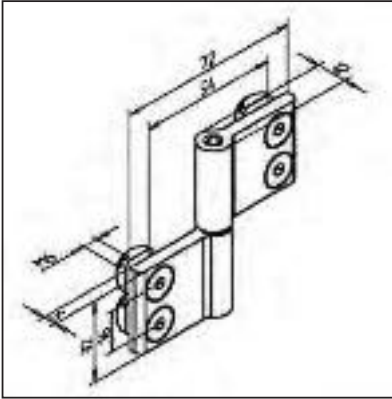
- Doors, lids, movable attachments at profiles 19, 32 and 45
- Mounting of guards
- Mount in reversed orientation for non lift removable or horizontal applications
- Connection of profiles 19, 32 and 45 at various angles

ASSEMBLY

- Use fastening kit
- For production of hinges at various length or piano-hinges is hinge-profile 5GB, **part no. 20.0093/0** available

HINGE L 45/45

part no. 21.1378/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural anodized with stainless steel cylinder

- Fastening kit

- Weight 0,089 kg

- Load max. 400 N

APPLICATIONS

- Doors, lids, movable attachments at profiles 45

- Mounting of guards

- Mount in reversed orientation for non lift removable or horizontal applications

- Connection of profiles 45 at various angles

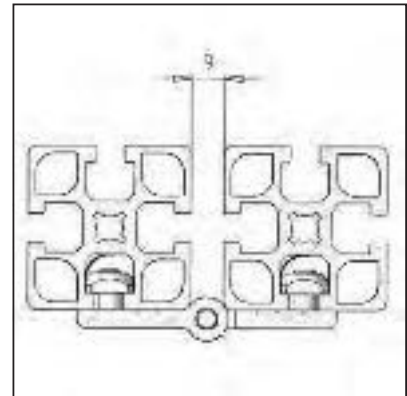
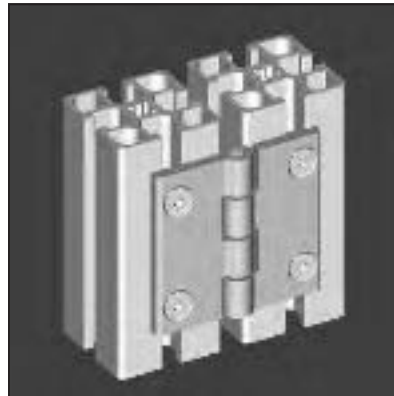
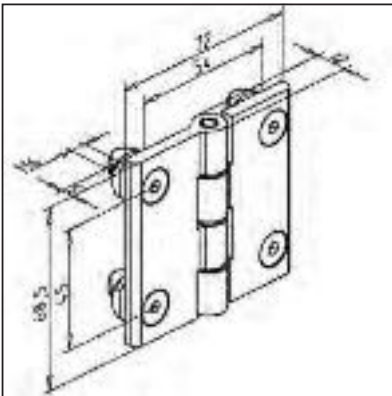
ASSEMBLY

- Use fastening kit

- For production of hinges at various length or piano-hinges is hinge-profile 5GB, **part no. 20.0093/0** available

DOOR HINGE SMALL

part no. 21.0973/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium

- Fastening kit

- Weight 0,120 kg

APPLICATIONS

- Suitable for large doors and lids

- Guard units

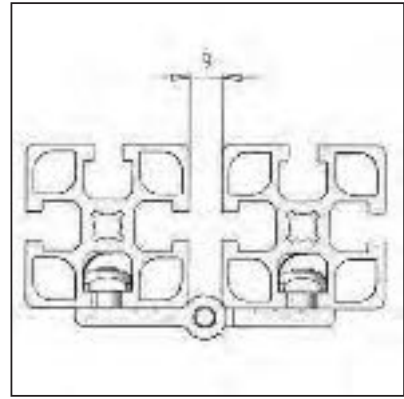
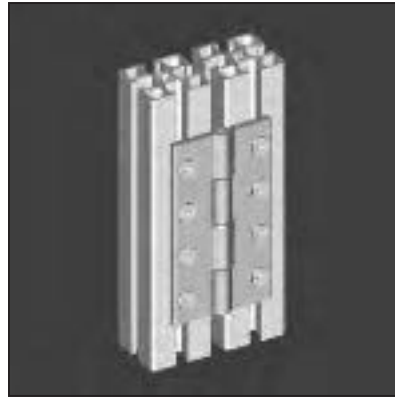
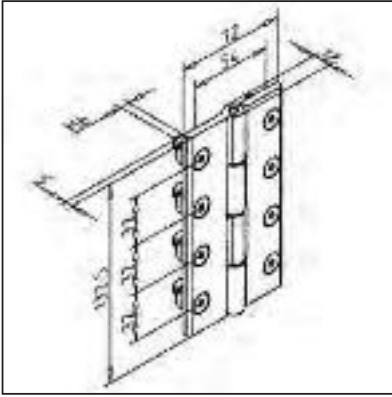
- Connection of profiles at any angle

ASSEMBLY

- Use fastening kit

DOOR HINGE LARGE

part no. 21.0970/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium
- Fastening kit
- Weight 0,235 kg

APPLICATIONS

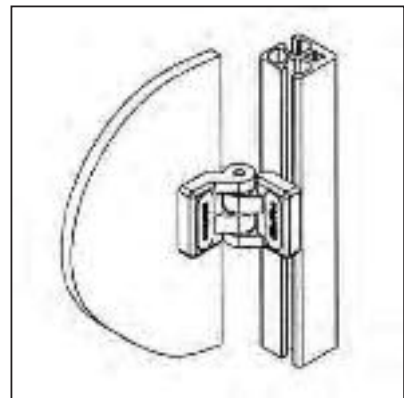
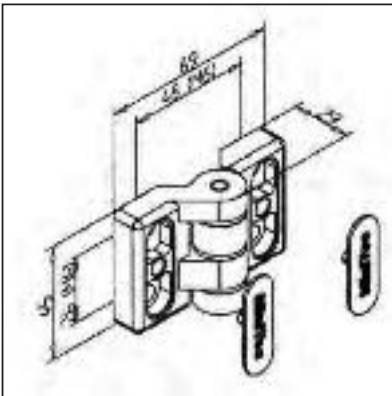
- Suitable for large doors and lids
- Guard units
- Connection of profiles at any angle

ASSEMBLY

- Use fastening kit

HINGE 19 S

part no. 21.1044/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Without fastening kit
- End caps
- Weight 0,100 kg
- Load max. 600 N

APPLICATIONS

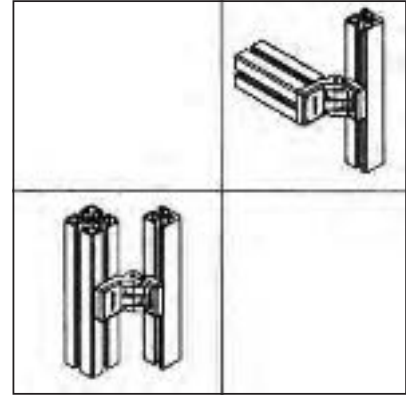
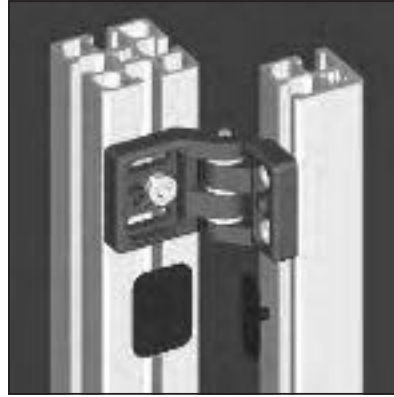
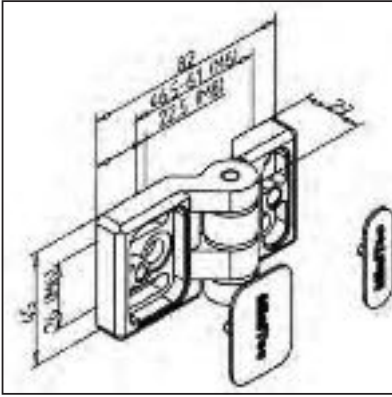
- Suitable for large doors and flaps of profiles type 19 or 32
- Guard units
- Connection of profiles 19 and 32 at any angle

ASSEMBLY

- Fasten hinge with 2 M6 x 18 bolts and 2 square nuts on the profile groove, or with screws corresponding to the material thickness directly on the panel elements
- For heavy-duty applications use multiple hinges
- Bending range 270°

HINGE 32 S

part no. 21.1055/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder-coated, grey
- Without fastening kit
- End caps
- Weight 0,105 kg
- Load max. 600 N

APPLICATIONS

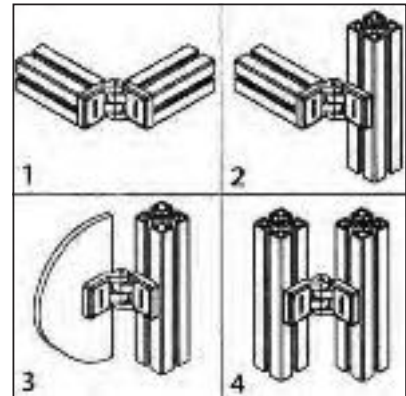
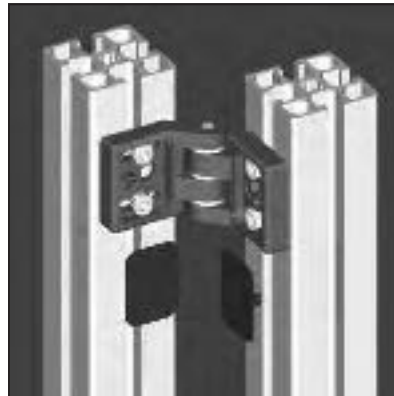
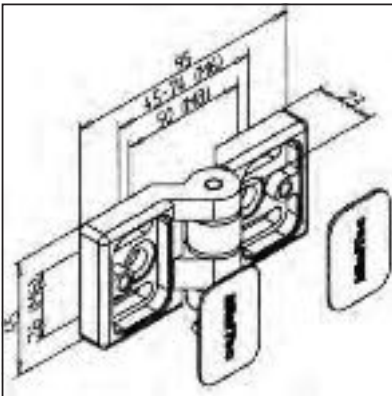
- Suitable for large doors and flaps
- Guard units
- Connection of profiles 19, 32 and 45 at any angles

ASSEMBLY

- Fasten hinge with 2 M6 x 18 bolts and 2 square nuts on the profile groove or with screws corresponding to the material thickness directly on the panel elements
- Other hinge half on profile 45 x 45 with screw M8 x 30 or 2 screws M6 x 18 fasten
- For heavy-duty applications use multiple hinges
- Bending range 270°

HINGE 45 S

part no. 21.1098/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder-coated, grey
- Without fastening kit
- End caps
- Weight 0,100 kg
- Load max. 600 N

APPLICATIONS

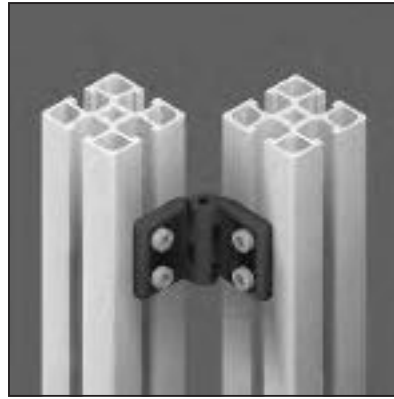
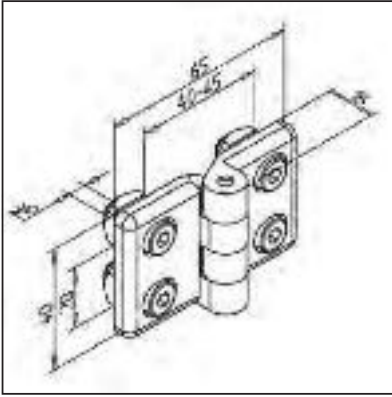
- Suitable for large doors and flaps
- Guard units
- Connection of profiles at various angles
- For heavy-duty application use multiple hinges

ASSEMBLY

- 1: 2 screws M8 x 30
- 2: 2 screws M6 x 18, 2 square nuts M6, 1 screw M8 x 30
- 3: 2 screws M6 x 18, 2 square nuts M6, 2 screws M6 for panel element according to material
- 4: 4 screws M6 x 18, 4 square nuts M6
- Bending range 270°

HINGE 45 M6

part no. 21.1175/0



TECHN. DATA / ITEMS SUPPLIED

- ABS, grey	
- Fastening kit	
- Weight	0,061 kg
- Load max.	160 N

APPLICATIONS

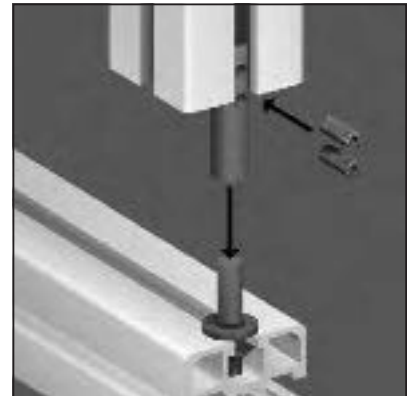
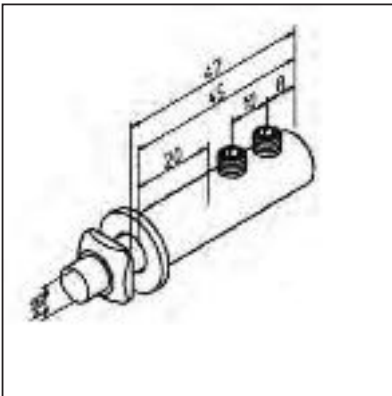
- Suitable for light doors and lids
- Guard units
- Connection of profiles at various angles

ASSEMBLY

- Use fastening kit

INTERNAL HINGE AL

part no. 21.1142/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural	
- Fastening kit	
- Weight	0,020 kg
- Load max.	250 N

APPLICATIONS

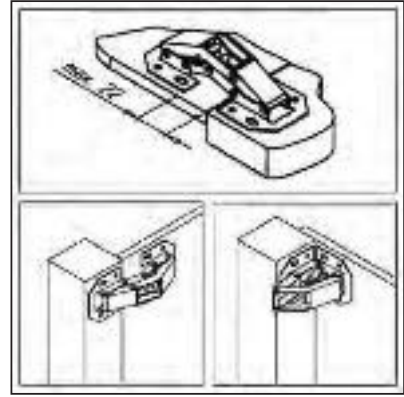
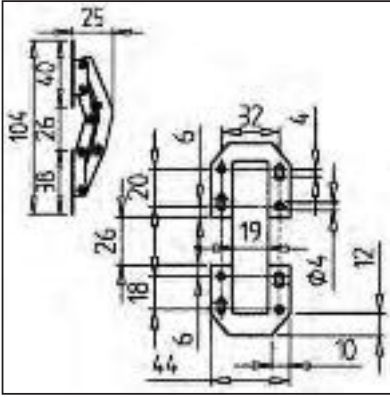
- Doors
- Lids
- Movable elements
- Subsequent insertion of doors

ASSEMBLY

- Screw snap bolts onto the frame and insert washer
- Insert hinge into door element
- Hold the door element above the grooves, push hinges onto snap bolts and tighten them

SWING-OUT HINGE

part no. 21.1187/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated	
- Without fastening kit	
- Weight	0,082 kg
- Load max.	50 N

APPLICATIONS

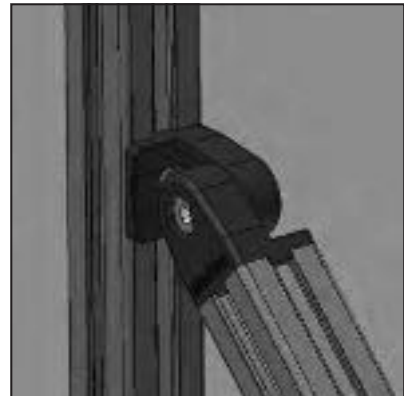
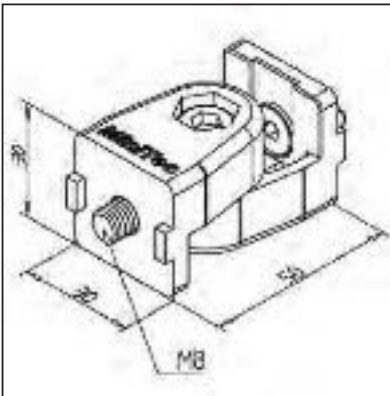
- Light doors
- Show cases, Fair equipment, guards
- Doors close without gap, bearing on the outside or flush on the inside

ASSEMBLY

- On profile grooves with screws M4 x 16 and square nut M4
- Direct fastening on panel elements; screw length according to material thickness
- Direct fastening on profile surface

LINK 30 S

part no. 21.2106/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey	
- Fastening kit	
- Locking device against torsion	
- Weight	0,087 kg

APPLICATIONS

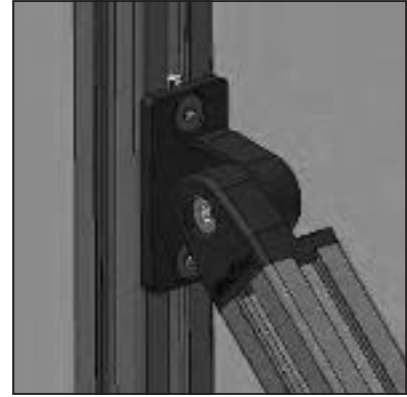
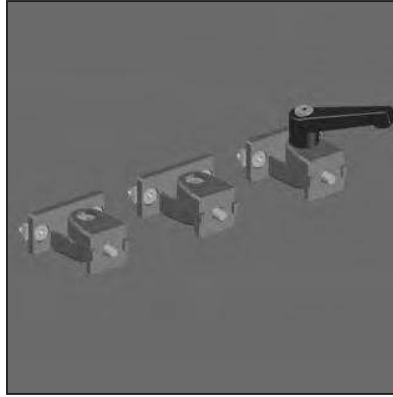
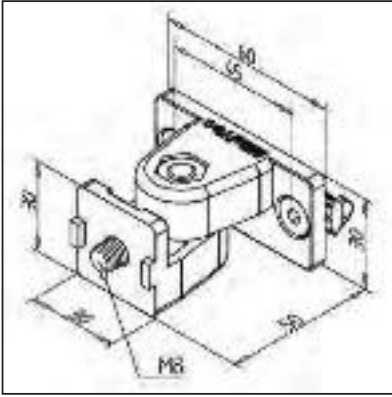
- Connection of profiles at any angle
- Subsequent insertion of profiles into existing frames
- Alternatively: Angle bracket 30 S **part no. 21.2222/0**
- Alternatively: Angle bracket fixed 30 S **part no. 21.2225/0**

ASSEMBLY

- First part of hinge to be mounted on profile face
- Second part of hinge to be mounted on frame
- Screw both parts together on hinge point

LINK 30 F / S

part no. 21.2105/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium GD, powder coated, grey
- Fastening kit
- Locking device against torsion
- Weight 0,105 kg

APPLICATIONS

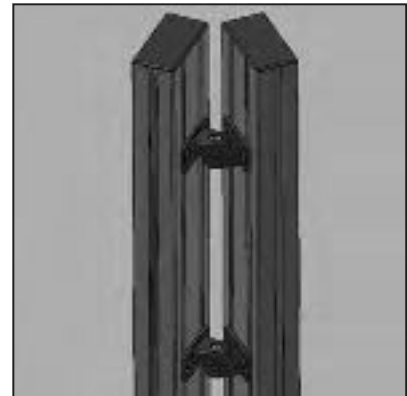
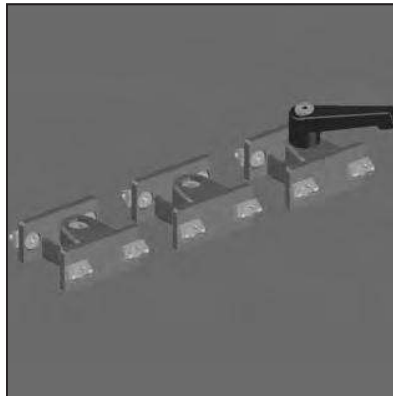
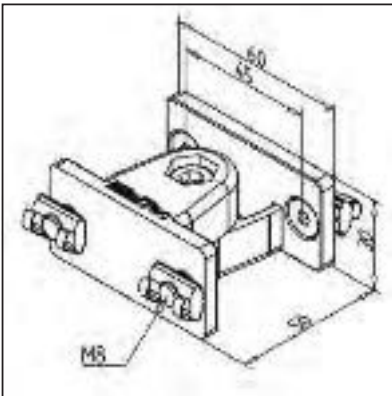
- Connection of profiles at any angle
- Subsequent insertion of profiles into existing frames
- Alternatively:
Angle bracket 30 F / S **part no. 21.2221/0**
- Alternatively:
Angle bracket fixed 30 F / S **part no. 21.2224/0**

ASSEMBLY

- First part of hinge to be mounted on profile face
- Mount profile with angle bracket on frame

LINK 30 F

part no. 21.2111/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium GD, powder coated, grey
- Fastening kit
- Locking device against torsion
- Weight 0,126 kg

APPLICATIONS

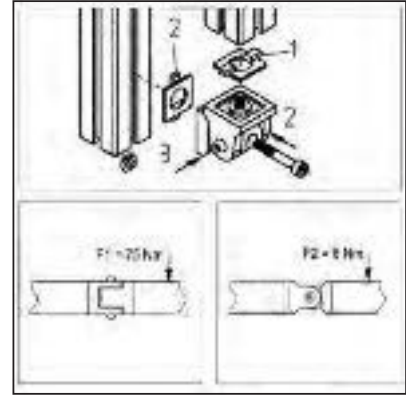
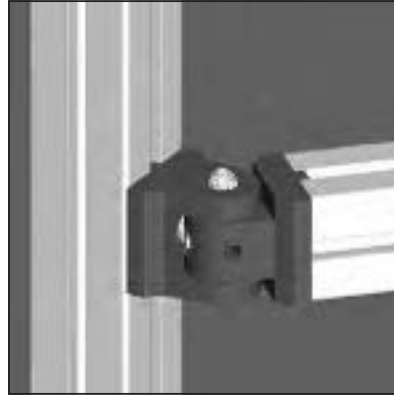
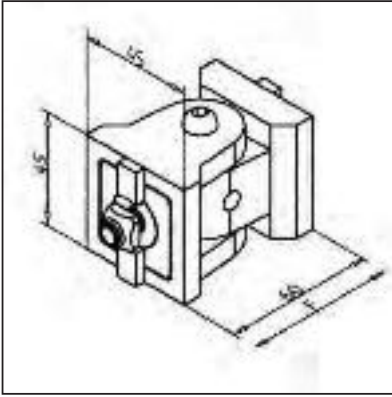
- Connection of profiles at any angle
- Subsequent insertion of profiles into existing frames
- Alternatively:
Angle bracket 30 F **part no. 21.2223/0**
- Alternatively:
Angle bracket fixed 30 F **part no. 21.2226/0**

ASSEMBLY

- Fastening of hinges on profile groove
- Screw both parts together on hinge point

LINK

part no. 21.2030/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fastening kit
- AL GD locking device against torsion
- Load Fmax. 5000 N
- Weight 0,250 kg

APPLICATIONS

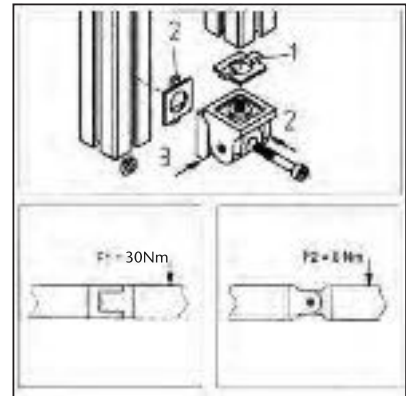
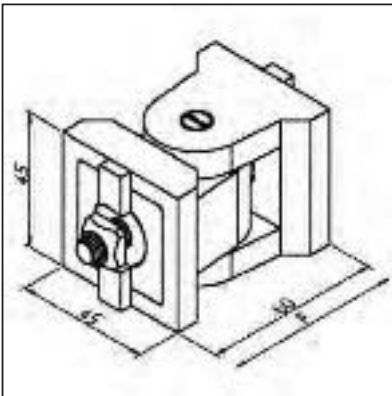
- Connection of profiles at any angle
- Braces
- Reinforcement of frame constructions
- Not to be used as a hinge

ASSEMBLY

- 1: Joint half with pre-mounted screw to desired position fasten
- 2: Screw from scope of supply insert and joint half of 2 fix swivel (to it mobile side 90°)
- 3: Tighten lateral connecting screws

ANGLE BRACKET

part no. 21.2020/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fastening kit
- AL GD locking device against torsion
- Load max. 1500 N
- Weight 0,240 kg

APPLICATIONS

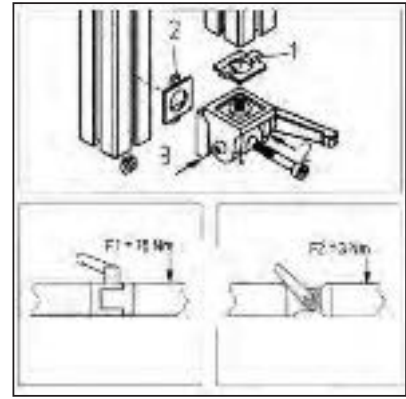
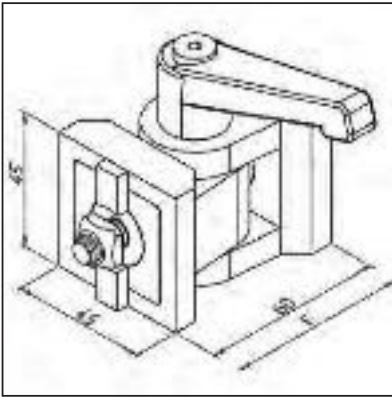
- Heavy swivel doors, bearing assembly of movable add-on pieces
- Not lockable
- For heavy loads use multiple hinges

ASSEMBLY

- 1: Joint half with pre-mounted screw to desired position fasten
- 2: Screw from scope of supply insert and joint half of 2 fix (to it, do not solve camp pins swivel mobile side 90°!)

ANGLE BRACKET FIXABLE

part no. 21.2010/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fastening kit
- AL GD locking device against torsion
- Load max. 1500 N
- Weight 0,280 kg

APPLICATIONS

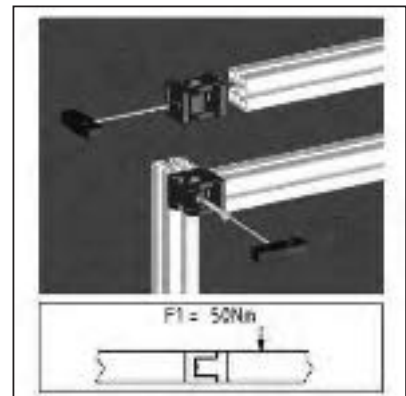
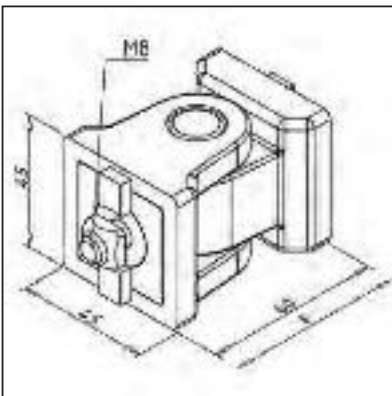
- Heavy swivel doors, bearing assembly of movable add-on pieces
- Clamping lever for positioning of add-on parts
- Fixing of pieces such as measuring devices that need to be adjusted quickly
- For heavy loads use multiple hinges

ASSEMBLY

- 1: Joint half with pre-mounted screw to desired position fasten
- 2: Insert screw M8 x 50 and fix hinge half 2
- 3: Tighten clamping lever

ANGLE BRACKET 45 / 15

part no. 21.2315/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fastening kit
- AL GD locking device against torsion
- Load max. 2700 N
- Weight 0,312 kg

APPLICATIONS

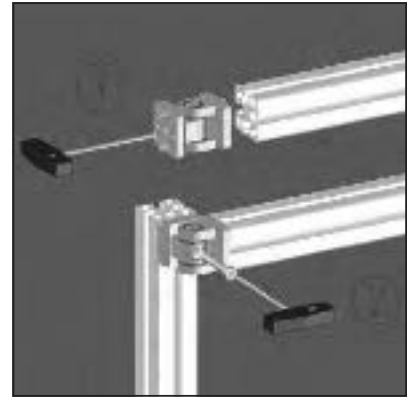
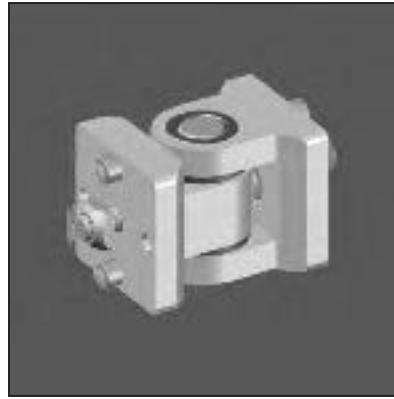
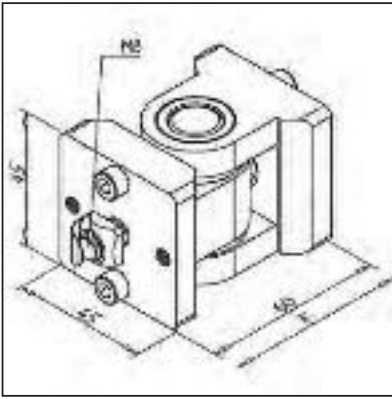
- Heavy swivel doors, bearing assembly of movable add-on pieces
- Clamping lever for positioning of add-on parts
- For heavy loads use multiple hinges

ASSEMBLY

- 1: Mount the hinge half 1 on the desired position (with key SA/F through bore in hinge half 2)
- 2: Insert screw M8 x 50 and fix hinge half 2

HEAVY DUTY HINGE

part no. 21.2034/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc-plated
- Fastening kit
- Locking device against torsion
- Load 3500 N
- Weight 0,679 kg

APPLICATIONS

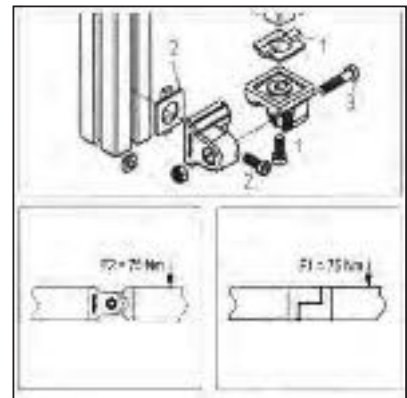
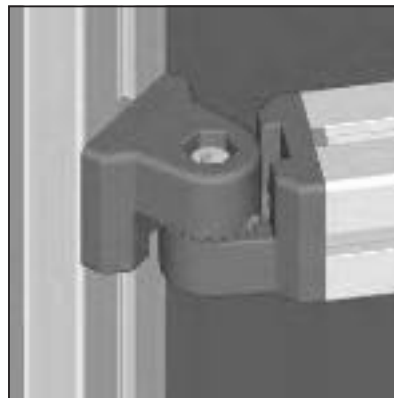
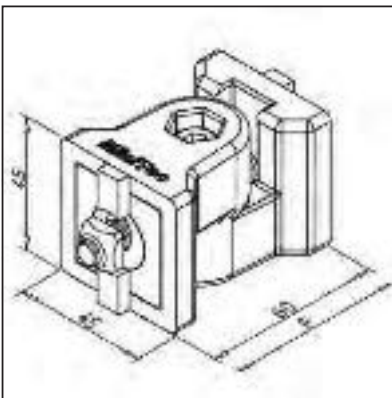
- Heavy swivel doors, bearing assembly of movable add-on pieces
- Not lockable
- For heavy loads use multiple hinges

ASSEMBLY

- First part of hinge to be mounted on profile face
- Second part of hinge to be mounted on frame

ANGLE BRACKET R

part no. 21.2041/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fastening kit
- Locking device against rotation AL GD
- Load max. 5000 N
- Weight 0,263 kg

APPLICATIONS

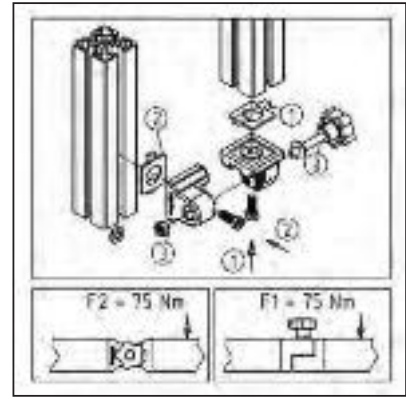
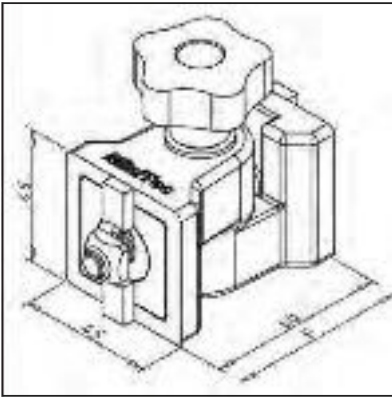
- Setting angle 180° in steps of 15°
- Adjustable fixing of add-on parts such as grip-boxes, beams or monitors
- Safe adjustment through tooth system

ASSEMBLY

- 1: Place locking device and screw first half of the bracket
- 2: Fix second half
- 3: Connect the 2 halves in desired angle and tighten

ANGLE BRACKET R FIXABLE

part no. 21.2230/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fastening kit
- Locking device against torsion AL GD
- Load max. 5000 N
- Weight 0,279 kg

APPLICATIONS

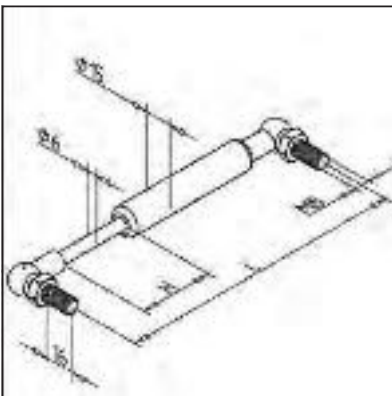
- Setting angle 180° in steps of 15°
- Adjustable fixing of add-on parts such as grip-boxes, beams or monitors
- Safe adjustment through tooth system

ASSEMBLY

- 1: Place locking device and screw first half of the bracket
- 2: Fix second half
- 3: Connect the 2 halves in desired angle and tighten

GAS SPRING 6 / 15

part no. 24.1126/0



H (mm)	L (mm)
20	115,5
40	155,5
60	194,5
80	235
100	273
120	316
150	375,5

TECHN. DATA / ITEMS SUPPLIED

- Stroke (H) alternatively 20 / 40 / 60 / 80 / 100 / 120 / 150 mm
- Power (F) between 50 and 400 N (increments 50 N)
- Please indicate desired length of stroke and force

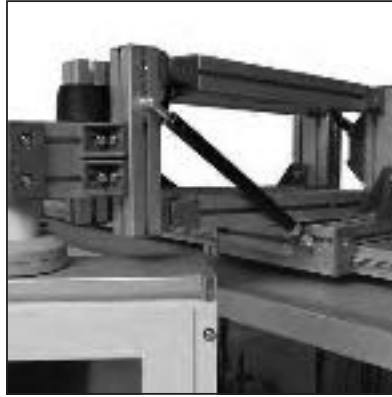
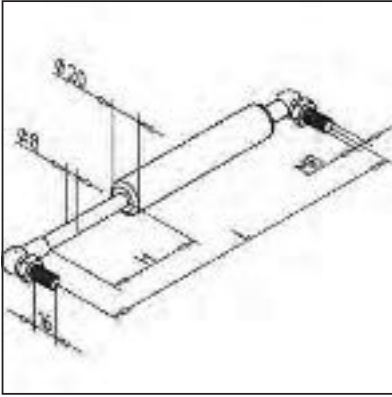
APPLICATIONS

- Lift assist for hinged elements
- Suitable for lift and swivel movements

ASSEMBLY

GAS SPRING 8 / 20

part no. 24.1127/0



H (mm)	L (mm)
57	206
80	244
100	286
120	326
140	366
160	405
180	445
200	485,5
220	527
250	585,5

TECHN. DATA / ITEMS SUPPLIED

- Stroke (H) alternatively 57 / 80 / 100 / 120 / 140 / 160 / 180 / 200 / 220 / 250 mm
- Power (F) between 80 and 750 N (increments 50 N)
- Please indicate desired length of stroke and force

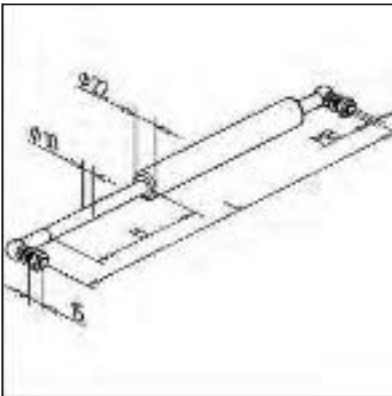
APPLICATIONS

- Lift assist for hinged elements
- Suitable for lift and swivel movements

ASSEMBLY

GAS SPRING 10/22

part no. 24.1128/0



H (mm)	L (mm)
100	286
150	386
200	486
250	586
300	686
350	786
400	886

TECHN. DATA / ITEMS SUPPLIED

- Stroke (H) alternatively 100 / 150 / 200 / 250 / 300 / 350 / 400 mm
- Power (F) between 100 and 1200 N (increments 50 N)
- Please indicate desired length of stroke and force

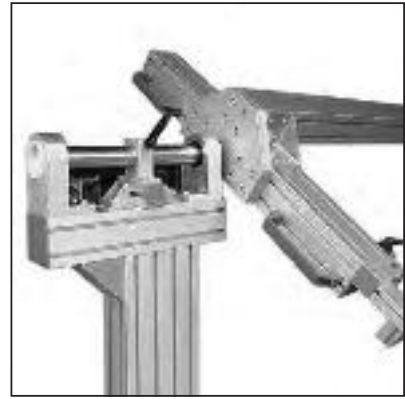
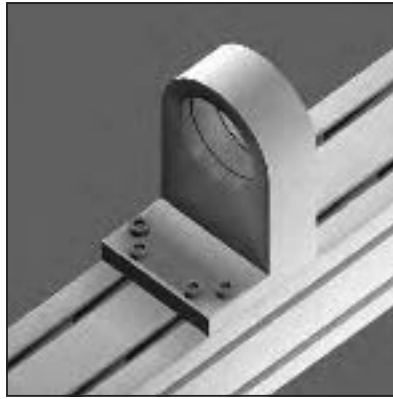
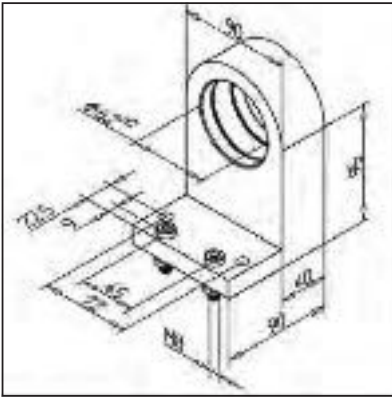
APPLICATIONS

- Lift assist for hinged elements
- Suitable for lift and swivel movements

ASSEMBLY

UPRIGHT BEARING

part no. 28.0158/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural anodized
- Fastening kit
- Without ball bearing and locking rings
- Weight 1,310 kg

APPLICATIONS

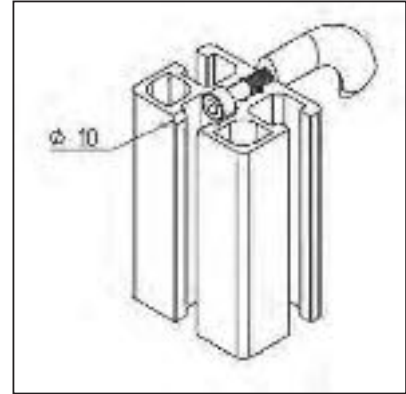
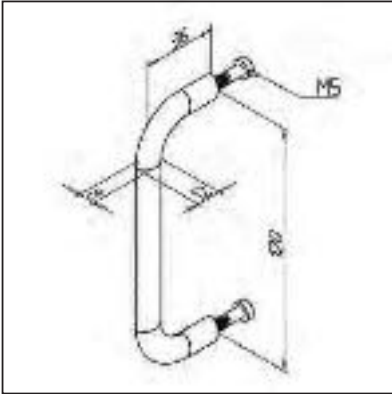
- Large swivel frames
- Guiding of shafts, axles, drums, tires lengthwise and crosswise to the profile

ASSEMBLY

- Location hole fitting for radial ball bearing 6206 2RS **part no. 50.0977/1**
- Use fastening kit

HANDLE AL

part no. 21.1138/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural anodized
- Fastening kit
- Weight 0,050 kg

APPLICATIONS

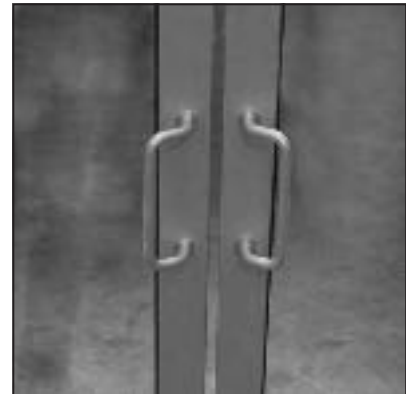
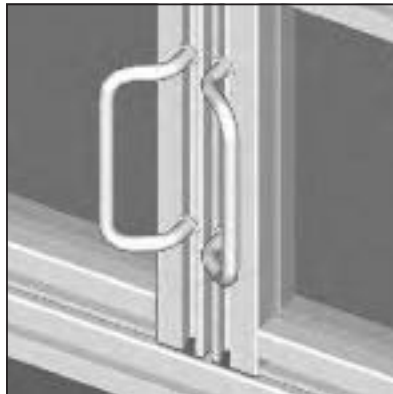
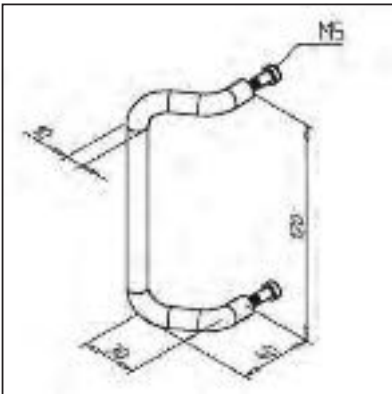
- Show cases
- Cabinets
- Light doors

ASSEMBLY

- Use fastening kit
- With step drilling \varnothing 10 mm x 5,5 mm respectively through hole \varnothing 5,5 mm

HANDLE AL ANGLED

part no. 21.1348/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium natural, anodized
- Fastening kit
- Weight 0,050 kg

APPLICATIONS

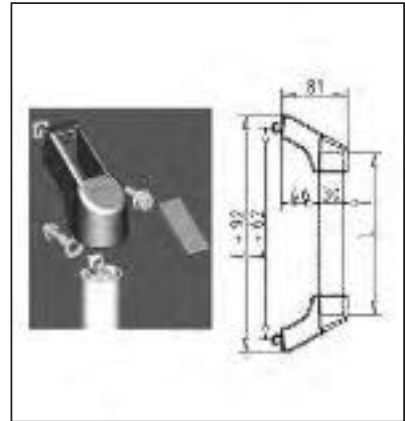
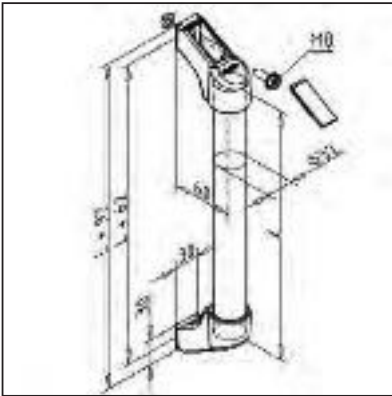
- Show cases
- Cabinets
- Light doors

ASSEMBLY

- Use fastening kit
- 2 step drills \varnothing 10 mm x 5,5 mm or through-bores \varnothing 5,5 mm in 120 mm distance

HANDLE GP

part no. 21.2317/0



TECHN. DATA / ITEMS SUPPLIED

- Handle profile aluminium, anodized E6/ EV1
- Bracket ABS, grey
- Fastening kit steel, zinc-plated
- Weight 0,247 kg
- Length 300 mm
- Other lengths on request
- Please measure L specify
- Construction set without profile part no. 21.2317/1

APPLICATIONS

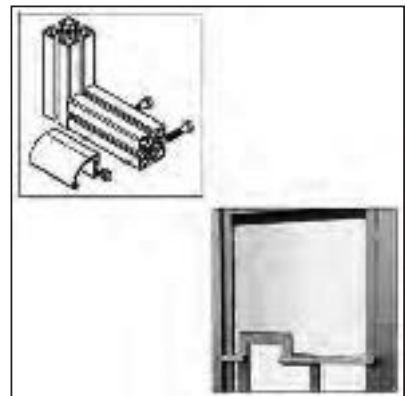
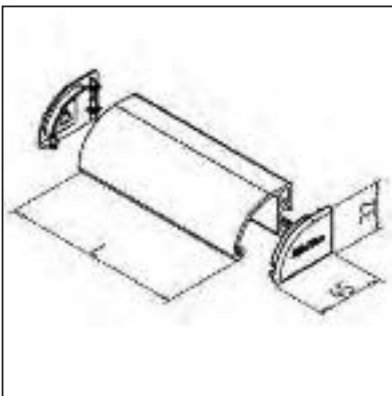
- Doors and lids
- Creeper
- Railing

ASSEMBLY

- Attach bracket to handle profile
- Attach handle to profile grooves using mounting material from fastening kit

CLOSED PROTECTIVE HANDLE

part no. 21.1048/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium anodized
- End caps
- Without fastening kit
- Weight 0,113 kg
- Length 120 mm
- Other lengths on request
- Please measure L specify

APPLICATIONS

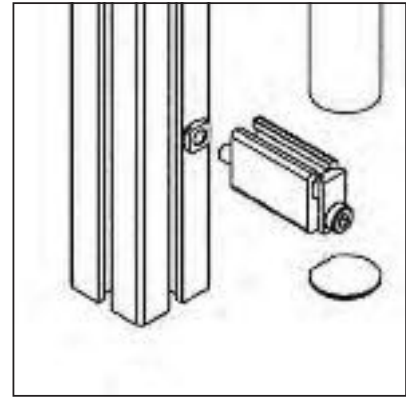
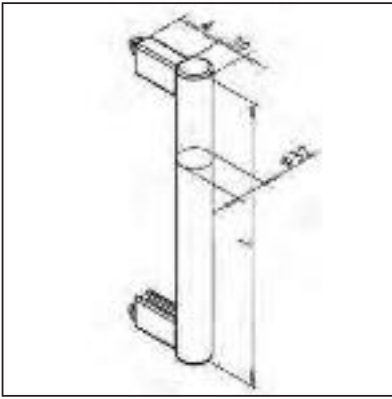
- Doors
- Lids
- Guards
- Furniture

ASSEMBLY

- On profile groove with 2 hex socket cap screws M6 x 16 and square nut M6
- Directly on panel element with hex socket cap screw M6, length according to material thickness
- Assembly can also be carried out from the rear side; for this purpose insert square nut M6

PROFILE HANDLE 32

part no. 21.0962/0



TECHN. DATA / ITEMS SUPPLIED

- Assembly kit made from MiniTec aluminium profiles
- Fastening kit
- Weight 0,510 kg
- Length (L) 300 mm
- Standard distance (A) 48 mm
- Other lengths on request
- Please specify dimension L and A level

APPLICATIONS

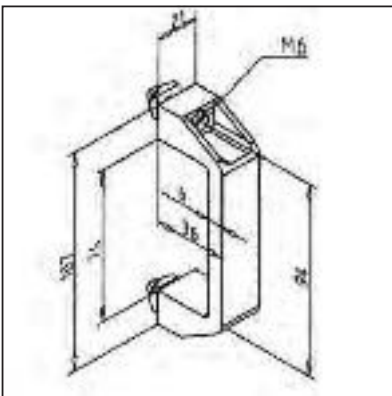
- Handle for very large doors, lids, trolleys, removable panel elements

ASSEMBLY

- Enter square nut in existing construction
- Pre-assemble the spacers and profile connector with longer screws
- Insert the handle profile and tighten the profile connector to the spacers
- Clip on end caps

HANDLE 90

part no. 21.1099/1



TECHN. DATA / ITEMS SUPPLIED

- PA 6.6, grey
- On request also deliverable in black
part no. 21.1099/0
- Fastening kit
- Weight 0,025 kg

APPLICATIONS

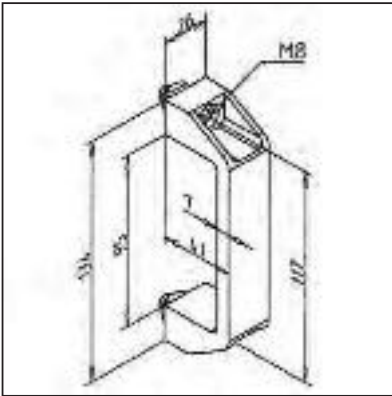
- Doors
- Lids
- Guards

ASSEMBLY

- Use fastening kit
- Directly on panel element with hex socket cap screw M6, length according to material thickness
- Assembly can also be carried out from the rear side

HANDLE 120

part no. 21.1092/1



TECHN. DATA / ITEMS SUPPLIED

- PA 6.6, grey
- On request also deliverable in black
part no. 21.1092/0
- Fastening kit
- Weight 0,074 kg
- On request ESD capability available in black
part no. 32.1007/0

APPLICATIONS

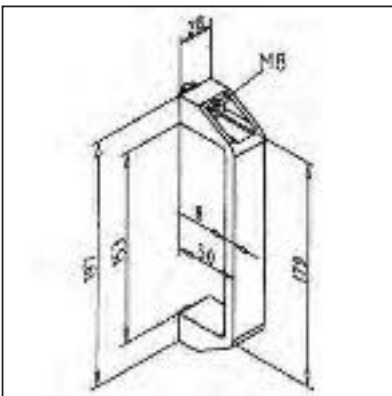
- Doors
- Lids
- Guards

ASSEMBLY

- Use fastening kit
- Directly on panel element with hex socket cap screw M8, length according to material thickness
- Assembly can also be carried out from the rear side

HANDLE 180

part no. 21.1094/1



TECHN. DATA / ITEMS SUPPLIED

- PA 6.6, grey
- On request also deliverable in black
part no. 21.1094/0
- Fastening kit
- Weight 0,099 kg

APPLICATIONS

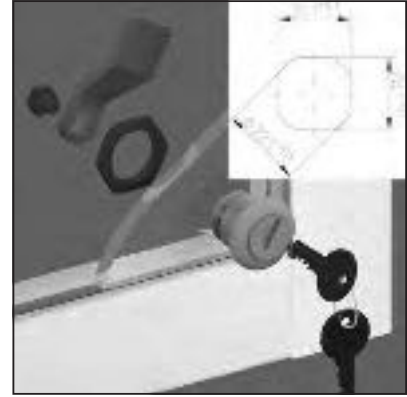
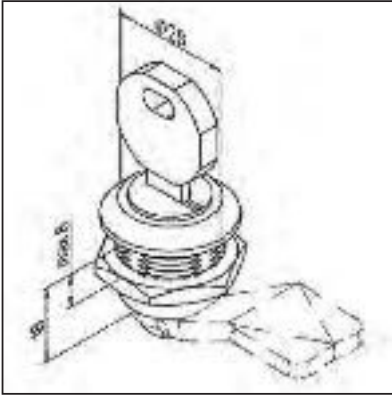
- Doors
- Lids
- Guards

ASSEMBLY

- Use fastening kit
- Directly on panel element with hex socket cap screw M8, length according to material thickness
- Assembly can also be carried out from the rear side

CYLINDER LOCK

part no. 21.1752/0



TECHN. DATA / ITEMS SUPPLIED

- Brass, chrome plated
- Without lock
- 2 keys
- Weight 0,100 kg

APPLICATIONS

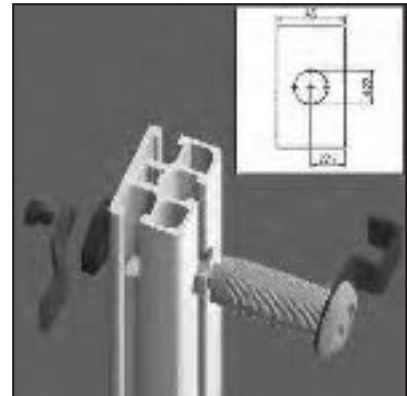
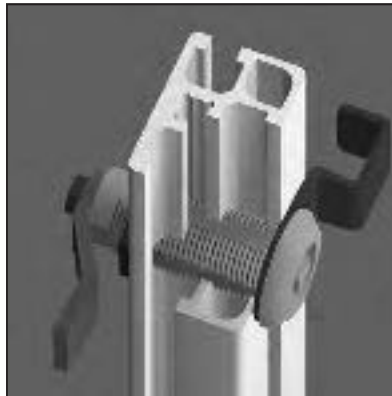
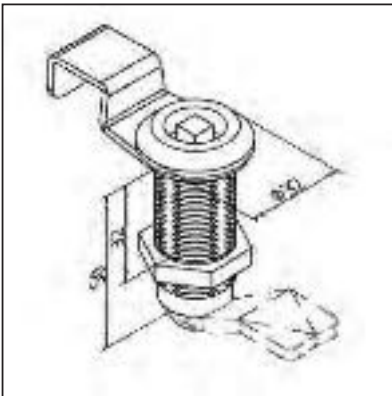
- Light doors from panel elements up to 8 mm thickness

ASSEMBLY

- Bore Ø 22 mm in panel element
- Position: 22 mm from edge in both directions
- Selection of locks see page 132

BOLT LOCK 32 FOR FOUR-FACED KEY

part no. 21.1087/6



TECHN. DATA / ITEMS SUPPLIED

- Housing GD Zn, black
- With four-faced key
- Opener, black
- Fixing nut, steel, zinc plated
- Without lock
- Weight 0,179 kg

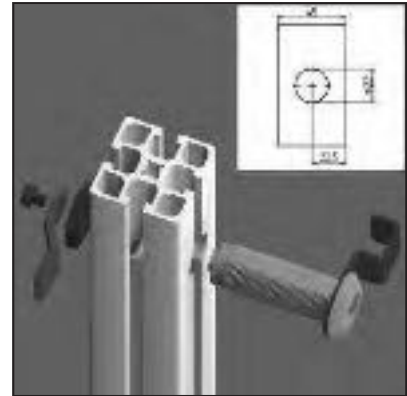
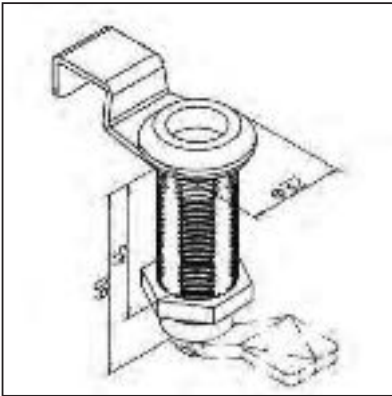
APPLICATIONS

- For profiles 32
- Locking of doors and lids in guard units

ASSEMBLY

- Bore Ø 22 mm in the middle of the profile
- Tighten bolt lock from the rear with fixing nut
- Selection of locks see page 132

BOLT LOCK 45 SOCKERT HEX HEAD WRENCH 10 A/F part no. 21.1087/9



TECHN. DATA / ITEMS SUPPLIED

- Housing GD Zn, black
- For socket hex head wrench 10 A/F
- Opener, black
- Fixing nut, steel, zinc plated
- Without lock
- Weight 0,111 kg

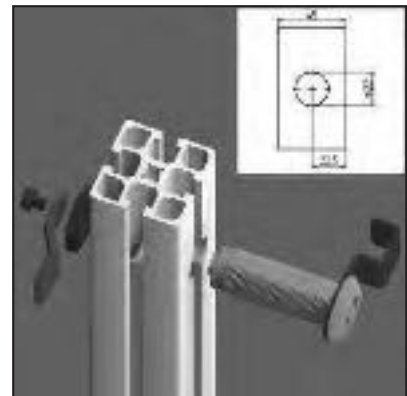
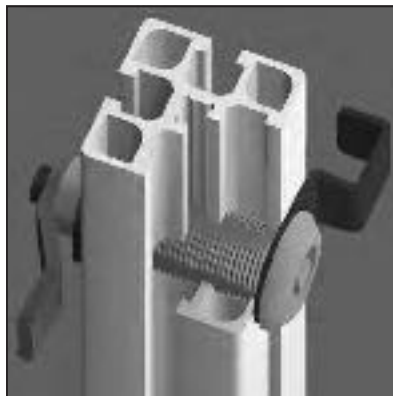
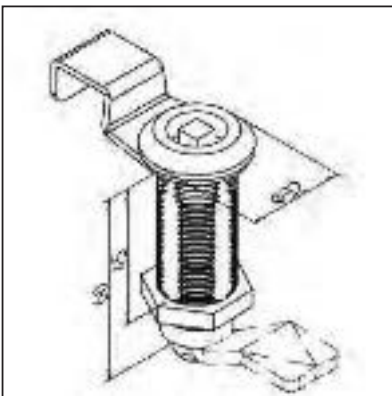
APPLICATIONS

- For profiles 45
- Locking of doors and lids in guard units

ASSEMBLY

- Bore \varnothing 22 mm in the middle of the profile
- Tighten bolt lock from the rear with fixing nut
- Selection of locks see page 132

BOLT LOCK 45 FOR FOUR-FACED KEY part no. 21.1087/7



TECHN. DATA / ITEMS SUPPLIED

- Housing GD Zn, black
- With four-faced key
- Opener, black
- Fixing nut, steel, zinc plated
- Without lock
- Weight 0,197 kg

APPLICATIONS

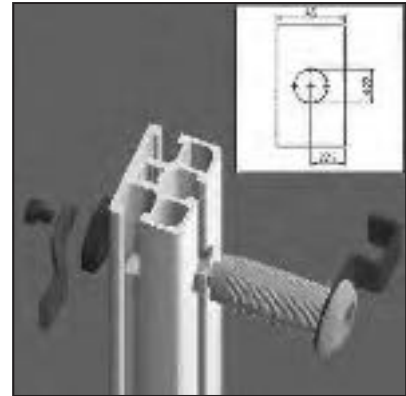
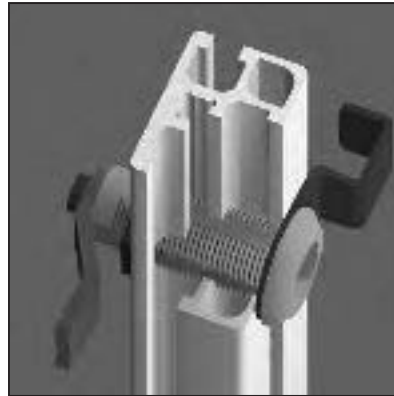
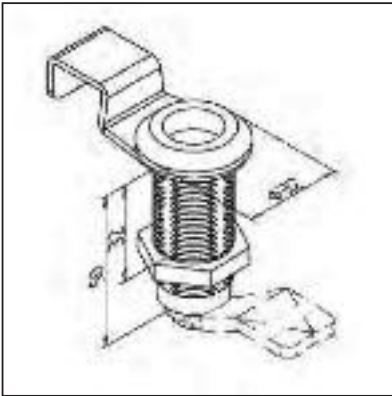
- For profiles 45
- Locking of doors and lids in guard units

ASSEMBLY

- Bore \varnothing 22 mm in the middle of the profile
- Tighten bolt lock from the rear with fixing nut
- Selection of locks see page 132

BOLT LOCK 32 SOCKET HEX HEAD WRENCH A/F 10

part no. 21.1087/8



TECHN. DATA / ITEMS SUPPLIED

- Housing GD Zn, black
- For socket hex head wrench A/F 10
- Opener, black
- Fixing nut, steel, zinc plated
- Without lock
- Weight 0,102 kg

APPLICATIONS

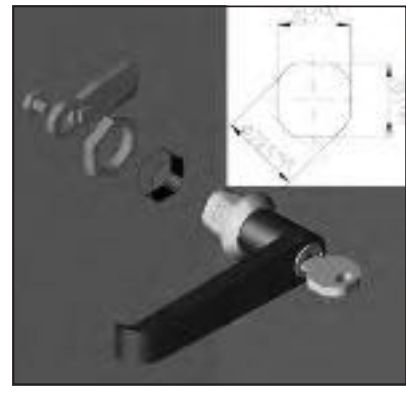
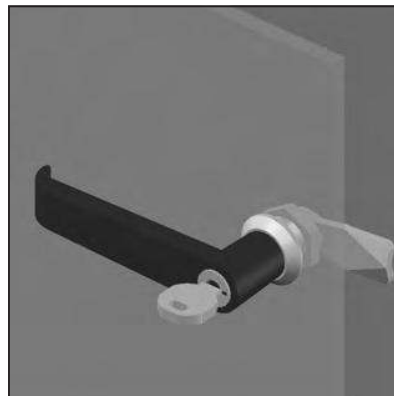
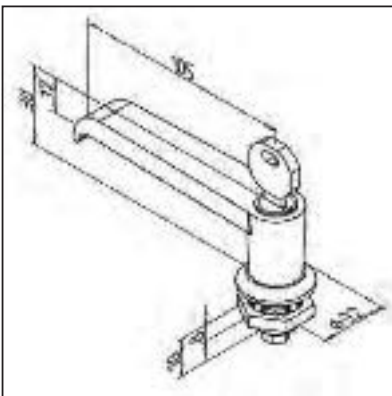
- For profiles 32
- Locking of doors and lids in guard units

ASSEMBLY

- Bore \varnothing 22 mm in the middle of the profile
- Tighten bolt lock from the rear with fixing nut
- Selection of locks see page 132

HANDLE 8 WITH PROFILE CYLINDER LOCK GREY

part no. 21.2305/0



TECHN. DATA / ITEMS SUPPLIED

- Housing PA/GD Zn, grey
- Fixing nut, steel, zinc-plated
- Without lock
- Weight 0,145 kg

APPLICATIONS

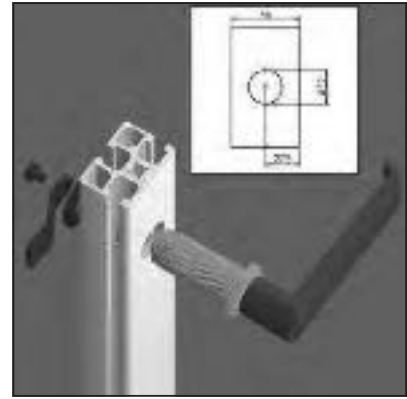
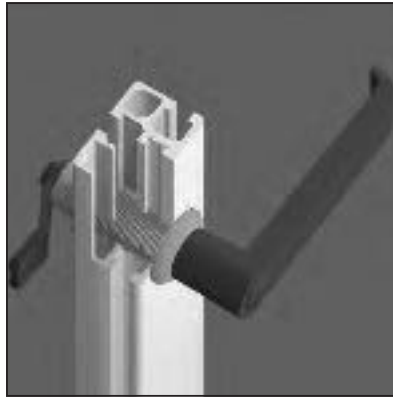
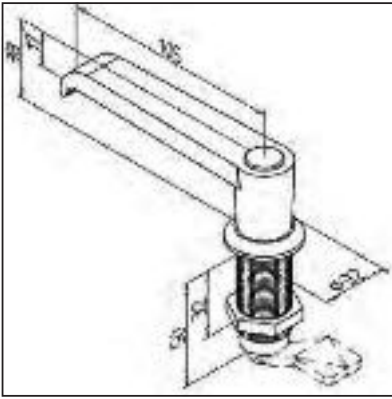
- Locking of doors and lids in guard units
- For panel elements up to 8 mm thickness

ASSEMBLY

- Drill borehole according to drawing
- Tighten handle lock from the rear with fixing nut

HANDLE 32 WITHOUT PROFILE CYLINDER LOCK

part no. 21.1087/4



TECHN. DATA / ITEMS SUPPLIED

- Housing PA/GD Zn, grey
- On request also deliverable in black **part no. 21.1087/2**
- Fixing nut, steel, zinc plated
- Without lock
- Weight 0,172 kg

APPLICATIONS

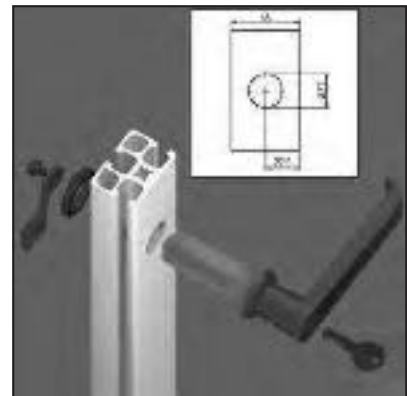
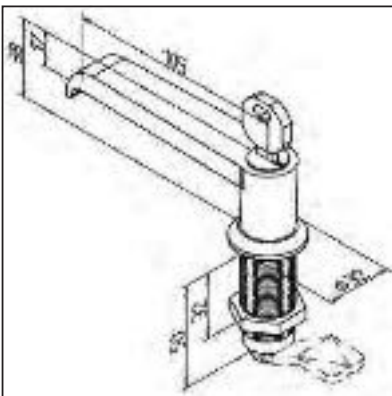
- For profiles 32
- Locking of doors and lids in guard units

ASSEMBLY

- Bore \varnothing 22 mm in the middle of the profile
- Tighten bolt lock from the rear with fixing nut
- Selection of locks see page 132

HANDLE 32 WITH PROFILE CYLINDER LOCK

part no. 21.1091/4



TECHN. DATA / ITEMS SUPPLIED

- Housing PA/GD Zn, grey
- On request also deliverable in black **part no. 21.1091/2**
- Fixing nut, steel, zinc plated
- Without lock
- Weight 0,211 kg

APPLICATIONS

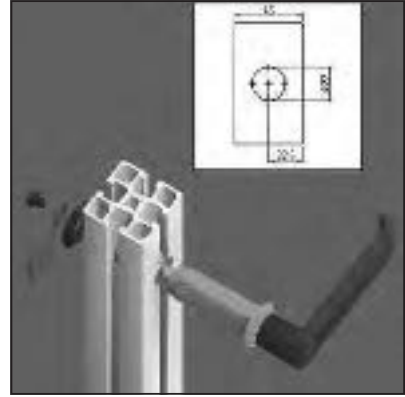
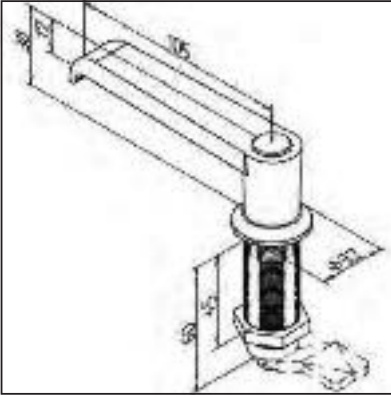
- For profiles 32
- Locking of doors and lids in guard units

ASSEMBLY

- Bore \varnothing 22 mm in the middle of the profile
- Tighten handle lock from the rear with fixing nut
- Selection of locks see page 132

HANDLE 45 WITHOUT PROFILE CYLINDER LOCK

part no. 21.1087/3



TECHN. DATA / ITEMS SUPPLIED

- Housing PA/GD Zn, grey
- On request also deliverable in black **part no. 21.1087/1**
- Fixing nut, steel, zinc plated
- Without lock
- Weight 0,195 kg

APPLICATIONS

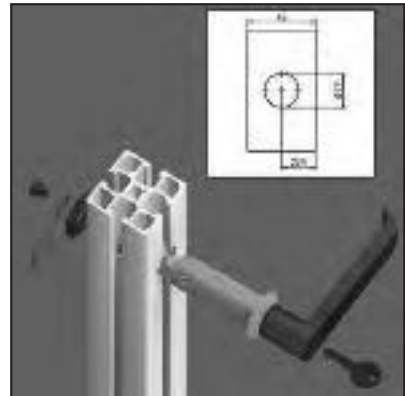
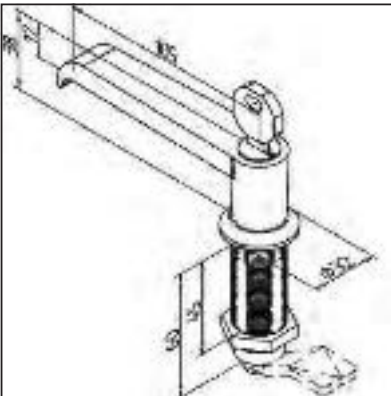
- For profiles 45
- Locking of doors and lids in guard units

ASSEMBLY

- Bore \varnothing 22 mm in the middle of the profile
- Tighten handle lock from the rear with fixing nut
- Selection of locks see page 132

HANDLE 45 WITH PROFILE CYLINDER LOCK

part no. 21.1091/3



TECHN. DATA / ITEMS SUPPLIED

- Housing PA / GD Zn, grey
- On request also deliverable in black **part no. 21.1091/1**
- Fixing nut, steel, zinc plated
- Without lock
- Weight 0,230 kg

APPLICATIONS

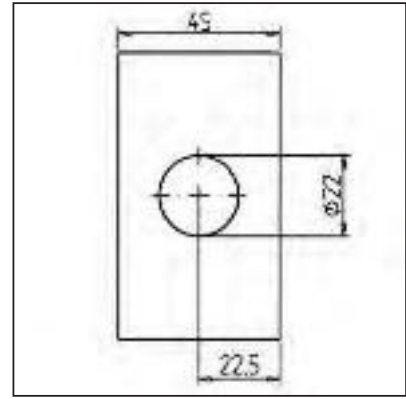
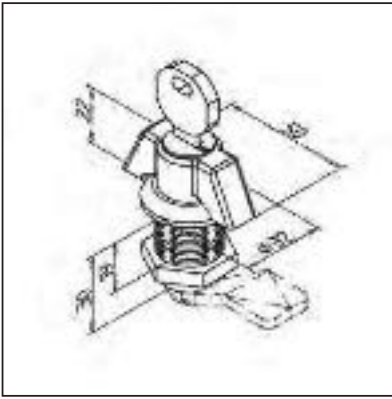
- For profiles 45
- Locking of doors and lids in guard units

ASSEMBLY

- Bore \varnothing 22 mm in the middle of the profile
- Tighten handle lock from the rear with fixing nut
- Selection of locks see page 132

T-HANDLE 19

part no. 21.1015/2



TECHN. DATA / ITEMS SUPPLIED

- GD Zn, chrome plated
- With profile cylinder lock
- Fixing nut, steel, zinc plated
- Without lock
- Weight 0,168 kg

APPLICATIONS

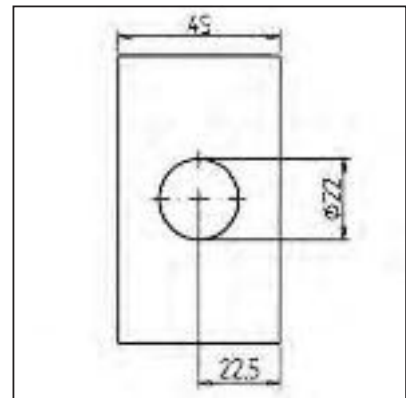
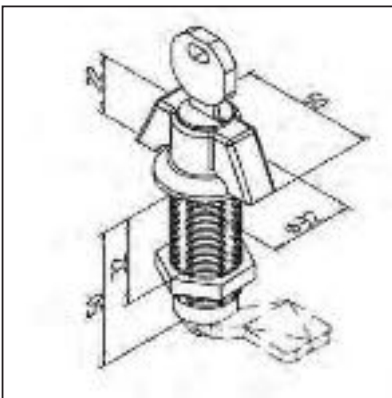
- For profiles 19
- Locking of doors and lids in guard units

ASSEMBLY

- Bore \varnothing 22 mm in the middle of the profile
- Tighten T-handle lock from the rear with fixing nut
- Selection of locks see page 132

T-HANDLE 32

part no. 21.1015/0



TECHN. DATA / ITEMS SUPPLIED

- GD Zn, chrome plated
- With profile cylinder lock
- Fixing nut, steel, zinc plated
- Without lock
- Weight 0,188 kg

APPLICATIONS

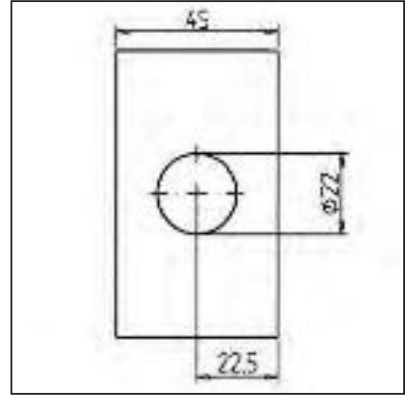
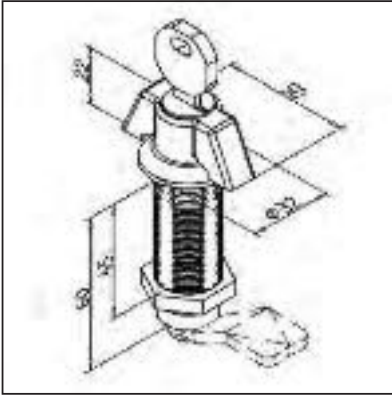
- For profiles 32
- Locking of doors and lids in guard units

ASSEMBLY

- Bore \varnothing 22 mm in the middle of the profile
- Tighten T-handle lock from the rear with fixing nut
- Selection of locks see page 132

T-HANDLE 45

part no. 21.1015/1



TECHN. DATA / ITEMS SUPPLIED

- GD Zn, chrome plated
- With profile cylinder lock
- Fixing nut, steel, zinc plated
- Without lock
- Weight 0,198 kg

APPLICATIONS

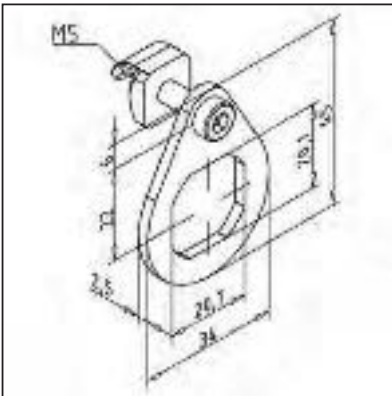
- For profiles 45
- Locking of doors and lids in guard units

ASSEMBLY

- Bore \varnothing 22 mm in the middle of the profile
- Tighten T-handle lock from the rear with fixing nut
- Selection of locks see page 132

TWIST-STOP F

part no. 21.0941/0



TECHN. DATA / ITEMS SUPPLIED

- 1.4305 / steel zinc-plated
- Fastening kit
- Weight 0,0213 kg

APPLICATIONS

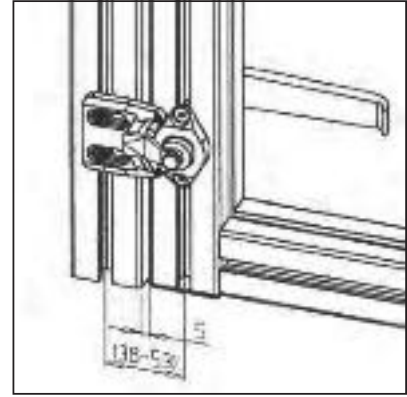
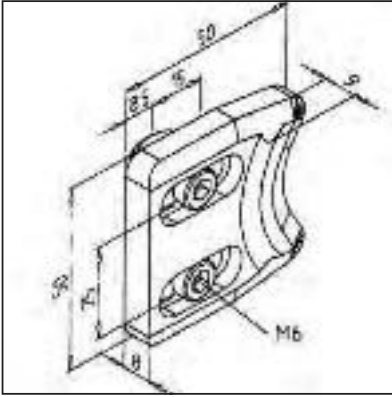
- Protection of bolt-locks, handles and T-handles against unwanted loosening or overturning
- In particular fitting in combination with Door stop S, **part no. 21.1767/0**

ASSEMBLY

- Mount handle or bolt lock as usual, fasten hexagon nut
- Fix Twist-Stop F using fastening kit
- Mount lock

DOOR STOP S

part no. 21.1767/0



TECHN. DATA / ITEMS SUPPLIED

- GD Zn, black
- Fastening kit
- Weight 0,077 kg

APPLICATIONS

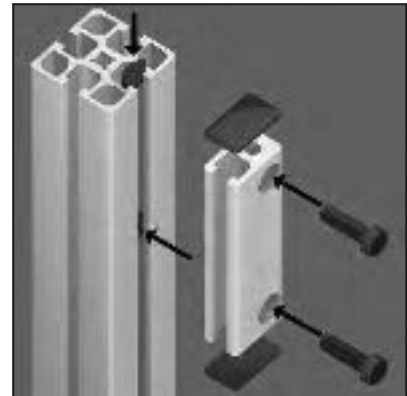
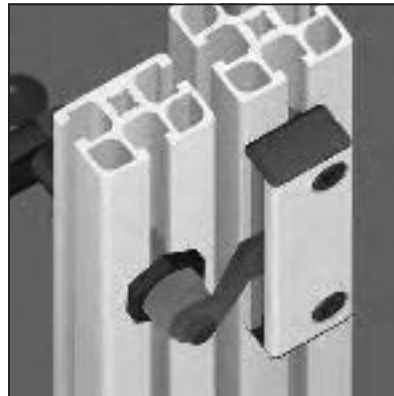
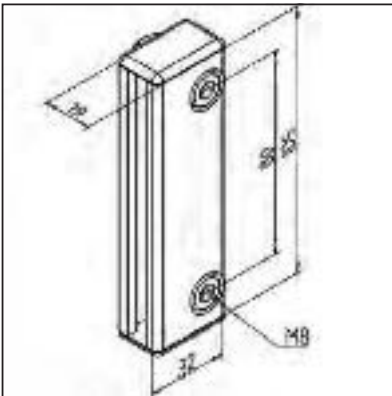
- Adjustable stop for swing doors
- Especially designed for use in combination with handles, bolt-locks or T-handles
- Also door catch

ASSEMBLY

- Screw with fastening kit on door frame
- See page 132

CATCH 19

part no. 21.1755/0



TECHN. DATA / ITEMS SUPPLIED

- Profile 19 x 32
- End caps
- Fastening kit
- Weight 0,040 kg

APPLICATIONS

- Locking of doors and lids in connection with handles or bolt locks

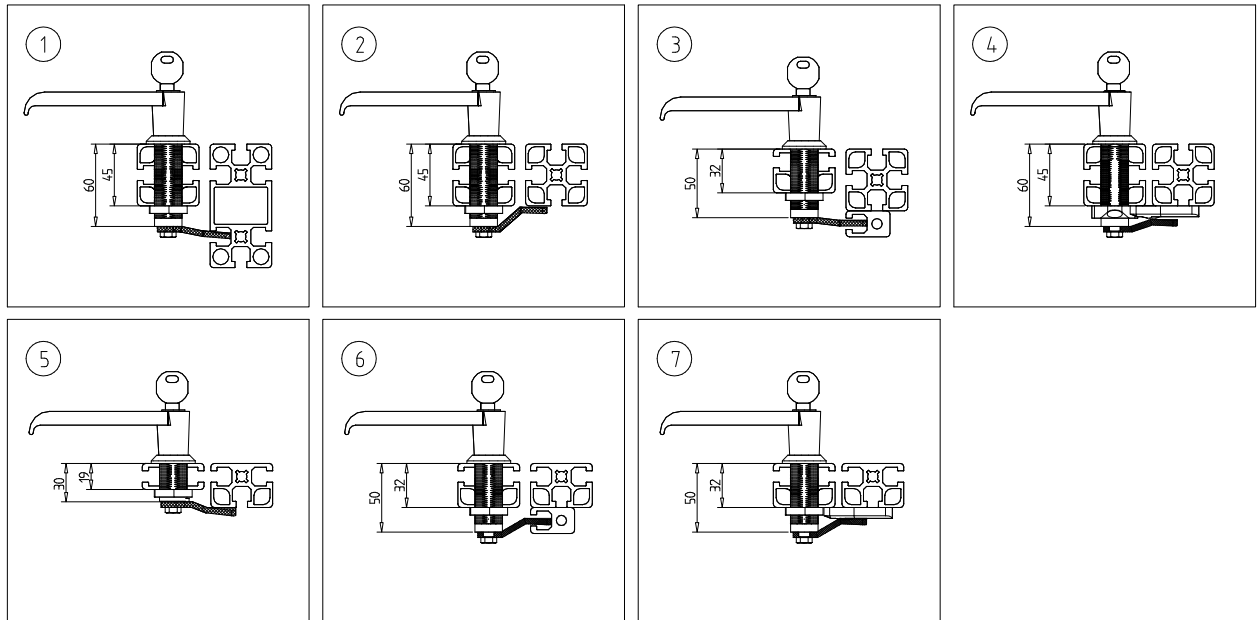
ASSEMBLY

- Use fastening kit
- Selection of locks see page 132

LOCKS

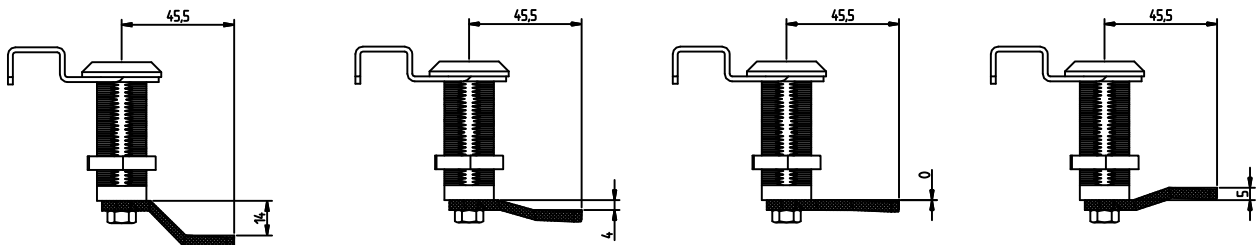
FITTING PRINCIPLES & SELECTION OF LOCKS

FITTING PRINCIPLES



SELECTION OF LOCKS

DOOR PROFILE	Door profile 45 x 45 mm	Door profile 32 X 45 mm	Door profile 19 X 45 mm	Surface element 4-8 mm
	Handle, T-Handle or Bolt lock 45	Handle, T-Handle or Bolt lock 32	Handle, T-Handle or Bolt lock 19	CYLINDER LOCK
	part no. of locks			
① 90 x 45	21.1093/1	21.1093/0	-	21.1093/2
② 45 x 45	21.1093/5	21.1093/3	21.1093/4 o. /0	21.1093/2
③ with Catch 19	21.1093/4	21.1093/2	-	-
④ with Door catch S	21.1093/3	21.1093/1	-	-
⑤ 32 x 45	-	-	21.1093/1	-
⑥ with Catch 19	-	21.1093/5	-	21.1093/0
⑦ with Door catch S	-	21.1093/4	21.1093/0	-

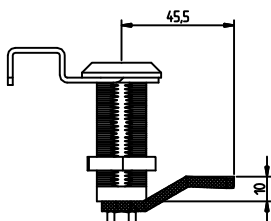


part no. 21.1093/0

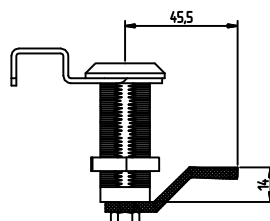
part no. 21.1093/1

part no. 21.1093/2

part no. 21.1093/3



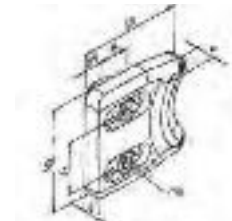
part no. 21.1093/4



part no. 21.1093/5



Catch 19
part no. 21.1755/0



Door catch S
part no. 21.1767/0

ROD LOCK

ONE OR TWO-SIDED LOCKING

Items supplied

- Bolt lock, steel, black with square key
- Guiding element, steel, galvanized
- Latch with rollers (l = 1100 mm), steel, galvanized
- Rod guide, plastic, black with injected nut M6

Optional

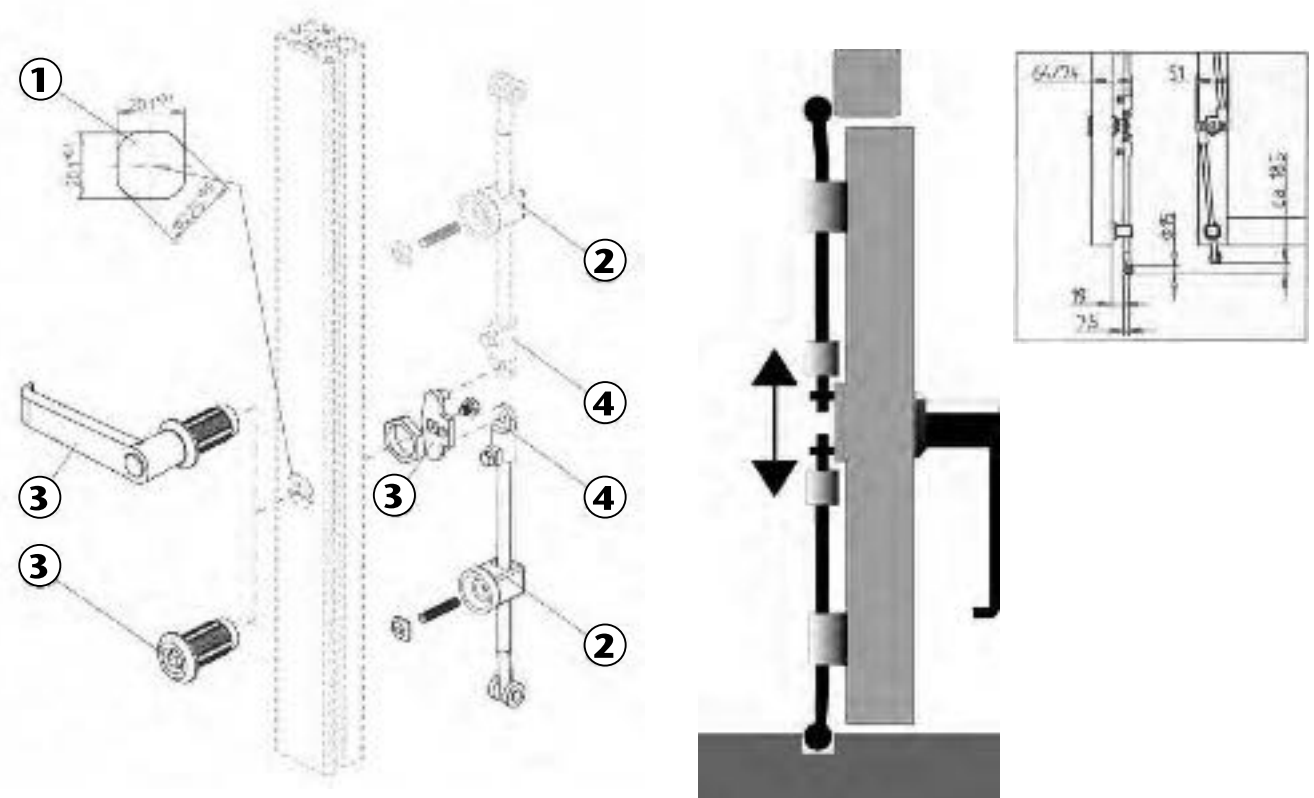
- Handle with or without lock

Applications

- For locking doors at upper or lower beam
- Use 2 rods for 2-sided locking
- Order bolt lock, handle without lock or handle with cylinder lock
- Especially suited for control boxes or double-sided doors

AVAILABLE VERSIONS

PROFILE	Bolt lock		Handle without lock		Handle with cylinder lock	
	1 ROD	2 RODS	1 ROD	2 RODS	1 ROD	2 RODS
32 x 45	21.1798/0	21.1798/2	21.1798/3	21.1798/4	21.1798/5	21.1798/6
45 x 45	21.1788/0	21.1788/2	21.1788/3	21.1788/4	21.1788/5	21.1788/6



Assembly

- ① Mill bore $\varnothing 22,5$ mm as shown in figure below
- ② Fix rod guide with set screw M6 x 30 at desired position. No drilling necessary. Screw square nut loose onto set screw. Insert the square nut into the profile groove and twist the plastic part until the guide is fixed
- ③ Attach bolt lock or handle
- ④ Insert rod into guiding element and connect with latch

ROD LOCK WITH FALLING LATCH

TWO-SIDED INTERLOCK WITH FALLING LATCH

Items supplied

- ① Rod lock insert
- ② handle
- ③ Falling latch (2 pcs.)
- ④ Adaptors for rods
- ⑤ Rods with lug (Lmax = 1200) (2 pcs.)

Optional

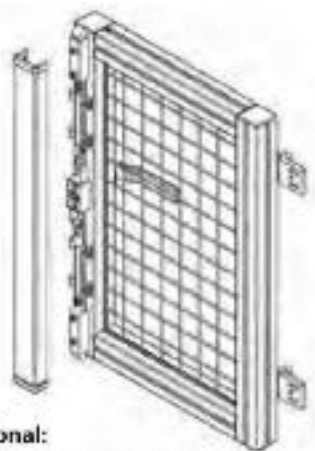
- ⑥ Cable channel part no. 20.1071/0
- ⑦ Protecting cap for cable channel part no. 22.1117/1
- ⑧ Cable clip part no. 22.1210/0

Application

- For locking doors at upper and lower beam
- Especially suited for doors in frames
- Max. door height 2750 mm

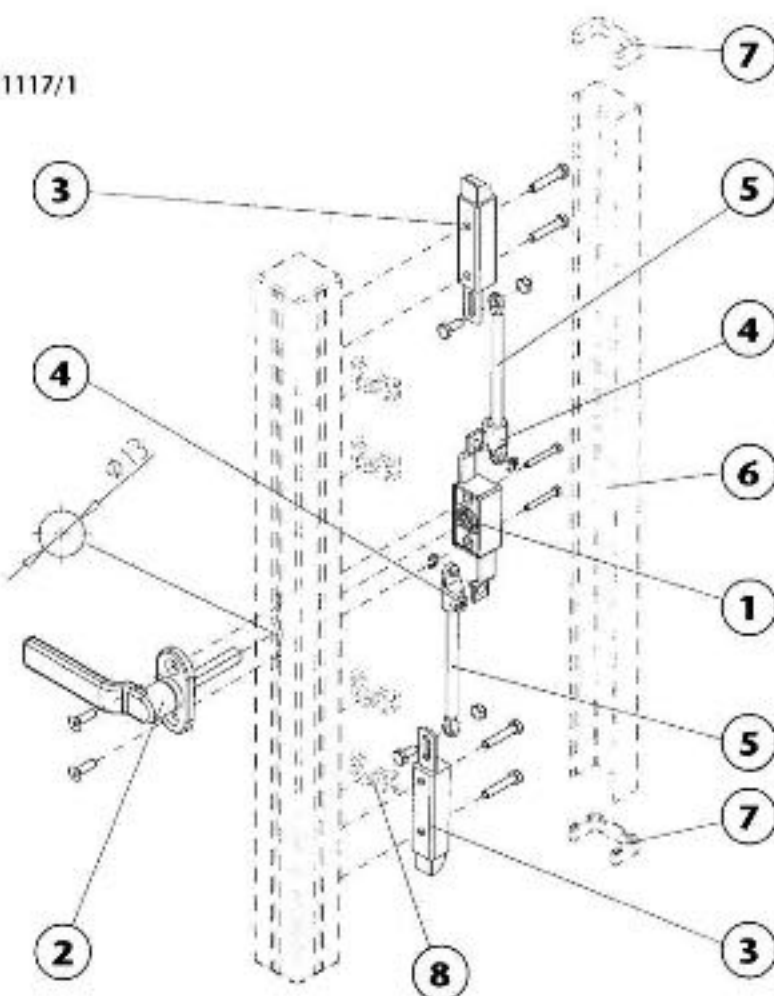
Assembly

- ① Bore \varnothing 13 mm in vertical door profile
- ② Screw lock and falling latch at door profile
- ③ Cut rods according to your doorsize.
Mount adaptors at rod-ends. Link rods with lock and falling latch
- ④ Insert handle and fix
- ⑤ Adjust falling latch



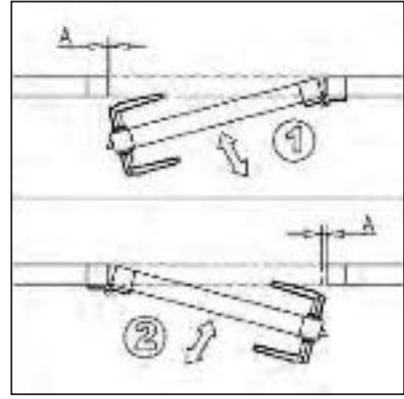
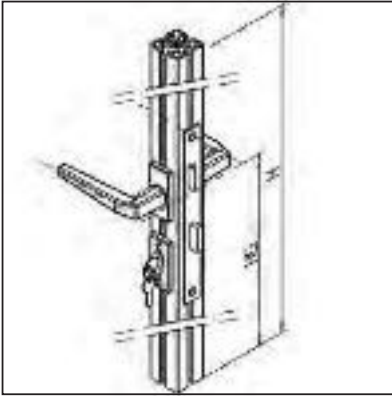
Optional:

Rod cover with cable channel



DOOR HANDLE

part no. 21.1748/0



TECHN. DATA / ITEMS SUPPLIED

- Door Lock steel, zinc-plated, fitted in profile 45x45
 - Fittings aluminum anodized
 - Profile cylinder with 3 keys mounted
 - Weight 0,850 kg
 - Weight + 1,950 kg/m
-
- **Standard version**
 - H = 2000mm
 - HG = 1000mm
 - **Other lengths and profiles on request**
 - **Please specify dimension H and HG level**
 - **Please specify a version 1 or 2**
 - Construction set without profile
 - part no. 21.1748/2**

APPLICATIONS

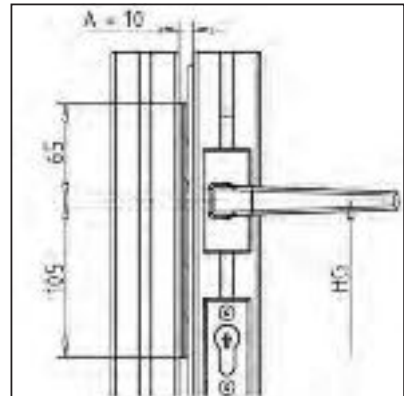
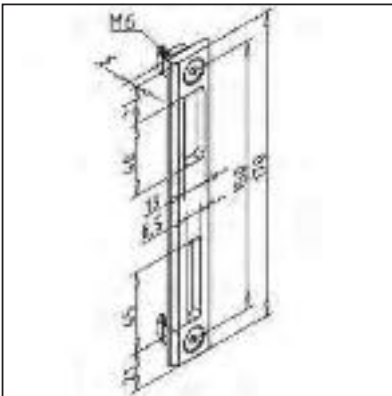
- Swing doors for guard units
- Other embodiments and profiles on request , for Example, G - sided profile with fixed knob but without lock mounting

ASSEMBLY

- Allow 5mm space between door and frame
- Using striking plate with 10 mm gap
- Closing wedge engages in opposite groove
- Position horizontal profile offside lock area or use counter sunk screw M8 x 25

STRIKING PLATE FOR DOOR LOCK

part no. 21.0966/0



TECHN. DATA / ITEMS SUPPLIED

- Profile 19 x 32
- Fastening kit
- Weight 0,061 kg

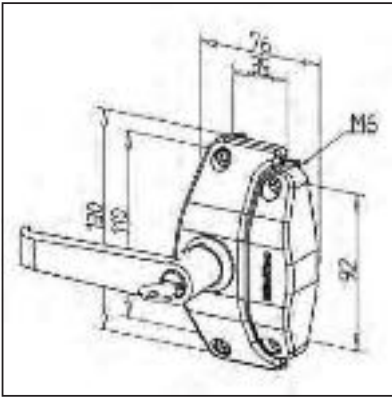
APPLICATIONS

- Locking of doors and lids in connection with handles or bolt locks
- No post processing required to profile groove of the door pillar

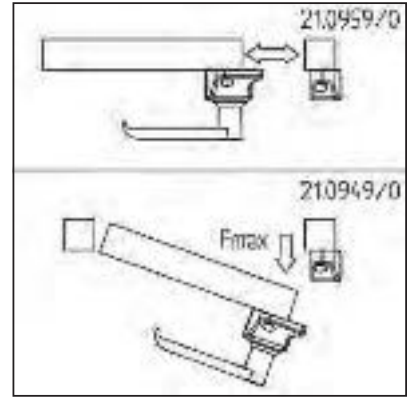
ASSEMBLY

- Use fastening kit
- Door gap at lock 10 mm

ROTARY LOCK 30



part no. 21.0949/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fastening kit
- Weight 210949/0 0,432 kg
- Weight 210959/0 0,441 kg
- Fmax. 1000 N

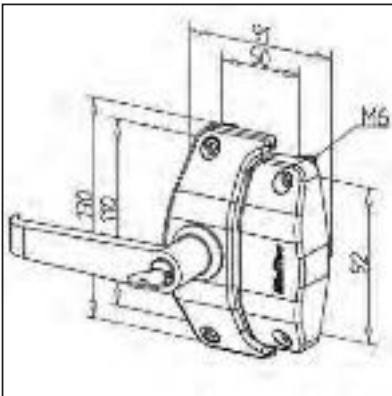
APPLICATIONS

- Rotary Lock 30 for swing doors:
part no. 21.0949/0
- Rotary Lock 30 for sliding doors:
part no. 21.0959/0
- For profiles series 30
- Locking of doors and lids
- No processing of profile necessary
- Position moveable

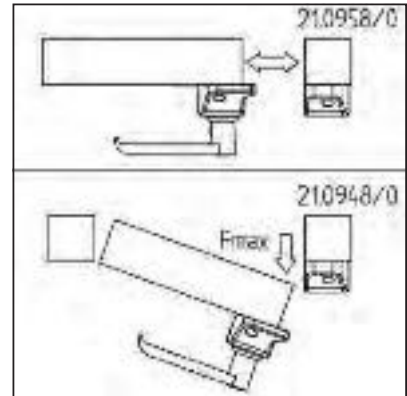
ASSEMBLY

- Use fastening kit
- Fastening on profile groove - without processing/boring of profiles

ROTARY LOCK 45



part no. 21.0948/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fastening kit
- Weight 210948/0 0,476 kg
- Weight 210958/0 0,493 kg
- Fmax. 2200 N

APPLICATIONS

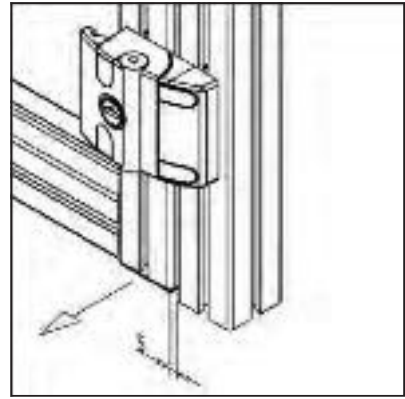
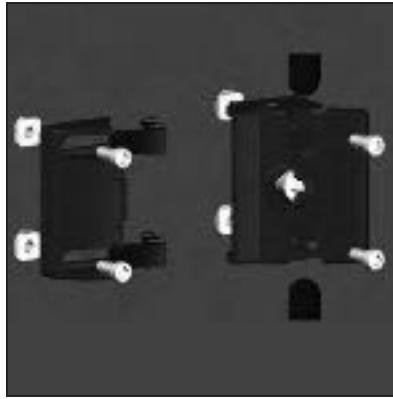
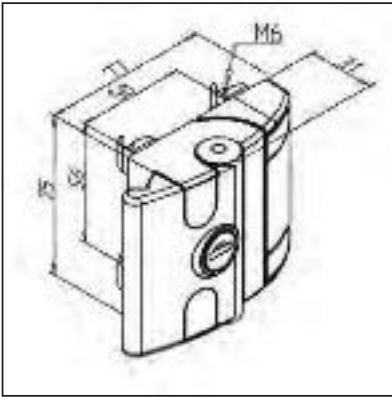
- Rotary lock 45 for swing doors:
part no. 21.0948/0
- Sliding door lock 45 for sliding doors:
part no. 21.0958/0
- Locking of doors and lids
- No processing of profile necessary
- Position moveable

ASSEMBLY

- Use fastening kit
- Fastening on profile groove - without processing/boring of profiles
- No extra door stop necessary

TRUNK LOCK COMPACT

part no. 21.2311/0



TECHN. DATA / ITEMS SUPPLIED

- GD-Zn, black
- Lock cylinder with two keys
- Fastening kit
- Weight 0,255 kg

APPLICATIONS

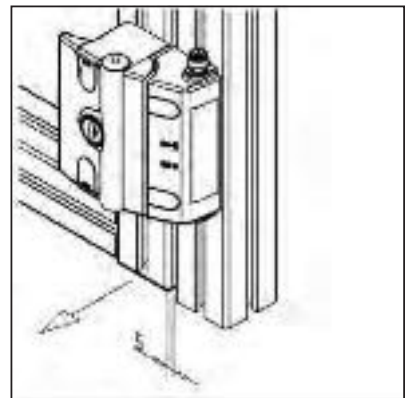
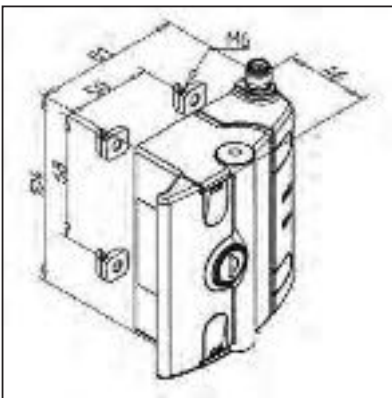
- Closing of doors and lids in guard units
- At the same door stop
- Also suitable for frameless doors
- Closed trunk can not be removed

ASSEMBLY

- Mount trunk lock on the door and jamb and mount screw cover
- To mount no profile be required

TRUNK LOCK WITH QUERY

part no. 21.2323/0



TECHN. DATA / ITEMS SUPPLIED

- GD-Zn, black
- Lock cylinder with two keys
- Fastening kit
- Reliability values according to EN ISO 13849-1 category 4 performance Level PLe
- Operating voltage DC24V ±15%
- 2 safety outputs, p-type, short-circuit proof
- Connection type M12, 8-pin
- UL-approved
- Weight 0,448 kg

APPLICATIONS

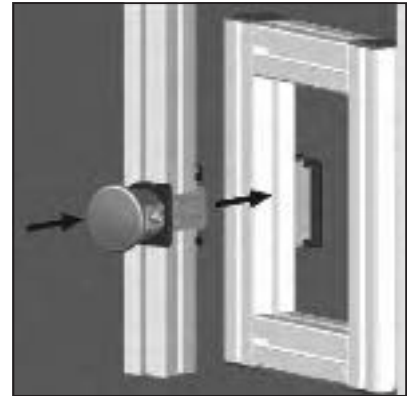
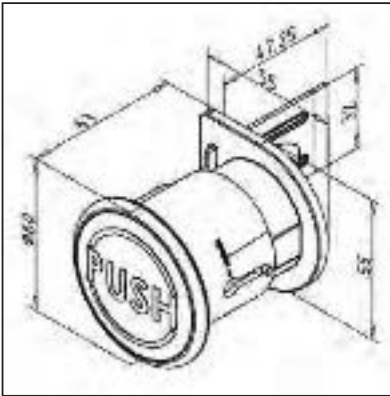
- Closing and securing doors and lids kat. 4 / PLe thanks to integrated transponder coded technology
- At the same door stop
- Closed trunk lock can not be removed

ASSEMBLY

- Mount trunk lock on the door and jamb and mount screw cover
- Electrical connection may also optionally be mounted below
- To mount no profile be required
- Matching leads available on request

EMERGENCY RELEASE FOR TRUNK LOCK

part no. 21.2316/0



TECHN. DATA / ITEMS SUPPLIED

- Plastic / steel zinc plated
- Fastening kit
- Weight 0,123 kg

APPLICATIONS

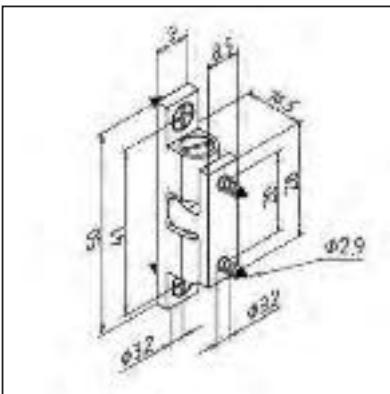
- Assembly in connection with our case lock compact **part no. 21.2311/0** or Trunk lock with query **part no. 21.2323/0**
- To open the door from the inside, on the outside lock attached
- Also functioned with locked trap catch
- When emergency release is snapped into place, closure of door is prevented

ASSEMBLY

- Also works with closed-off case closure

BALL LATCH 50

part no. 21.1763/0



TECHN. DATA / ITEMS SUPPLIED

- Brass
- Holding force adjustable 10 - 50 N
- Fastening kit
- Weight 0,030 kg

APPLICATIONS

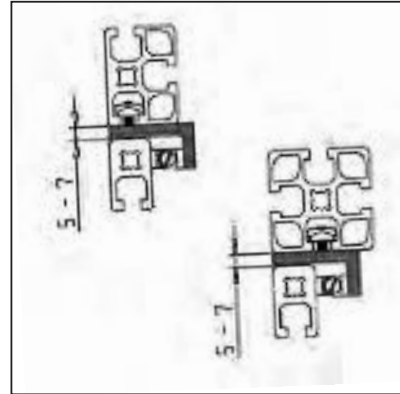
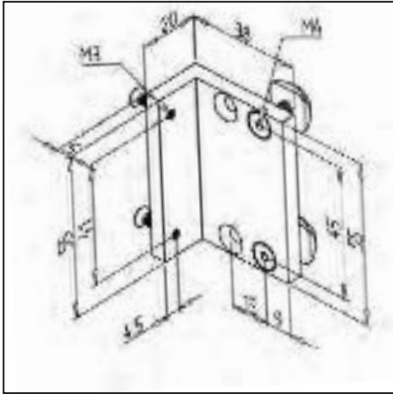
- Stop and catch for swing and sliding doors
- Ball latch 50 suitable for T-slots of reworked profiles. Allows gap-free closing of sliding doors
- Doors, lids, removable panel elements

ASSEMBLY

- Use fastening kit to fix the ball latch on any surface
- Use ball latch support 50 **part no. 21.1139/0** if necessary

BALL LATCH SUPPORT 50

part no. 21.1139/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural, anodized
- Fastening kit
- Weight 0,050 kg

APPLICATIONS

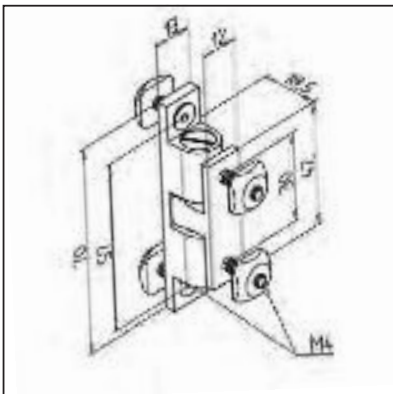
- Attachment of ball latch 50 in doors, lids
- Removable panel elements
- Door stop

ASSEMBLY

- Use fastening kit

BALL LATCH 70

part no. 21.1757/0



TECHN. DATA / ITEMS SUPPLIED

- Brass
- Holding force adjustable 50 - 150 N
- Fastening kit
- Weight 0,095 kg

APPLICATIONS

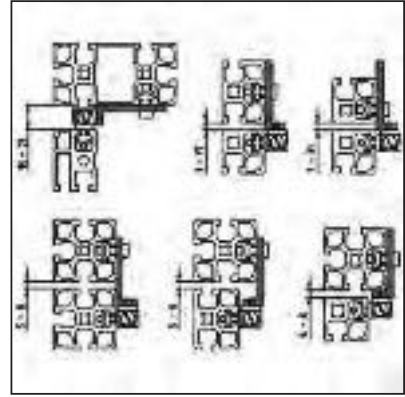
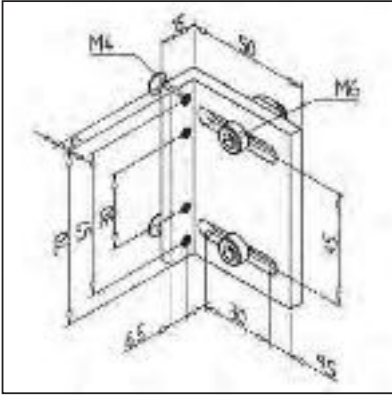
- Quick attachment of easy to remove panel elements
- Stop and catch for sliding doors, swing doors, lids

ASSEMBLY

- Use fastening kit
- Use ball latch support 70 **part no. 21.1137/0** if necessary.

BALL LATCH SUPPORT 70

part no. 21.1137/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural, anodized
- Fastening kit
- Weight 0,050 kg

APPLICATIONS

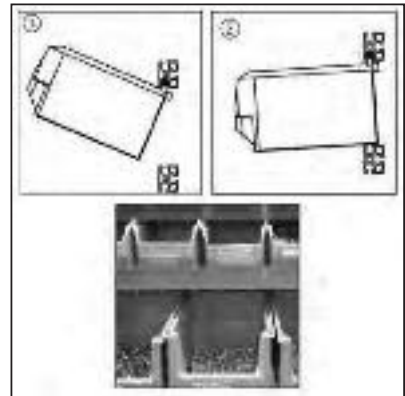
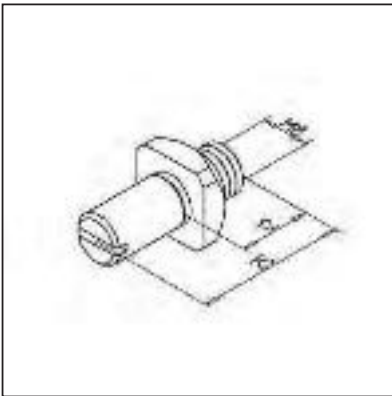
- Attachment of ball latch 70 in doors, lids, removable panel elements
- Door stop
- If using profile 32, ball latch support has to be shortened

ASSEMBLY

- Use fastening kit

SNAP BOLT 25

part no. 21.1758/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- With square nut, zinc plated
- Weight 0,010 kg
- Stainless version **part no. 21.1758/1**

APPLICATIONS

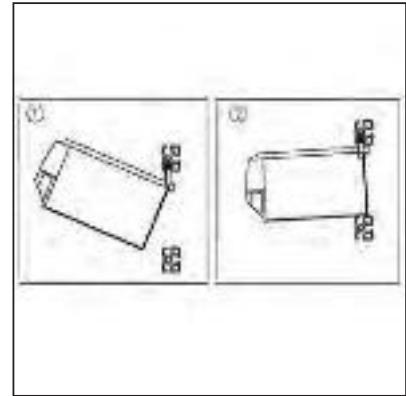
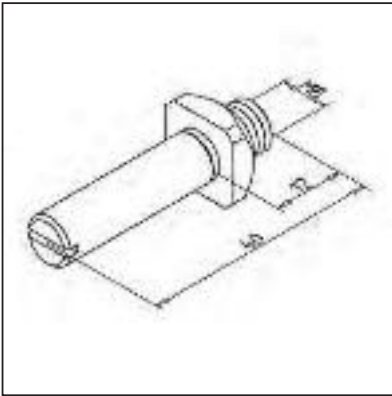
- Attachment of grab trays in work benches between 2 profiles
- Supports

ASSEMBLY

- Use fastening kit

SNAP BOLT 40

part no. 21.1760/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- With square nut, zinc plated
- Weight 0,020 kg

APPLICATIONS

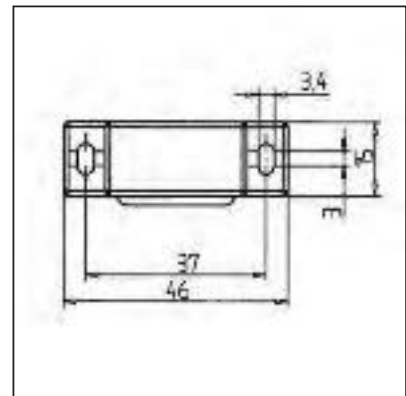
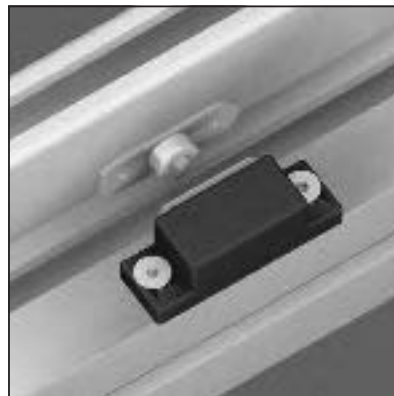
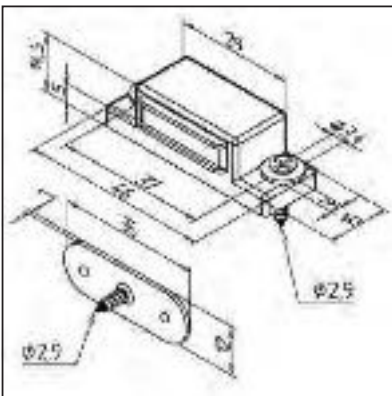
- Attachment of grab trays in work benches between 2 profiles
- Supports

ASSEMBLY

- Screw with square nut in profile groove

MAGNETIC CATCH

part no. 21.1753/0



TECHN. DATA / ITEMS SUPPLIED

- Housing PA 6, black
- Holding plate, steel, zinc plated
- Fastening kit
- Weight 0,021 kg
- Holding force 20 N

APPLICATIONS

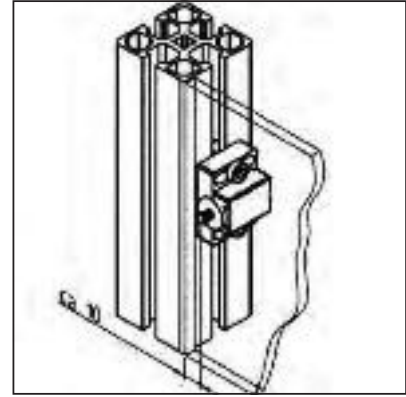
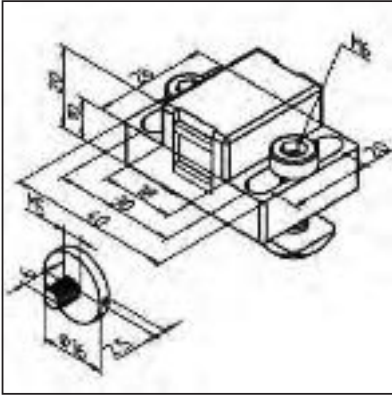
- Quick catch for swing doors
- Attachment of light panel elements

ASSEMBLY

- Mount with fastening kit on profile surface

MAGNETIC CATCH N

part no. 21.1741/0



TECHN. DATA / ITEMS SUPPLIED

- Housing PA 6, grey
- Holding plate, steel, zinc plated
- Fastening kit
- Weight 0,060 kg
- Holding force: 30 - 40 N

APPLICATIONS

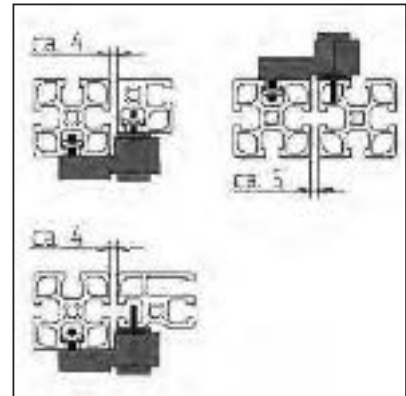
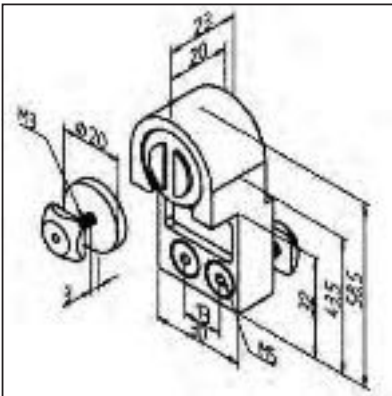
- Stop and quick catch for swing doors
- Fastening of light panel elements

ASSEMBLY

- Use fastening kit
- Opposite plate directly on profile surface or panel element; thread M5 required

MAGNETIC CATCH S

part no. 21.1740/0



TECHN. DATA / ITEMS SUPPLIED

- Housing PA, grey
- Holding plate, steel, zinc plated
- Fastening kit
- Weight 0,080 kg
- Holding force: 50 - 75 N

APPLICATIONS

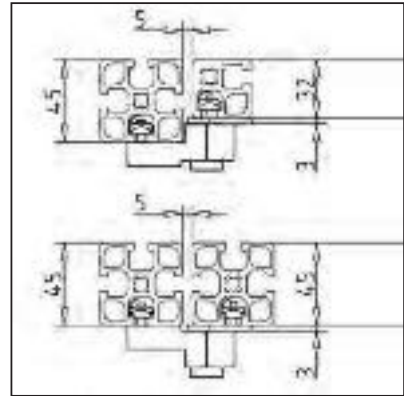
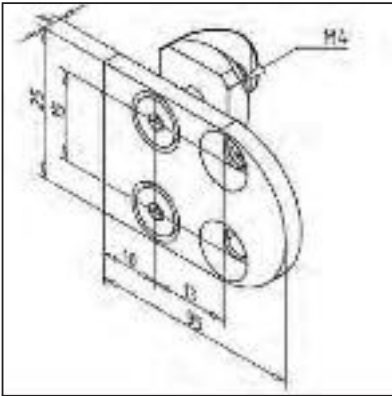
- Stop and quick catch for swing doors
- Fastening of light panel elements

ASSEMBLY

- Use fastening kit
- Opposite plate directly on profile surface or panel element; thread M3 required

MAGNET PLATE S

part no. 21.2308/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc-plated
- Fastening kit
- Weight 0,031 kg

APPLICATIONS

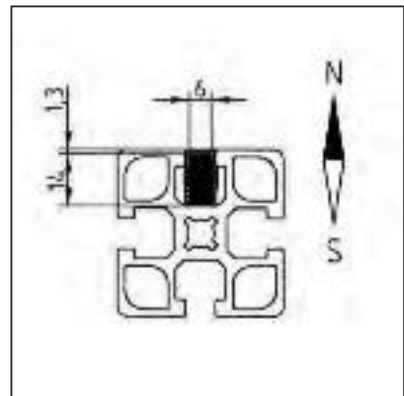
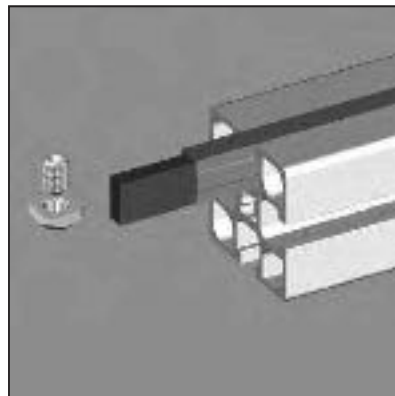
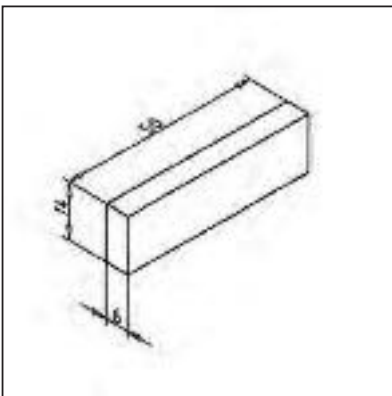
- Magnetic catch S,
part no. 21.1740/0

ASSEMBLY

- Fasten on profile groove
- No drilling necessary

MAGNET 6 X 14 X 50

part no. 21.0032/0



TECHN. DATA / ITEMS SUPPLIED

- 1 magnet, zinc-plated
- Energy density BHmax= 263 kJ/m³
- Magnetic remanence, Br = 1170 mT
- Coercive force, JHc = 955 kA/m
- max. service temperature +120 °C
- Without fastening kit
- Weight 0,033 kg
- Attention: Electric- and memory devices can be faulted by the magnet

APPLICATIONS

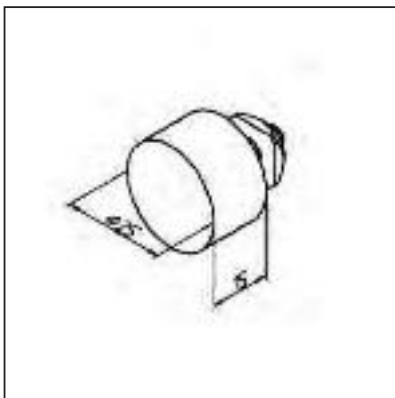
- Adhesive magnet for tools
- Below conveyors as guide, for magnetic transported material or higher conveyor speeds

ASSEMBLY

- Snap or slip the cover profile into profile groove
- Insert magnet into t-slot
- For fastening: (mighty recommended)
Use end cap AL, set screw with square nut or t-slot bar

STOPPER 25

part no. 21.1759/0



TECHN. DATA / ITEMS SUPPLIED

- NBR, black
- Square nut M6, zinc plated
- Weight 0,020 kg

APPLICATIONS

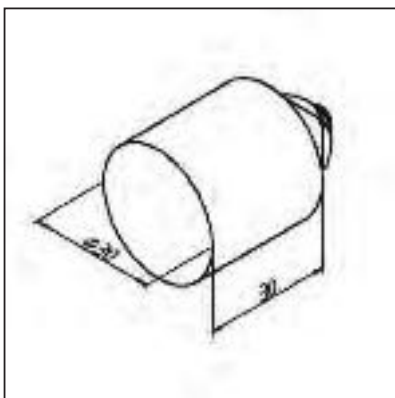
- Stop for doors, linear guides

ASSEMBLY

- Fix with square nut M6 in profile groove

STOPPER 30

part no. 21.1759/1



TECHN. DATA / ITEMS SUPPLIED

- NBR, black
- Square nut M8, zinc plated
- Weight 0,060 kg

APPLICATIONS

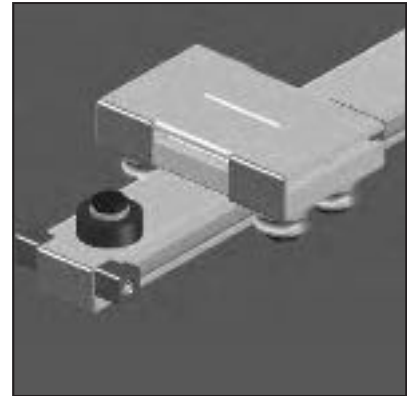
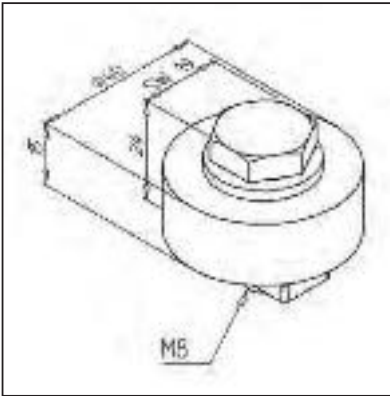
- Stop for heavy doors, linear guides

ASSEMBLY

- Fix with square nut M8 in profile groove

STOPPER 40

part no. 21.2301/0

**TECHN. DATA / ITEMS SUPPLIED**

- NBR, black

- Square nut M8, zinc-plated

- Weight 0,0553 kg

APPLICATIONS

- Stop for heavy doors, linear guides

ASSEMBLY

- Fix with square nut in profile groove and tighten stopper

BASE AND TRANSPORT PLATES

BASE AND TRANSPORT PLATE 30 X 60



Items supplied

- Aluminium, powder coated, grey
- with fastening kit

Application

- Mounting of adjustable feet on profiles 90 x 32 UL

Assembly

- Connection with fastening kit on profile face

THREAD	THICKNESS	WEIGHT	PART NO.
M8	15 mm	0.085 kg	21.2114/0
M10	15 mm	0.084 kg	21.2115/0
M12	15 mm	0.082 kg	21.2116/0

BASE AND TRANSPORT PLATE 32 X 90



Items supplied

- Aluminium, powder coated, grey
- with fastening kit

Application

- Mounting of adjustable feet on profiles 90 x 32 UL

Assembly

- Connection with fastening kit on profile face

THREAD	THICKNESS	WEIGHT	PART NO.
M8	15 mm	0.164 kg	21.1356/0
M10	15 mm	0.162 kg	21.1357/0
M12	15 mm	0.160 kg	21.1358/0

BASE AND TRANSPORT PLATE 45 X 90



Items supplied

- Aluminium, powder coated, grey
- with fastening kit

Application

- Mounting of adjustable feet on profiles 45 x 90

Assembly

- Connection with fastening kit on profile face

THREAD	THICKNESS	WEIGHT	PART NO.
M10	15 mm	0.164 kg	21.1038/0
M12	15 mm	0.162 kg	21.1039/0
M16	15 mm	0.160 kg	21.1040/0
M20	15 mm	0.156 kg	21.1047/0

BASE AND TRANSPORT PLATES

BASE AND TRANSPORT PLATE 90 X 90

**Items supplied**

- Aluminium, powder coated, grey
- with fastening kit

Application

- Mounting of adjustable feet on profiles 90 x 90

Assembly

- Connection with fastening kit on profile face

THREAD	THICKNESS	WEIGHT	PART NO.
M10	15 mm	0.332 kg	21.1041/0
M12	15 mm	0.330 kg	21.1042/0
M16	15 mm	0.345 kg	21.1043/0
M20	15 mm	0.290 kg	21.1057/0

BASE AND TRANSPORT PLATE 90 R 90°

**Items supplied**

- Aluminium, powder coated, grey
- with fastening kit

Application

- Mounting of adjustable feet on profiles 90 R 90°

Assembly

- Connection with fastening kit on profile face

THREAD	THICKNESS	WEIGHT	PART NO.
M10	15 mm	0.277 kg	21.0009/0
M12	15 mm	0.275 kg	21.0010/0
M16	15 mm	0.272 kg	21.0011/0
M20	15 mm	0.268 kg	21.0012/0

FEET

FEET PA



Items supplied

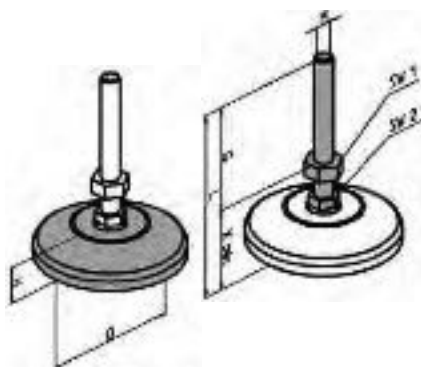
- Plate PA, grey
- Anti skid insert NBR
- Threaded bolt, steel, zinc plated
- Locknut, steel, zinc plated
- All bolts are suitable for all plates

Application

- Levelling of machine bases or constructions
- Boards, partitions, enclosures
- Tables, conveyors and work stations

Assembly

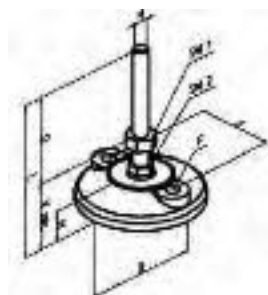
- Directly on core boring of profiles, reborable up to M12
- On larger threads use base and transportplate
- For profiles 45 x 90 und 90 x 90 a base and transport plate is required, if the feet are to be positioned centrally.



THREADED BOLT	PLATE			
	Ø 30	Ø 45	Ø 60	Ø 80
M8	21.1851/0	21.1871/0	21.1881/0	21.1891/0
M10	21.1852/0	21.1872/0	21.1882/0	21.1892/0
M12	-	21.1873/0	21.1883/0	21.1893/0
M16	-	21.1874/0	21.1884/0	21.1894/0

PLATE			THREADED BOLT					
D mm	H mm	max. load	M	G	X	SW1	SW2	L
30	20	300 kg	8	33,5	38.5	13	14	72,5
45	20	500 kg	10	42	40.5	17	14	82,5
60	20	1000 kg	12	90	42.5	19	14	132,5
80	20	1000 kg	16	107	45.5	24	17	152,5

FEET PA WITH ATTACHMENT BORES



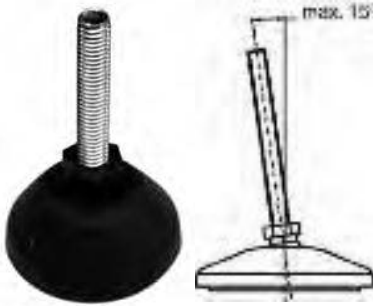
Items supplied

- Plate PA, grey
- Anti skid insert NBR
- Threaded bolt, steel, zinc plated
- Locknut, steel, zinc plated
- Feet with load 1800 kg are supplied without anti skid insert NBR

PART NO.	COLOUR	M	G	X	SW1	SW2	L	E	F	D	MAX. LOAD
21.1846/0	grey	10	82	40	17	14	122	74	Ø9	100	1000 kg
21.1847/0	grey	12	140	42	19	14	182	74	Ø9	100	1000 kg
21.1848/0	grey	16	137	45	24	17	182	74	Ø9	100	1000 kg

FEET

FEET PA



Items supplied

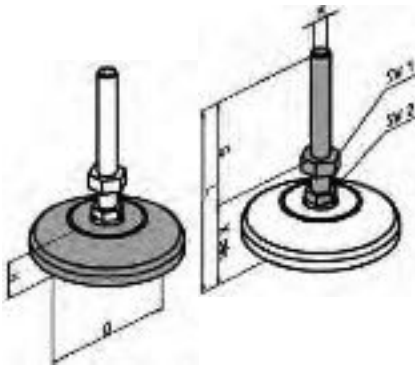
- Plate PA, grey
- Anti skid insert NBR
- Threaded bolt, steel, zinc plated
- Locknut, steel, zinc plated
- All bolts are suitable for all plates

Application

- Levelling of machine bases or constructions
- Boards, partitions, enclosures
- Tables, conveyors and work stations

Assembly

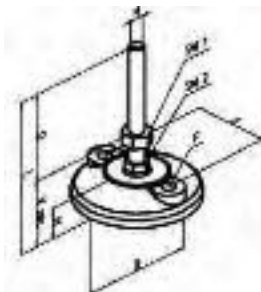
- Directly on core boring of profiles, reborable up to M12
- On larger threads use base and transport plate
- For profiles 45 x 90 und 90 x 90 a base and transport plate is required, if the feet are to be positioned centrally.



THREADED BOLT	PLATE			
	Ø 30	Ø 45	Ø 60	Ø 80
M8	21.1851/0	21.1871/0	21.1881/0	21.1891/0
M10	21.1852/0	21.1872/0	21.1882/0	21.1892/0
M12	-	21.1873/0	21.1883/0	21.1893/0
M16	-	21.1874/0	21.1884/0	21.1894/0

PLATE			THREADED BOLT					
D mm	H mm	max. load	M	G	X	SW1	SW2	L
30	20	300 kg	8	33,5	38.5	13	14	72,5
45	20	500 kg	10	42	40.5	17	14	82,5
60	20	1000 kg	12	90	42.5	19	14	132,5
80	20	1000 kg	16	107	45.5	24	17	152,5

FEET PA WITH ATTACHMENT BORES



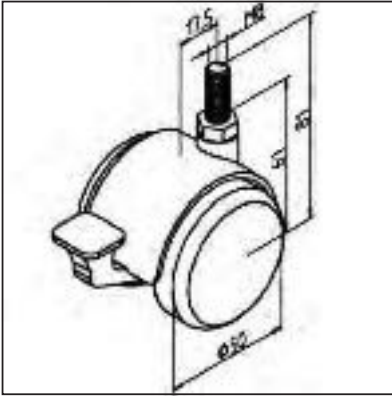
Items supplied

- Plate PA, grey
- Anti skid insert NBR
- Threaded bolt, steel, zinc plated
- Locknut, steel, zinc plated
- Feet with load 1800 kg are supplied without anti skid insert NBR

part no.	COLOUR	M	G	X	SW1	SW2	L	E	F	D	max. load
21.1846/0	grey	10	82	40	17	14	122	74	Ø9	100	1000 kg
21.1847/0	grey	12	140	42	19	14	182	74	Ø9	100	1000 kg
21.1848/0	grey	16	137	45	24	17	182	74	Ø9	100	1000 kg

FURNITURE WHEEL WITH LOCKING DEVICE

part no. 21.1153/0



TECHN. DATA / ITEMS SUPPLIED

- Housing, polyamide, black
- Double wheel, polyamide, black with slide bearing
- Fastening kit
- Weight 0,080 kg
- Load max. 30 kg

APPLICATIONS

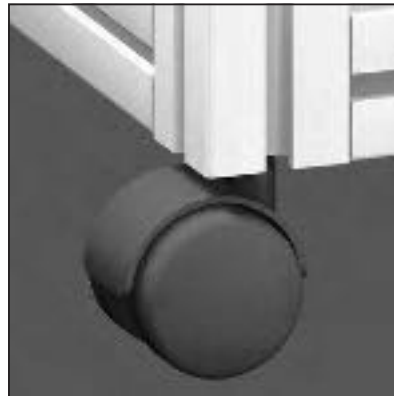
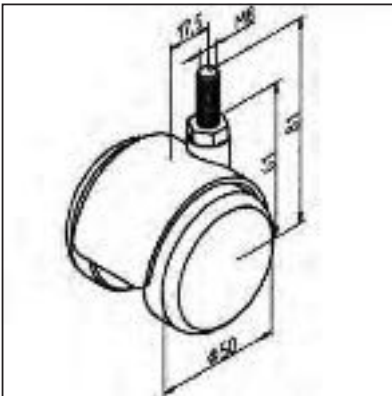
- Light movable tables
- Movable file box
- Office furniture, Tool boxes

ASSEMBLY

- Directly on central bore of the vertical profile
- If wheel is to be positioned centrally, for profiles 45 x 90 or bigger, a base plate with thread M8 is required

FURNITURE WHEEL WITHOUT LOCKING DEVICE

part no. 21.1105/0



TECHN. DATA / ITEMS SUPPLIED

- Housing, polyamide, black
- Double wheel, polyamide, black with slide bearing
- Fastening kit
- Weight 0,076 kg
- Load max. 30 kg

APPLICATIONS

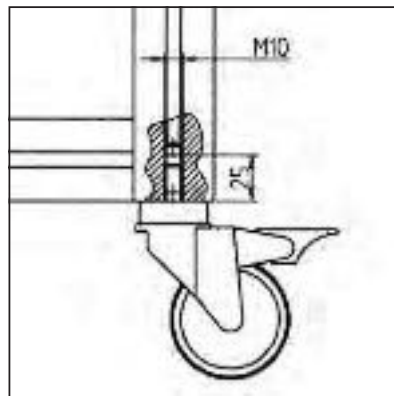
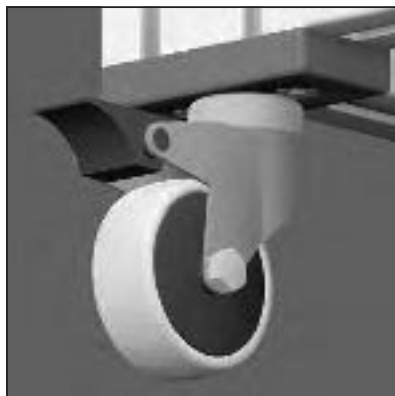
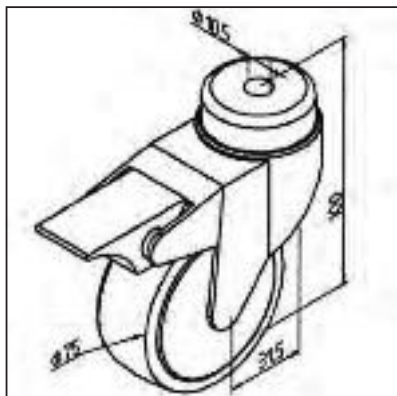
- Light movable tables
- Movable file box
- Office furniture, Tool boxes

ASSEMBLY

- Directly on central bore of the vertical profile
- If wheel is to be positioned centrally, for profiles 45 x 90 or bigger, a base plate with thread M8 is required

WHEEL SWIVEL TYPE WITH BRAKE D 75 X 100

part no. 21.1120/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- Tire, rubber, grey
- Fastening kit
- Weight 0,250 kg
- Load max. 50 kg
- Further constructions on demand

APPLICATIONS

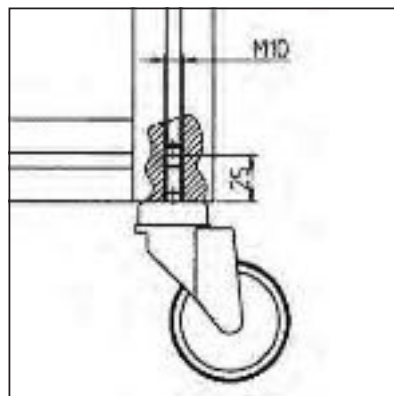
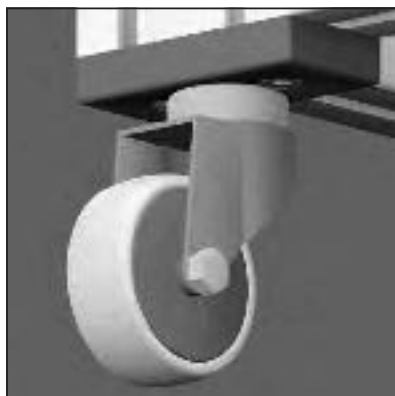
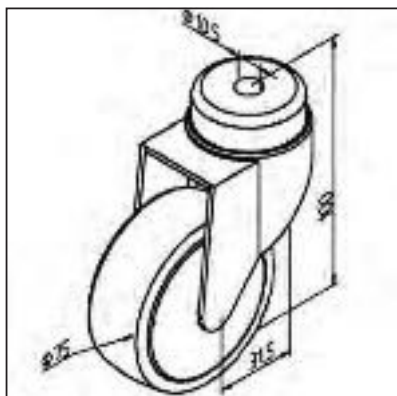
- Movable tables
- Material-pillars
- Show cases, etc.

ASSEMBLY

- Directly on central bore of the vertical profile; thread M10 required
- With profiles 45 x 90 or bigger use base plate M10

WHEEL SWIVEL TYPE WITHOUT BRAKE D 75 X 100

part no. 21.1118/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- Tire, rubber, grey
- Fastening kit
- Weight 0,372 kg
- Load max. 50 kg
- Further constructions on demand

APPLICATIONS

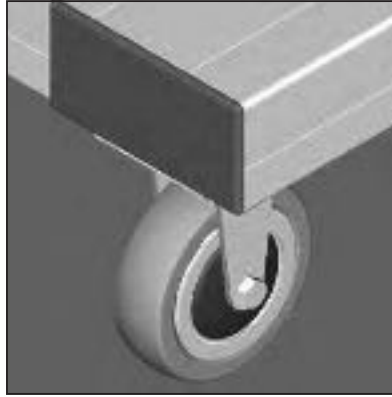
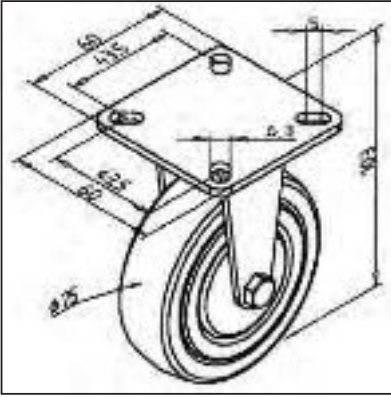
- Movable tables
- Material-pillars
- Show cases, etc.

ASSEMBLY

- Directly on central bore of the vertical profile; thread M10 requested
- If the wheel is to be positioned centrally, for profiles 45 x 90 or bigger a base plate is required

WHEEL RIGID TYPE

part no. 21.1475/0



TECHN. DATA / ITEMS SUPPLIED

- Housing, steel
- Tire, rubber, grey
- Fastening kit
- Weight 0,350 kg
- Load max. 50 kg
- Further constructions on demand

APPLICATIONS

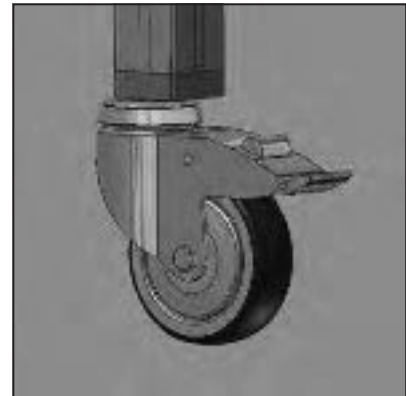
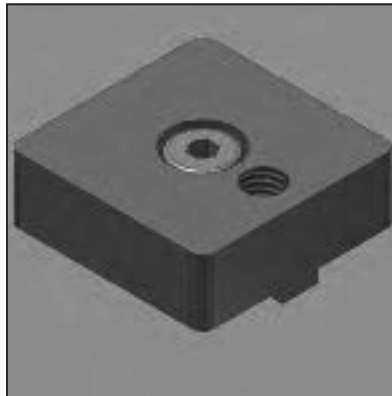
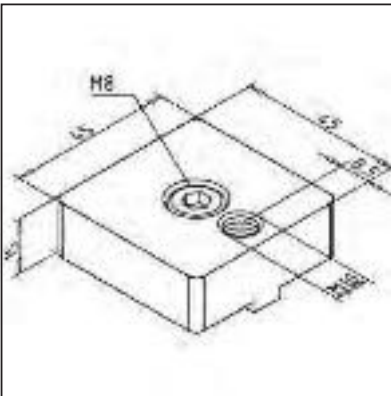
- Material-pillars
- Frames
- Movable tables

ASSEMBLY

- With fastening kit from supply schedule directly on profile groove
- With fixing plate for wheel rigid type **part no. 21.1476/0** on profile

BASE AND TRANSPORT PLATE 45 X 45 VA M10

part no. 21.2059/0



TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Fastening kit
- Weight 0,23 kg

APPLICATIONS

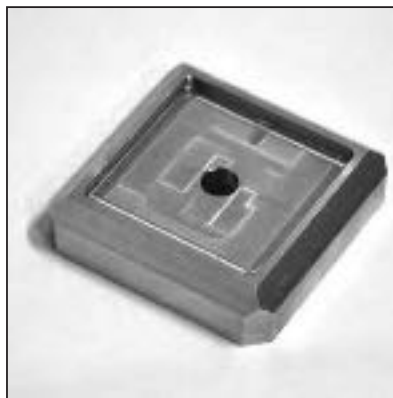
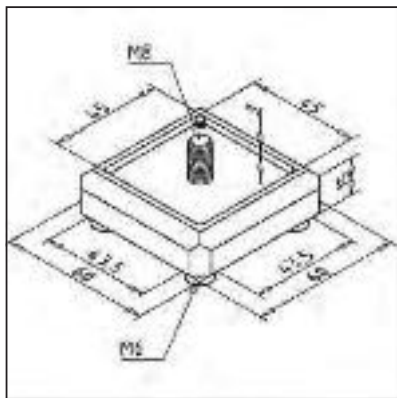
- Profile 45 x 45
- Profile 45 x 45 VA
- Height compensation for mounting of swivel wheels in combination with wheels rigid type
- For using feet M10

ASSEMBLY

- Connect with fastening kit on profile face

FIXING PLATE 45 VA FOR WHEEL RIGID TYPE

part no. 21.2058/0



TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Fastening kit
- Weight 0,36 kg

APPLICATIONS

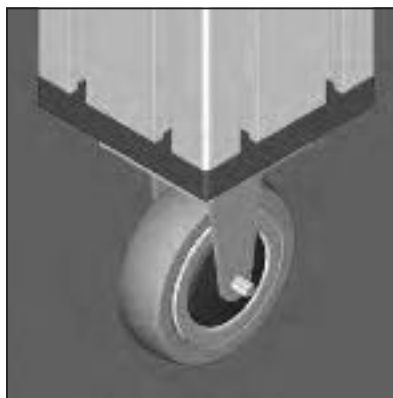
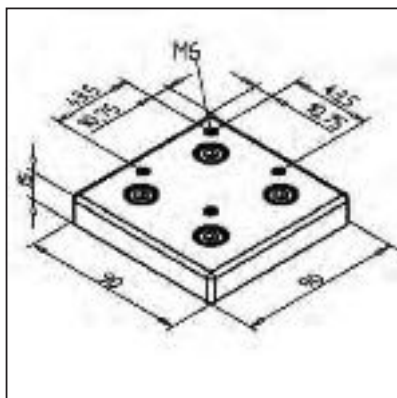
- Profile 45 x 45
- Profile 45 x 45 VA
- For fastening of wheel rigid type on profile face 45 x 45 and 45 x 45 VA

ASSEMBLY

- Connect with fastening kit on profile face

FIXING PLATE FOR WHEEL RIGID TYPE

part no. 21.1476/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fastening kit
- Weight 0,330 kg

APPLICATIONS

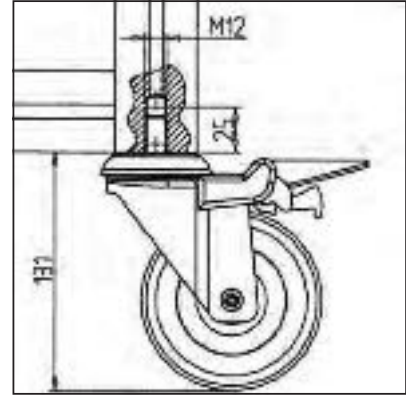
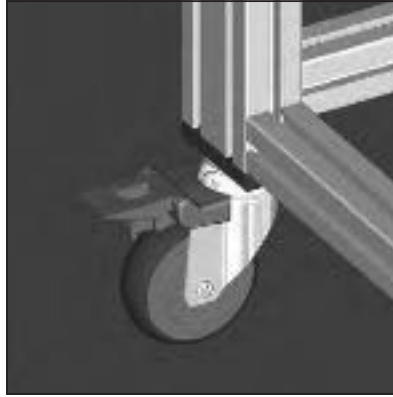
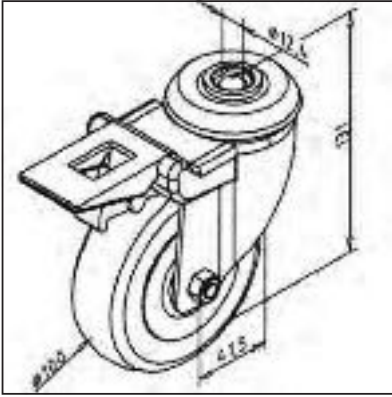
- For fastening of wheel Ø 75 x 100 rigid type **part no. 21.1475/0** on profile face 90 x 90

ASSEMBLY

- Use fastening kit

WHEEL SWIVEL TYPE WITH BRAKE D 100 X 131

part no. 21.0031/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- Tire, rubber
- Fastening kit
- Weight 0,75 kg
- Load max. 100 kg
- Further models on demand

APPLICATIONS

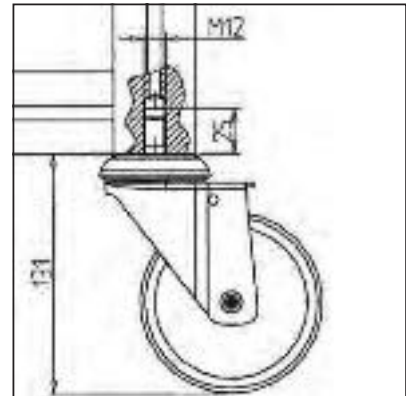
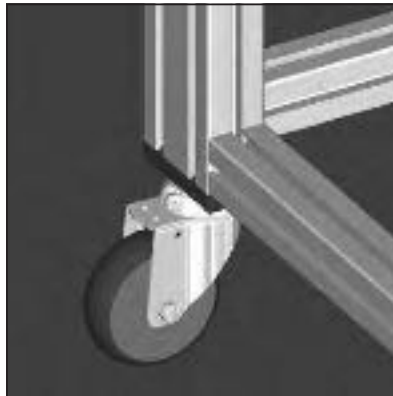
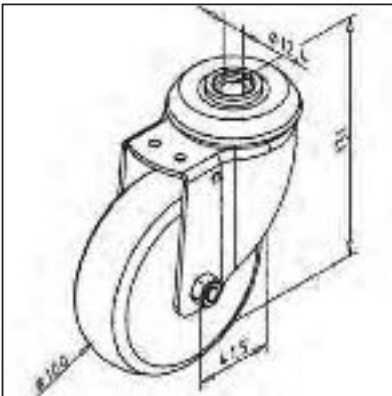
- Movable tables
- Material-pillars
- Show cases, etc.

ASSEMBLY

- Mount directly on central bore of the vertical profile; drill thread M12
- If the wheel is to be positioned centrally, for profiles 45 x 90 or 90 x 90 a base plate is required

WHEEL SWIVEL TYPE WITHOUT BRAKE D 100 X 131

part no. 21.0030/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- Tire, rubber
- Fastening kit
- Weight 0,65 kg
- Load max. 100 kg
- Further models on demand

APPLICATIONS

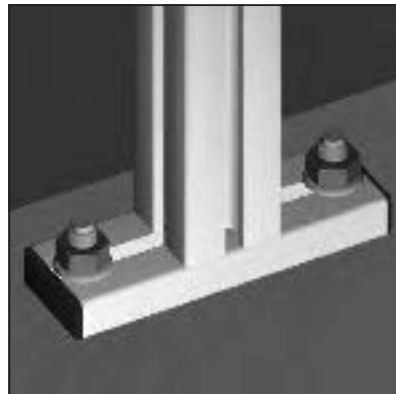
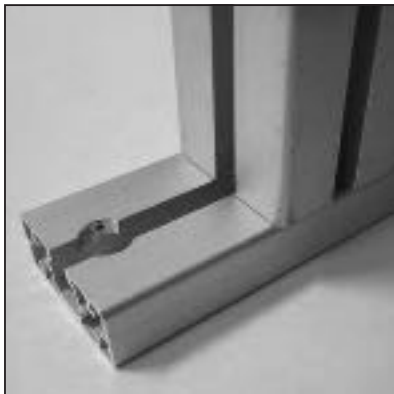
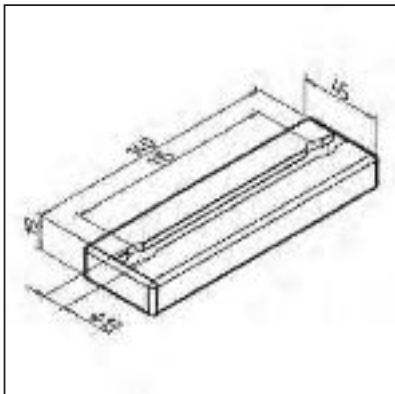
- Movable tables
- Material-pillars
- Show cases, etc.

ASSEMBLY

- Directly on central bore of the vertical profile; thread M10 requested
- If the wheel is to be positioned centrally, for profiles 45 x 90 or 90 x 90 a base plate is required

FLOOR MOUNTING PLATE 45

part no. 21.1730/0



TECHN. DATA / ITEMS SUPPLIED

- Profile 19 x 45
- End caps, grey
- Without fastening kit
- Weight 0,130 kg

APPLICATIONS

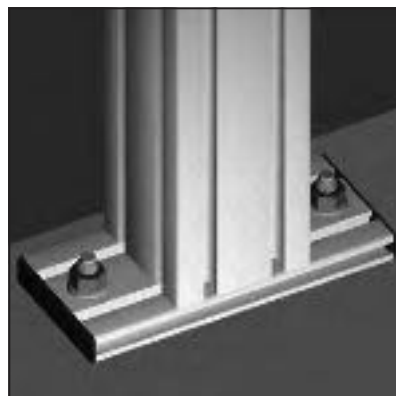
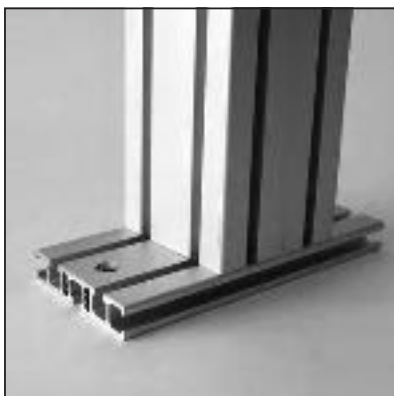
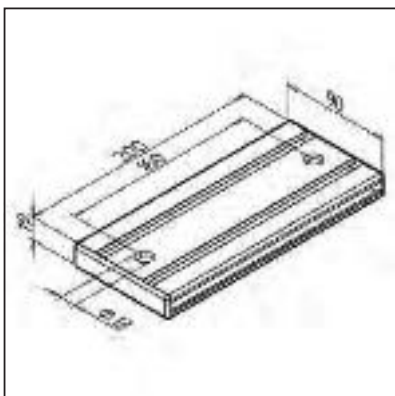
- Floor mounting of pillar 45 x 45

ASSEMBLY

- On profile side: MiniTec power-lock fastener
- On floor side: 2 floor anchors **part no. 21.1082/0**

FLOOR MOUNTING PLATE 90

part no. 21.1733/0



TECHN. DATA / ITEMS SUPPLIED

- Profile 19 x 90
- End caps, grey
- Without fastening kit
- Weight 0,465 kg

APPLICATIONS

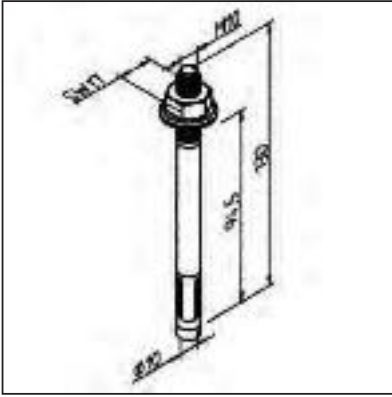
- Floor mounting of pillars 45 x 90 or 90 x 90

ASSEMBLY

- On profile side: 2 or 4 MiniTec power-lock fasteners
- On floor side: 2 floor anchors **part no. 21.1082/0**

FLOOR ANCHOR 10

part no. 21.1082/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- Ø 10
- Complete with nut and washer
- Weight 0,084 kg

APPLICATIONS

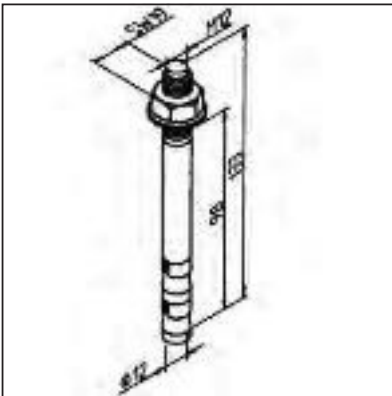
- Attachment of pillars to floor or wall. To be used together with angle bracket for floor fastening, levelling plate or floor mounting plate

ASSEMBLY

- Fit bore in the bottom
- Use floor anchor in connection with angle, levelling plate or floor mounting plate

FLOOR ANCHOR 12

part no. 21.1115/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- Ø 12
- Complete with nut and washer
- Weight 0,116 kg

APPLICATIONS

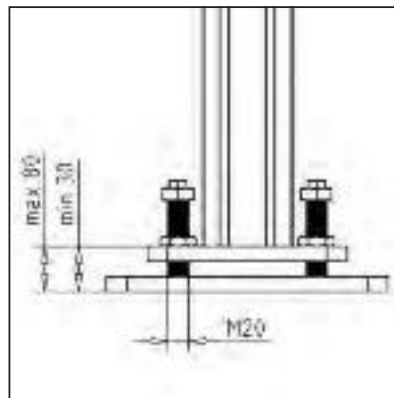
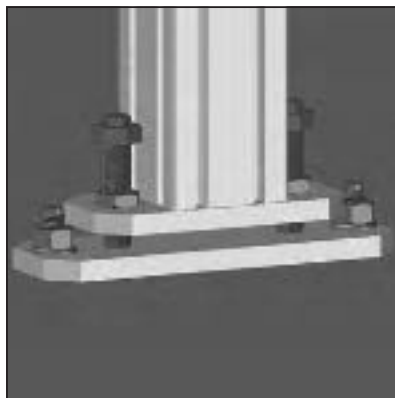
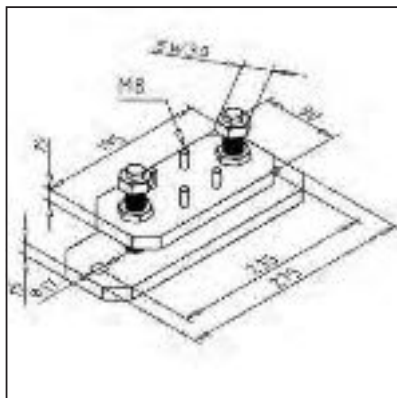
- Attachment of pillars to floor or wall. To be used together with angle bracket for floor fastening, levelling plate or floor mounting plate

ASSEMBLY

- Fit bore in the bottom
- Use floor anchor in connection with angle, levelling plate or floor mounting plate

LEVELLING PLATE 90 ST

part no. 21.0976/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- With fastening kit for profile
- With levelling elements
- Without dowels
- Weight 5,120 kg

APPLICATIONS

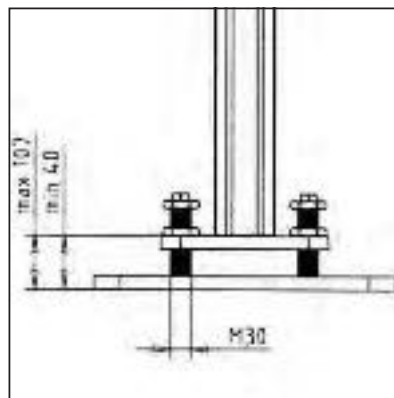
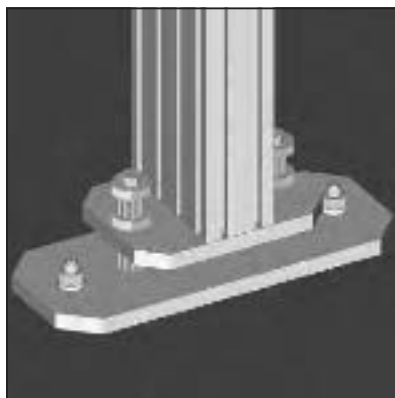
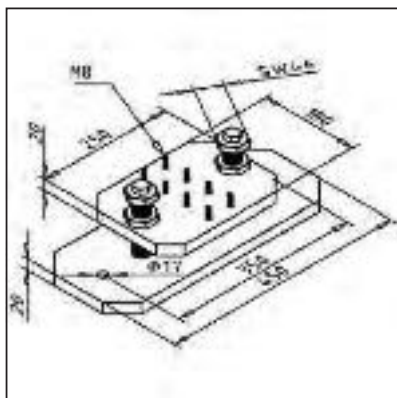
- Exact layout of heavy structures with post profile 90x90

ASSEMBLY

- Fasten footplate to the floor using a high performance anchor
- Fasten profile panel to the profile with the fastening kit in the scope of delivery
- Turn the M20 screw to set the height and secure it with the counter nut

LEVELLING PLATE 180 ST

part no. 21.0977/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- With fastening kit for profile
- With levelling elements
- Without dowels
- Weight 20,347 kg

APPLICATIONS

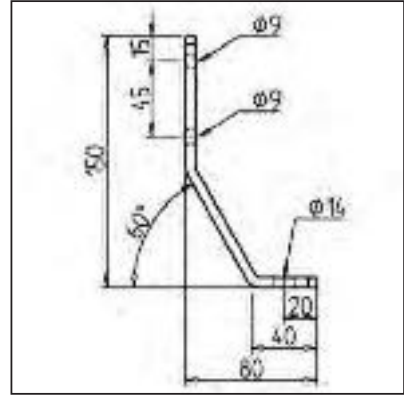
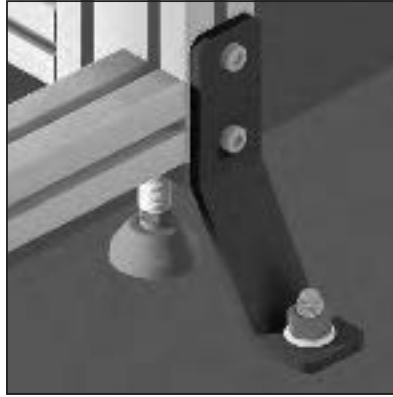
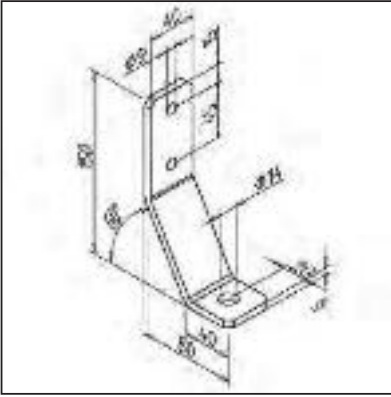
- Exact layout of heavy structures with post profile 90x180

ASSEMBLY

- Fasten foot plate to the floor using a high performance anchor
- Fasten profile panel to the profile with the fastening kit
- Turn the M20 screw to set the height and secure it with the counter nut

ANGLE BRACKET FOR FLOOR FASTENING

part no. 21.1112/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, powder coated, grey
- With fastening kit for profile
- Weight 0,360 kg

APPLICATIONS

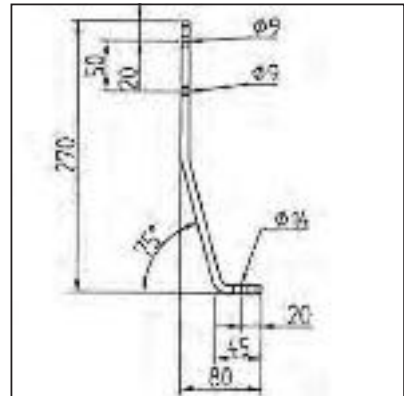
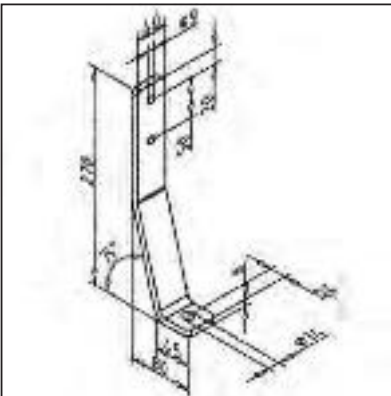
- Securing and fastening of constructions on floor or wall

ASSEMBLY

- On profile side: Use hex socket cap screws M8 x 20 5 A/F
- On floor side: Use floor anchor 12 **part no. 21.1115/0**
- Also suitable for subsequent mounting

ANGLE BRACKET FOR FLOOR FASTENING

part no. 21.0015/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, powder coated, grey
- With fastening kit for profile
- Weight 0,757 kg

APPLICATIONS

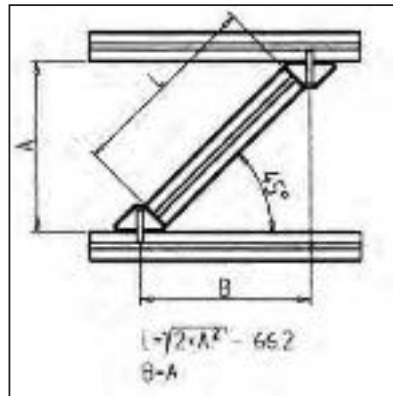
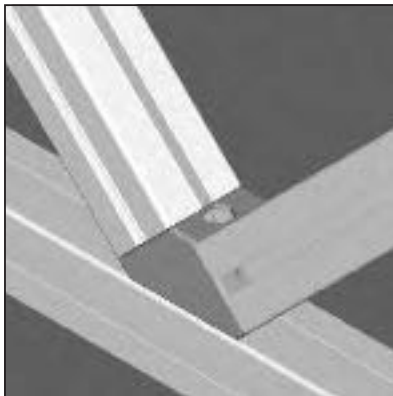
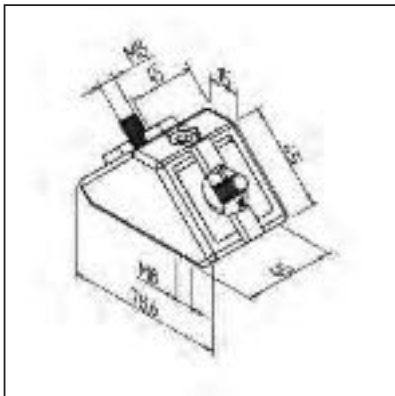
- Securing and fastening of constructions on floor or wall

ASSEMBLY

- On profile side: Use hex socket cap screws M8 x 20 A/F 5
- On floor side: Use floor anchor 12 **part no. 21.1115/0**
- Also suitable for subsequent mounting

BRACE SOCKET 45 GD

part no. 21.1729/0



TECHN. DATA / ITEMS SUPPLIED

- GD Zn, powder coated, grey
- Fastening kit
- Weight 0,261 kg

APPLICATIONS

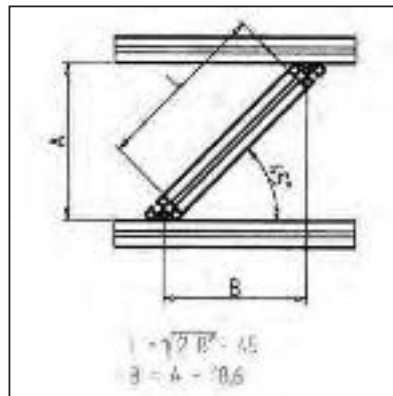
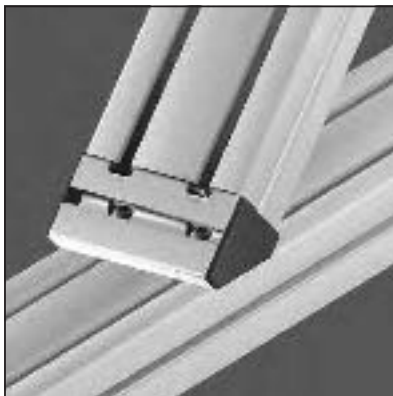
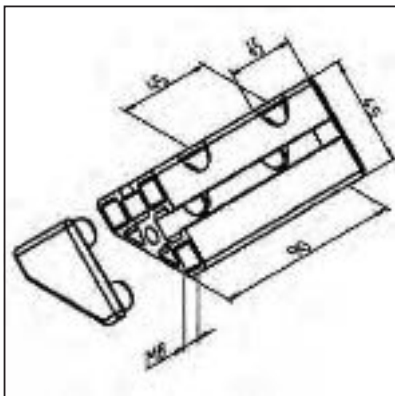
- Support in half-timbered constructions

ASSEMBLY

- Screw brace socket onto the frame
- Insert supports by means of MiniTec power-lock fasteners and tighten

BRACE SOCKET 45° / 90

part no. 21.1727/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium profile 45 / 45°
- End caps, grey
- Fastening kit
- Weight 0,175 kg

APPLICATIONS

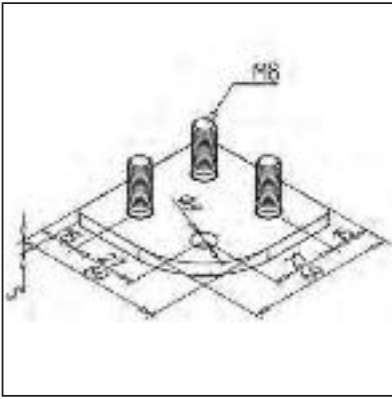
- Support in half-timbered constructions

ASSEMBLY

- Screw brace socket onto the frame
- Insert supports by means of MiniTec power-lock fasteners and tighten
- Fix end caps

BASE AND TRANSPORT PLATE 45 X 45 VA M10

part no. 21.0038/0



TECHN. DATA / ITEMS SUPPLIED

- Stainless steel
- Fastening kit
- Weight kg

APPLICATIONS

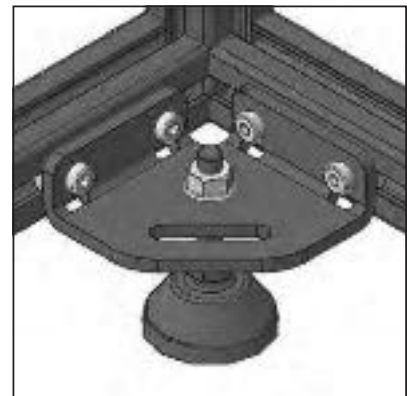
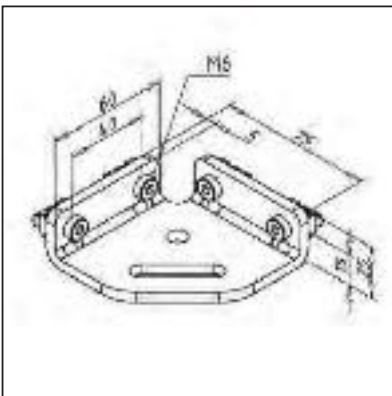
- Profile 45 x 45
- Height compensation for mounting of swivel wheels in combination with wheels rigid type
- For using feet M10

ASSEMBLY

- Connect with fastening kit on profile face

ADAPTER FLANGE 30

part no. 21.2120/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, powder coated grey
- Fastening kit
- Weight 0,261 kg

APPLICATIONS

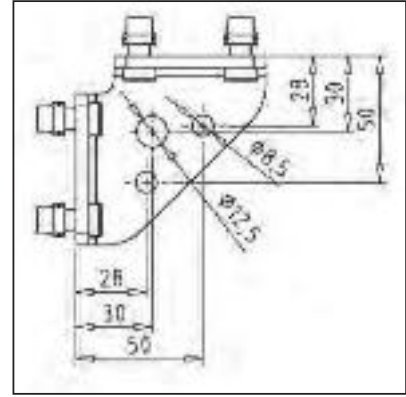
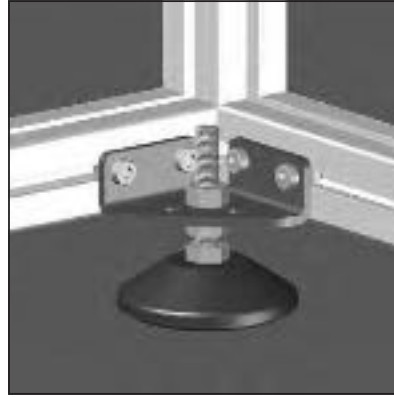
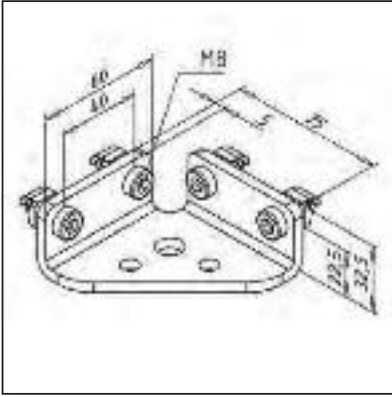
- Strengthening of profile constructions
- Attachment of internal feet or wheels
- Floor mounting and levelling of frames

ASSEMBLY

- Use fastening kit; screw onto profile groove

ADAPTER FLANGE 45

part no. 21.2300/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, powder coated, grey
- Fastening kit
- Weight 0,311 kg

APPLICATIONS

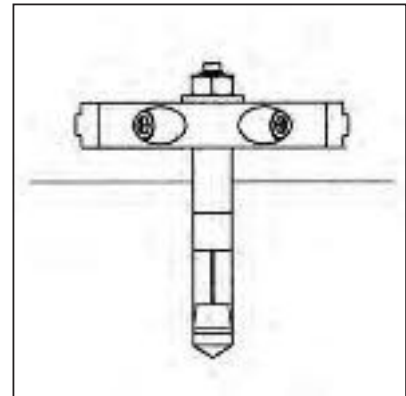
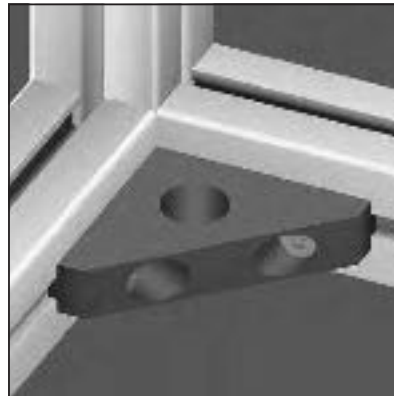
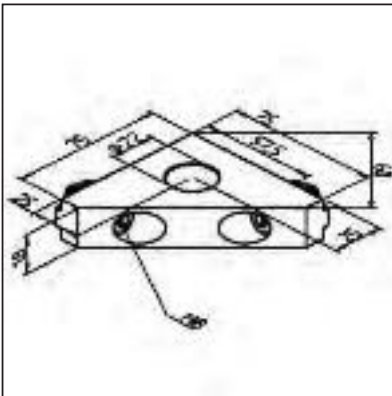
- Strengthening of profile constructions
- Attachment of internal feet or rollers
- Floor mounting and levelling of frames

ASSEMBLY

- Use fastening kit; screw onto profile groove

CORNER 90

part no. 21.1783/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural anodized
- Fastening kit
- Weight 0,170 kg

APPLICATIONS

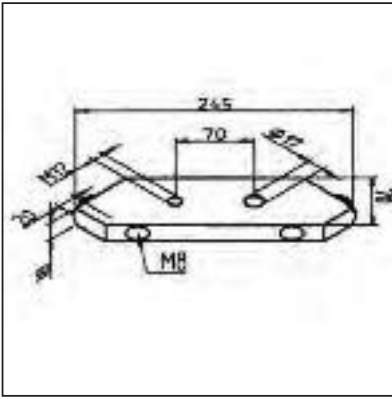
- Strengthening of constructions
- Attachment of internal feet
- Floor mounting and levelling of frames

ASSEMBLY

- On profile side with fastening kit
- On floor side fasten with floor anchor

CORNER 180

part no. 21.1784/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural anodized
- Fastening kit
- Weight 0,690 kg

APPLICATIONS

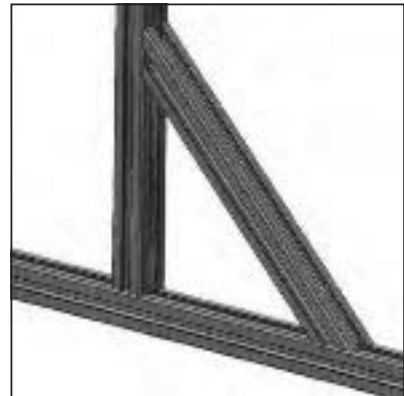
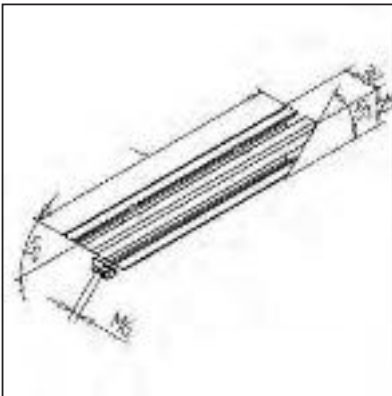
- Strengthening of heavy constructions
- Attachment of internal feet
- Floor mounting and levelling of frames

ASSEMBLY

- On profile side with fastening kit
- On floor side fasten with floor anchor and levelling screw M 12

STRENGTHENING ELEMENT 30

part no. 21.2110/0



TECHN. DATA / ITEMS SUPPLIED

- Profile 30 x 30, ready for use
- Both ends cut at 45° with counter-bores for fastening kit
- Fastening kit
- Weight 0,213 kg
- Length 300 mm

APPLICATIONS

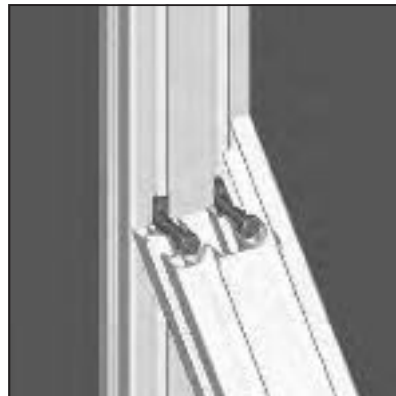
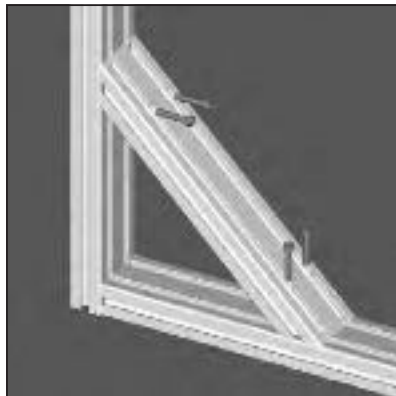
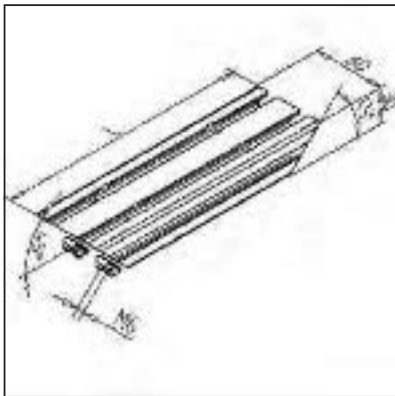
- Reinforcement of constructions in half-timbered principle

ASSEMBLY

- Screw onto profile groove; use fastening kit

STRENGTHENING ELEMENT 30 X 60

part no. 21.2210/0



TECHN. DATA / ITEMS SUPPLIED

- Profile 30 x 60, ready for use
- Both ends cut at 45° with counter-bores for fastening kit
- Fastening kit
- Weight 0,338 kg
- Length 300 mm

APPLICATIONS

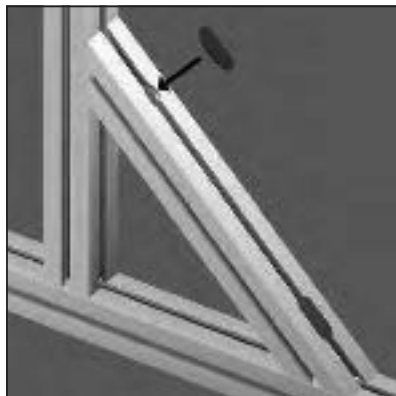
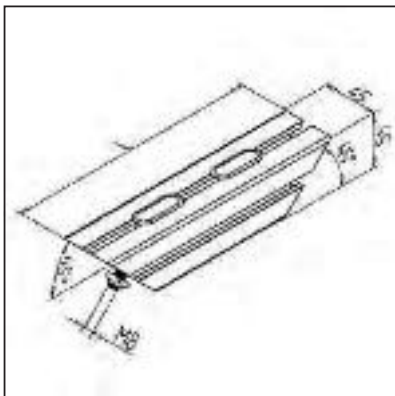
- Reinforcement of constructions in half-timbered principle

ASSEMBLY

- Screw onto profile groove; use fastening kit

STRENGTHENING ELEMENT 45

part no. 21.1761/0



TECHN. DATA / ITEMS SUPPLIED

- Profile 45 x 45, ready for use
- Both ends cut at 45° with counter-bores for fastening kit
- Fastening kit
- Weight 0,870 kg
- Length 360 mm

APPLICATIONS

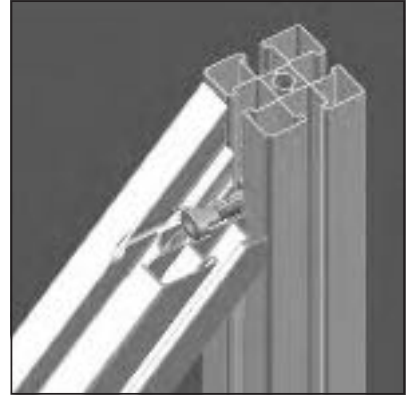
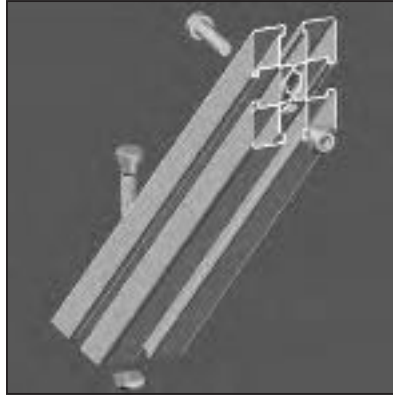
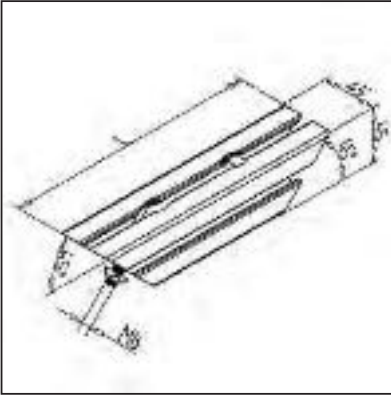
- Reinforcement of constructions in half-timbered principle

ASSEMBLY

- Screw onto profile groove, use fastening kit

STRENGTHENING ELEMENT 45 VA

part no. 21.1706/0



TECHN. DATA / ITEMS SUPPLIED

- Profile 45 x 45, ready for use
- Both ends cut at 45° with counter-bores for fastening kit
- Fastening kit
- Weight 0,890 kg
- Length 360 mm
- Other lengths and profiles on request
- Please specify dimension L

APPLICATIONS

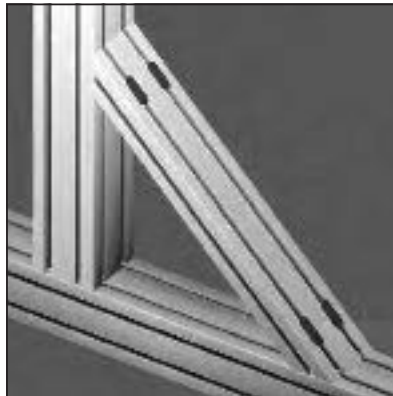
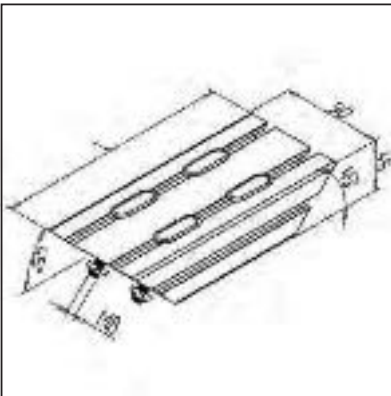
- reinforcement profile construction, half-timbered building

ASSEMBLY

- Screw with fastening kit on profile groove of the frame construction

STRENGTHENING ELEMENT 90

part no. 21.1762/0



TECHN. DATA / ITEMS SUPPLIED

- Profile 45 x 90, ready for use
- Both ends cut at 45° with 4 counter-bores for fastening kit
- Fastening kit
- Weight 1,416 kg
- Length 360 mm

APPLICATIONS

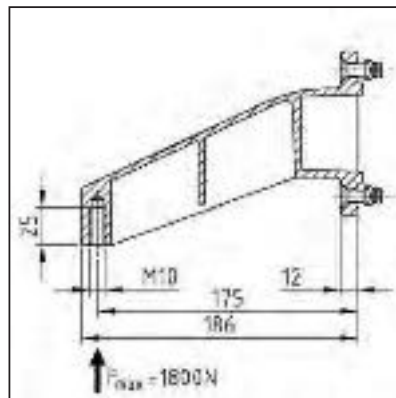
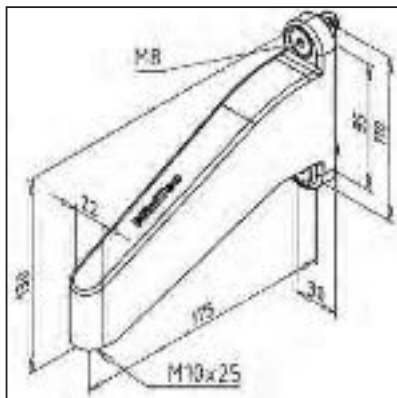
- Reinforcement of constructions; essentially in half-timbered principle

ASSEMBLY

- Screw onto profile groove, use fastening kit

CANTILEVER FOOT 175

part no. 21.2191/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fastening kit
- Weight 0,368 kg

APPLICATIONS

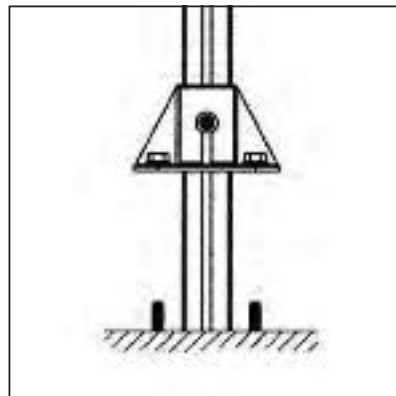
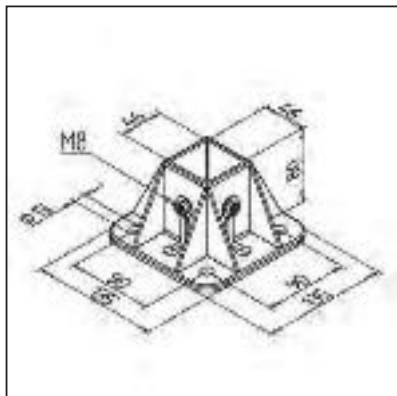
- Arrangement of frames and fastening of feet

ASSEMBLY

- Mounting onto profile strut with fastening kit
- Fastening of wheel swivels, feet and screws M10

FOOT 45 GD

part no. 21.1731/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fastening kit for profile
- Weight 0,587 kg

APPLICATIONS

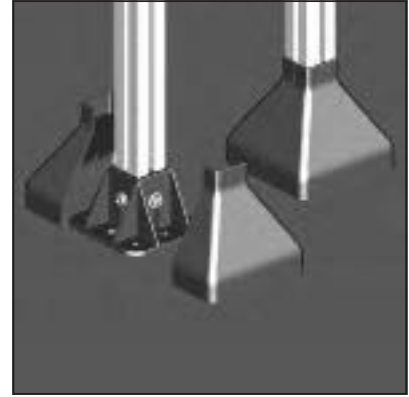
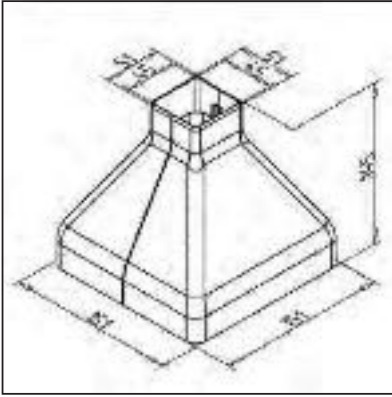
- Suitable for profiles up to dimension 45 x 45
- Floor mounting of guard units, information plates and frames
- As connection element for wall attachment

ASSEMBLY

- Insert profile into foot
- Insert the square nut with spring steel sheet into the profile groove; preassemble the screws
- Fix the foot on the floor or on the wall; for this purpose use high-performance anchors or universal dowels with hexagon screws
- Tighten the fastening screws

COVER FOR FOOT 45

part no. 22.1164/0



TECHN. DATA / ITEMS SUPPLIED

- Material: ABS, grey
- Weight 0,166 kg

APPLICATIONS

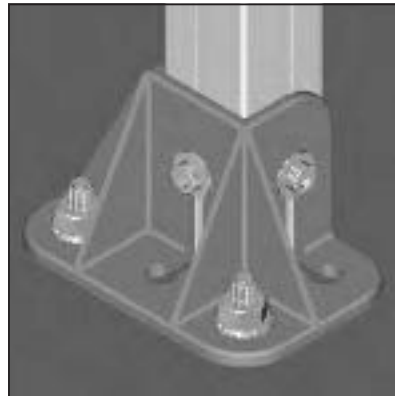
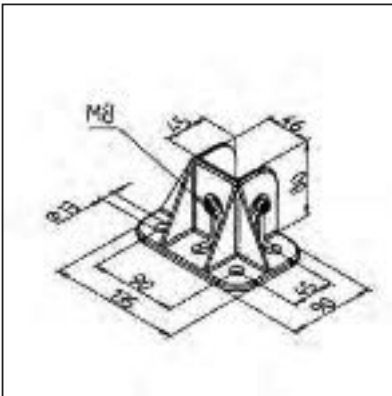
- To cover foot 45 GD 45 and GD open

ASSEMBLY

- Mounting on profile / foot

FOOT 45 GD OPEN

part no. 21.1738/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fastening kit for profile
- Weight 0,356 kg

APPLICATIONS

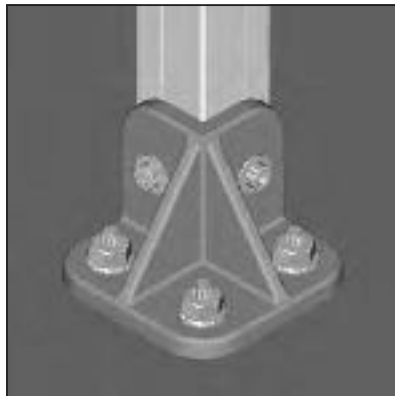
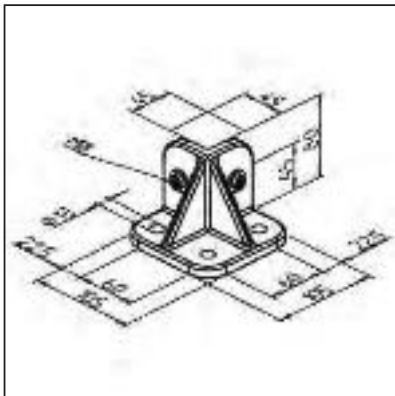
- Floor mounting of guard units, information plates and frames
- As connection element for wall attachment; can be used both-sided

ASSEMBLY

- Insert profile into foot
- Insert the square nut with spring steel sheet into the profile groove; preassemble the screws
- Fix the foot on the floor or on the wall; for this purpose use high-performance anchors or universal dowels with hexagon screws
- Tighten the fastening screws

FOOT 45 GD S

part no. 21.1723/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fastening kit for profile
- Weight 0,499 kg

APPLICATIONS

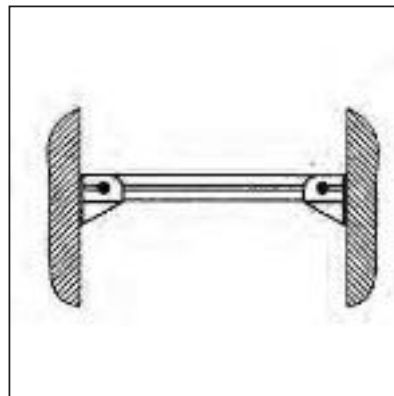
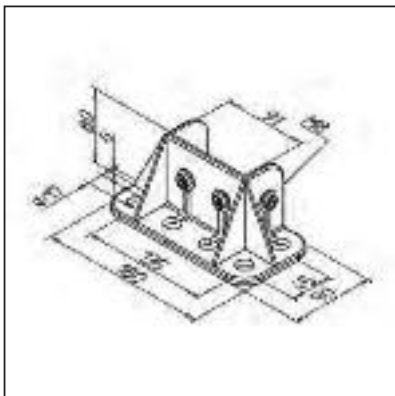
- Suitable for all profiles
- Floor mounting of guard units, information plates and frames
- As connection element for wall attachment; can be used both-sided

ASSEMBLY

- Fix the foot on the floor or on the wall; for this purpose use high-performance anchors or universal dowels with hexagon screws
- Tighten the fastening screws

FOOT 90 GD

part no. 21.1737/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fastening kit for profile
- Weight 0,465 kg

APPLICATIONS

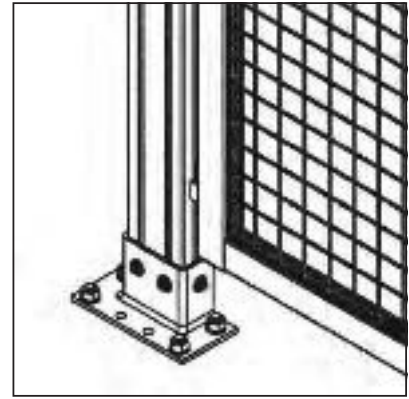
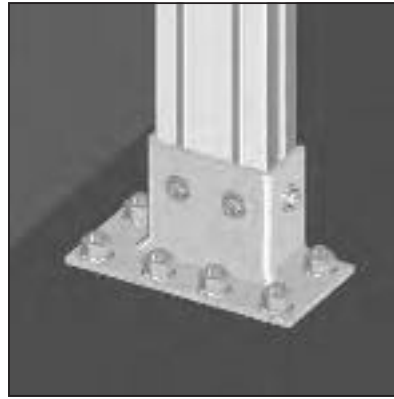
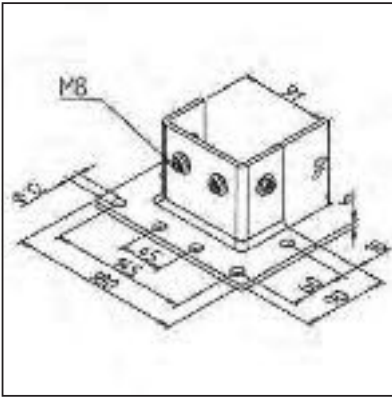
- Suitable for profiles up to dimension 45 x 90, 90 x 90 and 90 x 180
- Floor fastening of guard units, information plates and frames
- Connection element for wall attachment; can be used both-sided

ASSEMBLY

- Insert profile into foot
- Insert the square nut with spring steel sheet into the profile groove; preassemble the screws
- Fix the foot on the floor or on the wall; for this purpose use high-performance anchors or universal dowels with hexagon screws
- Tighten the fastening screws

FOOT 90 S

part no. 21.1707/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- Fastening kit for profile
- Weight 1,438 kg

APPLICATIONS

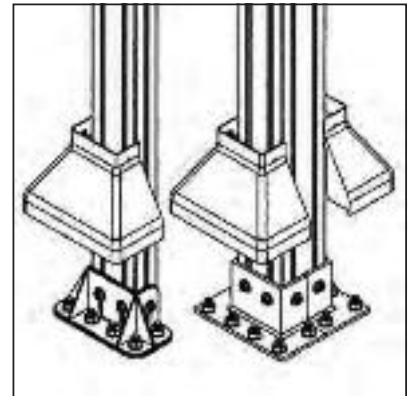
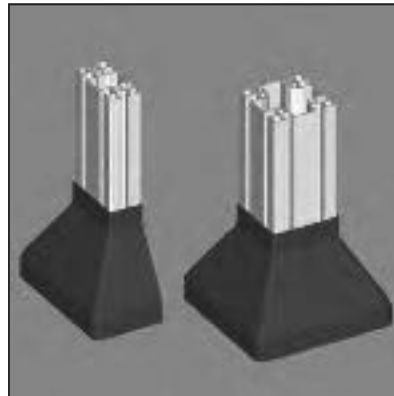
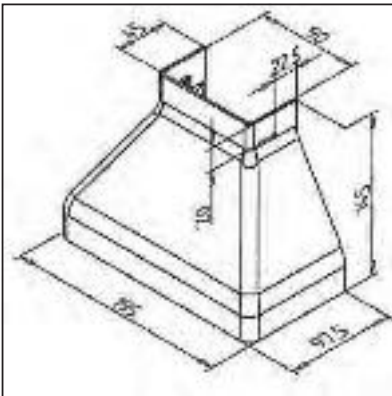
- Suitable for profiles up to dimension 45 x 90, 90 x 90 and 90 x 180
- Floor mounting of guard units, information plates and frames
- Connection element for wall attachment; can be used for both sides

ASSEMBLY

- Insert spring-loaded square nuts in profile grooves and slide to fixing position
- Fasten the foot on the floor or on the wall; for floor mounting use high performance anchors 12 mm or universal dowels with hexagon screws M12
- Tighten the screws on profile

COVER FOOT GD

part no. 22.1025/1



TECHN. DATA / ITEMS SUPPLIED

- ABS, grey
- Weight 0,131 kg

APPLICATIONS

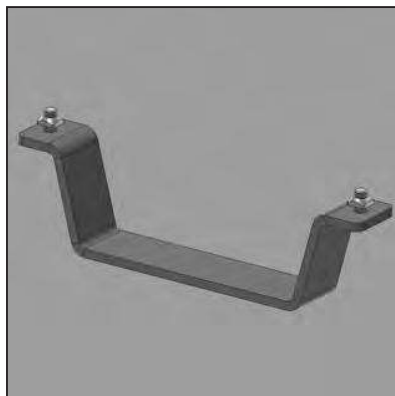
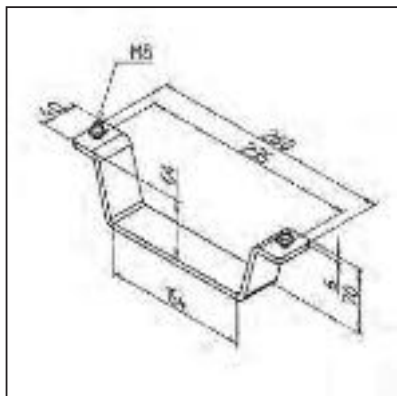
- Suitable for foot 90 GD and 90 S
- Less dust and dirt deposit on the foot
- Easy to clean

ASSEMBLY

- Expand the cover manually and clip in the slots of the profile
- Push the cover downwards
- Laterally fix with self tapping screw 3,4 x 16; in addition drill $\varnothing 2,5$ on the marked place

CLAMP FOR TRANSPORTATION

part no. 26.1101/0



TECHN. DATA / ITEMS SUPPLIED

- 1 clamp
- Steel, zinc-plated
- Fastening kit
- Weight 0,708 kg

APPLICATIONS

- For fixation of goods during transport with forklift

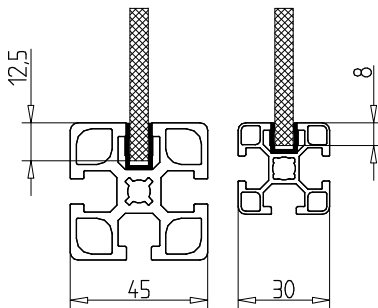
ASSEMBLY

- Fastening on bottom side of construction with fastening kit
- Use always in pairs

FITTING OF PANEL ELEMENTS

MOUNTING ELEMENTS INTO THE PROFILE GROOVE

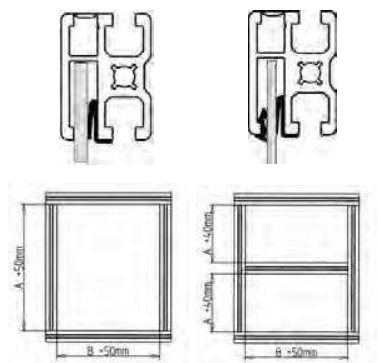
There are two assembly modes that have to be distinguished: the mounting of elements into the profile groove and the subsequent attachment of panel elements. The mounting of elements into the groove has to be pre-planned. It is recommended to put together elements to a complete frame that can be fitted into existing constructions. This assembly method is of particularly use for large panel elements, corrugated mesh and sealing constructions. Subsequent mounting of panel elements is easier to perform and causes less damage.



Cover profiles

Panel elements of max. 6 mm thickness can be mounted directly into the profile groove by using a PVC cover profile.

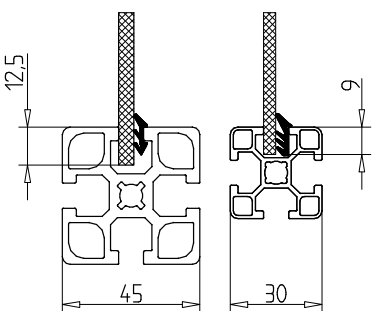
Allow an enlargement of panel elements in x and y direction of:
 groove system 30: +16 mm
 groove system 45: +25 mm



Clamp profile 45 x 32

The clamp profile 45 x 32 combines the properties of the construction profiles and the secure fixing for panel elements of max. 8 mm thickness. This profile is best suited for large elements and corrugated mesh. The ready assembled frames are subsequently fixed to the stand profiles with guard unit fixing angles. Quick removal of the units is ensured.

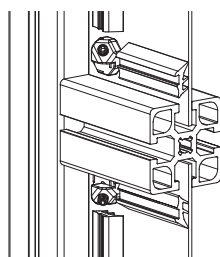
Allow an enlargement of panel elements in x and y direction of:
 1) Simple frames: +50 mm
 2) Frames with intermediate brackets: +40 mm



Insert seals

Sheet material, plastic panels, and panes etc. from 2 to 6 mm can easily be mounted and sealed with insert seal 2, 4, 5 and 6. The seals are subsequently pressed into free space between panel element and profile groove with a blunt tool made from wood or plastic.

Allow an enlargement of panel elements in x and y direction of:
 groove system 30: +18 mm with Insert seal 30
 groove system 45: +25 mm with Insert seal 2/4/5/6

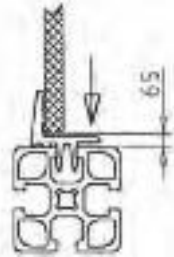


Grounding / conductive connection

Please use our grounding block **part no. 22.1163/0** for conductive connections of aluminum or steel plates with profile frames (thickness of 1.5 mm - 2.5 mm).

One grounding block is sufficient for each surface element. In conjunction with our plug seal 2, the sheet is fixed in panel frames.

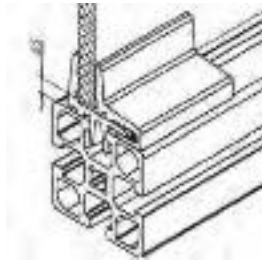
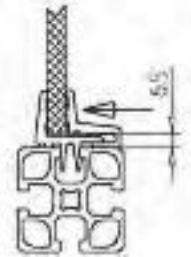
SUBSEQUENT MOUNTING OF PANEL ELEMENTS



Clamp profiles PVC

For easy fitting of panel elements of all kinds into existing frames without free space between frame and panel. Suitable for panel elements of max. 8 mm, also for corrugated mesh.

Calculation of pane size: Clear opening - 13 mm

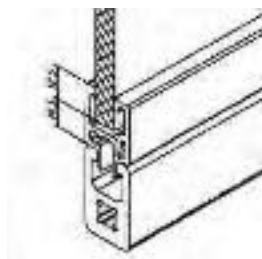
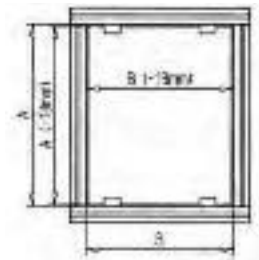


Panel holder

For easy and economic fitting of panel elements into existing frames. The panel holders made are of two elements. Best suited for all panel elements of max. 8 mm thickness, except for corrugated mesh.

Calculation of pane size:

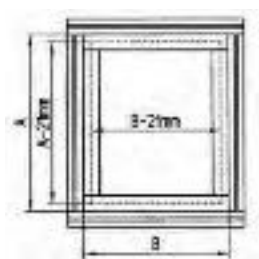
Clear opening - 13 mm (6,5 mm free space circumferentially)



Panel clamp profile

For an easy and cost efficient assembling of panel elements (also for subsequent assembling). No mitre cuts necessary. Suitable for panel elements up to a thickness of 8 mm.

For a tight fastening of panel elements < 8 mm use insert seal.



FITTING OF PANEL ELEMENTS

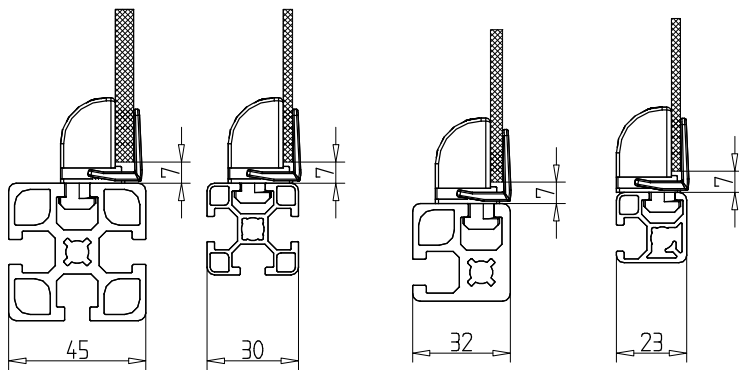
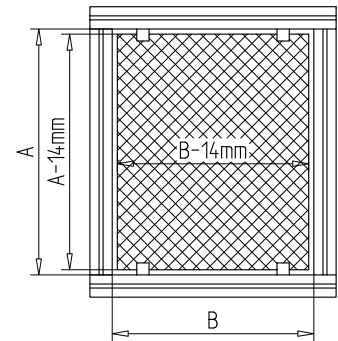
SUBSEQUENT MOUNTING OF PANEL ELEMENTS

Clamp block

Simple and economical fastening of panel elements. The clamp block consists of block and clip. Suitable for all panel elements from 2 - 6 mm thickness. Not for mesh.

Calculation of pane size:

Clear opening - 14 mm (7 mm free space circumferentially)

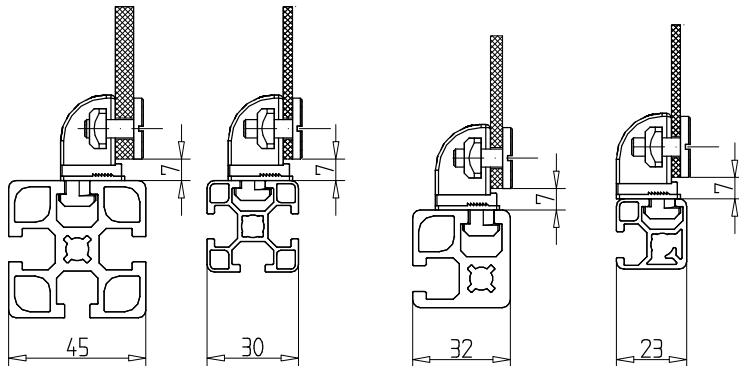
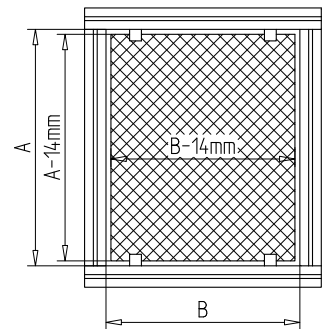


Screw block

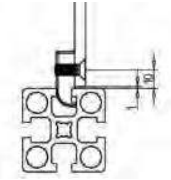
Suitable for all kind of panel elements up to 6 mm thickness, except mesh.

Calculation of pane size:

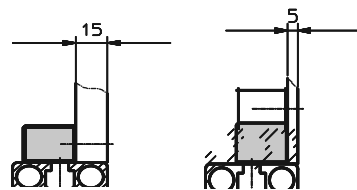
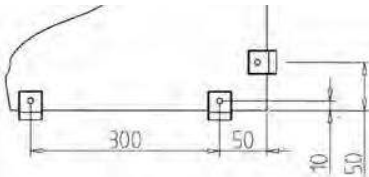
Clear opening - 14 mm (7 mm free space circumferentially)



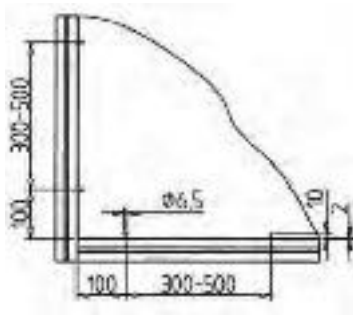
SUBSEQUENT MOUNTING OF PANEL ELEMENTS

**Thread socket**

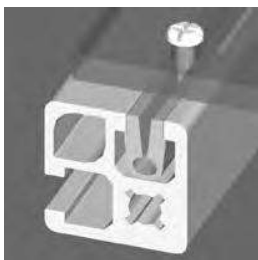
Secure and easy fastening of panel elements of all kinds, except for corrugated mesh. Insert the socket into profile grooves in 300 mm grid. Select screw form and length appropriate to thickness and type of panel element.

**Multiblock**

The multiblocks are installed in the clear space of the frame construction at a spacing of approx. 300 mm using cylinder-head screws M6 and rhombus nuts. Best suited for compound sheet materials. Material of 5-15 mm can be attached bundled. Select screw form and length appropriate to type and thickness of panel element. Bore holes for the attachment screws in the panel elements 6.5 mm in diameter and with 10 mm distance to edge.

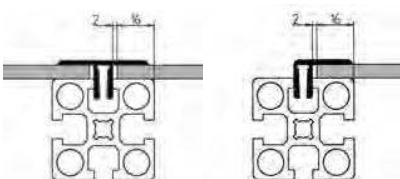
**Calculation of pane size:**

Clear opening - 4 mm (~2 mm free space circumferentially)

**Screw socket profile**

Material: PVC

Easy fastening of panels or panel elements at any point with commercial-type self-tapping screws.

**Panel-clamping profile**

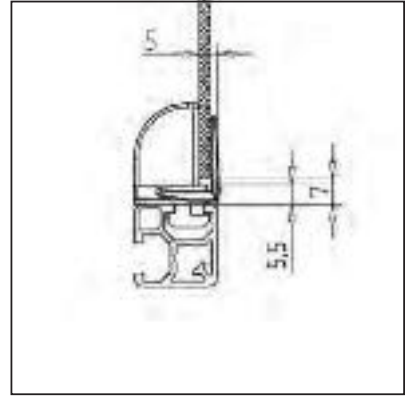
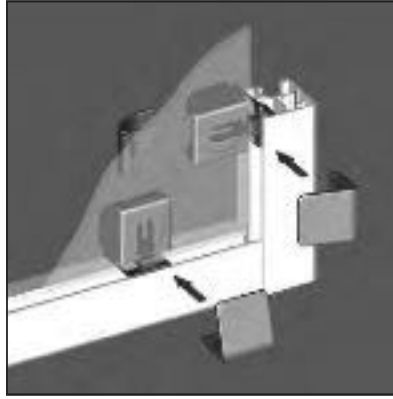
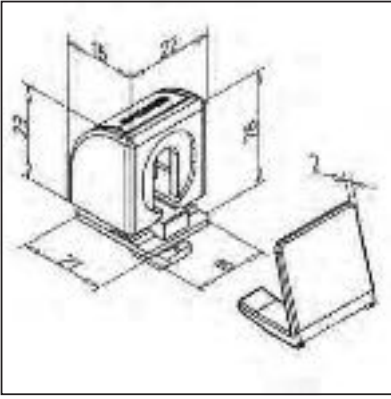
Suitable for panel elements from 2 to 10 mm.

Insert fixing bores \varnothing 5.5 mm for set screw M5 in ~250 mm grid. Press into profile groove and fix with set screw M5 x 16.

Best suited for panels, corrugated mesh and expanded metal.

PANEL CLAMP BLOCK 23

part no. 22.1235/0



TECHN. DATA / ITEMS SUPPLIED

- ABS grey
- Weight 0,008 kg

APPLICATIONS

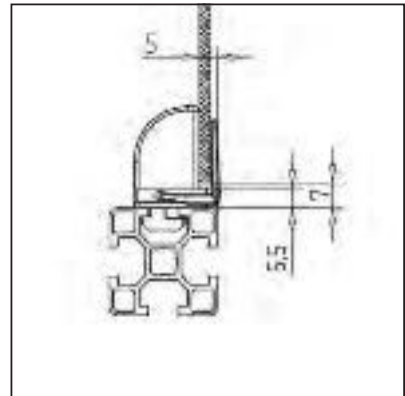
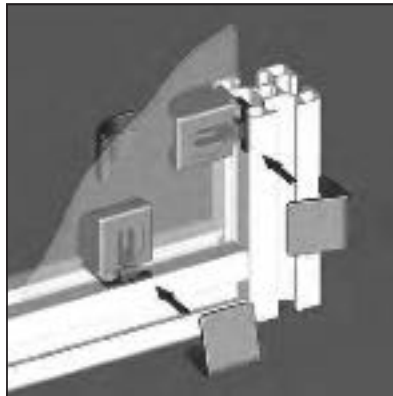
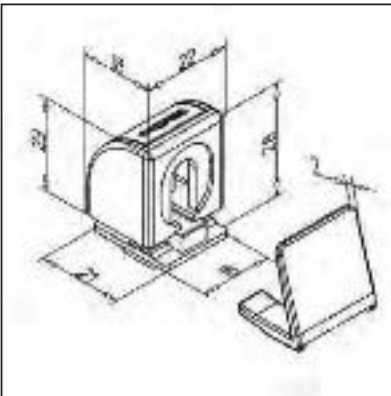
- Suitable for all profiles 30
- Subsequent fitting of panel elements from 2 to 6 mm thickness
- Circulating air gap 7 mm

ASSEMBLY

- Insert socket into profile groove
- Insert panel elements
- Press on clip
- **Disassembly:**
Lift clip with a screwdriver

PANEL CLAMP BLOCK 30

part no. 22.1230/0



TECHN. DATA / ITEMS SUPPLIED

- ABS grey
- Weight 0,008 kg

APPLICATIONS

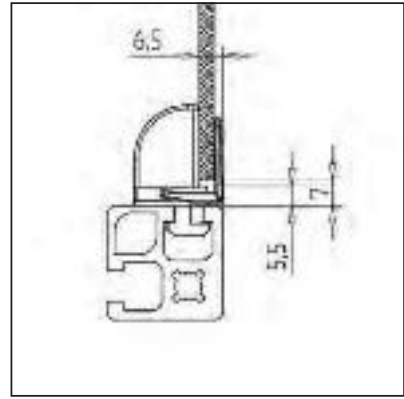
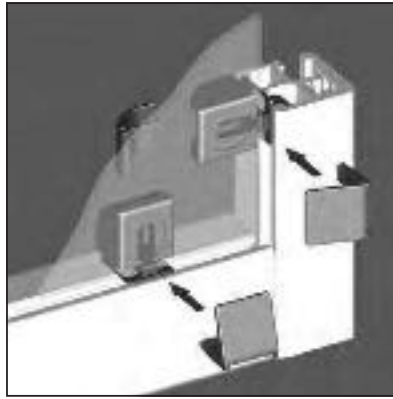
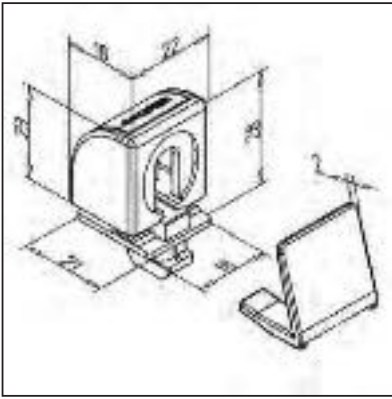
- Suitable for all profiles 30
- Subsequent fitting of panel elements from 2 to 6 mm thickness
- Circulating air gap 7 mm

ASSEMBLY

- Insert socket into profile groove
- Insert panel elements
- Press on clip
- **Disassembly:**
Lift clip with a screwdriver

PANEL CLAMP BLOCK 32

part no. 22.1245/0



TECHN. DATA / ITEMS SUPPLIED

- ABS grey
- Weight 0,008 kg

APPLICATIONS

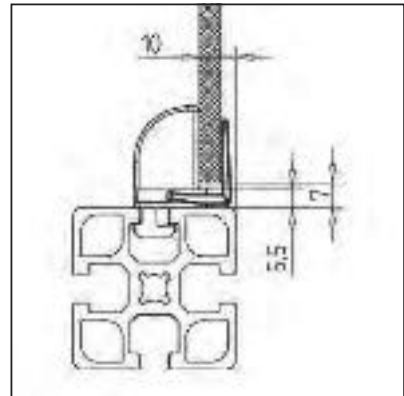
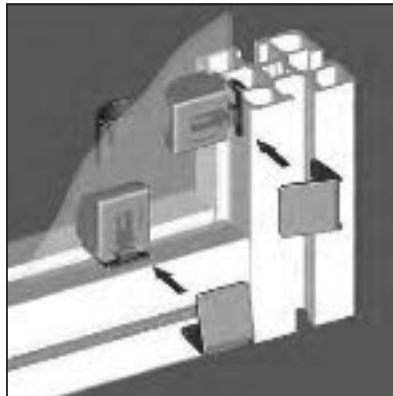
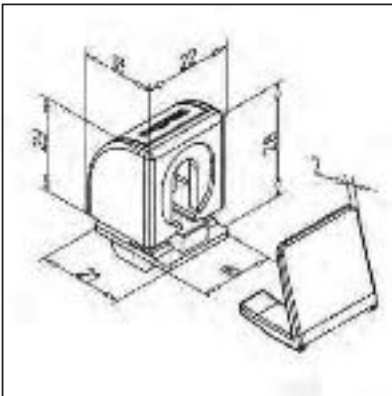
- Suitable for all profiles 30
- Subsequent fitting of panel elements from 2 to 6 mm thickness
- Circulating air gap 7 mm

ASSEMBLY

- Insert socket into profile groove
- Insert panel elements
- Press on clip
- **Disassembly:**
Lift clip with a screwdriver

PANEL CLAMP BLOCK 45

part no. 22.1240/0



TECHN. DATA / ITEMS SUPPLIED

- ABS grey
- Weight 0,008 kg

APPLICATIONS

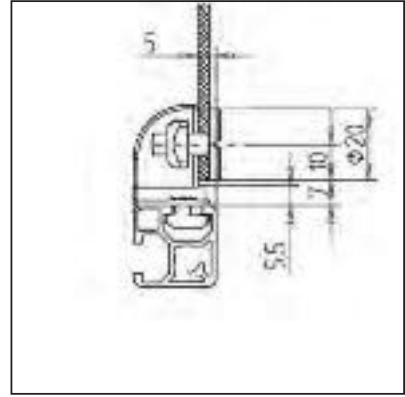
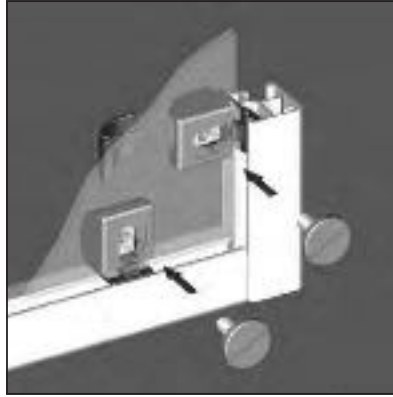
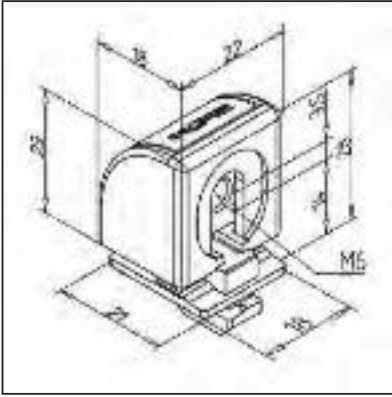
- Suitable for all profiles 30
- Subsequent fitting of panel elements from 2 to 6 mm thickness
- Circulating air gap 7 mm

ASSEMBLY

- Insert socket into profile groove
- Insert panel elements
- Press on clip
- **Disassembly:**
Lift clip with a screwdriver

SCREW BLOCK 23

part no. 22.1255/0



TECHN. DATA / ITEMS SUPPLIED

- ABS grey
- Nut M6, steel, zinc-plated
- Weight 0,011 kg
- Also available with thread size M4 / M5 / M8

APPLICATIONS

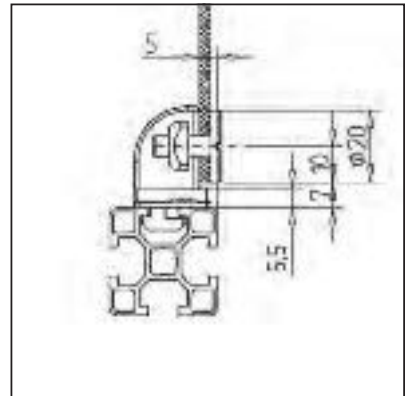
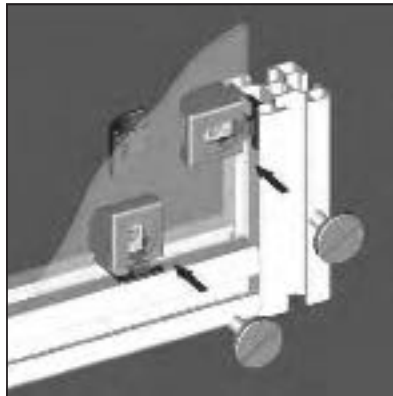
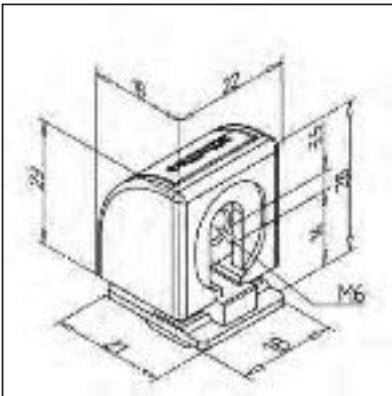
- Suitable for all profiles 30
- Subsequent fitting of panel elements from 2 to 6 mm thickness
- Circulating air gap 7 mm

ASSEMBLY

- Insert socket into profile groove
- Insert bored panel elements
- To screw panel elements
- Recommended flat head screw M6x12 **part no. 21.2074/0** 3 mm slice thickness or M6x16 **part no. 21.1246/0** for greater strength

SCREW BLOCK 30

part no. 22.1250/0



TECHN. DATA / ITEMS SUPPLIED

- ABS grey
- Nut M6, steel, zinc-plated
- Weight 0,011 kg
- Also available with thread size M4 / M5 / M8

APPLICATIONS

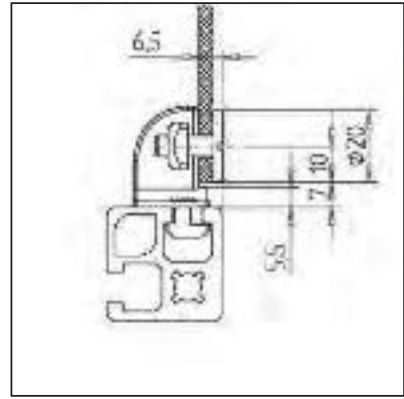
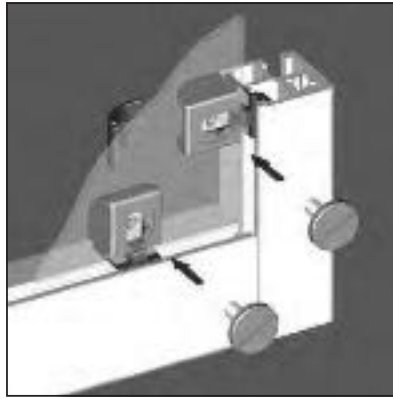
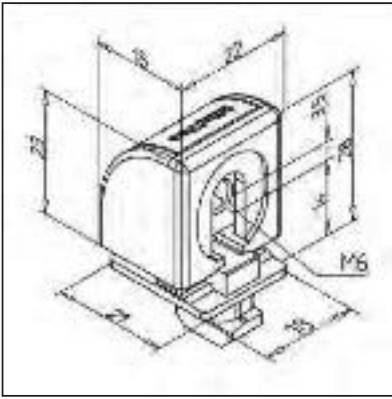
- Suitable for all profiles 30
- Subsequent fitting of panel elements from 2 to 6 mm thickness
- Circulating air gap 7 mm

ASSEMBLY

- Insert socket into profile groove
- Insert bored panel elements
- To screw panel elements
- Recommended flat head screw M6x12 **part no. 21.2074/0** 3 mm slice thickness or M6x16 **part no. 21.1246/0** for greater strength

SCREW BLOCK 32

part no. 22.1265/0



TECHN. DATA / ITEMS SUPPLIED

- ABS grey
- Nut M6, steel, zinc-plated
- Weight 0,011 kg
- Also available with thread size M4 / M5 / M8

APPLICATIONS

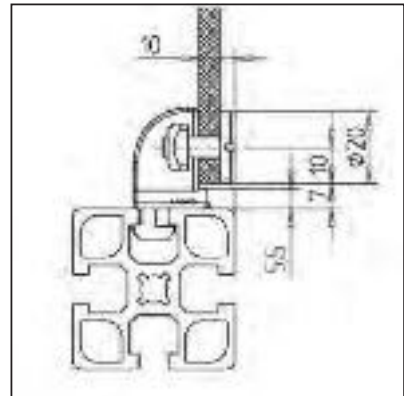
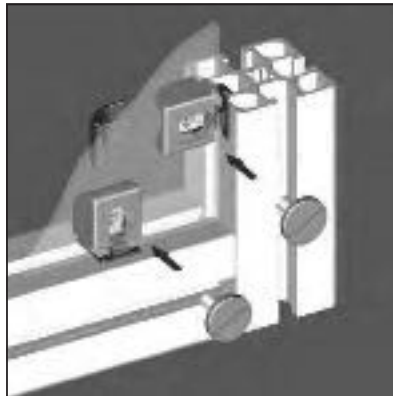
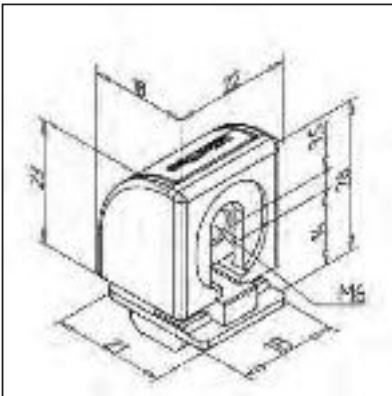
- Suitable for all profiles 45
- Subsequent fitting of panel elements from 2 to 6 mm thickness
- Circulating air gap 7 mm

ASSEMBLY

- Insert socket into profile groove
- Insert bored panel elements
- To screw panel elements
- Recommended flat head screw M6x12 **part no. 21.2074/0** 3 mm slice thickness or M6x16 **part no. 21.1246/0** for greater strength

SCREW BLOCK 45

part no. 22.1260/0



TECHN. DATA / ITEMS SUPPLIED

- ABS grey
- Nut M6, steel, zinc-plated
- Weight 0,011 kg
- Also available with thread size M4 / M5 / M8

APPLICATIONS

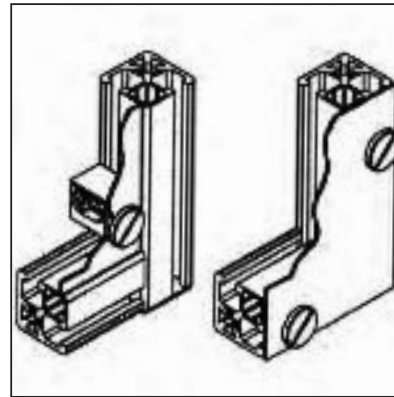
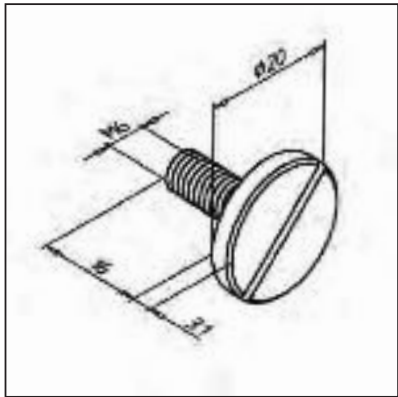
- Suitable for all profiles 45
- Subsequent fitting of panel elements from 2 to 6 mm thickness
- Circulating air gap 7 mm

ASSEMBLY

- Insert socket into profile groove
- Insert bored panel elements
- To screw panel elements
- Recommended flat head screw M6x12 **part no. 21.2074/0** 3 mm slice thickness or M6x16 **part no. 21.1246/0** for greater strength

PAN HEAD SCREW 16

part no. diverse



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated

- Screw head: Ø 20

- M6 x 12, **part no. 21.2074/0**
- M6 x 16, **part no. 21.1246/0**
- M6 x 20, **part no. 21.1246/1**

- Weight 0,010 kg

APPLICATIONS

- Mounting of panel elements directly on profile groove or

- In connection with screw block 32 **part no. 22.1112/0** or multiblock **part no. 21.1355/0**

ASSEMBLY

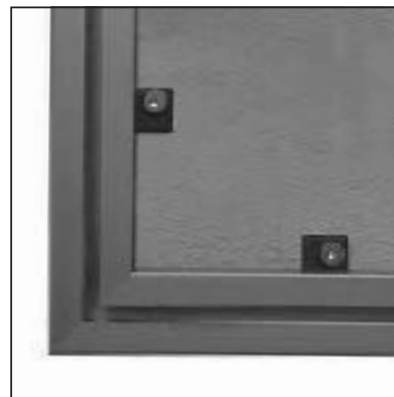
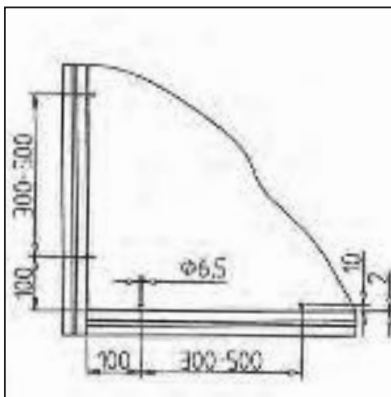
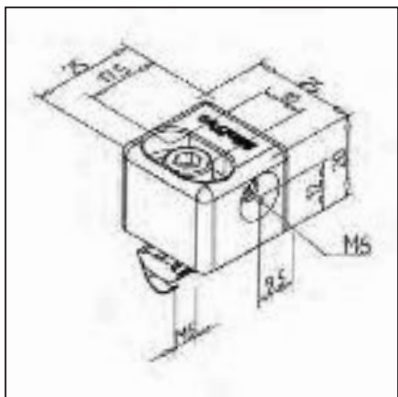
- Predrill panel elements: Ø 6,5 mm

- Recommend grid dimension: ca. 150 mm

- Edge distance: see screw block 32 and multiblock

MULTIBLOCK 30 GD

part no. 21.2220/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey

- Fastening kit

- Without pan head screw

- Weight 0,0316 kg

APPLICATIONS

- Subsequent fitting of panel and add-on elements

- Flush installation of panels, thickness 6 to 7 mm

ASSEMBLY

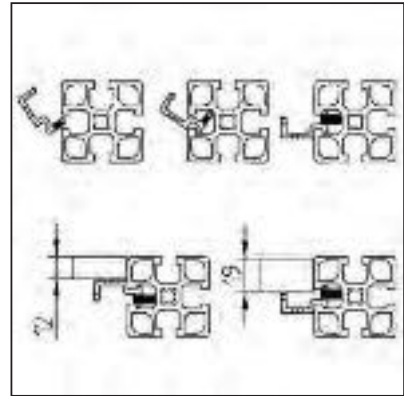
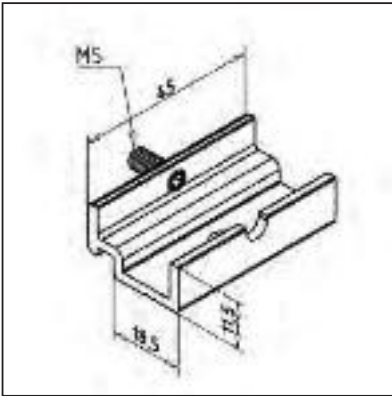
- Subsequent fastening of panel elements with screws M6 or pan head screw

- Calculation of the panel element dimension: clear opening - 4 mm (~2 mm space afloat)

- Fixing bores Ø 6,5 mm, 10 mm distance from edge of the panel element

MOUNTING BASE, PIVOTED

part no. 21.0036/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural anodized
- Set screw M05
- Weight 0,016 kg

APPLICATIONS

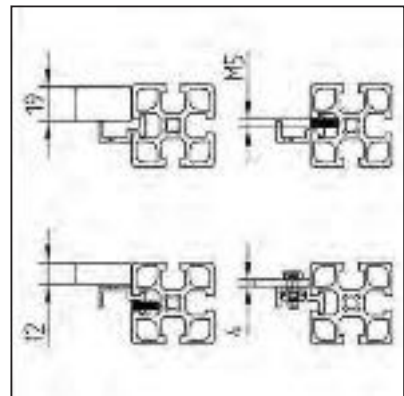
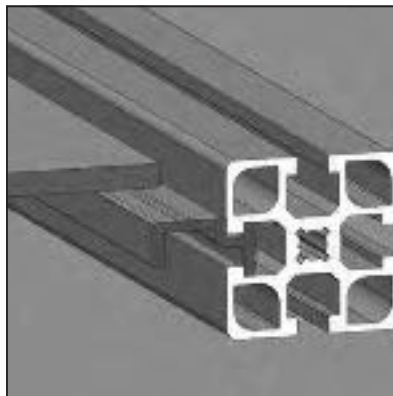
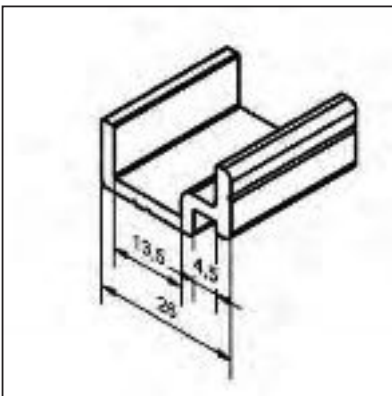
- For placing and fasten table tops and surface elements

ASSEMBLY

- Insertion into the profile groove
- Clamp with set screw
- No processing required

SUPPORT PROFILE

part no. 20.1121/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural anodized
- Weight 0,339 kg/m
- Length 6 m

APPLICATIONS

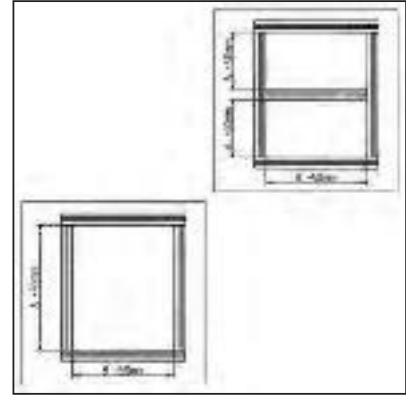
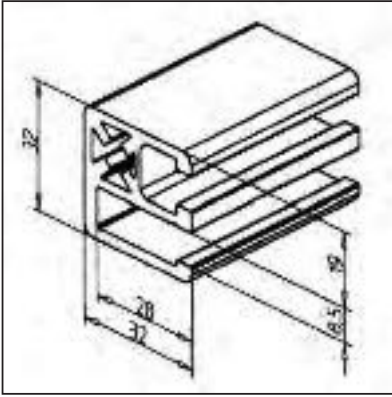
- All types of safety equipment
- For installation of surface elements such as panels and plates up to a thickness of 19 mm
- Subsequent insertion

ASSEMBLY

- Swivel support profile in groove, if necessary to be fastened with set screw
- Surface element: clear opening x+y: -2 mm

CLAMP PROFILE 32 X 32

part no. 20.1070/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	5,024 cm ⁴
- Iy =	4,418 cm ⁴
- wx =	3,041 cm ³
- wy =	2,398 cm ³
- Weight	1,211 kg/m
- Length	6 m
- Packing unit	48 m

APPLICATIONS

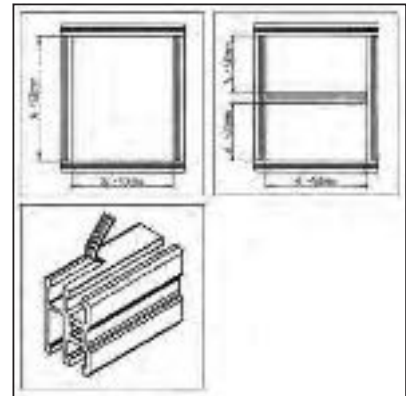
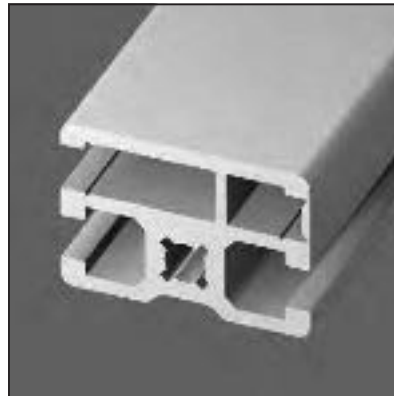
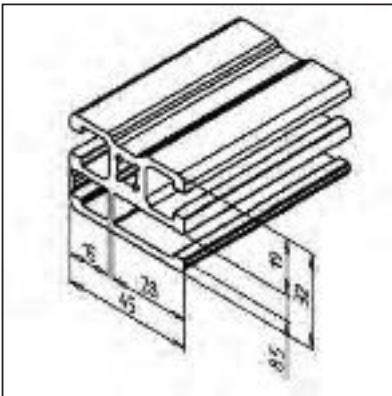
- All types of safety equipment
- For clamping surface elements such as corrugated mesh, panels or plates up to a thickness of 8 mm
- For large flexible panels, split panel into sections using a center bar of clamp profile 45x32

ASSEMBLY

- MiniTec power-lock fastener; no bores required
- No cut-outs in surface elements required
- Premount 3 sides of the frame
- Insert surface element and mount last profile strut
- Push in distance profile on the inside or knock in with a flat tool
- For panel elements < 4 mm mount additional insert seal

CLAMP PROFILE 45 X 32

part no. 20.1053/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	6,465 cm ⁴
- Iy =	9,521 cm ⁴
- wx =	3,999 cm ³
- wy =	4,119 cm ³
- Weight	1,615 kg/m
- Length	6 m
- Packing unit	48 m

APPLICATIONS

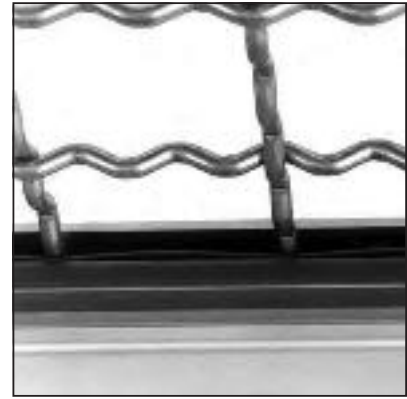
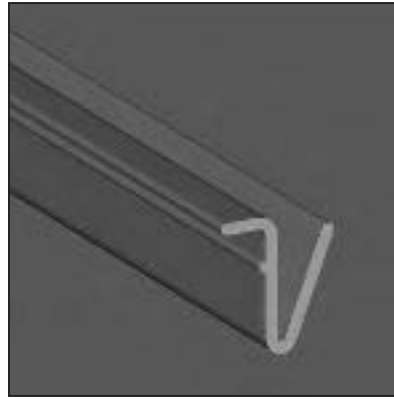
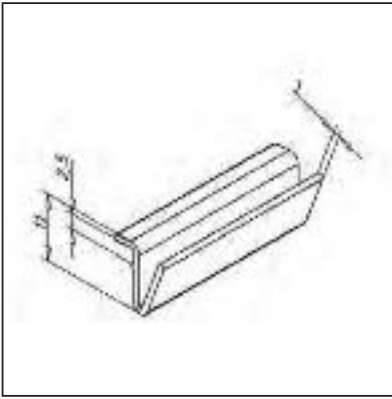
- All types of safety equipment
- For clamping surface elements such as corrugated mesh, panels or plates up to a thickness of 8 mm
- With larger protection fields intermediate rods from mounting rail 45 x 32 are to be used, in order to ensure sufficient security against squeezing the two dimensional elements out
- Additional struts of clamp profile 45 x 32 must be used for larger guarding elements to ensure sufficient protection against extrusion of surface element; detach covering strips of profile 45 x 32

ASSEMBLY

- MiniTec power-lock fastener
- No cut-outs in surface elements required
- Premount 3 sides of the frame
- Insert surface element and mount last profile strut
- Push in distance profile on the inside or knock in with a flat tool
- For panel elements < 4 mm mount additional insert seal

DISTANCE PROFILE 30

part no. 22.1158/0



TECHN. DATA / ITEMS SUPPLIED

- ABS, grey	
- Weight	0,02 kg/m
- Length	2 m

APPLICATIONS

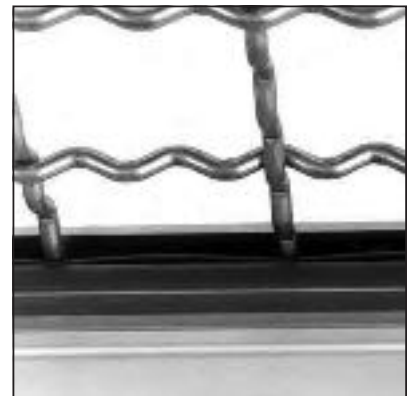
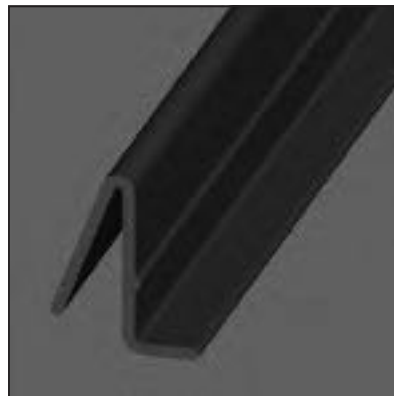
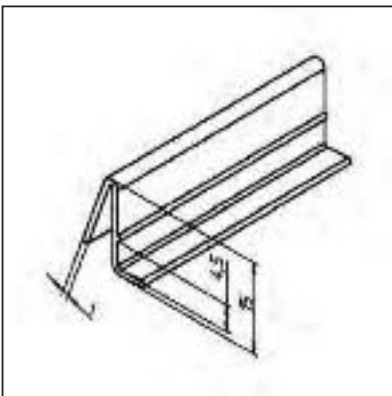
- For clamping surface elements such as corrugated mesh, panels and plates for profile series 30

ASSEMBLY

- Mount frame and panel elements
- Press in with suitable tool in space between panel element and profile

DISTANCE PROFILE

part no. 22.1039/0



TECHN. DATA / ITEMS SUPPLIED

- ABS, grey	
- Weight	0,055 kg/m
- Length	2 m

APPLICATIONS

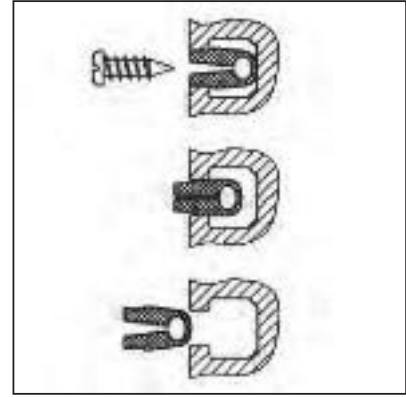
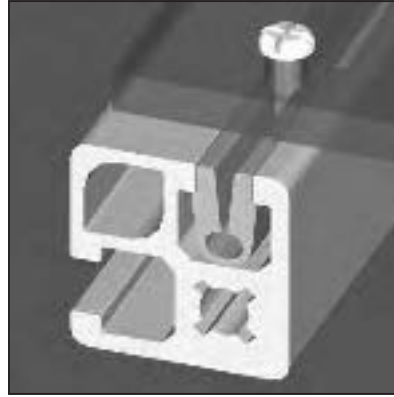
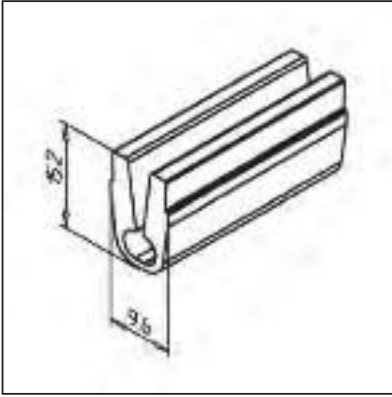
- Spacing element to use with clamp profile 45 x 32 **part no. 20.1053/0** and clamp profile 32 x 32 **part no. 20.1070/0** to fix corrugated mesh or panel elements
- Also for use with all other profiles to fix panel elements

ASSEMBLY

- Mount frame and panel elements
- Press in with suitable tool in space between panel element and clamp profile

SCREW SOCKET PROFILE

part no. 22.1076/0



TECHN. DATA / ITEMS SUPPLIED

- PVC, grey RAL 7012

- Weight 0,118 kg/m

- Length 2 m

APPLICATIONS

- Easy fastening of panels or panel elements at any point

ASSEMBLY

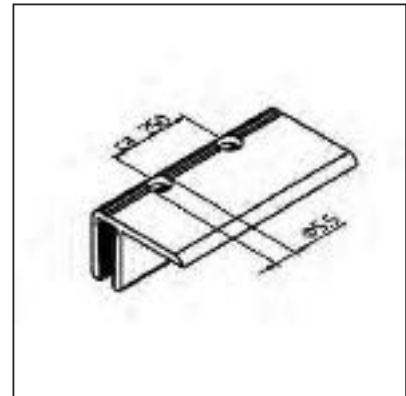
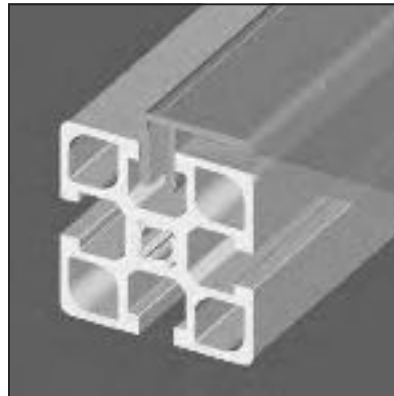
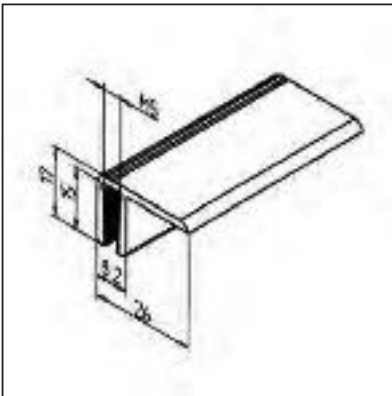
- Clip profile into groove

- Fasten element with commercial-type selftapping screws \varnothing 4-5 mm; Length min: 16 mm

- For material 1-6 mm, use self tapping screw 3,5 x 16 mm **part no. 21.1365/0**

PANEL CLAMPING PROFILE

part no. 20.1025/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1

- Weight 0,260 kg/m

- Length 6 m

APPLICATIONS

- Fastening of panel elements

- Subsequent fitting of panels on facade side

- Subsequent fitting of panel elements of max. 10 mm thickness

ASSEMBLY

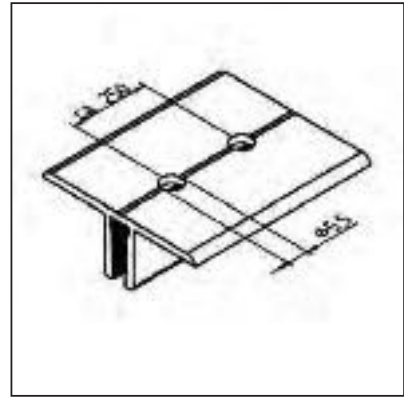
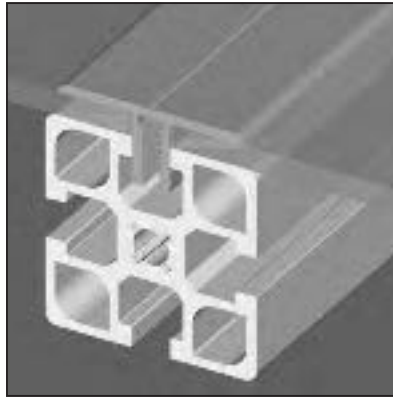
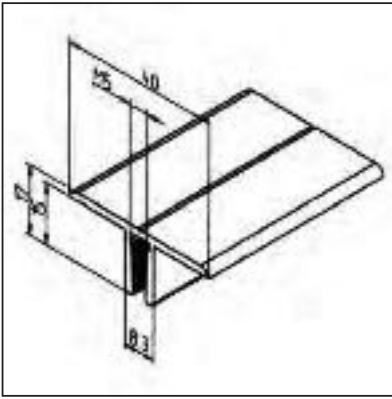
- Drill bores \varnothing 5,5 mm for set screw M5 in panel element dimension of 250 mm

- Press into profile groove and clamp with set screw M5 x 12

- Calculation of the panel element dimension: see page 173

DOUBLE PANEL CLAMPING PROFILE

part no. 20.1018/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1	
- Weight	0,375 kg/m
- Length	6 m

APPLICATIONS

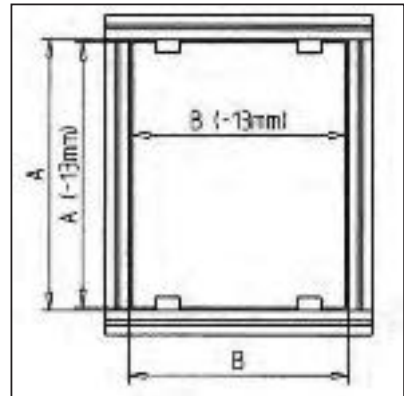
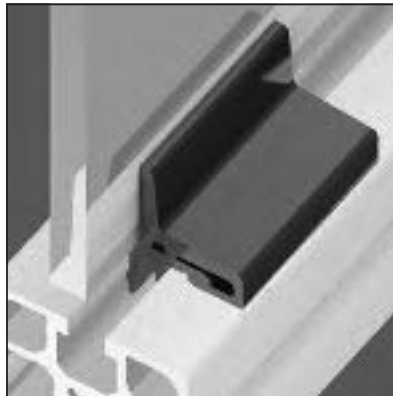
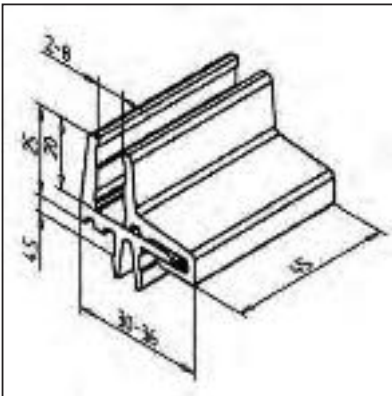
- Fastening of panel elements
- Support of panel elements of a thickness up to 10 mm

ASSEMBLY

- Drill bores \varnothing 5,5 mm for set screw M5 in panel element dimension of 250 mm
- Press into profile groove and clamp with set screw M5 x 12
- Also see panel clamping profile **part no. 20.1025/0**
- Calculation of the panel element dimension: see page 173

PANEL HOLDER

part no. 22.1090/1



TECHN. DATA / ITEMS SUPPLIED

- Hard PVC, grey	
- On request also deliverable in black part no. 22.1090/0	
- Weight	0,011 kg

APPLICATIONS

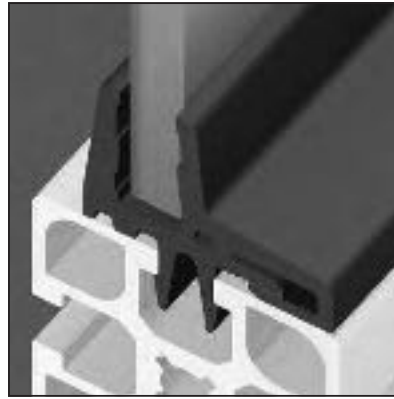
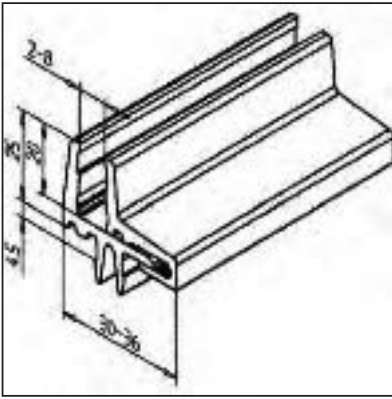
- Fastening of panel elements up to 8 mm
- If the panel elements are < 4 mm, a cellular rubber should be inserted
- Windows, door fillings
- Not suitable for corrugated mesh

ASSEMBLY

- Snap socket half into profile groove
- Insert the panel element
- Press clamping half firmly on socket half
- Calculation of the panel element dimension: see page 171

CLAMP PROFILE PVC

part no. 22.1092/0



TECHN. DATA / ITEMS SUPPLIED

- Hard PVC, grey
- On request also deliverable in black **part no. 22.1080/0**
- Weight 0,230 kg/m
- Length 2 m

APPLICATIONS

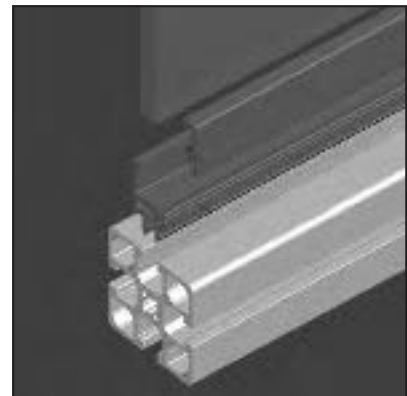
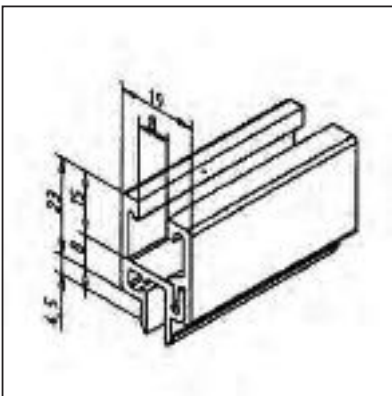
- Fastening of panel elements up to 8 mm
- If the panel elements are < 4 mm, a cellular rubber should be inserted
- Windows, door fillins
- No free space between profile and panel element
- Also suitable for corrugated mesh

ASSEMBLY

- Snap socket half into profile groove
- Insert the panel element
- Press clamping half firmly on socket half
- Calculation of the panel element dimension: see page 171

PANEL CLAMP PROFILE

part no. 22.1107/1



TECHN. DATA / ITEMS SUPPLIED

- ABS, grey
- On request also deliverable in black
- Weight 0,158 kg/m
- Length 2 m

APPLICATIONS

- Useful for subsequent fitting of profiles into existing profile frames
- Fastening of panel elements up to 8 mm
- For panels up to 8 mm use additional insert seal
- Windows, panels
- No air gap

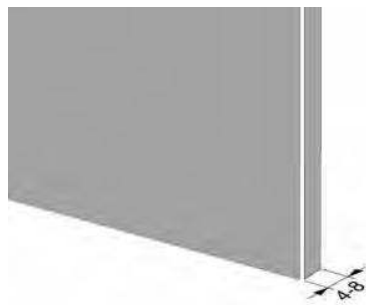
ASSEMBLY

- Snap socket half into profile groove
- Insert the panel element
- Press clamping half firmly on socket half
- Calculation of the panel element dimension: see page 171
- **No mitre cut necessary**

SURFACE ELEMENTS

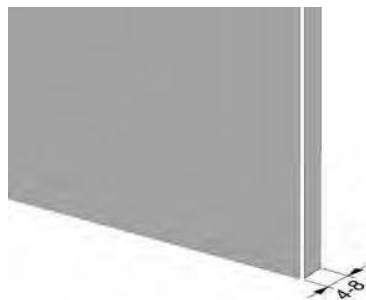
OPTIONS & MATERIAL

ACRYLIC



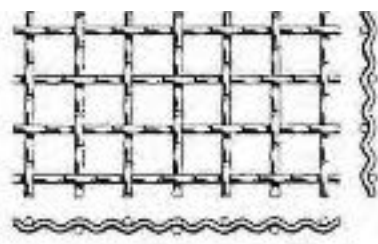
PART NO.	THICKNESS	COLOUR	WEIGHT	DIMENSION
21.1832/0	4 mm	tinted	4.76 kg/m ²	2030 x 3050 mm
21.1811/0	5 mm	tinted	5.95 kg/m ²	2030 x 3050 mm
21.1812/0	6 mm	tinted	7.14 kg/m ²	2030 x 3050 mm
21.1813/0	8 mm	tinted	9.52 kg/m ²	2030 x 3050 mm
21.1826/0	4 mm	clear	4.76 kg/m ²	2030 x 3050 mm
21.1836/0	5 mm	clear	5.95 kg/m ²	2030 x 3050 mm
21.1827/0	6 mm	clear	7.14 kg/m ²	2030 x 3050 mm
21.1828/0	8 mm	clear	9.52 kg/m ²	2030 x 3050 mm

POLYCARBONATE



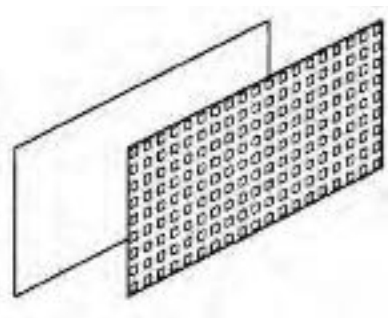
PART NO.	THICKNESS	COLOUR	WEIGHT	DIMENSION
21.1809/0	4 mm	tinted	4.76 kg/m ²	2030 x 3050 mm
21.1808/0	5 mm	tinted	5.95 kg/m ²	2030 x 3050 mm
21.1807/0	6 mm	tinted	7.20 kg/m ²	2030 x 3050 mm
21.1821/0	8 mm	tinted	9.78 kg/m ²	2030 x 3050 mm
21.1829/0	4 mm	clear	4.80 kg/m ²	2030 x 3050 mm
21.1833/0	5 mm	clear	5.95 kg/m ²	2030 x 3050 mm
21.1830/0	6 mm	clear	7.20 kg/m ²	2030 x 3050 mm
21.1831/0	8 mm	clear	9.78 kg/m ²	2030 x 3050 mm

CORRUGATED MESH



PART NO.	WIRE SIZE	MESH SIZE	WEIGHT	DIMENSION	MATERIAL
21.1803/0	4 mm	30 mm	6.2 kg/m ²	2000 x 3000 mm	St, galvanized
21.1805/0	4 mm	40 mm	4.7 kg/m ²	2000 x 3000 mm	St, galvanized
21.1818/2	4 mm	30 mm	2.14 kg/m ²	2000 x 2000 mm	ALMg3
21.1818/1	4 mm	40 mm	1.6 kg/m ²	2000 x 2000 mm	ALMg3

ON DEMAND

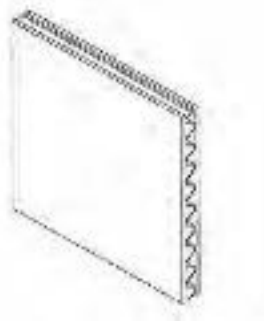


Aluminium sheets, steel plates,
perforated plates, laminated wood panels

SURFACE ELEMENTS

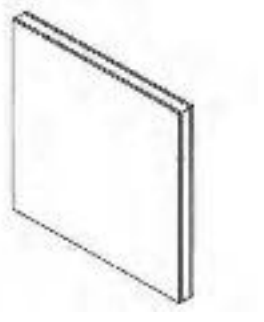
OPTIONS & MATERIAL

CORRUGATED ALUMINIUM PANEL



Front plate (anodized)	1 mm
Rear Plate (natural)	0.3 mm
Aluminium Welle	5.5 mm
Total thickness	4.6 kg/m ²
Panel Size	1500 x 2500 mm
Material	Aluminum, paintable, printable, recyclable

COMPOSITE PANEL



Material outside	Aluminium (anodized)
Material inside	Polyethylene
Total thickness	6 mm
Weight	7.3 kg/m ²
Panel Size	1500 x 3000 mm
Others	Aluminum, paintable, printable, recyclable

PVC-PLATE



Thickness	20 mm
Colour	grey, 7011 RAL
Weight	28 kg/m ²
Panel Size	1000 x 2000 mm
On Demand	other sizes and thicknesses, antistatic table plates

RECYCLED PE PLATE

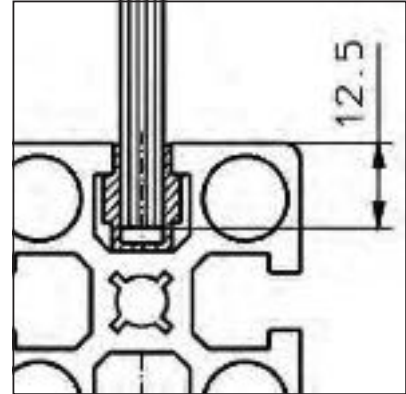
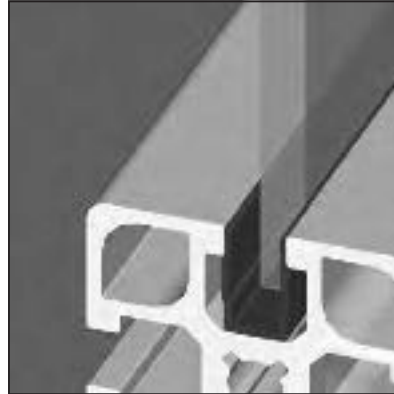
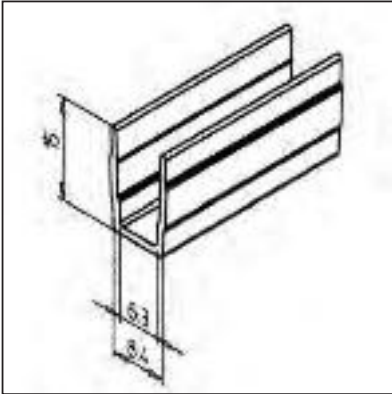


Thickness	10 - 40 mm
Colour*	black oder black-coloured
Dimension	1000 x 2000 mm
Density	0.93 kg/dm ³
Material	PE-Regenerate

* (In black-colored the color variance may vary depending on delivery)

COVER PROFILE

part no. 22.1070/1



TECHN. DATA / ITEMS SUPPLIED

- Hard PVC, grey

- Available in lightgrey **part no. 22.1070/2**
- Available in black **part no. 22.1070/0**
- Available in orange **part no. 22.1071/0**
- Available in blue **part no. 22.1072/0**
- Available in yellow **part no. 22.1074/0**

- Weight 0,060 kg/m

- Length 2 m

APPLICATIONS

- Mounted with groove inwards: for covering of profile grooves

- Mounted with groove outwards: attachment of panel elements up to 6 mm; thickness compensation for thin panels with silicon or rubber string

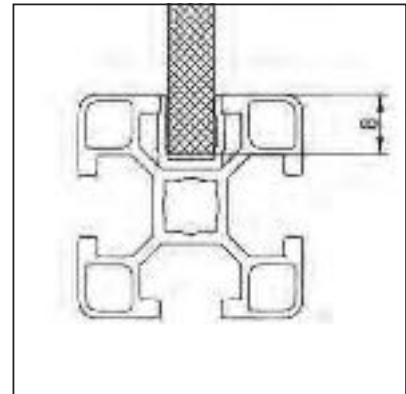
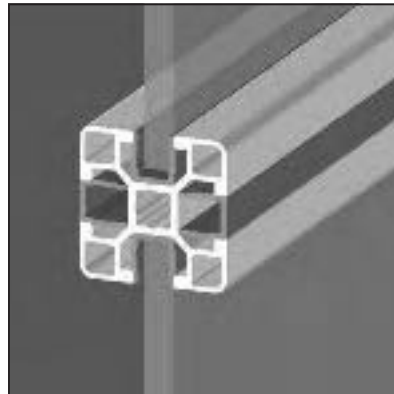
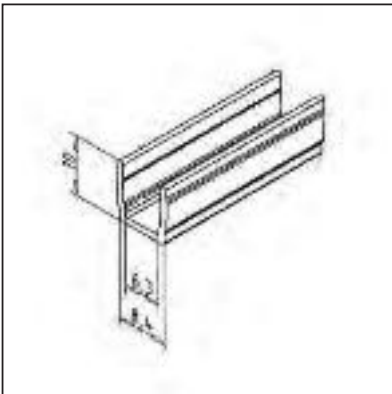
ASSEMBLY

- Snap or slip into profile groove

- Allowance for the panel elements: see page 170

COVER PROFILE 30

part no. 22.1161/1



TECHN. DATA / ITEMS SUPPLIED

- Hard PVC, grey

- Available in lightgrey **part no. 22.1161/2**

- Weight 0,040 kg/m

- Length 2 m

APPLICATIONS

- Mounted with the groove to the inside: For closing of the profile

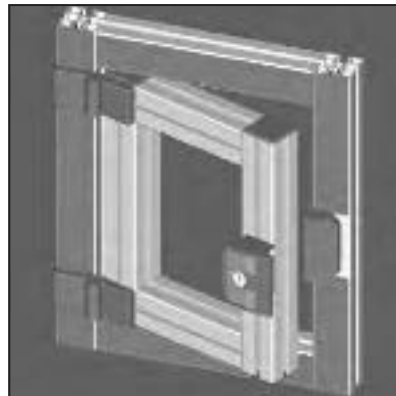
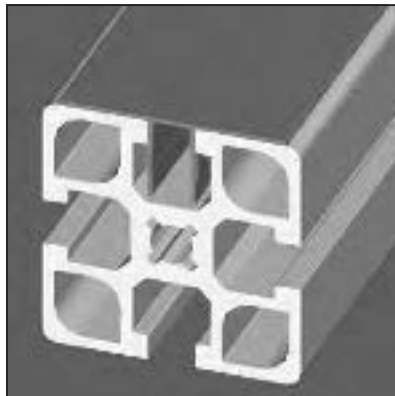
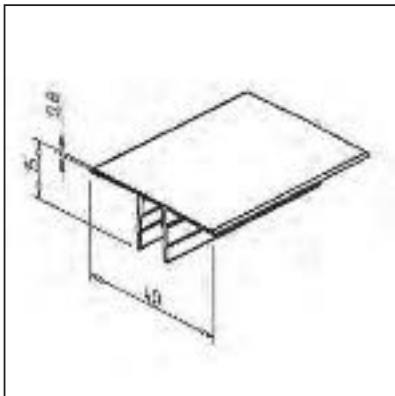
- Mounted with the groove on the outside: To accommodate surface elements to 6mm thickness

ASSEMBLY

- Press onto profile groove

SIGNAL PROFILE

part no. 22.1097/2



TECHN. DATA / ITEMS SUPPLIED

- PVC, yellow-orange
- Deliverable in red **part no. 22.1097/3**
- Deliverable in signal-yellow **part no. 22.1097/4**
- Weight 0,090 kg/m
- Length 2 m

APPLICATIONS

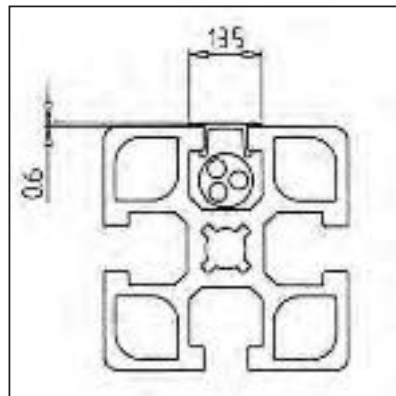
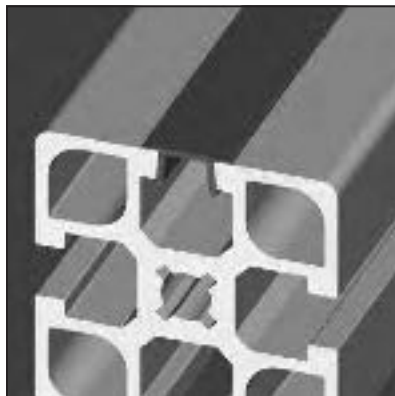
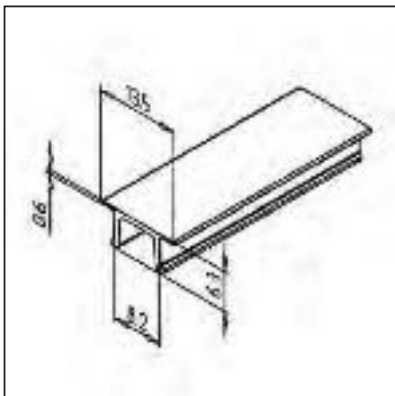
- Marking of safety relevant construction units such as doors and risk zones
- Coloured organization of constructions or parts

ASSEMBLY

- Clip in profile groove

COVER PROFILE K

part no. 22.1020/1



TECHN. DATA / ITEMS SUPPLIED

- ABS, grey
- Weight 0,023 kg/m
- Length 2 m
- Colour: yellow, part no. 22.1020/4

APPLICATIONS

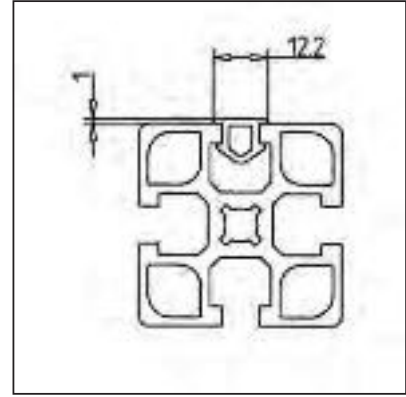
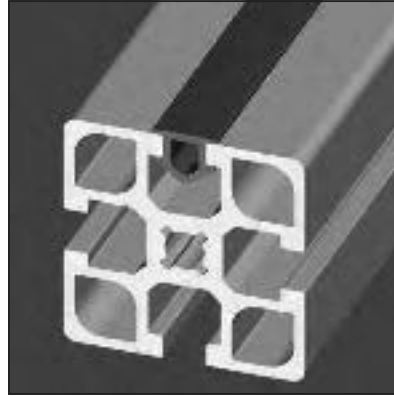
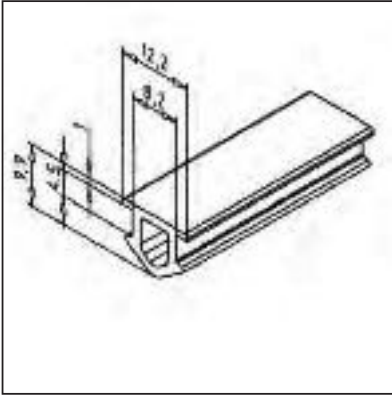
- Flush, dust-proof covering of profile grooves
- Groove cross-section usable as installation conduit for wiring or piping
- Information plates

ASSEMBLY

- Press by hand onto profile groove
- Cut of with pliers

COVER PROFILE G

part no. 22.1010/0



TECHN. DATA / ITEMS SUPPLIED

- NBR, black	
- Hardness (Shore A)	70°
- Weight	0,072 kg/m
- Length	25 m

APPLICATIONS

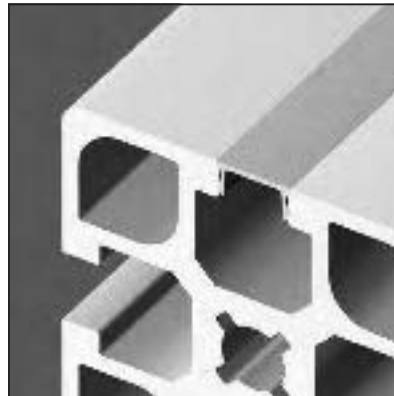
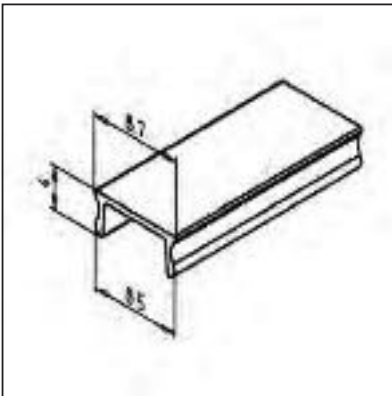
- Flush, dust-proof covering of profile grooves
- Groove cross-section usable as installation conduit for wiring or piping

ASSEMBLY

- Press by hand onto profile groove
- Cut of with pliers

COVER PROFILE L

part no. 20.1021/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural	
- Weight	0,030 kg/m
- Length	2 m
- Also deliverable in aluminium anodized part no. 20.1021/1	

APPLICATIONS

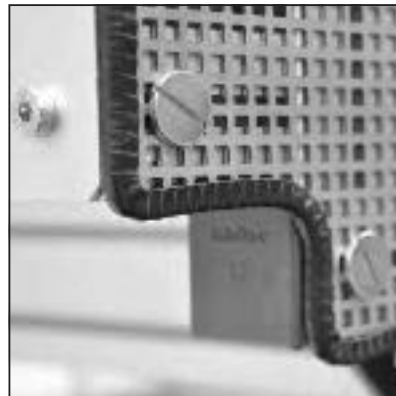
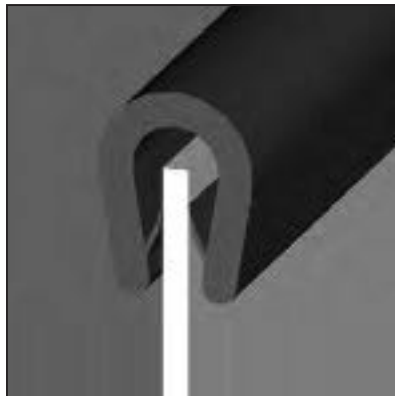
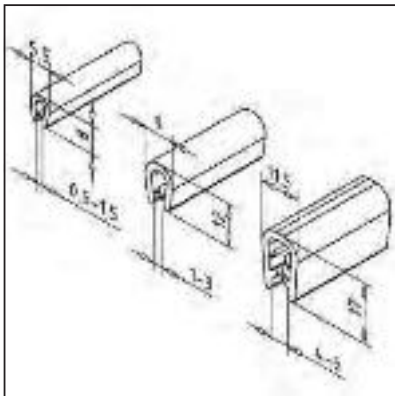
- Flush, dust-proof covering of profile grooves
- Groove cross-section usable as installation conduit for wiring or piping
- Information plates

ASSEMBLY

- Press by hand onto profile groove
- Cut of with pliers

EDGE PROTECTION

part no. diverse



TECHN. DATA / ITEMS SUPPLIED

- PVC, black, strengthened with steel sheet
- Edge Protection 0,5-1,5 **part no. 22.1029/0**
- Edge Protection 1-3 **part no. 22.1036/0**
- Edge Protection 4-6 **part no. 22.1037/0**
- Weight (0,5-1,5) 0,050 kg/m
- Weight (1-3) 0,120 kg/m
- Weight (4-6) 0,190 kg/m
- Length (0,5-1,5) 50 m
- Length (1-3 u. 4-6) 100 m

APPLICATIONS

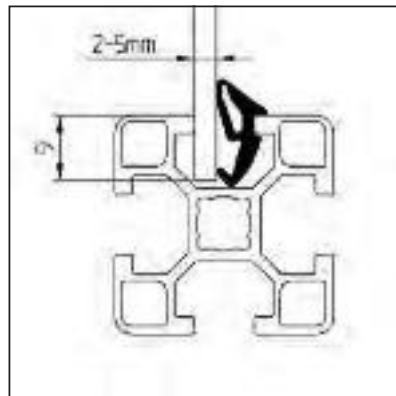
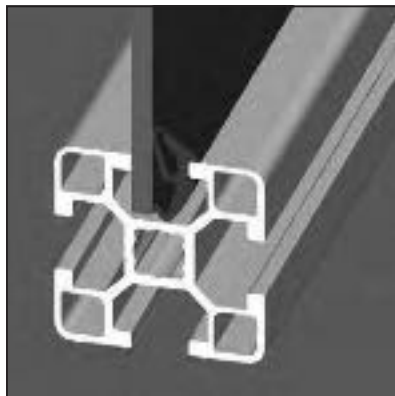
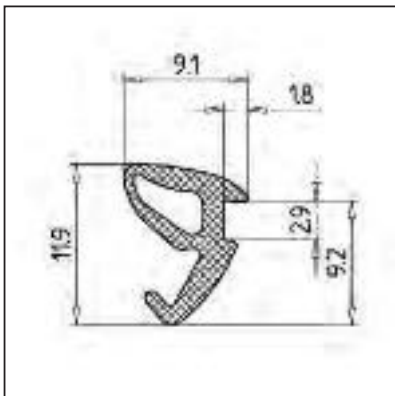
- Edge protection for panel elements
- Protection of MiniTec conduit
- Protection of bores and openings

ASSEMBLY

- Slip on edge of the panel element

INSERT SEAL 30

part no. 22.1174/0



TECHN. DATA / ITEMS SUPPLIED

- EPDM-AGV, black
- Weight 0,05 kg/m
- Length max. 100 m

APPLICATIONS

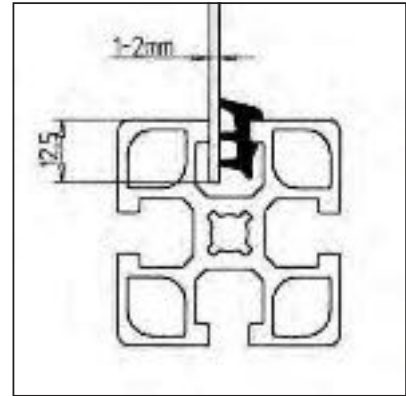
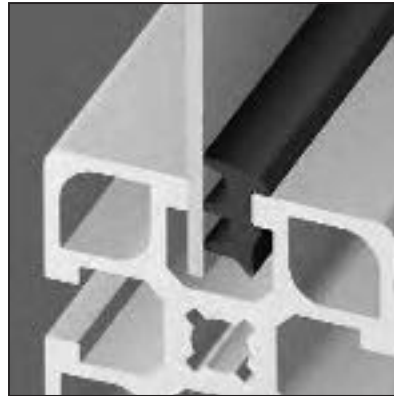
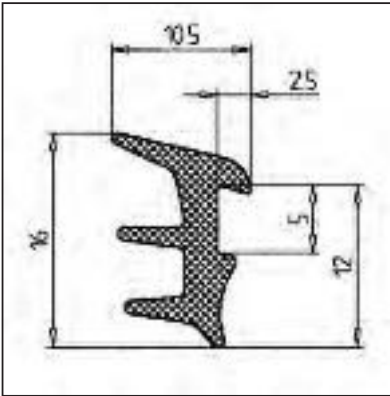
- Attachment and sealing of panel elements from 2-5 mm in the profile groove

ASSEMBLY

- Insert panel element into profile groove and press insert seal subsequently into free space between panel element and profile groove with blunt tool made of wood or plastic

INSERT SEAL 2

part no. 22.1083/0



TECHN. DATA / ITEMS SUPPLIED

- EPDM, black	
- Weight	0,096 kg/m
- Length	100 m

APPLICATIONS

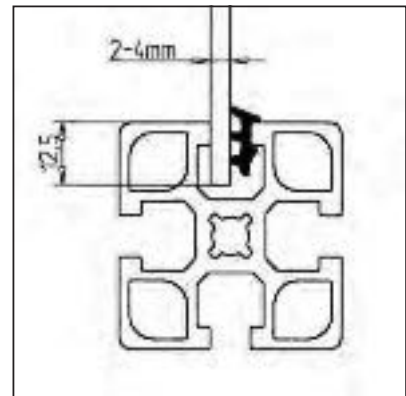
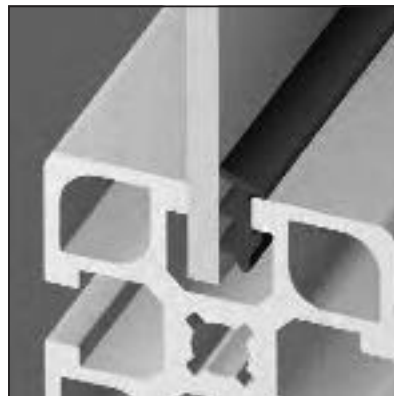
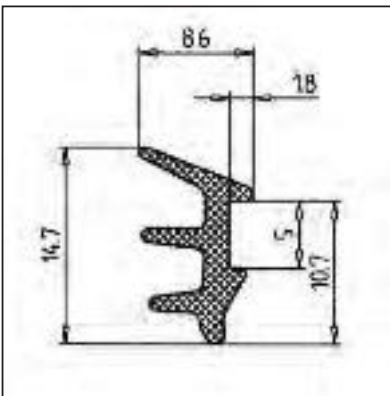
- Not suitable for acrylic plastic and polycarbonate
- Fastening and sealing of panel elements up to 2 mm thickness, directly in the profile groove

ASSEMBLY

- Insert panel into profile groove
- Press insert seal subsequently into free space between panel element and profile groove with blunt tool made of wood or plastic
- Materials Ø 2 mm can be clamped by using insert seal 6 part no. 22.1086/1 on both sides

INSERT SEAL 4

part no. 22.1081/0



TECHN. DATA / ITEMS SUPPLIED

- EPDM-AGV, black	
- Weight	0,070 kg/m
- Length	100 m

APPLICATIONS

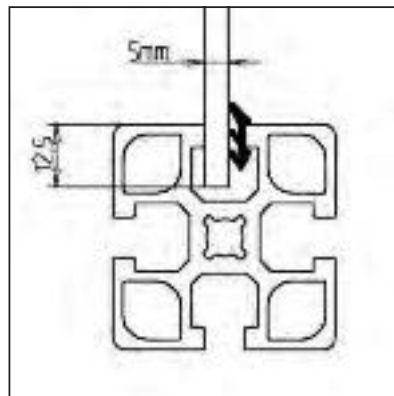
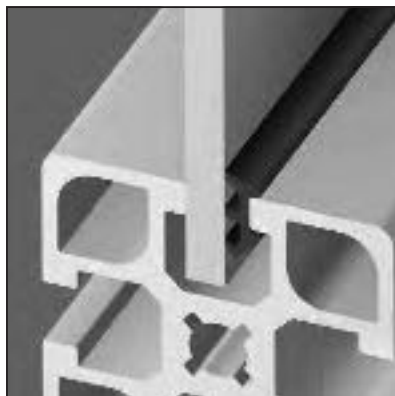
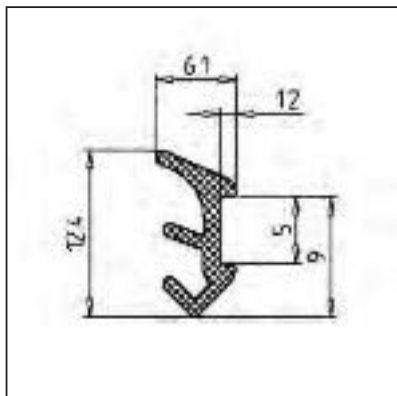
- Fastening and sealing of panel elements up to 2-4 mm in the profile groove
- Also suitable for acrylic plastic and polycarbonate

ASSEMBLY

- Insert panel element into profile groove and press insert seal subsequently into free space between panel element and profile groove with blunt tool made of wood or plastic

INSERT SEAL 5

part no. 22.1099/0



TECHN. DATA / ITEMS SUPPLIED

- EPDM-AGV, black	
- Weight	0,040 kg/m
- Length	100 m

APPLICATIONS

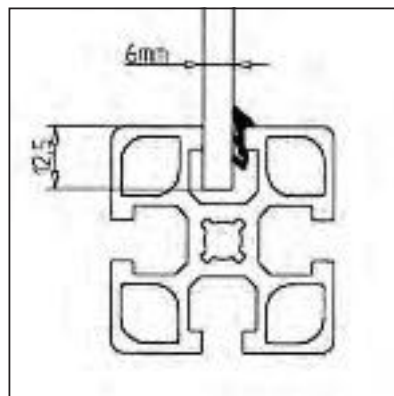
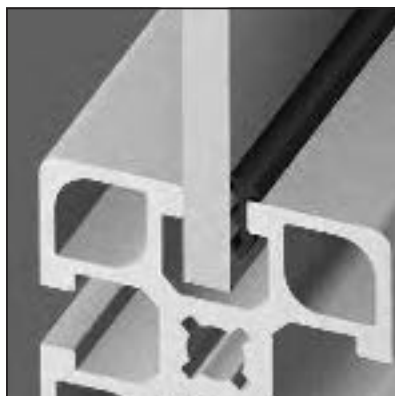
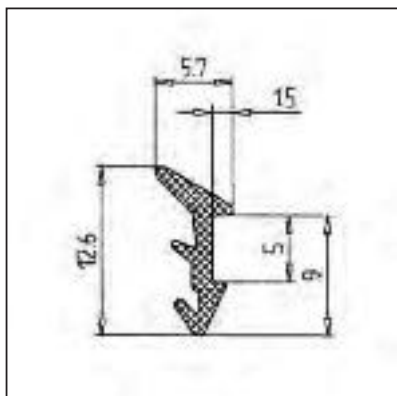
- Fastening and sealing of panel elements up to 5 mm thickness, directly in the profile groove
- Also suitable for acrylic plastic and polycarbonate

ASSEMBLY

- Insert panel into profile groove

INSERT SEAL 6

part no. 22.1086/1



TECHN. DATA / ITEMS SUPPLIED

- EPDM-AGV, black	
- Weight	0,020 kg/m
- Length	100 m
- Oil-resistant execution, part no. 22.1086/3	

APPLICATIONS

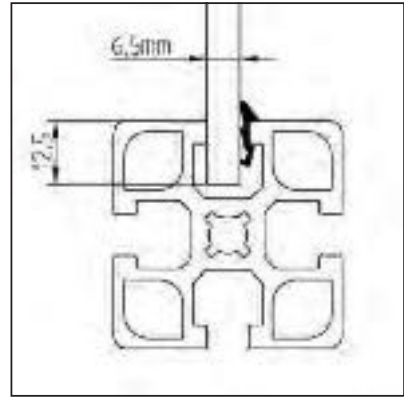
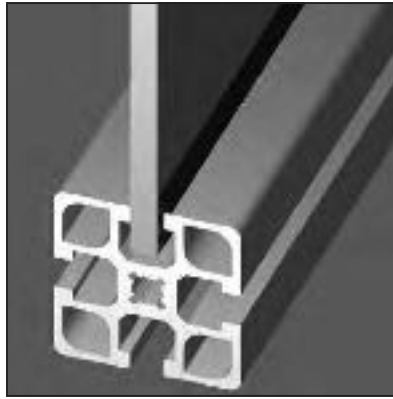
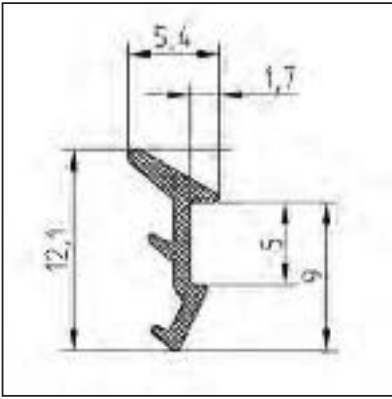
- Fastening and sealing of panel elements up to 6 mm thickness, directly in the profile groove
- Also suitable for acrylic plastic and polycarbonate

ASSEMBLY

- Insert panel into profile groove
- Materials Ø 2 mm can be clamped by using insert seal 6 on both sides

INSERT SEAL 6,5

part no. 22.0991/0



TECHN. DATA / ITEMS SUPPLIED

- EPDM-AGV, black	
- Weight	0,033 kg/m
- Length	100 m

APPLICATIONS

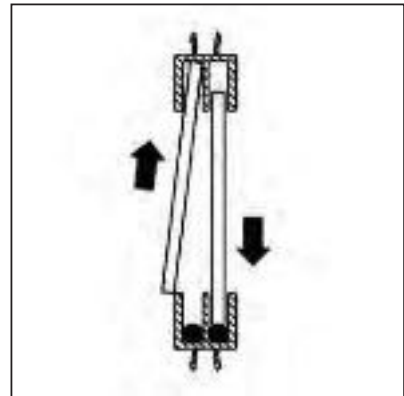
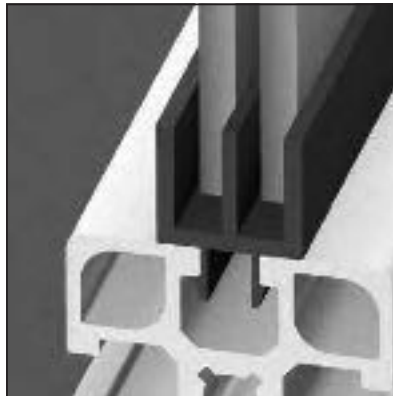
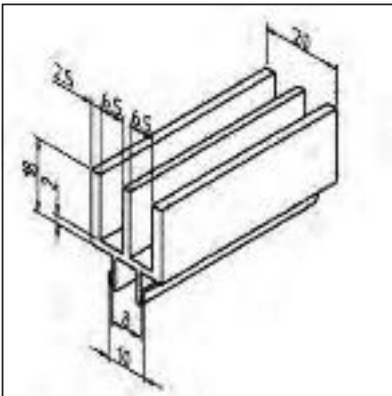
- Fastening and sealing of panel elements up to 6,5 mm thickness, directly in the profile groove
- Also suitable for acrylic plastic and polycarbonate

ASSEMBLY

- Insert panel into profile groove, press it subsequently with blunt tool made of wood or plastic
- Materials Ø 2 mm can be clamped by using insert seal 6,5 on both sides

GUIDE PROFILE 2

part no. 22.1073/1



TECHN. DATA / ITEMS SUPPLIED

- Hard, PVC, grey	
- On request also deliverable in black part no. 22.1073/0	
- Weight	0,270 kg/m
- Length	2 m

APPLICATIONS

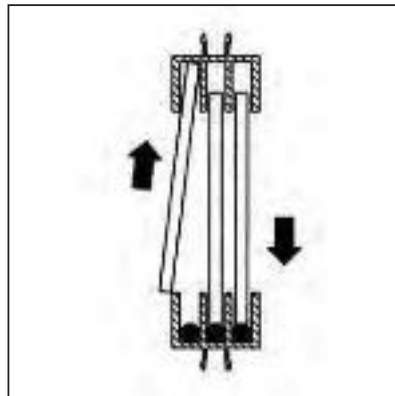
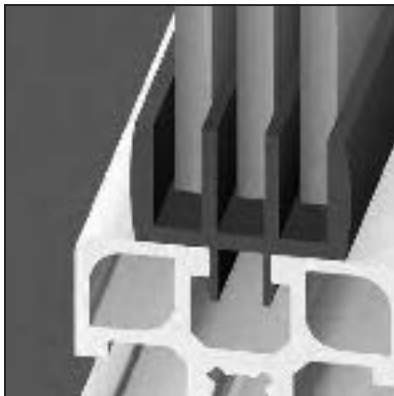
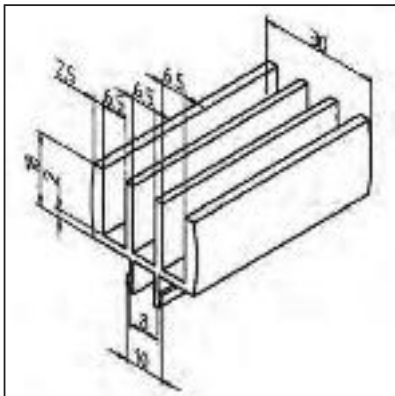
- 2-fold sliding doors made of panel elements of max. 6 mm

ASSEMBLY

- Snap into profile groove
- Suitable for subsequent mounting
- For subsequent mounting of panel elements PVC-bars **part no. 22.1077/0** are to be inserted into grooves of the lower guide profile
- For the panel element allow a min. of 20 mm reduction in y-direction, for direct fitting without PVC-bars allow a min. of 10 mm reduction in y-direction

GUIDE PROFILE 3

part no. 22.1075/1



TECHN. DATA / ITEMS SUPPLIED

- Hard, PVC, grey
- On request also deliverable in black
part no. 22.1075/0
- Weight 0,342 kg/m
- Length 2 m

APPLICATIONS

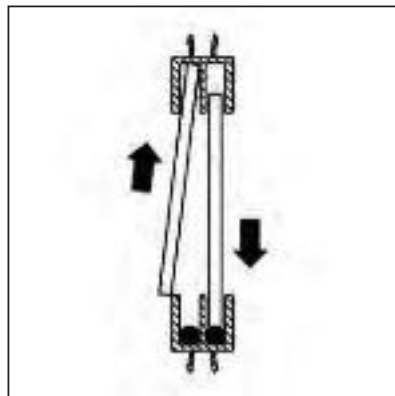
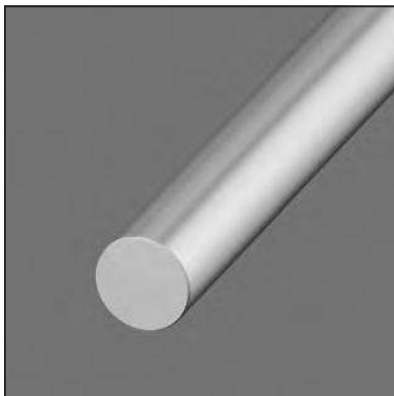
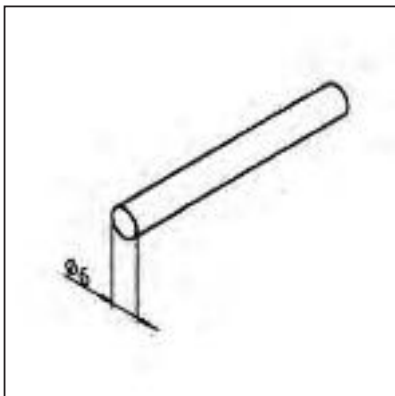
- 3-fold sliding doors, made of panel elements of max. 6 mm

ASSEMBLY

- Snap into profile groove
- Suitable for subsequent mounting
- For subsequent mounting of panel elements PVC-bars **part no. 22.1077/0** are to be inserted into grooves of the lower guide profile
- For the panel element allow a min. of 20 mm reduction in y-direction, for direct fitting without PVC-bars allow a min. of 10 mm reduction in y-direction

PVC-BAR

part no. 22.1077/0



TECHN. DATA / ITEMS SUPPLIED

- PA, natural
- Ø 6 mm
- Weight 0,040 kg/m
- Length 3 m

APPLICATIONS

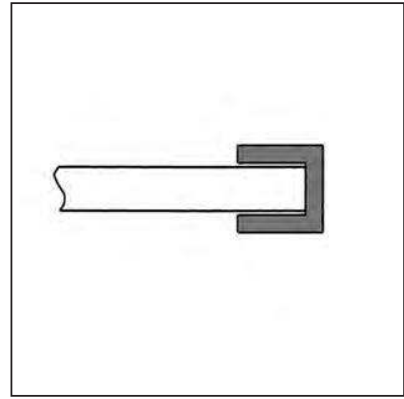
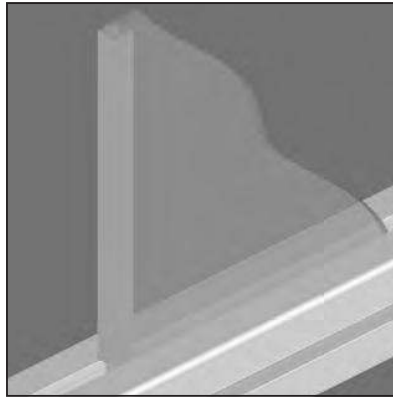
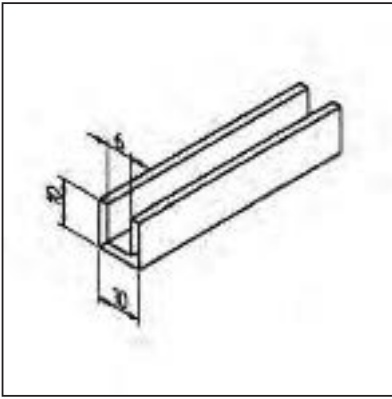
- Guiding of windows or doors in guide profiles

ASSEMBLY

- Insert in the lower grooves of guide profiles 2 and 3

U-PROFILE

part no. 21.1002/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV1	
- Weight	0,150 kg/m
- Length	6 m

APPLICATIONS

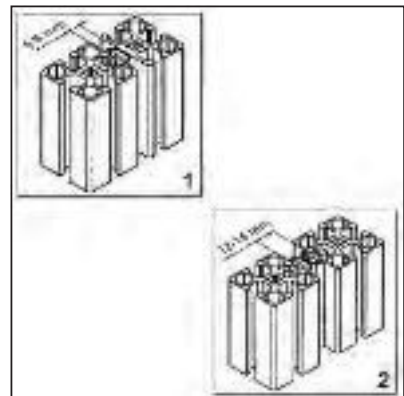
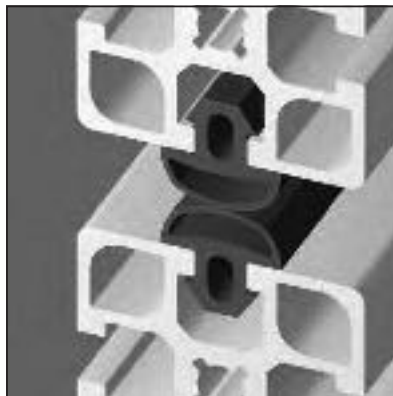
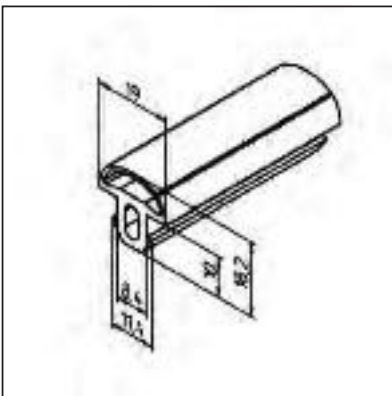
- Frame for screens of max. 5 mm

ASSEMBLY

- Glue on edges of panel elements with suitable adhesive

SEALING LEDGE

part no. 22.1078/0



TECHN. DATA / ITEMS SUPPLIED

- NBR, black	
- Hardness (Shore A)	70°
- Weight	0,175 kg/m
- Length	50 m

APPLICATIONS

- Sealing of doors, lids and other constructions against dust, water, noise etc.

ASSEMBLY

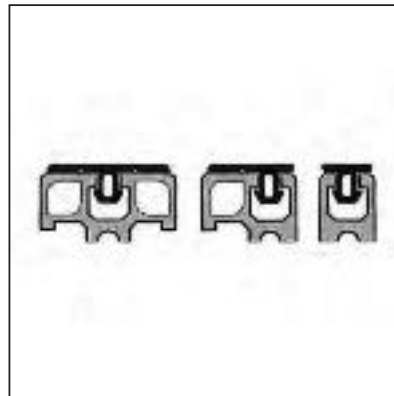
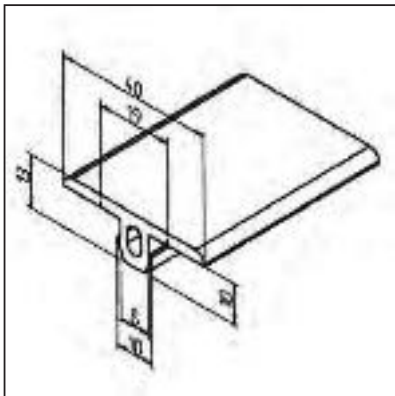
- Press into profile groove

- 1: Sealing of one side:
gap width = 6 - 8 mm

- 2: Sealing of both sides:
gap width = 12 - 16 mm

COVER PROFILE

part no. 22.1098/0



TECHN. DATA / ITEMS SUPPLIED

- NBR, black	
- Hardness (Shore A)	70°
- Weight	0,230 kg/m
- Length	50 m
- Cover Profile EPDM part no. 22.1098/1	

APPLICATIONS

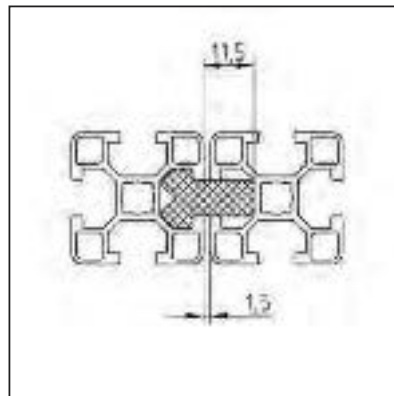
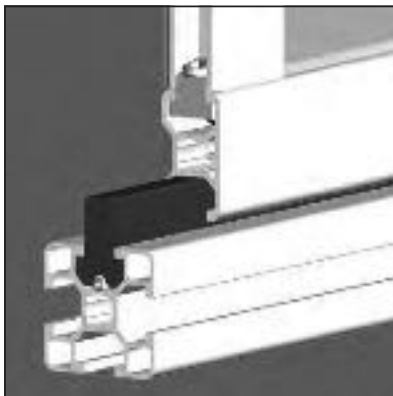
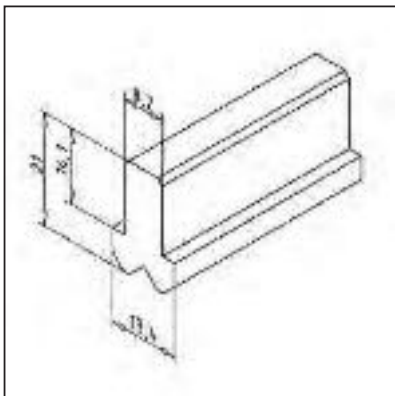
- Edge Protection
- Buffer strip
- Ladder rungs
- Buffer for sliding doors

ASSEMBLY

- Press into profile groove
- The lower side of the profile has 2 tear-off notches for adjustment of width to the aluminium profile

SLIDE BAR 8 N 30

part no. 22.1170/0



TECHN. DATA / ITEMS SUPPLIED

- Hard plastic, black	
- Highly wear-resistant	
- Weight	0,178 kg/m
- Length	2 m

APPLICATIONS

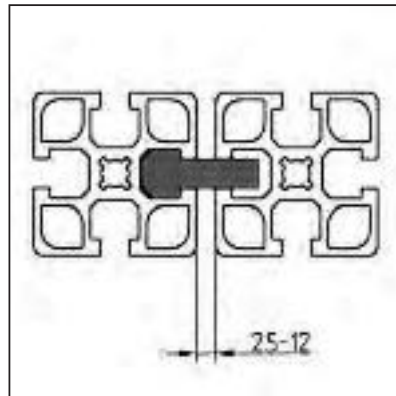
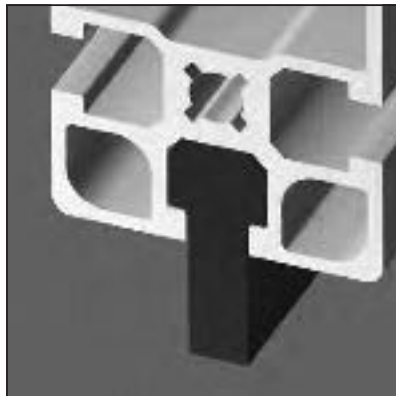
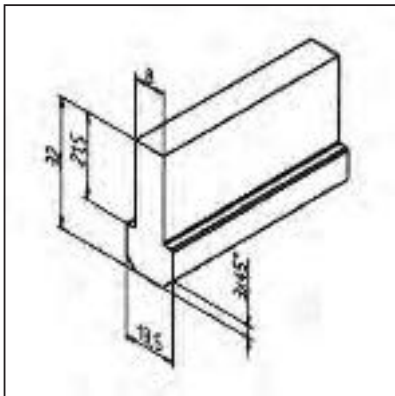
- Guiding device for sliding doors and other sliding elements

ASSEMBLY

- Slide into profile groove
- The slide can be fixed with a set screw M4

SLIDE BAR 8 N

part no. 22.1085/0



TECHN. DATA / ITEMS SUPPLIED

- Hard plastic, black
- Highly wear-resistant
- Weight 0,300 kg/m
- Length 2 m

APPLICATIONS

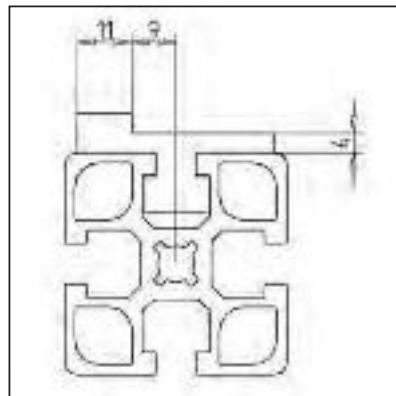
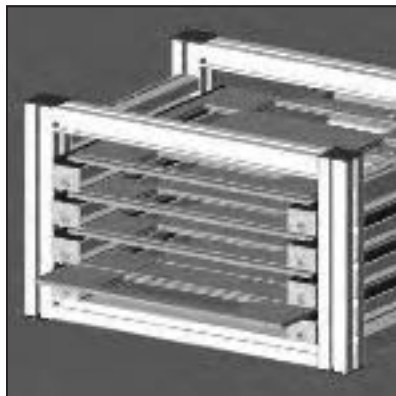
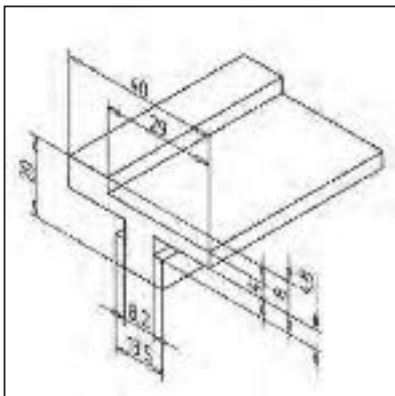
- Guiding device for sliding doors and other sliding elements
- Lateral guide for conveyors

ASSEMBLY

- Slide into profile groove

SLIDE BAR 8-40 A

part no. 29.8012/0



TECHN. DATA / ITEMS SUPPLIED

- Hard plastic, black
- Highly wear-resistant
- Weight 0,317 kg/m
- Length 2 m

APPLICATIONS

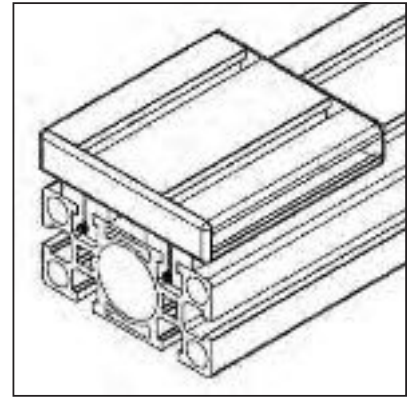
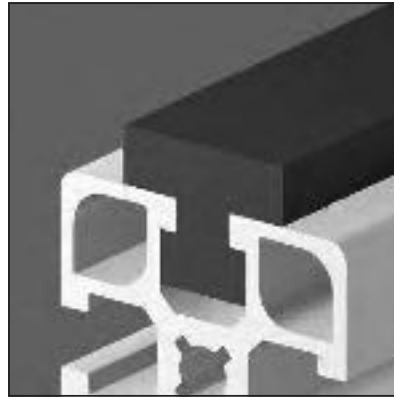
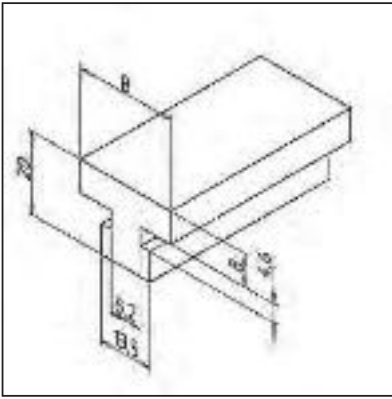
- Sliding support
- workpiece slide
- Guide for lifting doors
- Slides

ASSEMBLY

- Slide into profile groove

SLIDE BAR 8

part no. diverse



TECHN. DATA / ITEMS SUPPLIED

- Hard plastic, black
- Highly wear-resistant
- B=25 **part no. 22.1088/0**
- Weight 0,311 kg/m
- B=40 **part no. 22.1088/1**
- Weight 0,401 kg/m
- B=45 **part no. 22.1088/3**
- Weight 0,463 kg/m
- Length 2 m

APPLICATIONS

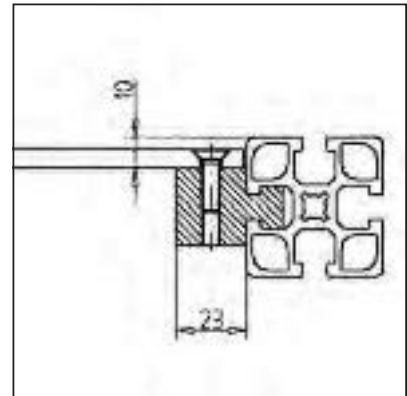
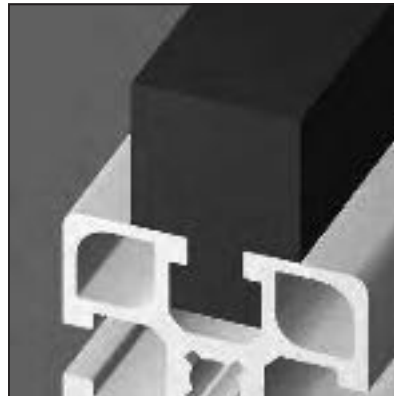
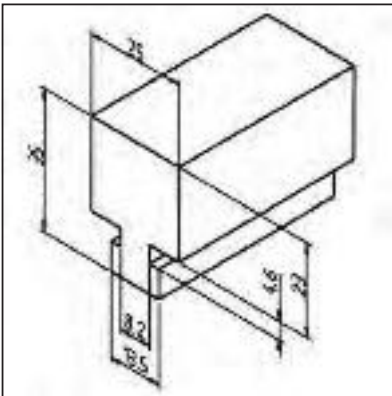
- Sliding support
- workpiece slide
- Guide for lifting doors
- Slides

ASSEMBLY

- Slide into profile groove

SLIDE BAR 23

part no. 22.1089/0



TECHN. DATA / ITEMS SUPPLIED

- Hard plastic, black
- Highly wear-resistant
- Weight 0,673 kg/m
- Length 2 m

APPLICATIONS

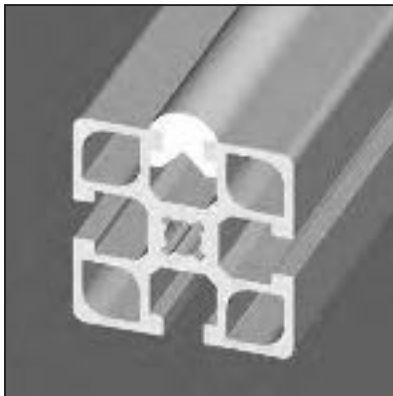
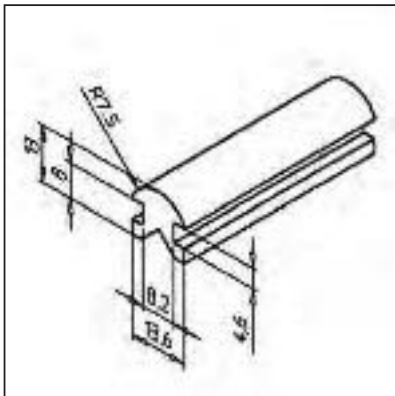
- Sliding support
- workpiece slide
- Customer processing possible by additional machining allowance

ASSEMBLY

- Slide into profile groove

SLIDE BAR R

part no. 22.1104/0



TECHN. DATA / ITEMS SUPPLIED

- PE, white
- Highly wear-resistant
- Weight 0,115 kg/m
- Length 2 m

APPLICATIONS

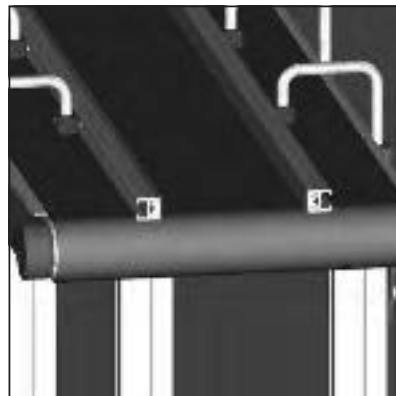
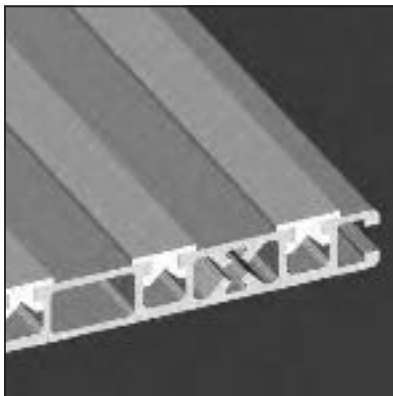
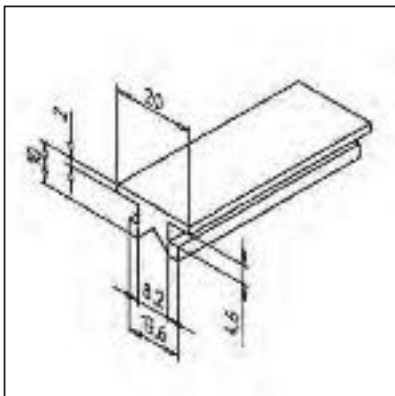
- Lateral guides
- Slide ways
- Kan-Ban racks
- Protective surface and supporting plates

ASSEMBLY

- Slide into profile groove
- Suitable for all profiles

SLIDE BAR F

part no. 22.1135/0



TECHN. DATA / ITEMS SUPPLIED

- PE, white
- highly wear resistant
- Weight 0,098 kg
- Length 2 m

APPLICATIONS

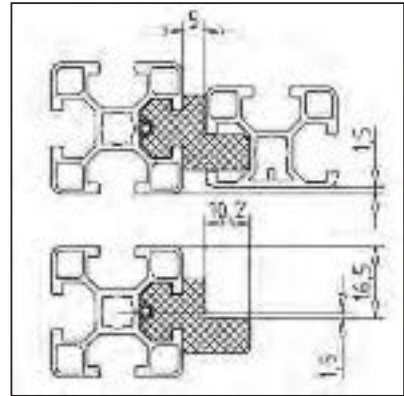
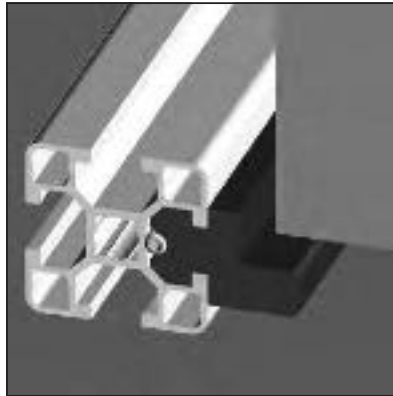
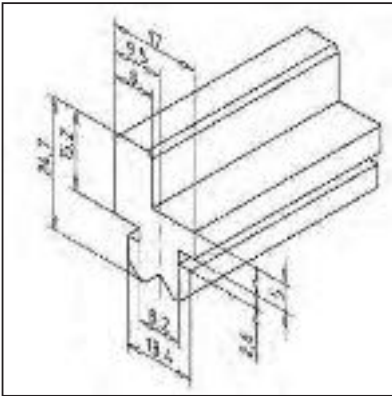
- lateral guide for flat components
- slide for containers
- accumulator roller / rail

ASSEMBLY

- slide into profile groove
- secure slide bar at both ends with set screw or adjustable end caps

ANGULAR SLIDE BAR 30

part no. 22.1171/0



TECHN. DATA / ITEMS SUPPLIED

- PE, black	
- highly wear resistant	
- Weight	0,248 kg/m
- Length	2 m

APPLICATIONS

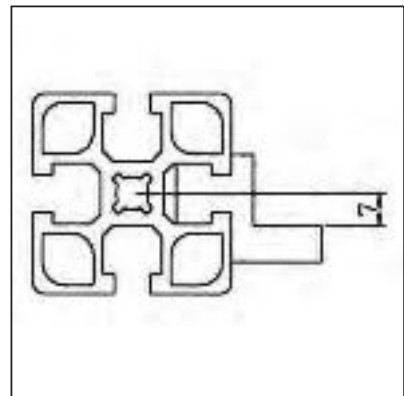
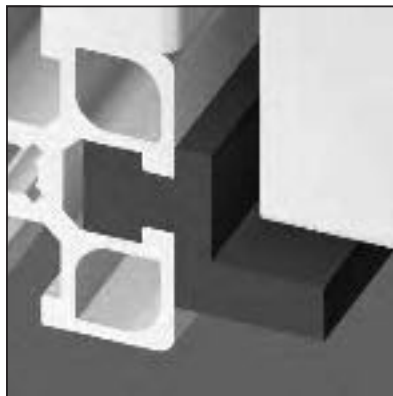
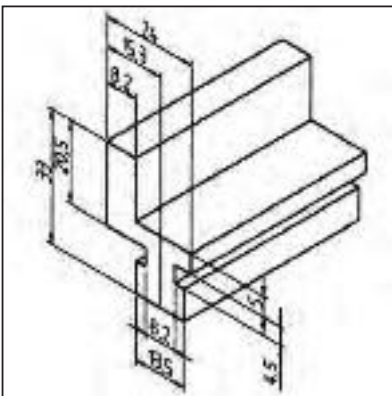
- Guiding device for sliding doors and other sliding elements

ASSEMBLY

- slide into profile groove
- The slide can be fixed with a set screw M4

ANGULAR SLIDE BAR

part no. 22.1040/0



TECHN. DATA / ITEMS SUPPLIED

- Hard plastic, black	
- Highly wear-resistant	
- Weight	0,48 kg/m
- Length	2 m

APPLICATIONS

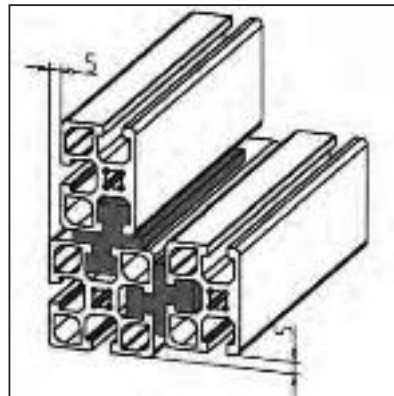
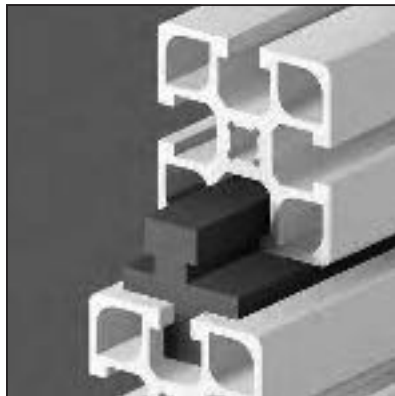
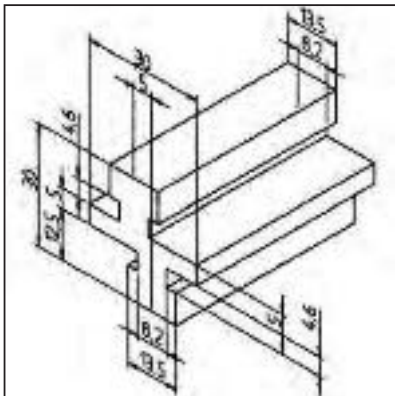
- Conveying systems
- Belt conveyors
- Lateral guides

ASSEMBLY

- Slide into profile groove

DOUBLE SLIDE BAR

part no. 22.1087/0



TECHN. DATA / ITEMS SUPPLIED

- Hard plastic, black
- Highly wear-resistant
- Weight 0,420 kg/m
- Length 2 m

APPLICATIONS

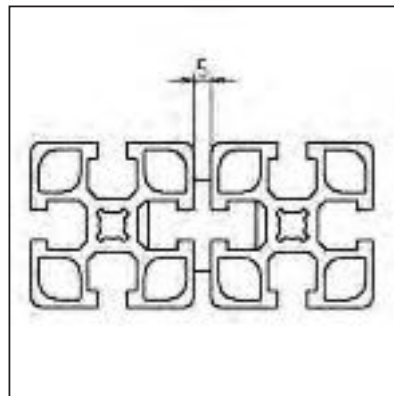
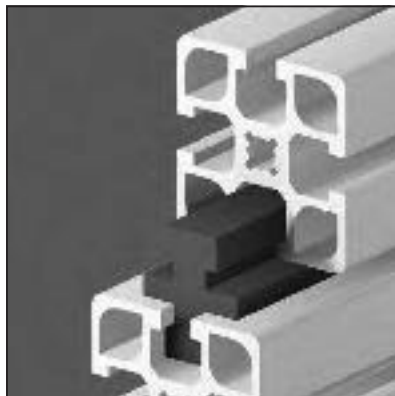
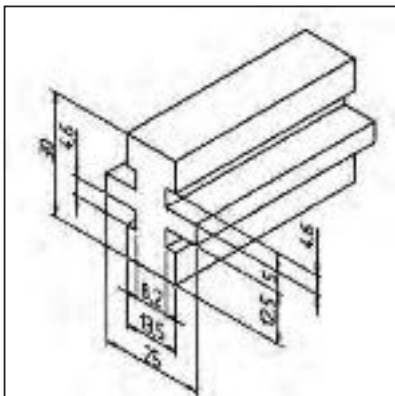
- Simple workpiece slides
- Guide for drawers

ASSEMBLY

- Slide the double slide unit into profile groove of frame and sliding element
- Secure the sliding element at both ends with hex socket cap screws M8 x 16

PARALLEL SLIDE BAR

part no. 22.1041/0



TECHN. DATA / ITEMS SUPPLIED

- Hard plastic, black
- Highly wear-resistant
- Weight 0,387 kg/m
- Length 2 m

APPLICATIONS

- Parallel guide without difference in height
- Sliding elements that are flush on the outside

ASSEMBLY

- Slide into profile groove
- If necessary, they can be locked on one side by means of straight pins M6 x 16

PREASSEMBLED ELEMENTS FOR LIFTING AND SLIDING DOORS

All elements are preassembled from our standard products ready for use. They are easily fixed to our profiles by using our fastening elements. Stock of parts is not necessary and planning and assembly time can be reduced significantly.



Slide-roll element

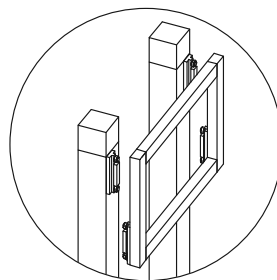
For one door four elements are necessary:

- One each to be fixed at end positions of pillar.
- One each to be fixed at door element.

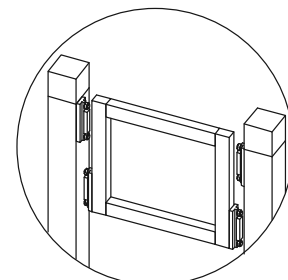
Length of sliding profile:

desired stroke + 180 mm min.

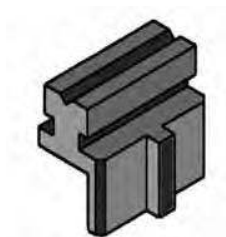
1. Disassemble slide-roll element.
2. Insert T-slot bar into profile groove and fix at desired position.
3. Reassemble the slide-roll element and lock with glue.



Assembly in front of pillars.
Gap = 8 mm



Assembly between pillars.
Gap = 8 mm



Guide for sliding-door

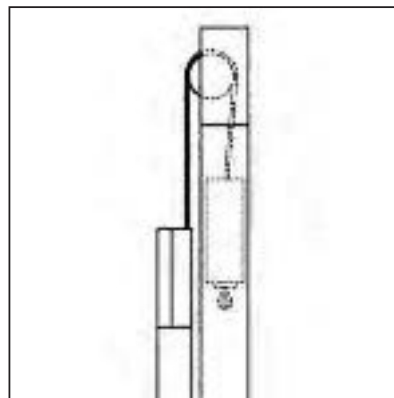
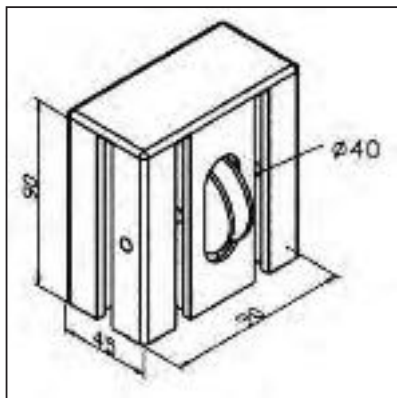
For a simultaneous guidance of two elements in one profile groove. Subsequent mounting of sliding-doors into existing constructions possible. For one door element 4 guides are necessary.

Allow for door elements:

Height: clearance of the opening minus 11 mm
 Width for 2 elements: $\frac{\text{clear width} + 55}{2}$

CABLE PULLEY 45

part no. 21.1775/0



TECHN. DATA / ITEMS SUPPLIED

- Housing made of profile 45 x 90
- Cable roller preassembled; built-in on broad side of the profile
- End cap
- Weight 0,350 kg
- Load max. 12 kg

APPLICATIONS

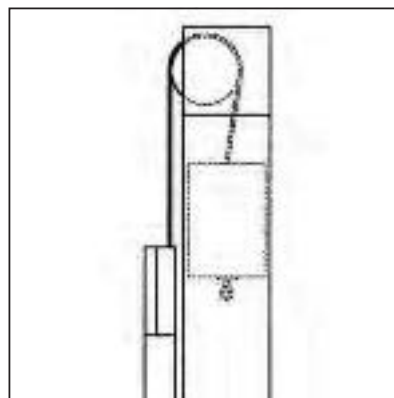
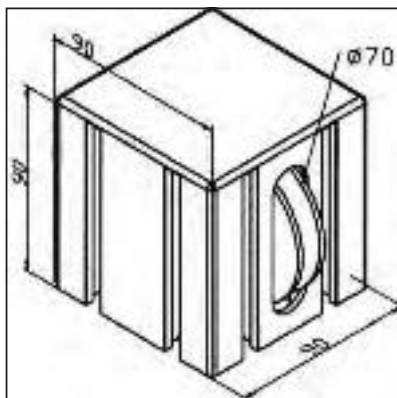
- Cable reverse for counterweights in lifting doors made of profiles 45 x 90 L or 45 x 90 G
- For continuous operation and heavy loads use chain pulley 45

ASSEMBLY

- Attachment on vertical profile with 2 T-slot bars 90 **part no. 21.1029/0**
- Corresponding cable **part no. 21.1777/0** is a wear part and must be regularly checked and lubricated if required

CABLE PULLEY 90

part no. 21.1776/0



TECHN. DATA / ITEMS SUPPLIED

- Housing made of profile 90 x 90 L
- Built-in cable roller St, zinc plated
- End cap
- Weight 0,680 kg
- Load max. 30 kg

APPLICATIONS

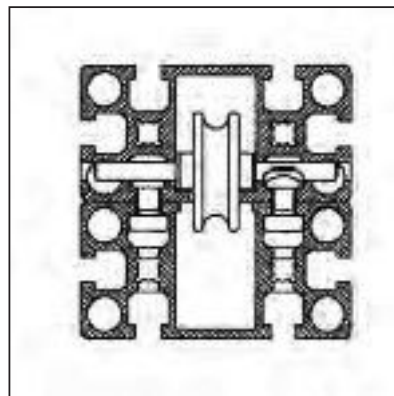
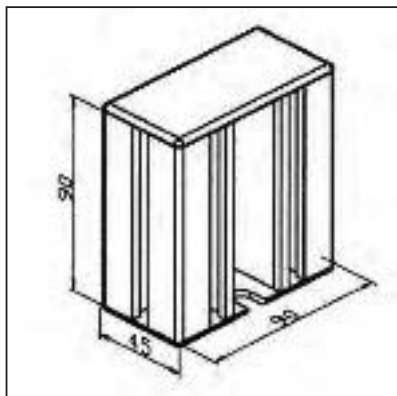
- Cable reverse for counterweights in lifting doors made of profiles 90 x 90 L
- For continuous operation and heavy loads use chain pulley 90

ASSEMBLY

- Attachment on vertical profile with 4 T-slot bars 90 **part no. 21.1029/0**
- Corresponding cable **part no. 21.1777/0** is a wear part and must be regularly checked and lubricated if required

END BLOCK

part no. 21.1780/0



TECHN. DATA / ITEMS SUPPLIED

- Profile 45 x 90
- End caps 45 x 90, one with slot for cable passage
- Fastening kit
- Weight 0,290 kg
- Length 90 mm

APPLICATIONS

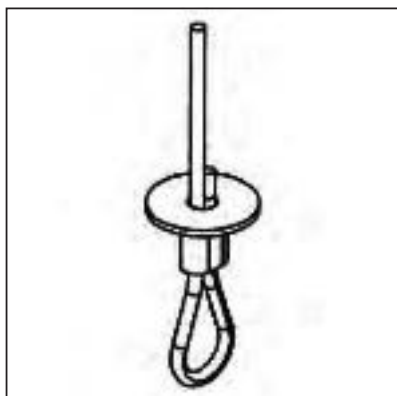
- Safety device for cable pulleys

ASSEMBLY

- Use fastening kit

CABLE

part no. 21.1777/0



TECHN. DATA / ITEMS SUPPLIED

- Steel cable VA, 2,5 mm
- With clamping eye hook on one side, pressed
- Weight 0,072 kg/m
- Length 2,5 m
- On request also deliverable in other lengths

APPLICATIONS

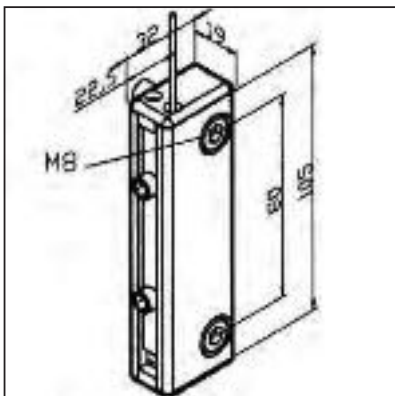
- Use in connection with counterweight 45 or 90 and cable pulleys

ASSEMBLY

- Lead the cable through the center bore and into the counterweight
- Fasten the cable with the cable clamping device **part no. 21.1797/0** on the lifting door
- Cable is a wear part and must be regularly checked and lubricated if required

ROPE CLAMP

part no. 21.1797/0



TECHN. DATA / ITEMS SUPPLIED

- Profile 19 x 32
- 1 Clamping plate
- 2 hex socket cap screws with square nuts
- 2 End caps, one with throughbore
- Weight 0,149 kg

APPLICATIONS

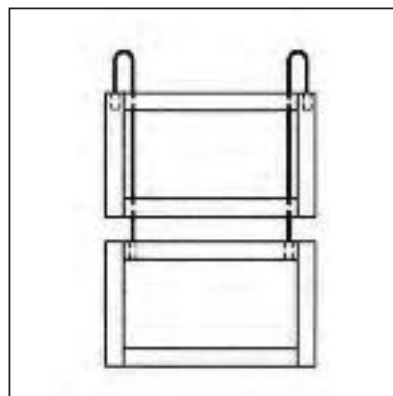
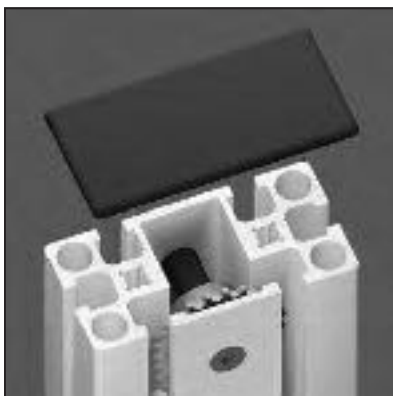
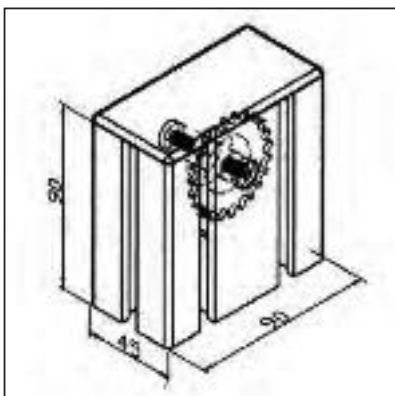
- Connection of counterweight and door element in lifting doors

ASSEMBLY

- Remove lower end cap and unscrew set screw
- Attach rope clamp with fastening kit at the top of the door element
- Pull the rope through the bore of the upper end cap
- Put the counterweight in desired position (test in upper and lower end position of the door element)
- Lay rope end in loop around clamping plate, slide into the slot and fix the two set screws
- If necessary cut cable end and fix lower end cap

SYNCHRONOUS PULLEY 45

part no. 21.1792/0



TECHN. DATA / ITEMS SUPPLIED

- Housing made of profile 45 x 90
- Chain wheel, steel, preassembled for installation on broad side of the profile
- Weight 0,343 kg
- Load max. 34 kg

APPLICATIONS

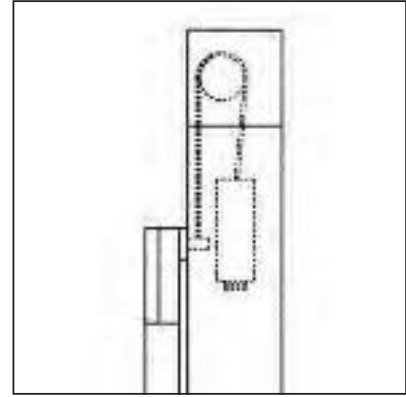
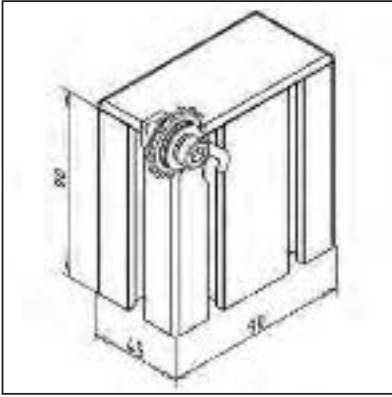
- Simultaneous opening and closing of two lifting doors running in the operate direction; doors are of similar weight
- The chain is guided in the profile groove, thus no hand-protection is required

ASSEMBLY

- Attachment on vertical profile with 2 T-slot bars 90 **part no. 21.1029/0**
- Insert chain **part no. 21.1713/0** in pulley; fasten it with the door chain clamping device **part no. 21.1712/0** on both doors and insert it in the vertical profiles

CHAIN PULLEY 32

part no. 21.1774/0



TECHN. DATA / ITEMS SUPPLIED

- Housing made of profile 45 x 90
- Chain wheel, steel, zinc plated, preassembled, for small profile side
- End cap
- Weight 0,388 kg
- Load max. 50 kg

APPLICATIONS

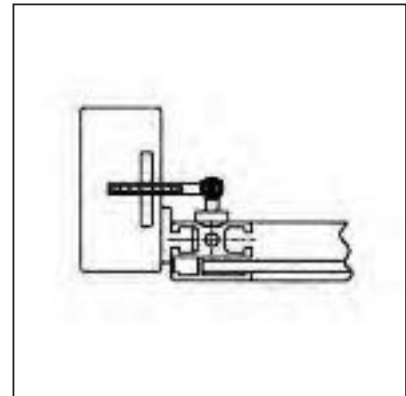
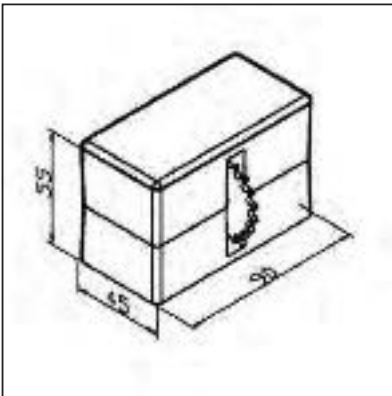
- Chain reverse for counterweights in lifting doors; for inner balancing weight in profiles 45 x 90 F or 45 x 90 G
- The cable is guided in the profile groove, thus no hand-protection is required

ASSEMBLY

- Attachment on vertical profiles with 2 slot-bars 90 **part no. 21.1029/0**
- Applications of chain **part no.. 21.1713/0** with door chain clamping device **part no. 21.1712/0** and weight chain clamping device **part no. 21.1711/0**

CHAIN PULLEY 45 A

part no. 21.1838/0



TECHN. DATA / ITEMS SUPPLIED

- Housing aluminium GD, powder coated, grey
- Chain wheel, steel, zinc plated, preassembled
- End cap
- Fastening kit
- Weight 0,347 kg
- Load max. 50 kg

APPLICATIONS

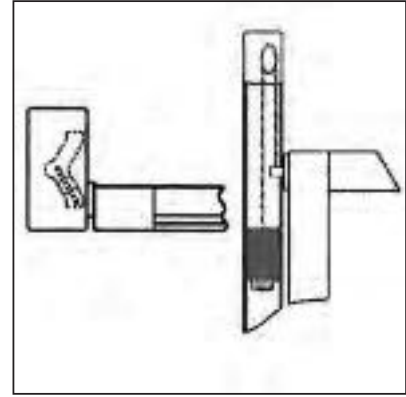
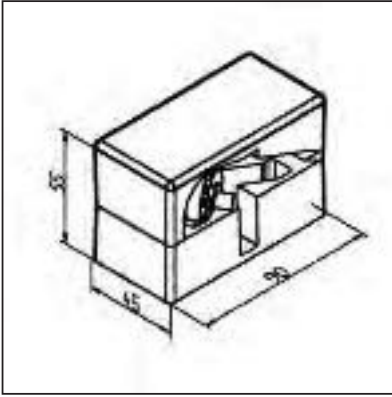
- Chain reverse of counterweights for lifting doors for inner counterweight in profile 45 x 90 L or 45 X 90 G
- Chain runs on the outer profile side and in the middle of the broad side; if required covered with hand-protection **part no. 21.1780/0**

ASSEMBLY

- Attachment with fastening kit from supply schedule; thread M8 in vertical profile required
- Use of chain **part no.. 21.1713/0** with door chain clamping device **part no. 21.1712/0** and weight chain clamping device **part no. 21.1711/0**

CHAIN PULLEY 45 I

part no. 21.1840/0



TECHN. DATA / ITEMS SUPPLIED

- Housing aluminium GD, powder coated, grey
- Chain wheel, steel, zinc plated, preassembled
- End cap
- Fastening kit
- Weight 0,347 kg
- Load max. 50 kg

APPLICATIONS

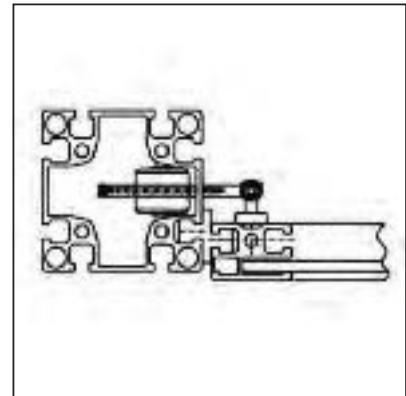
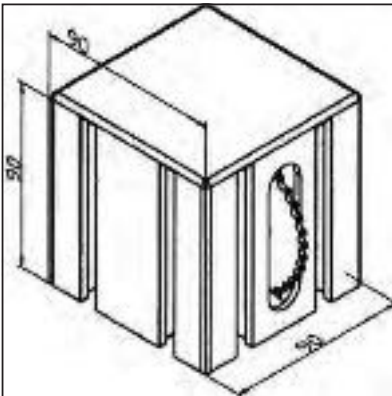
- Chain reverse of counterweights for lifting doors for inner counterweight in profile 45 x 90 L or 45 X 90 G
- Chain runs on the broad side of the profile in the right or left profile groove (adjustable chain wheel), no hand-protection required

ASSEMBLY

- Attachment with fastening kit; thread M8 in vertical profile required
- Use of chain **part no.. 21.1713/0** with door chain clamping device **part no. 21.1712/0** and weight chain clamping device **part no. 21.1711/0**

CHAIN PULLEY 90

part no. 21.1839/0



TECHN. DATA / ITEMS SUPPLIED

- Housing aluminium GD, powder coated, grey
- Chain wheel, steel, zinc plated, preassembled
- End cap
- Weight 0,681 kg
- Load max. 70 kg

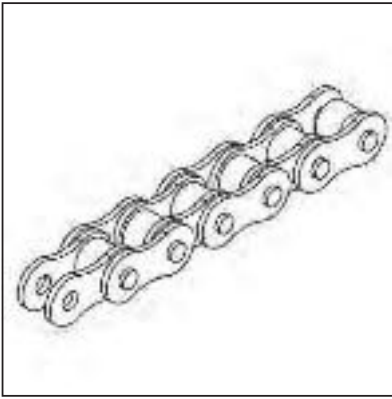
APPLICATIONS

- Chain reverse for counterweights for lifting doors, for inner balancing weight in profile 90 x 90 L
- The chain is guided on the outside and in the middle of the profile surface; cover with hand-protection **part no. 21.1780/0**

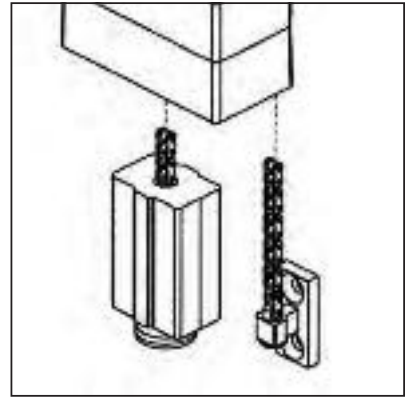
ASSEMBLY

- Attachment on vertical profiles with 4 slot-bars **part no. 21.1029/0**
- Use of chain **part no.. 21.1713/0** with door chain clamping device **part no. 21.1712/0** and weight chain clamping device **part no. 21.1711/0**

CHAIN 04



part no. 21.1713/0



TECHN. DATA / ITEMS SUPPLIED

- Roller chain, steel
- Size 4
- Weight 0,120 kg/m
- Breaking load min. 3000 N
- **Please indicate desired length**

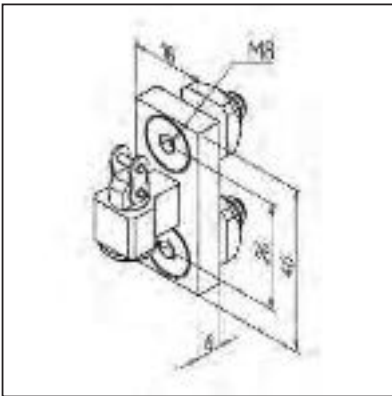
APPLICATIONS

- Use in connection with counterweight 45 or 90 and chain pulleys
- Use in connection with door chain clamping device **part no. 21.1712/0** for fastening the chain on the door
- Use in connection with weight chain clamping device **part no. 21.1711/0** for fastening the chain on the side of the counterweight

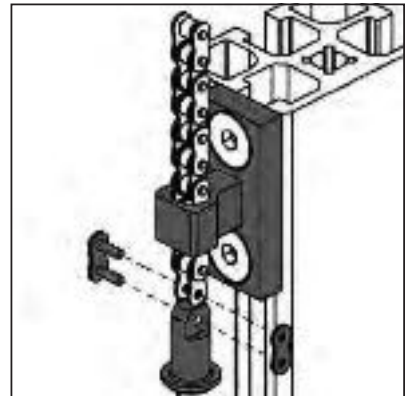
ASSEMBLY

- Lead the chain through the counterweight and through the fastening kit for chain (counterweight side) **part no. 21.1711/0** mount chain lock
- For mounting on door lead chain through fastening kit for chain (door side) **part no. 21.1712/0**

DOOR CHAIN CLAMPING DEVICE



part no. 21.1712/0



TECHN. DATA / ITEMS SUPPLIED

- Steel zinc plated
- Fastening kit
- Weight 0,060 kg

APPLICATIONS

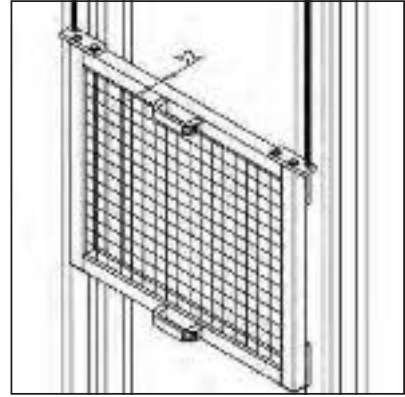
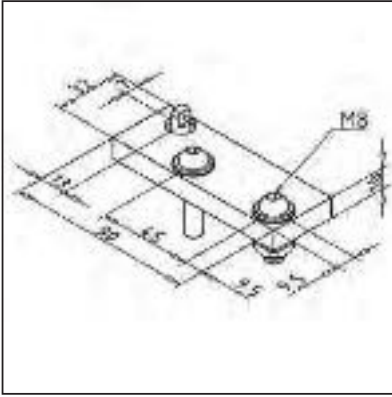
- Use in connection with counterweight 45 or 90 and pulleys
- Use in connection with chain **part no. 21.1713/0** for fastening on door side

ASSEMBLY

- Lead the chain through the counterweight and through the fastening kit for chain (counterweight side) **part no. 21.1711/0** mount chain lock
- For mounting on door lead chain through fastening kit for chain (door side) **part no. 21.1712/0** and mount bolt with link for chain

DOOR CHAIN CLAMPING DEVICE KV-32

part no. 21.1980/0



TECHN. DATA / ITEMS SUPPLIED

- Steel zinc plated
- Fastening kit and link for chain
- Weight 0,247 kg

APPLICATIONS

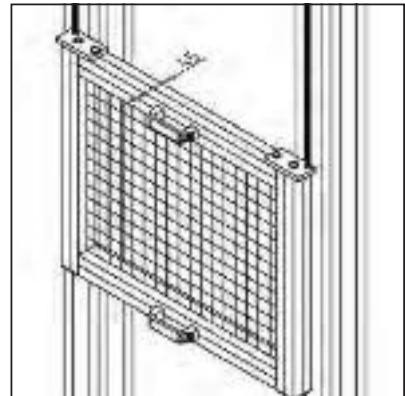
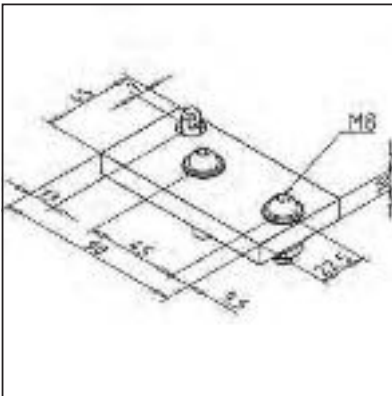
- Use in connection with chain pulley 90 and chain 04
- Mount lifting doors from profile 45 x 32 with Slide-roll element in front of pillars

ASSEMBLY

- Mount plate to lifting doors with the supplied lock chain roller 04
- Use 2 door chain clamping every lifting doors

DOOR CHAIN CLAMPING DEVICE KV-45

part no. 21.1981/0



TECHN. DATA / ITEMS SUPPLIED

- Steel zinc plated
- Fastening kit and chain lock
- Weight 0,345 kg

APPLICATIONS

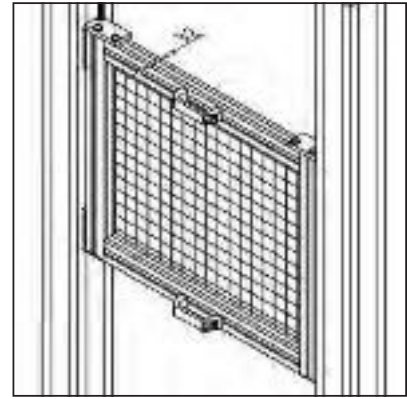
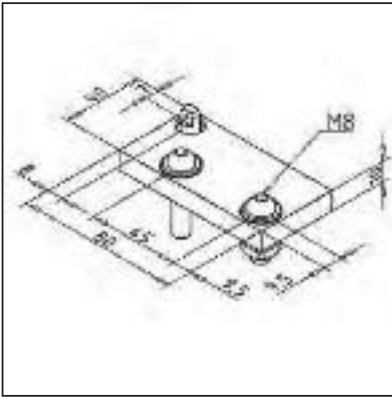
- Use in connection with chain pulley 90 and chain 04
- Mount lifting doors from profile 45 x 45 with Slide-roll element in front of pillars

ASSEMBLY

- Mount plate to lifting doors with the supplied lock chain roller 04
- Use 2 door chain clamping every lifting doors

DOOR CHAIN CLAMPING DEVICE KI-32

part no. 21.1982/0



TECHN. DATA / ITEMS SUPPLIED

- Steel zinc plated
- Fastening kit and link for chain
- Weight 0,278 kg

APPLICATIONS

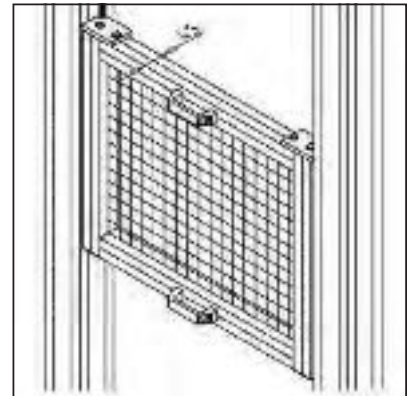
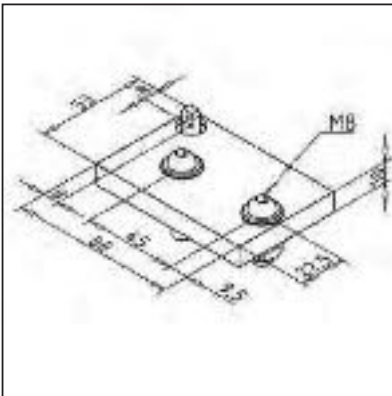
- Use in connection with chain pulley 90 and chain 04
- Mount lifting doors from profile 45 x 32 with Slide-roll element in front of pillars

ASSEMBLY

- Mount plate to lifting doors with the supplied lock chain roller 04
- Use 2 door chain clamping every lifting doors

DOOR CHAIN CLAMPING DEVICE KI-45

part no. 21.1983/0



TECHN. DATA / ITEMS SUPPLIED

- Steel zinc plated
- Fastening kit and link for chain
- Weight 0,360 kg

APPLICATIONS

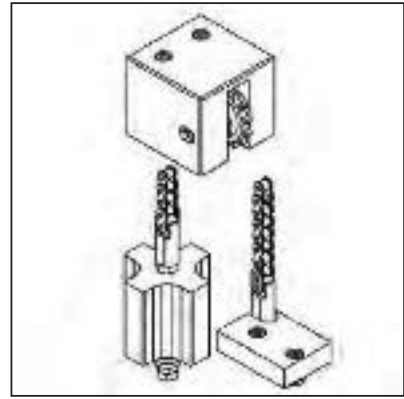
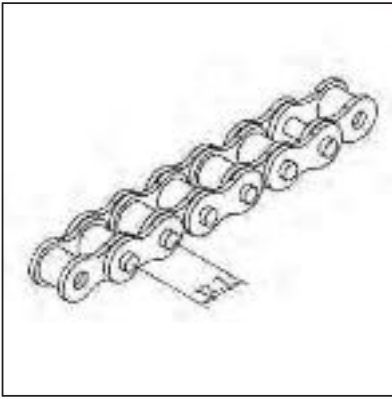
- Use in connection with chain pulley 90 and chain 04
- Mount lifting doors from profile 45 x 32 with Slide-roll element in front of pillars

ASSEMBLY

- Mount plate to lifting doors with the supplied lock chain roller 04
- Use 2 door chain clamping every lifting doors

CHAIN 08

part no. 29.0307/0



TECHN. DATA / ITEMS SUPPLIED

- Chain, steel	
- Size 8	
- Weight	0,700 kg/m
- Breaking load min.	18.000 N
- Please indicate desired length	

APPLICATIONS

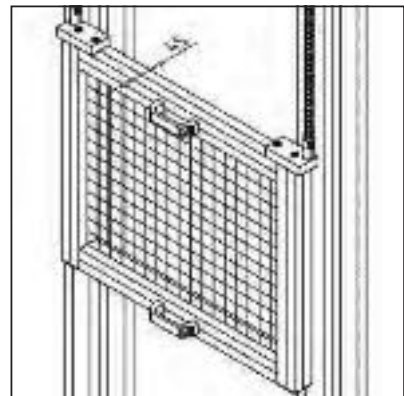
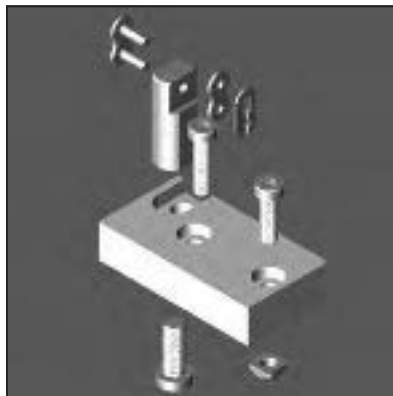
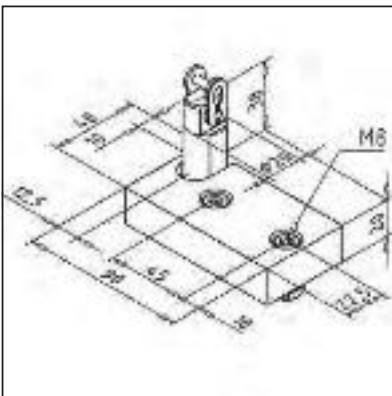
- Use in connection with counterweight 45 or 90 and chain reverse 90 S
- Fastening kit for chain (counterweight) S **part no. 21.0925/0**

ASSEMBLY

- Mounting by Fastening kit for chain (counterweight) S **part no. 21.0925/0** of M10 threaded rod **part no. 21.1667/0** for receiving the counterweight

DOOR CHAIN CLAMPING DEVICE 90 S FRONT

part no. 21.0927/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium anodized	
- Fastening kit and link for chain	
- Weight	0,381 kg

APPLICATIONS

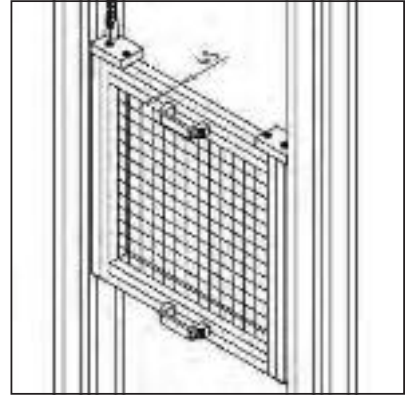
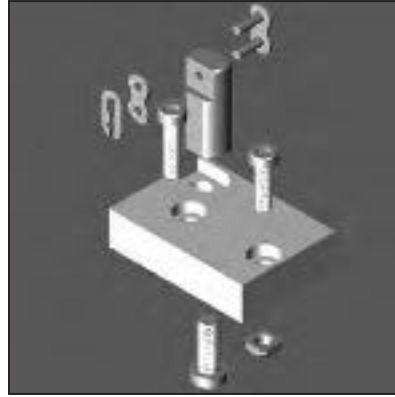
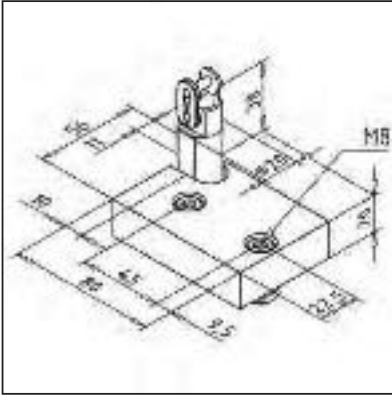
- Use in conjunction with chain reverse 90 S and chain 08
- Mount lifting doors from profile 45 x 45 with Slide-roll element in front of pillars

ASSEMBLY

- Mount plate to lifting doors with the supplied lock chain roller 08
- Use 2 door chain clamping every lifting doors

DOOR CHAIN CLAMPING DEVICE 90 S SIDEWAY

part no. 21.0928/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium anodized
- Fastening kit and link for chain
- Weight 0,368 kg

APPLICATIONS

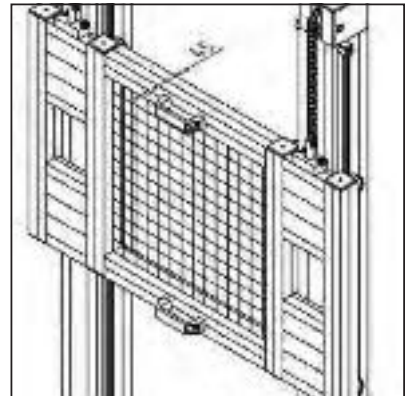
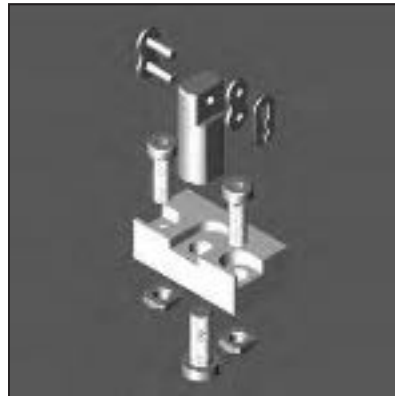
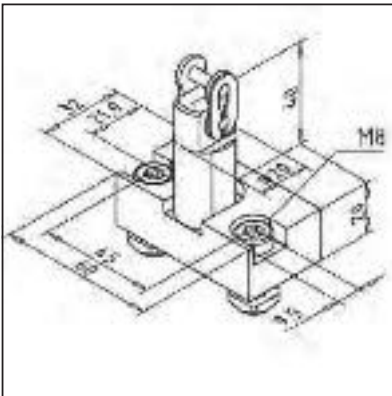
- Use in conjunction with chain reverse 90 S and chain 08
- Mount lifting doors from profile 45 x 45 with Slide-roll element in front of pillars

ASSEMBLY

- Mount plate to lifting doors with the supplied lock chain roller 08
- Use 2 door chain clamping every lifting doors

DOOR CHAIN CLAMPING DEVICE 90 S SLIDE

part no. 21.0929/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium anodized
- Fastening kit and link for chain
- Weight 0,375 kg

APPLICATIONS

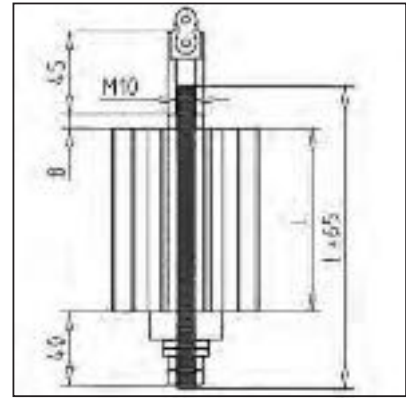
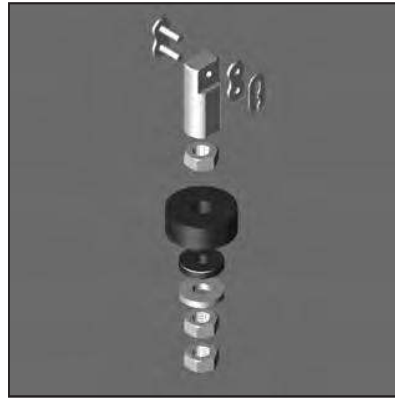
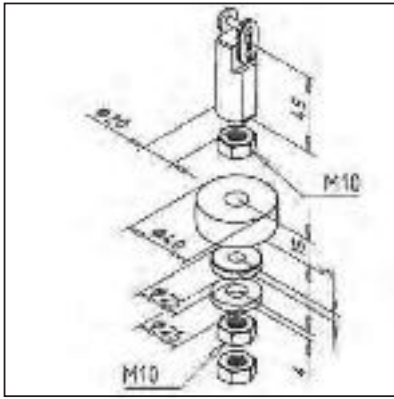
- Use in conjunction with chain reverse 90 S and chain 08
- For mounting on slide LW 45 or LW 90

ASSEMBLY

- Mount plate to slide with the supplied lock chain roller 08

DOOR CHAIN CLAMPING DEVICE (COUNTERWEIGHT) S

part no.
21.0925/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- Rubber-ring
- Link for chain
- Weight 0,145 kg
(ohne Gewindestange)
- Please order threaded rod M 10 **part no. 21.1667/0** in addition to desired length

APPLICATIONS

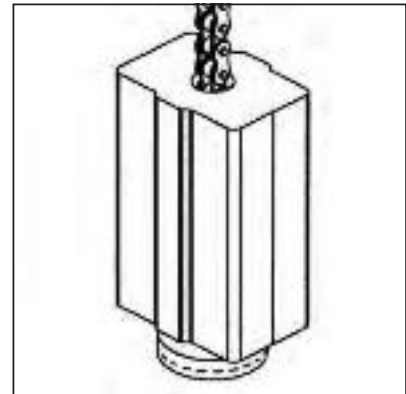
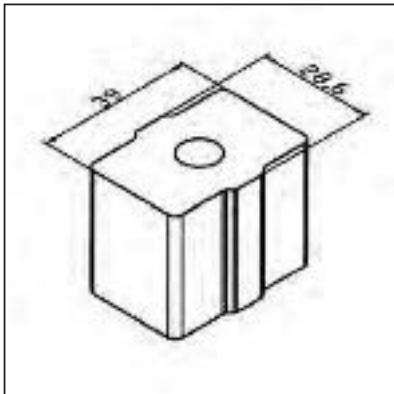
- Use in connection with counterweight 45 or 90 and pulleys
- Use in connection with chain **part no. 21.1713/0** to fasten chain to counterweight

ASSEMBLY

- Lead the chain through the counterweight and through the fastening kit for chain (counterweight side) **part no. 21.1711/0** mount chain lock
- For mounting on door lead chain through fastening kit for chain (door side) **part no. 21.1712/0**
- Connect threaded rod with enclosed chain lock chain

COUNTERWEIGHT 45

part no. 21.1772/0



TECHN. DATA / ITEMS SUPPLIED

- Pb cast, special hard
- For profiles 45 x 90 L or 45 x 90 G
- Weight 10 kg/m
- Length 0,330 m

APPLICATIONS

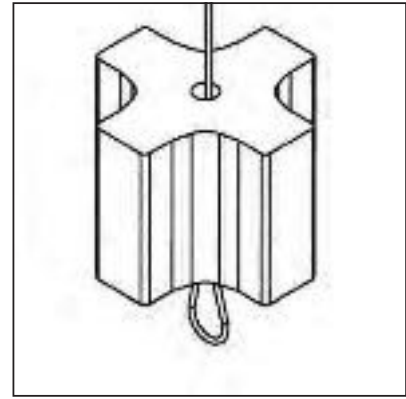
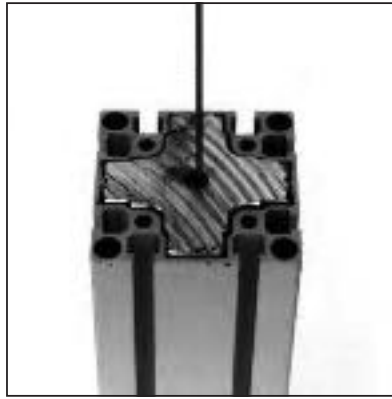
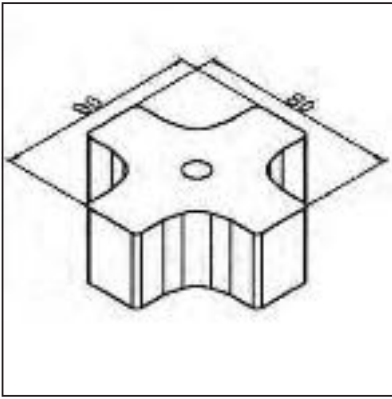
- Counterweight for large lifting doors
- For cable and chain

ASSEMBLY

- Insert the counterweight into the profile

COUNTERWEIGHT 90

part no. 21.1778/0



TECHN. DATA / ITEMS SUPPLIED

- Pb cast, special hard
- For profiles 90 x 90
- Weight 38,5 kg/m
- Length 0,260 m

APPLICATIONS

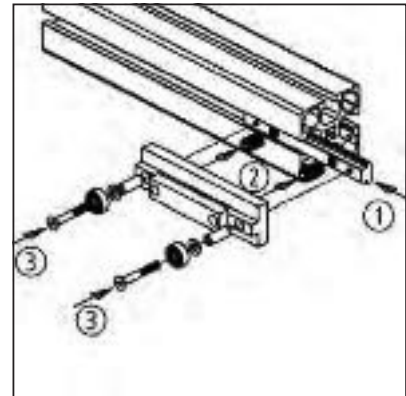
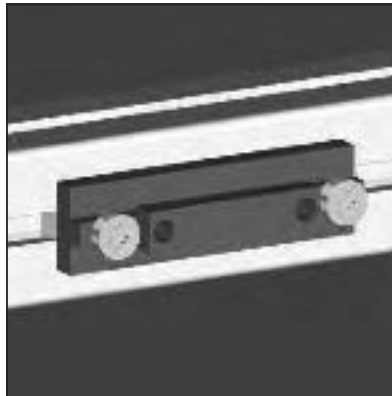
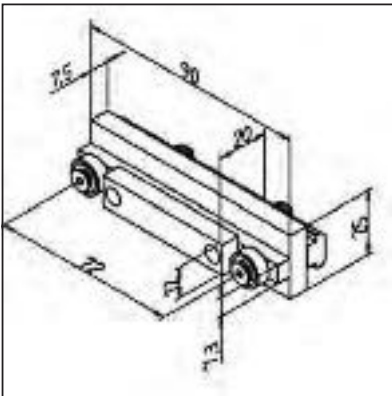
- Counterweight for large lifting doors
- For cable and chain

ASSEMBLY

- Insert the counterweight into the profile

SLIDE-ROLL ELEMENT

part no. 21.1796/0



TECHN. DATA / ITEMS SUPPLIED

- Hard plastic black, highly wear-resistant
- 1 T-slot bar, steel, zinc plated
- 2 ball-bearings, premounted
- Weight 0,093 kg
- Load max. 200 N

APPLICATIONS

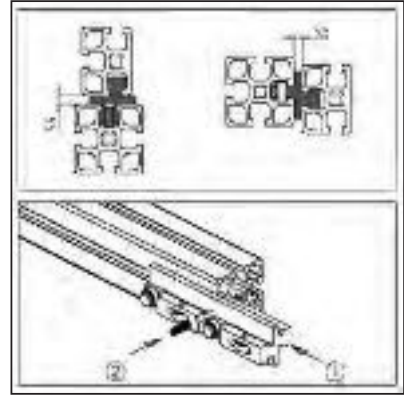
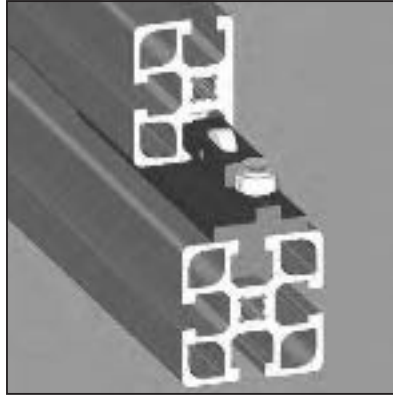
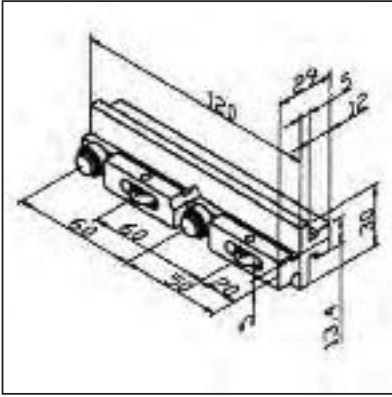
- Guide for lifting doors in the groove of the vertical profile
- Light linear slides
- Workpiece-slides, drawers

ASSEMBLY

- 1: Disassemble the bearings from the element
- 2: Insert t-slot bar into profile groove and lock at desired position
- 3: Reassemble the slide and the bearings with t-slot bar, secure with suitable glue

GLIDE-ROLL ELEMENT

part no. 21.1799/0



TECHN. DATA / ITEMS SUPPLIED

- Hard plastic black, highly wear-resistant
- 1 clamping screw, steel, zinc plated
- 4 built-in ball-bearings
- Weight 0,060 kg
- F max 300 N

APPLICATIONS

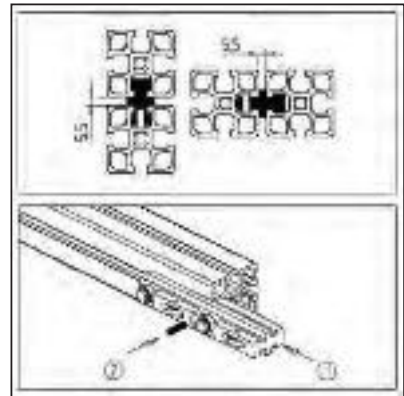
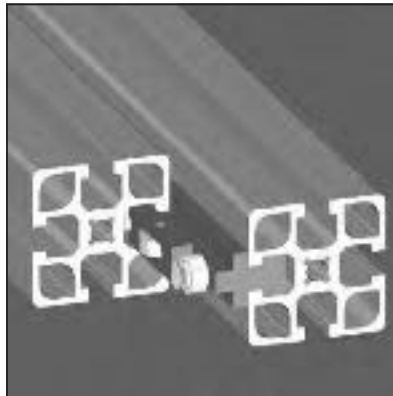
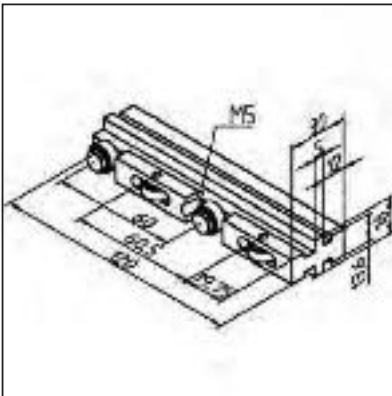
- Guide for sliding doors, lifting-doors, workpiece-slides, light linear guides
- The element provides 5 mm eccentricity for the construction of sliding doors with 2 casements or guides with 5 mm ground clearance

ASSEMBLY

- 1: Insert the element with screw side into profile groove of movable construction part
- 2: Tighten the screw
- 3: Slide the completely mounted movable part into the grooves of the guiding profiles. Secure the movable part against falling out with screws at both ends

GLIDE-ROLL ELEMENT PARALLEL

part no. 21.1714/0



TECHN. DATA / ITEMS SUPPLIED

- Hard plastic black, extremely wear resistant
- 1 clamping screw, steel, zinc plated
- 4 built-in ball-bearings
- Weight 0,060 kg
- F max 300 N

APPLICATIONS

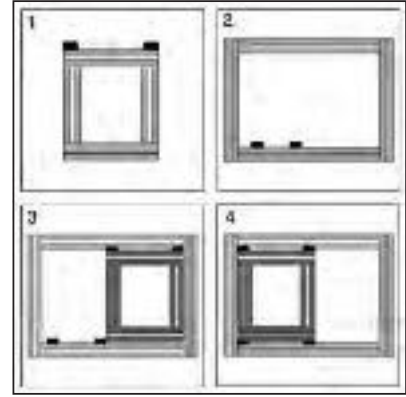
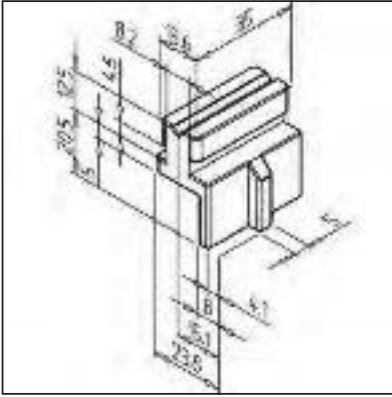
- Guide for sliding doors, lifting-doors, workpiece-slides, light linear guides
- Both slots are parallel to each other for construction of flush sliding doors

ASSEMBLY

- 1: Insert the element with screw side into profile groove of movable construction part
- 2: Tighten the screw
- 3: Slide the completely mounted movable part into the grooves of the guiding profiles. Secure the movable part against falling out with screws at both ends

GUIDE FOR SLIDING DOOR

part no. 22.1079/0



TECHN. DATA / ITEMS SUPPLIED

- Plastic PA 6.6, black
- 1 screw
- For 1 door element 4 guides are necessary
- Weight 0,029 kg

APPLICATIONS

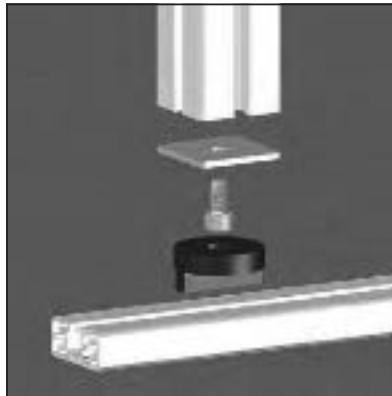
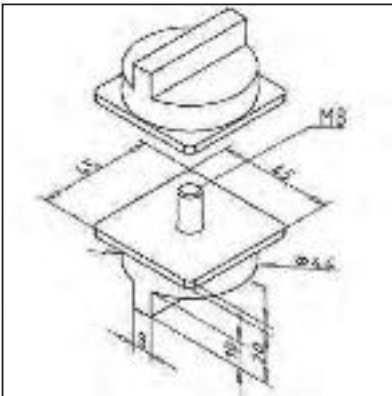
- Sliding doors
- Sliding elements
- Workpiece-slides, drawers
- For a simultaneous guidance of 2 elements in 1 profile groove
- Subsequent mounting of sliding doors into existing constructions possible

ASSEMBLY

- 1: Fasten the upper guide to the frame of the door element
 - 2: Insert the lower guide into the frame construction
 - 3: Insert the door element
 - 4: Slide it into the lower guide and secure at desired position
- Mount second door element
 - Allowance: see page

FOLDING DOOR SUPPORT

part no. 22.1148/0



TECHN. DATA / ITEMS SUPPLIED

- 2 slide elements; plastic, black
- Fastening kit and end caps 45 x 45 AL
- Weight 0,084 kg

APPLICATIONS

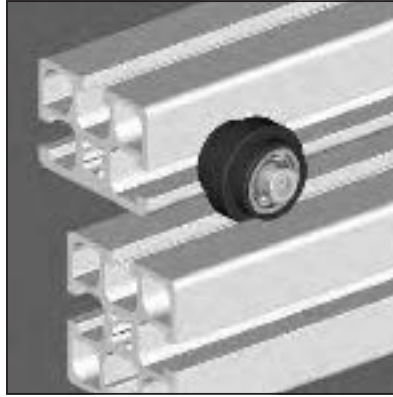
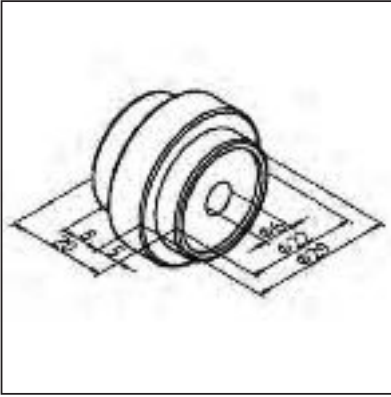
- Slide element for guiding of folding doors
- Guiding in profile grooves

ASSEMBLY

- Mounting of end caps with supplied fastening kit on front of door profile
- Insert slide elements into profile grooves
- Insert mounted screws into drill hole of slide element
- Use always in pairs
- Measures valid for profiles 45x45 for door mounted with hinge **part no. 21.1378/0**

ROLLER ELEMENT

part no. 21.1782/0



TECHN. DATA / ITEMS SUPPLIED

- ABS, grey	
- With 2 ball-bearings 626 ZZ	
- Weight	0,033 kg
- Load max.	200 N

APPLICATIONS

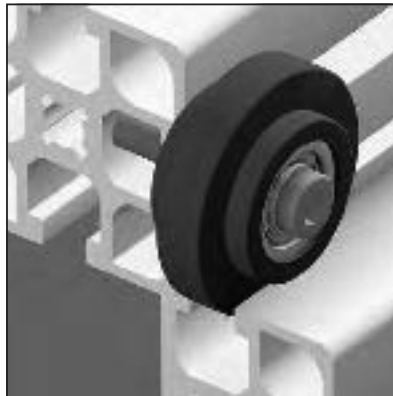
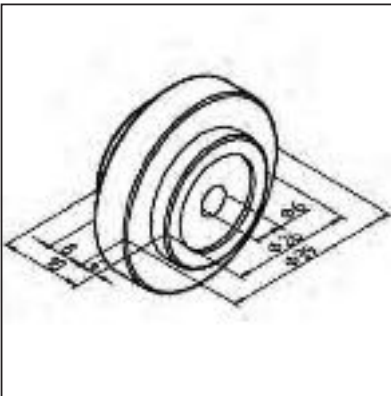
- Guide for sliding doors, lifting doors and drawers

ASSEMBLY

- Attachment with hex socket cap screws M6 x 35 and square nut M6 on profile grooves or directly on the panel element

ROLLER ELEMENTS S

part no. 21.1781/0



TECHN. DATA / ITEMS SUPPLIED

- PA, grey	
- With 2 ball-bearings 626 ZZ	
- Weight	0,044 kg
- Load max. (roller)	200 N

APPLICATIONS

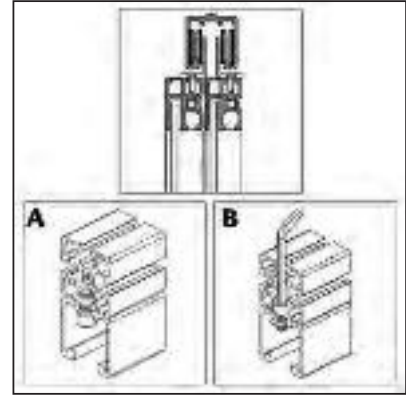
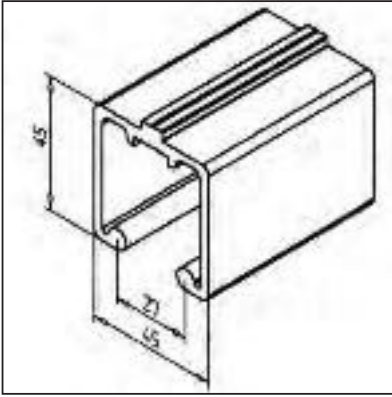
- Guide for sliding doors, lifting doors and drawers

ASSEMBLY

- Attachment with hex socket cap screws M6 x 35 and square nut M6 on profile grooves or directly on the panel element

SLIDING DOOR PROFILE

part no. 20.1038/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	15,347 cm ⁴
- Iy =	15,597 cm ⁴
- wx =	5,912 cm ³
- wy =	6,932 cm ³
- Weight	1,474 kg/m
- Length	6 m
- Packing unit	48 m

APPLICATIONS

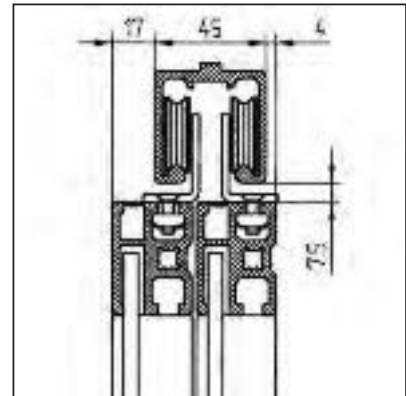
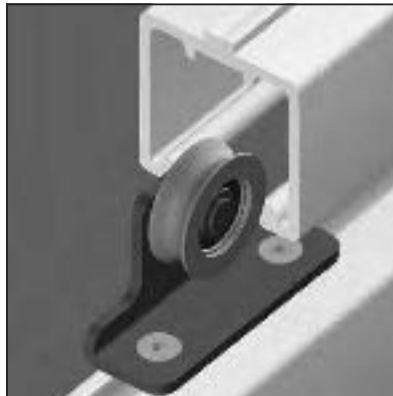
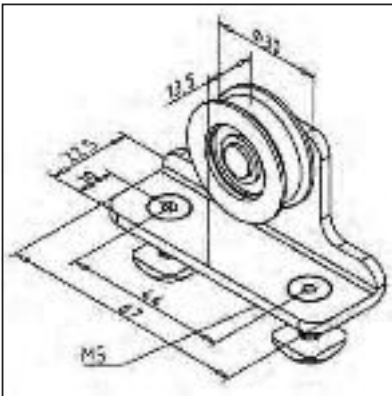
- Two wing sliding doors
- One wing sliding doors

ASSEMBLY

- Drill Ø 8,5 mm holes in centering groove; bore pitch: 250 - 400 mm depending on the load
- A) Position M8 F square nuts in the supporting profile and fasten the sliding door profile with M8 x 25 hex socket cap screw
- B) Drill holes or step holes in the supporting profile and insert the square nuts in the sliding profile; the nuts are secured against torsion

ROLLER ELEMENT FOR SLIDING DOOR

part no. 21.2000/0



TECHN. DATA / ITEMS SUPPLIED

- Plastic roller with ball-bearing	
- Zinc plated steel support	
- Fastening kit	
- Weight	0,080 kg
- Load max./roller	600 N

APPLICATIONS

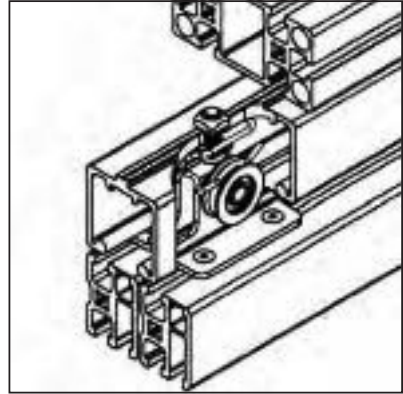
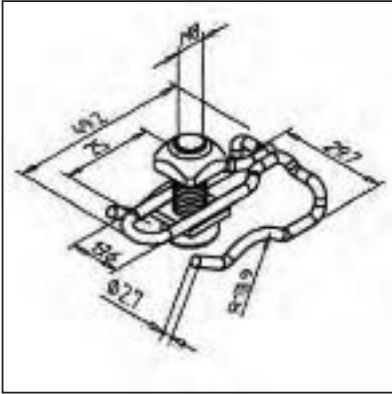
- Easy-running, multi-wing sliding doors in guard units, exhibition stands, testing units, etc.

ASSEMBLY

- Fasten the roller elements on profile groove; use fastening kit
- Insert the doors in the sliding rail profile and gently swing out the doors at their bottom end
- Secure the sliding door at the bottom with locking pins, sliding rails 8N **part no. 22.1085/0** or U-Profile **part no. 21.2002/0** against swinging

STOP FOR SLIDING DOOR K

part no. 21.2019/0



TECHN. DATA / ITEMS SUPPLIED

- Spring steel wire
- Fastening kit
- Weight 0,010 kg

APPLICATIONS

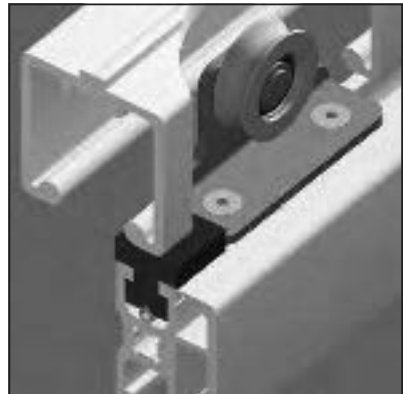
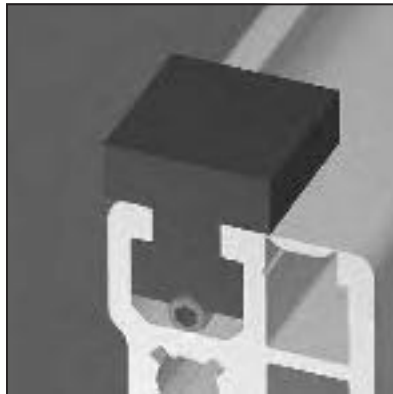
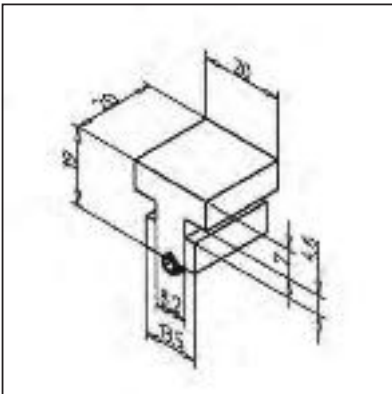
- Stop for sliding doors in their end positions (open / closed)

ASSEMBLY

- Mark end position of the wheel
- Bore drill \varnothing 8,5 m in sliding door profile
- Use fastening kit

ANTI LIFT FOR SLIDING DOOR

part no. 21.2003/0



TECHN. DATA / ITEMS SUPPLIED

- Hard plastic, black
- Fastening kit
- Weight 0,010 kg

APPLICATIONS

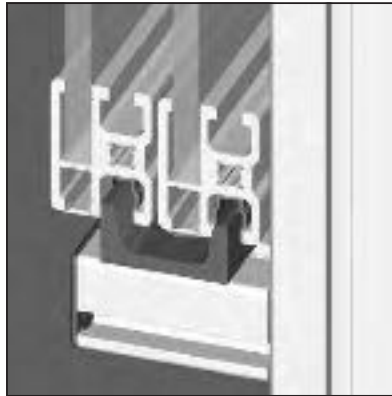
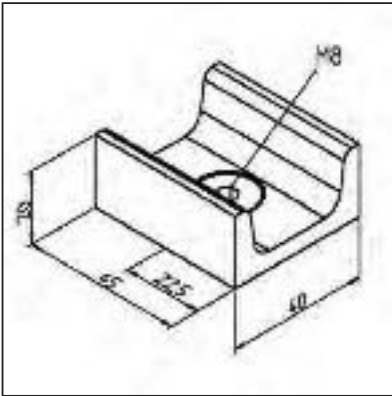
- Securing of sliding doors against lift off
- Reduction of pendulum motion

ASSEMBLY

- Slip lift for sliding door in upper profile groove of the door-element
- Secure the position by the included set screw horizontally in profile groove underneath antilift
- Mount end cap

U-BAR FOR SLIDING DOOR

part no. 21.2002/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- Fastening kit
- Weight 0,012 kg

APPLICATIONS

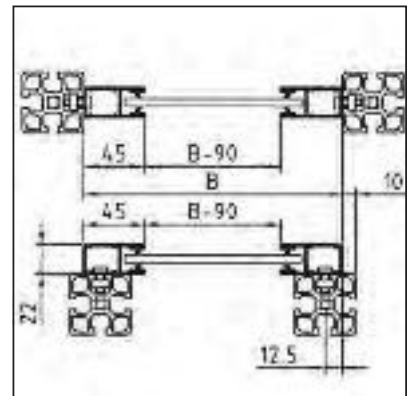
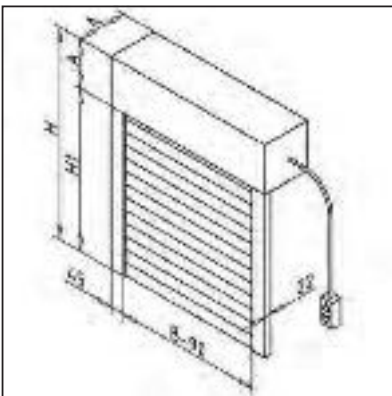
- Securing of sliding doors against lateral swinging

ASSEMBLY

- Hang up the doors
- Mount U-Bar on profile (-60 mm), slide in position and fix
- For smooth movement provide profile grooves with cover profile

ROLLING DOOR WITH DRIVE

part no. diverse



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, powder coated, silver
- 2 lateral guide rails, housing
- Electrical drive 230 V
- Without switch
- Max. width 2,70 m
- Cable length 2 m
- Please indicate width B and dimension H

APPLICATIONS

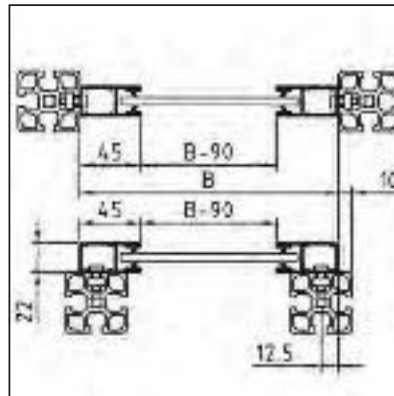
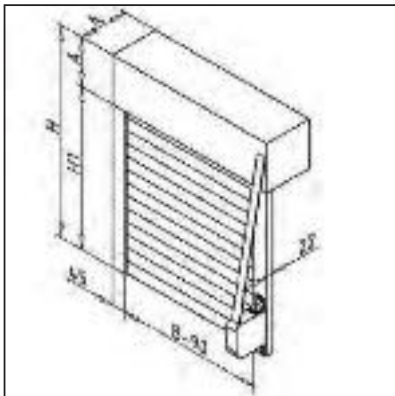
- Cupboard for instruments
- Tools boxes
- Computer racks
- Counters
- Machine guards

ASSEMBLY

- Assemble lateral guides with housing
- Fix guides and housing in frame
- Housing A = 152, H up to 1,70 m, part no. 29.0402/0
- Housing A = 167,5, H up to 2,20 m, part no. 29.0403/0
- Housing A = 181, H up to 2,70 m, part no. 29.0404/0
- Stroke H1: H-A

ROLLING DOOR WITH DRIVE

part no. 29.0405/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, powder coated, silver
- 2 lateral guide rails, housing
- Max. width 2,70 m
- Please indicate width B and dimension H

APPLICATIONS

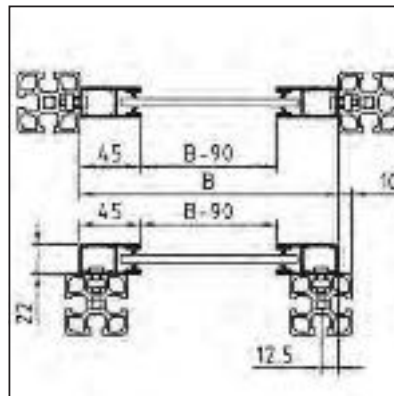
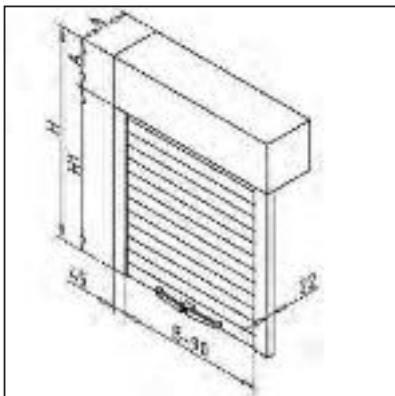
- Cupboard for instruments
- Tools boxes
- Computer racks
- Counters
- Machine guards

ASSEMBLY

- Assemble lateral guides with housing
- Fix guides and housing in frame
- Stroke H1: H-A

ROLLING DOOR WITH DRIVE

part no. 29.0406/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, powder coated, silver
- 2 lateral guide rails, housing
- Max. width 2,70 m
- Please indicate width B and dimension H

APPLICATIONS

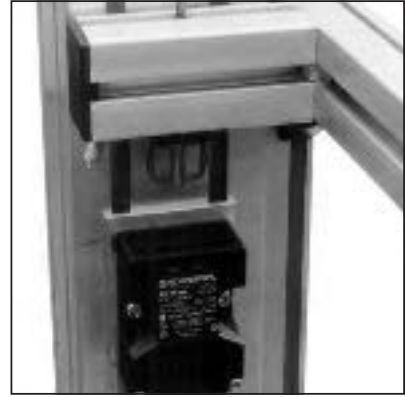
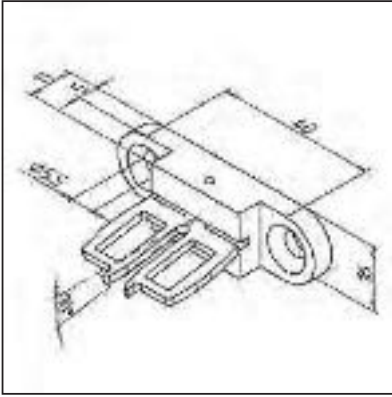
- Cupboard for instruments
- Tools boxes
- Computer racks
- Counters
- Machine guards

ASSEMBLY

- Assemble lateral guides with housing
- Fix guides and housing in frame
- Stroke H1: H-A

ACTUATING BOW FOR SECURITY SWITCH B3

part no. 21.1110/3

**TECHN. DATA / ITEMS SUPPLIED**

- Switching pad, type B3, for particularly small actuating radii over the small side of the bow

- Weight 0,032 kg

APPLICATIONS

- Actuating bow for small actuating radii in connection with security switch **part no. 21.1110/0** replaces standard bow

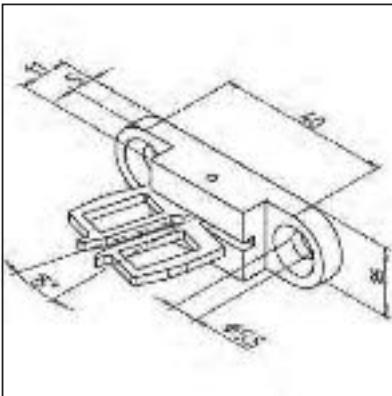
ASSEMBLY

- Fasten with fastening kit on profile groove

- Directly in panel element with countersunk screw M5 according to the material thickness

ACTUATING BOW FOR SECURITY SWITCH B2

part no. 21.1110/2

**TECHN. DATA / ITEMS SUPPLIED**

- Switching pad, type b2, for particularly small actuating radii over the broad side of the bow

- Weight 0,032 kg

APPLICATIONS

- Actuating bow for small actuating radii in connection with security switch **part no. 21.1110/0** replaces standard bow

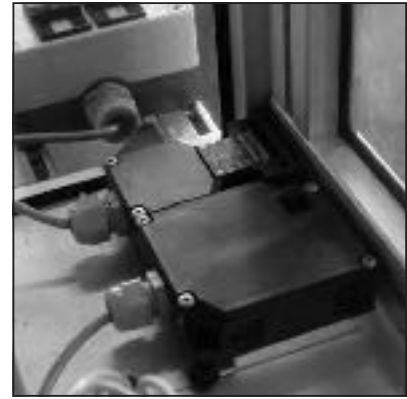
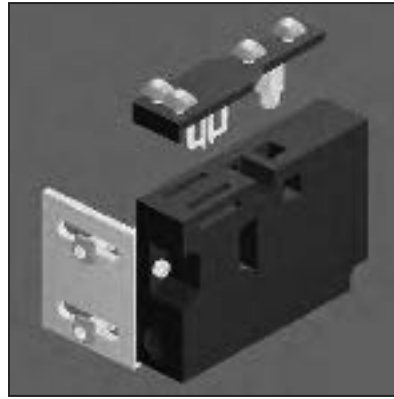
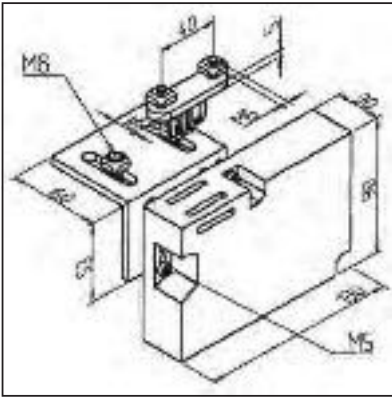
ASSEMBLY

- Fasten with fastening kit on profile groove

- Directly in panel element with countersunk screw M5 according to the material thickness

SECURITY SWITCH WITH LOCK

part no. 21.1766/0



TECHN. DATA / ITEMS SUPPLIED

- Switch, type AZM 161SK-12/12RK-024
- Housing thermoplast, black, self-extinguishing
- Protective system IP67, nominal operating current 10 A (230 V), driving voltage 24 V AC/DC, power consumption 10 W
- Fastening kit
- Optionally with actuating bow 110 V AC or 230 V AC
- Weight 0,475 kg

APPLICATIONS

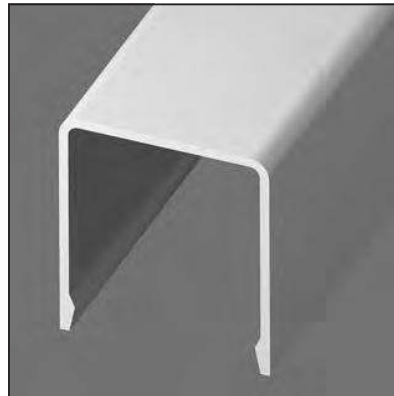
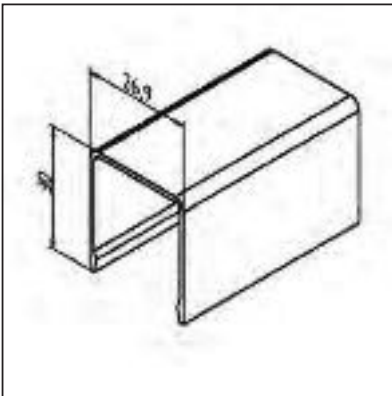
- Protective gears with high requirements to security

ASSEMBLY

- Fasten with fastening kit on profile groove

CONDUIT AL

part no. 20.1051/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural, anodized
- Weight 0,280 kg/m
- Length 6 m

APPLICATIONS

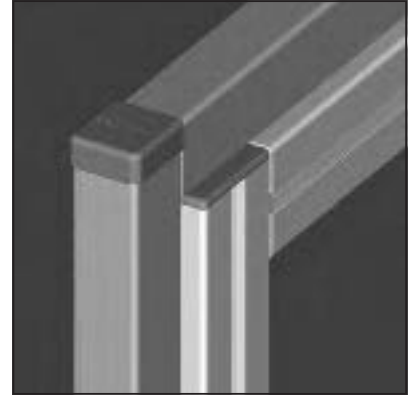
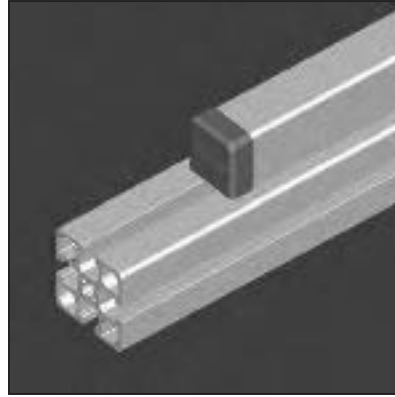
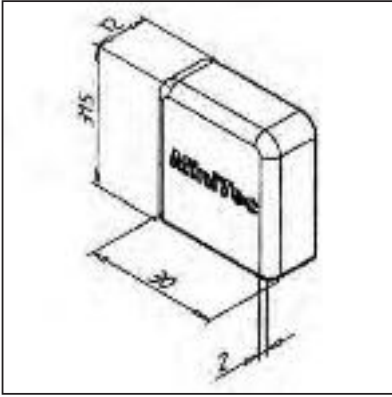
- Cover for cables and pneumatic hoses on all MiniTec aluminium profiles

ASSEMBLY

- Clip on cable clips **part no.22.1204/0**

END CAP CONDUIT AL

part no. 22.1119/1



TECHN. DATA / ITEMS SUPPLIED

- ABS, grey RAL 7012

- Weight 0,004 kg

APPLICATIONS

- End cap for conduit AL

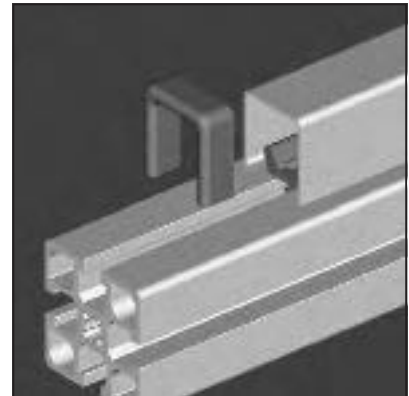
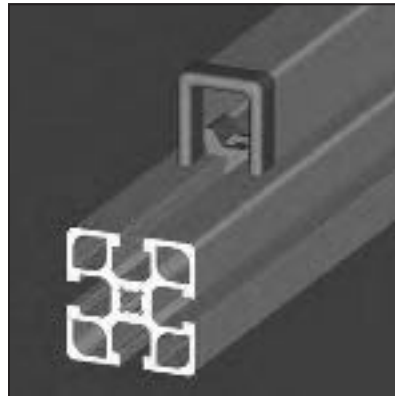
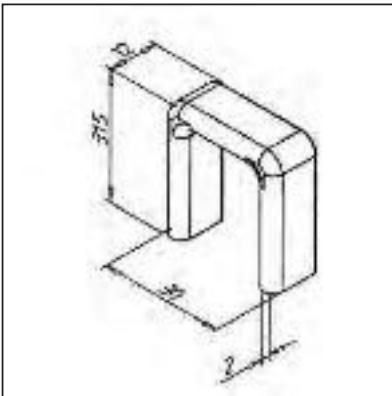
- Fabrication of external angle with conduit AL

ASSEMBLY

- Simply push onto the end of the conduit

EDGE PROTECTION FOR CONDUIT AL

part no. 22.1120/1



TECHN. DATA / ITEMS SUPPLIED

- ABS, grey RAL 7012

- Weight 0,003 kg

APPLICATIONS

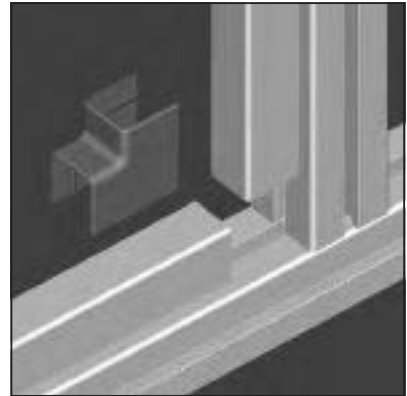
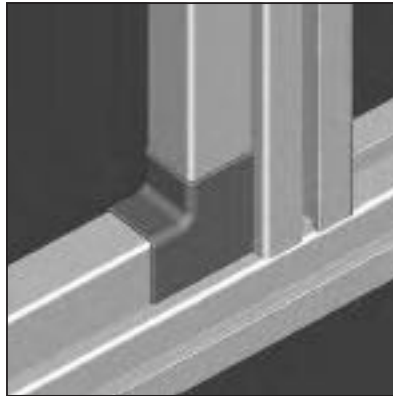
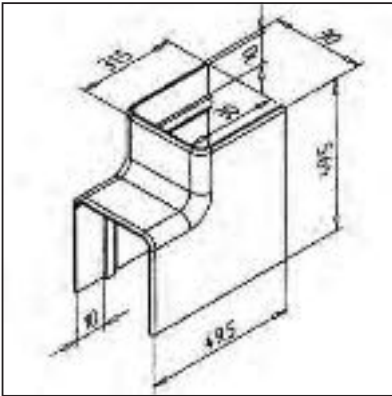
- Edge protection for conduit AL

ASSEMBLY

- Simply push onto the end of the conduit

INTERNAL ANGLE BRACKET OF CONDUIT AL

part no. 22.1121/1



TECHN. DATA / ITEMS SUPPLIED

- ABS, grey RAL 7012
- Weight 0,01 kg

APPLICATIONS

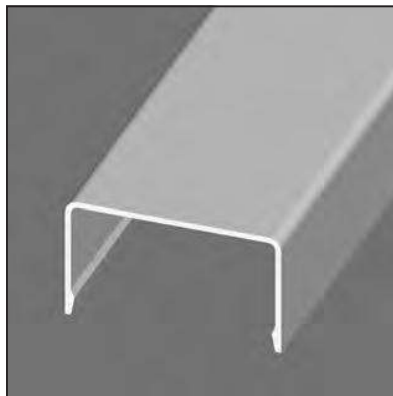
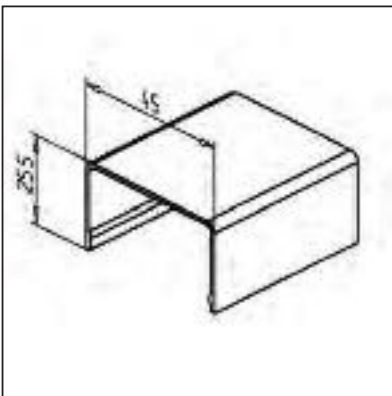
- Connection of conduit AL to internal angle bracket

ASSEMBLY

- Click the first side of the conduit to collar clamps.
- Insert angle bracket
- Click on the second side of the cable duct and slide along as far as the stop

CONDUIT 45 AL

part no. 20.1071/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural, anodized
- Weight 0,301 kg/m
- Length 6 m

APPLICATIONS

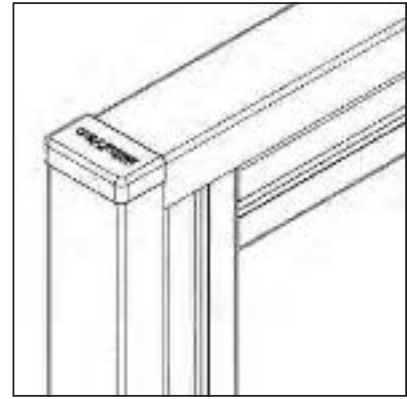
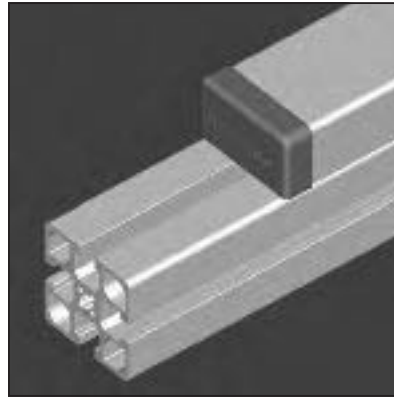
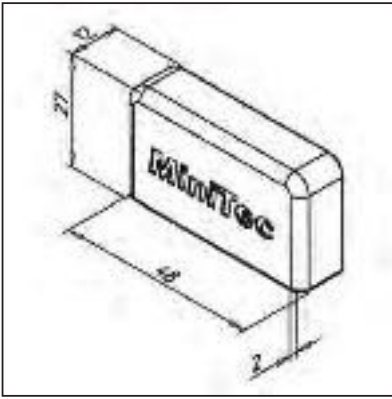
- Cover for cables and pneumatic hoses

ASSEMBLY

- Clip on cable clips **part no. 22.1210/0**

END CAP FOR CONDUIT 45 AL

part no. 22.1116/1



TECHN. DATA / ITEMS SUPPLIED

- ABS, grey RAL 7012
- Weight 0,006 kg

APPLICATIONS

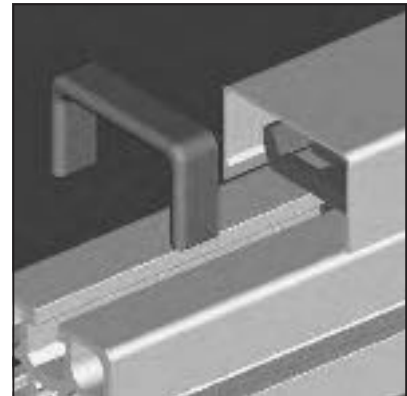
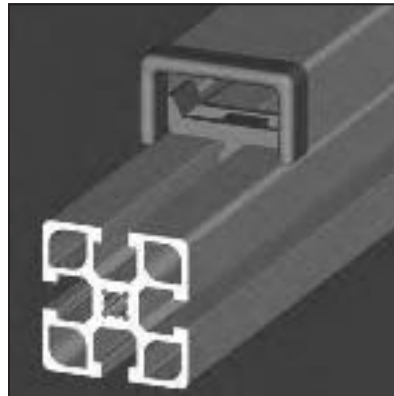
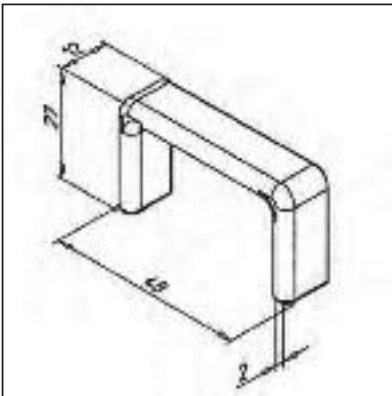
- End cap for conduit 45 AL
- Construction of corners on outside face

ASSEMBLY

- Clip onto end of conduit 45

EDGE PROTECTION FOR CONDUIT 45 AL

part no. 22.1117/1



TECHN. DATA / ITEMS SUPPLIED

- ABS, grey RAL 7012
- Weight 0,005 kg

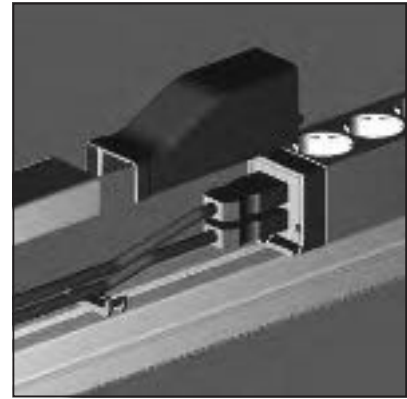
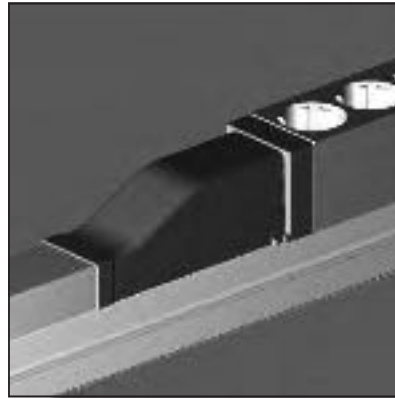
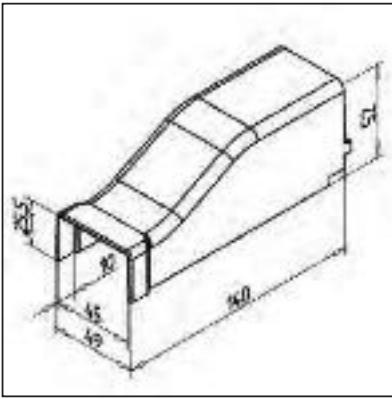
APPLICATIONS

- Edge protection for conduit 45 AL

ASSEMBLY

- Clip onto end of conduit 45 AL

ADAPTER CAP FOR CONNECTOR STRIP FOR CABLE CONDUIT 45 part no. 22.1154/1



TECHN. DATA / ITEMS SUPPLIED

- ABS, grey RAL 7012

- Weight 0,034 kg

APPLICATIONS

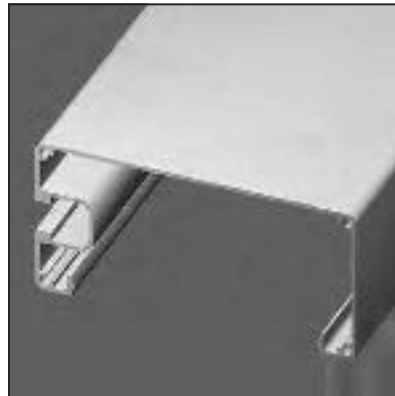
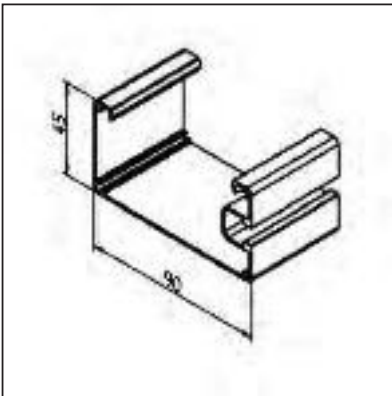
- Cover of cable conduit 45

ASSEMBLY

- Clip onto cable conduit 45

CONDUIT 90 AL

part no. 20.1056/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural, anodized

- Weight 0,970 kg/m

- Length 6 m

APPLICATIONS

- Cover for cables and pneumatic hoses

- Suitable for MiniTec profiles, grid dimension: 90

- Can also be swung open, when used with hinges

- End ledges with integrated energy supply

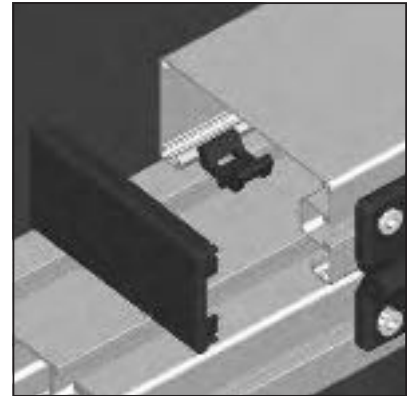
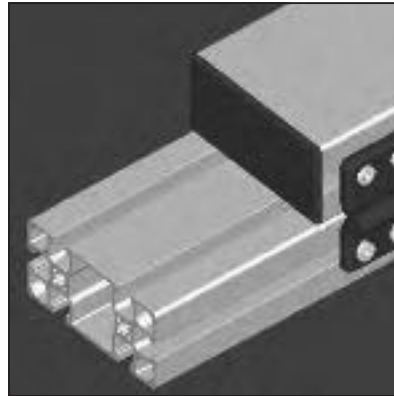
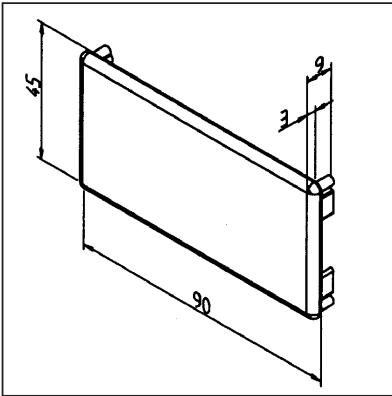
ASSEMBLY

- Clip on cable clips **part no. 22.1204/0**

- End caps **part no. 22.1045/0**

END CAP FOR CONDUIT 90 AL

part no. 22.1045/0



TECHN. DATA / ITEMS SUPPLIED

- ABS, grey RAL 7012
- Weight 0,011 kg

APPLICATIONS

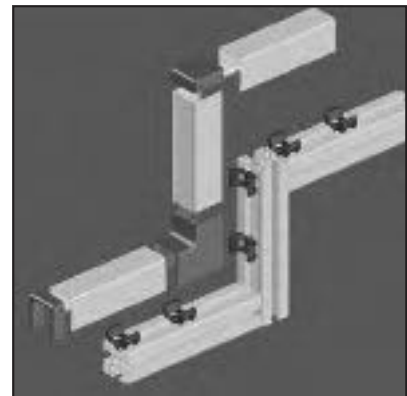
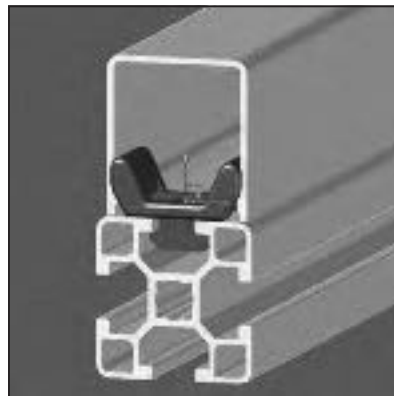
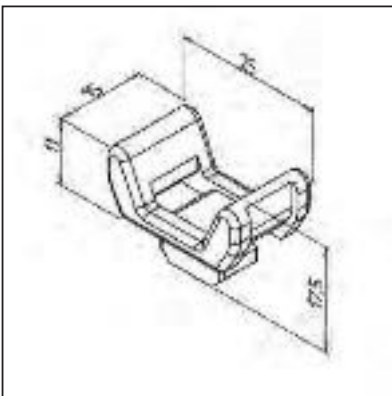
- End cover for conduit 90
- Constructions of corners on outside face

ASSEMBLY

- Clip onto end of conduit 90

CABLE CLIP 30

part no. 22.1212/0



TECHN. DATA / ITEMS SUPPLIED

- PA 6, grey
- Weight 0,002 kg

APPLICATIONS

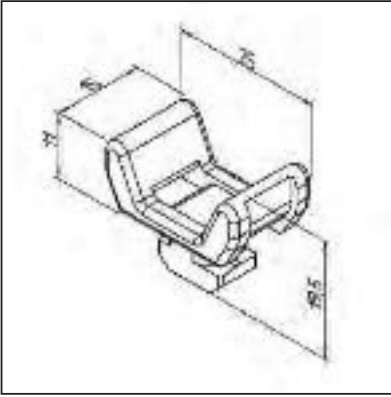
- Simple and rational fastening of cables and pneumatic hoses
- Suitable for conduit AL

ASSEMBLY

- Insert into profile groove and secure it with a 90° rotation
- Insert cable tie band through the cable clip and around the cable. Bind together, cut off any excessive length

CABLE CLIP

part no. 22.1204/0



TECHN. DATA / ITEMS SUPPLIED

- PA 6, grey

- Weight 0,002 kg

APPLICATIONS

- Simple and rational fastening of cables and pneumatic hoses

- Suitable for conduit 45 AL and conduit 90 AL

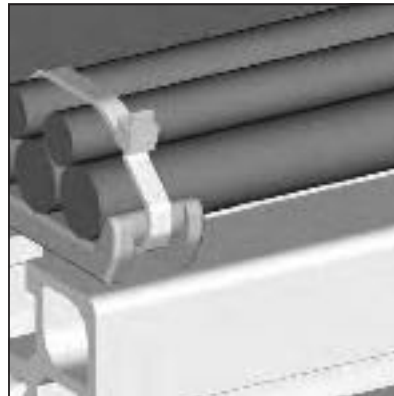
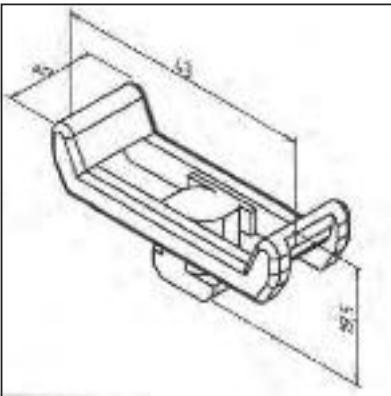
ASSEMBLY

- Insert into profile groove and secure it with a 90° rotation

- Insert cable tie band through the cable clip and around the cable. Bind together, cut off any excessive length

CABLE CLIP 45

part no. 22.1210/0



TECHN. DATA / ITEMS SUPPLIED

- PA 6, grey

- Weight 0,004 kg

APPLICATIONS

- Simple and rational fastening of cables and pneumatic hoses

- Suitable for conduit 45 AL

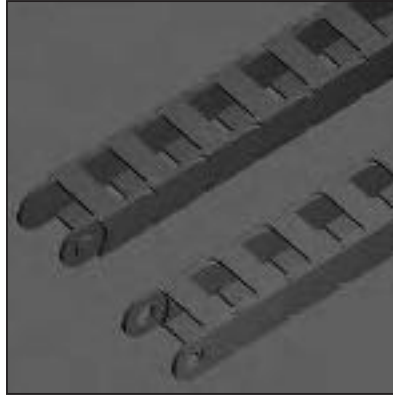
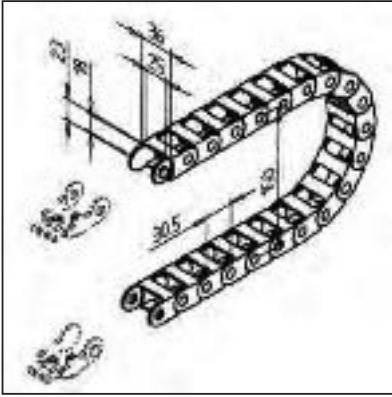
ASSEMBLY

- Insert into profile groove and secure it with a 90° rotation

- Insert cable tie band through the cable clip and around the cable. Bind together, cut off any excessive length

ENERGY CHAIN R

part no. 33.0410/0



TECHN. DATA / ITEMS SUPPLIED

- Plastic, black	
- Without fastening kit	
- Weight	0,341 kg

APPLICATIONS

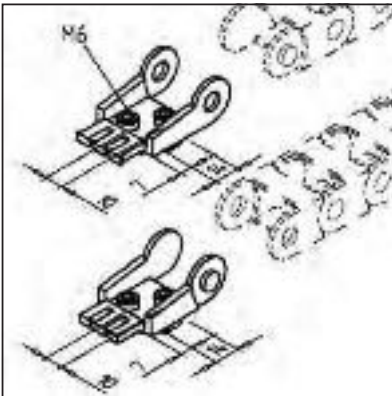
- Energy chain to bind cables and hoses on slides and movable elements
- Suitably profile 45 x 45 R
part no. 20.1046/0 44

ASSEMBLY

- Fastening of the energy chain by means of mounting brackets **part no. 33.0411/0**

MOUNTING BRACKETS FOR ENERGY CHAIN R

part no. 33.0411/0



TECHN. DATA / ITEMS SUPPLIED

- 1 bracket each left or right	
- Plastic, schwarz	
- Fastening kit	
- Weight	0,058 kg

APPLICATIONS

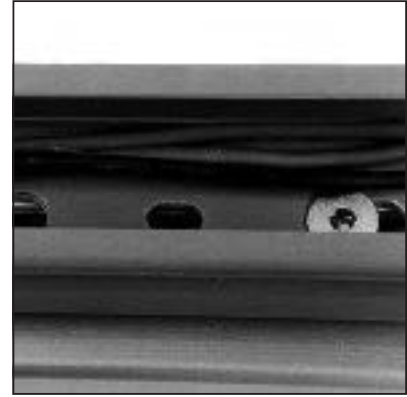
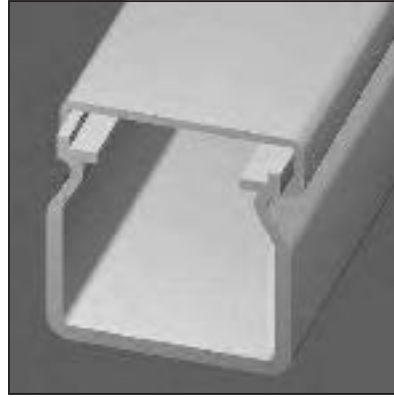
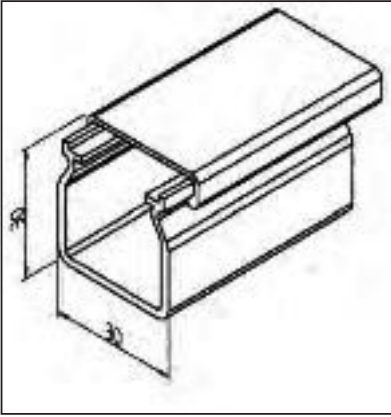
- For fastening energy chain R **part no. 33.0410/0** on profile constructions

ASSEMBLY

- Use fastening kit
- Use cable tie band to fix cables and hoses

CONDUIT 32

part no. 22.1082/0



TECHN. DATA / ITEMS SUPPLIED

- Hard PVC, grey
- Snap-cover
- Cross-section: 660 mm ²
- Weight 0,323 kg/m
- Length 2 m

APPLICATIONS

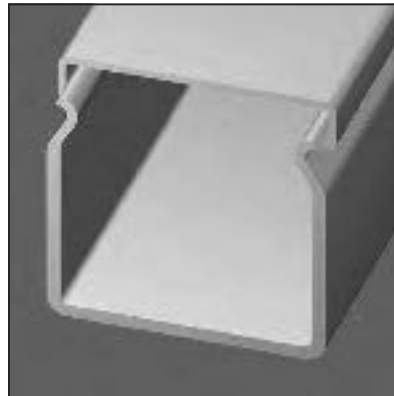
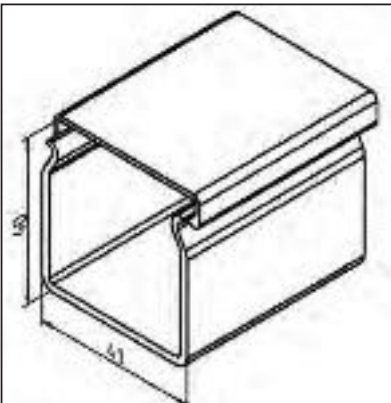
- Assembly of cables or tubings in all kinds of constructions

ASSEMBLY

- Fastening with screws M6 x 12 and rhombus-nut M6

CONDUIT 45

part no. 22.1084/0



TECHN. DATA / ITEMS SUPPLIED

- Hard PVC, grey
- Snap-cover
- Cross-section: 1584 mm ²
- Weight 0,523 kg/m
- Length 2 m

APPLICATIONS

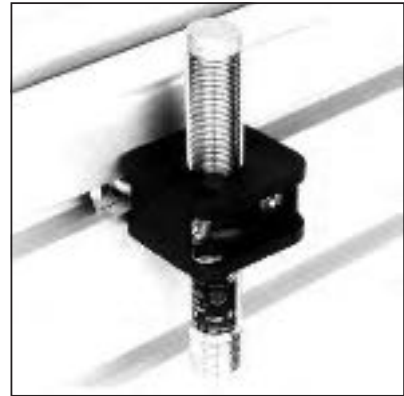
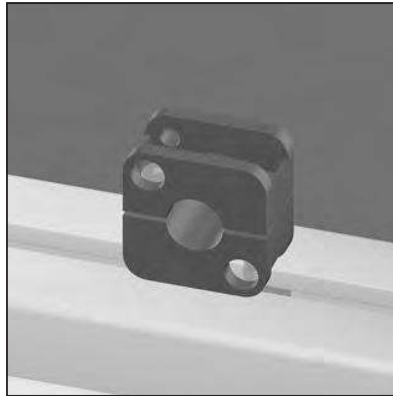
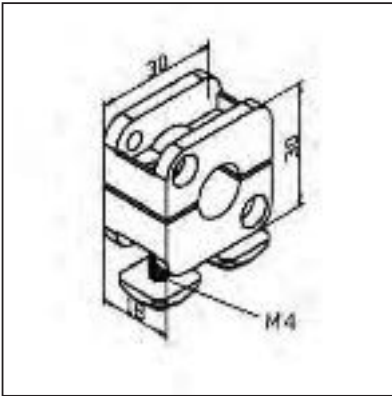
- Assembly of cables or tubings in all kinds of constructions

ASSEMBLY

- Fastening with screws M6 x 12 and rhombus-nut M6

PROXIMITY SWITCH HOLDER 12

part no. 28.0120/0



TECHN. DATA / ITEMS SUPPLIED

- Hard plastic, black
- Ø 12 mm
- Fastening kit
- Weight 0,040 kg

APPLICATIONS

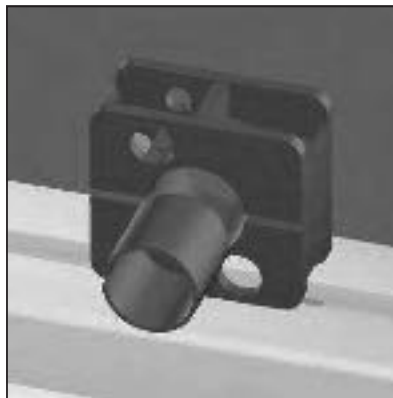
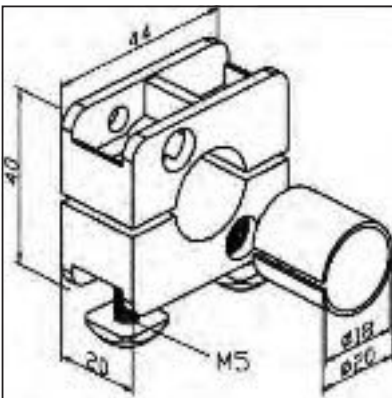
- Fastening of proximity switches Ø 12 mm in profile constructions and linear guides

ASSEMBLY

- On profile groove with fastening kit from supply schedule

PROXIMITY SWITCH HOLDER 18

part no. 28.0121/0



TECHN. DATA / ITEMS SUPPLIED

- Hard plastic, black
- Ø 18 mm
- Ø 20 mm
- Fastening kit
- Weight 0,050 kg

APPLICATIONS

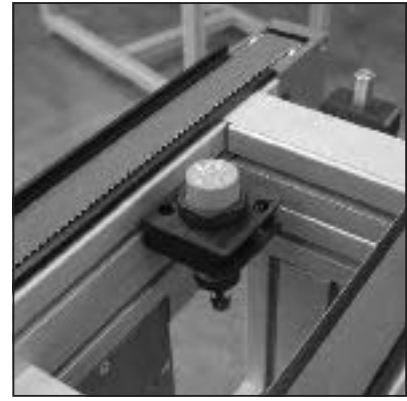
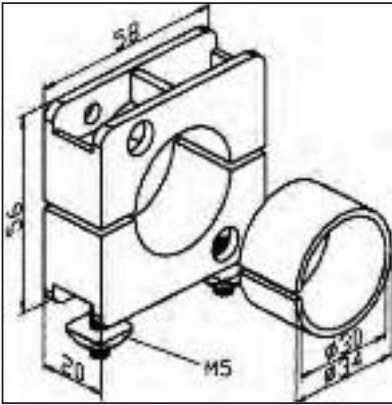
- Fastening of proximity switches Ø 18 mm and Ø 20 mm in profile constructions and linear guides

ASSEMBLY

- On profile groove with fastening kit from supply schedule

PROXIMITY SWITCH HOLDER 30

part no. 28.0122/0

**TECHN. DATA / ITEMS SUPPLIED**

- Hard plastic, black
- Ø 30 mm
- Ø 34 mm
- Fastening kit
- Weight 0,060 kg

APPLICATIONS

- Fastening of proximity switches Ø 30 mm and Ø 34 mm in profile constructions and linear guides

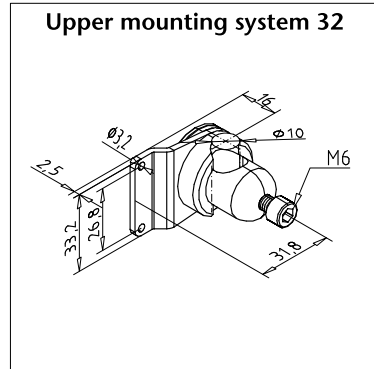
ASSEMBLY

- On profile groove with fastening kit from supply schedule

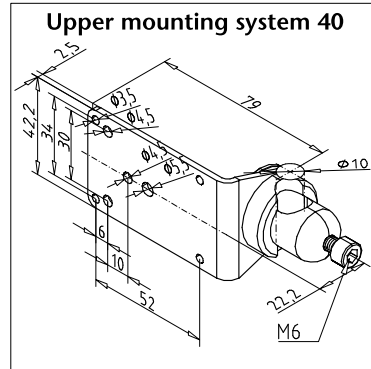
SENSOR HOLDERS

ALL LATERAL HOLDERS CAN BE COMBINED WITH ALL CARRIERS

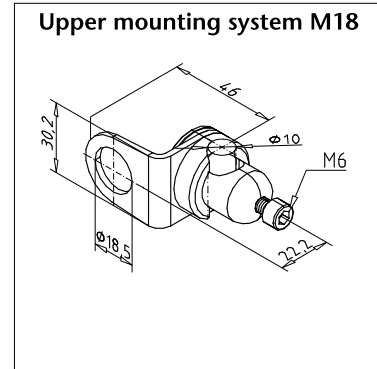
Carriers



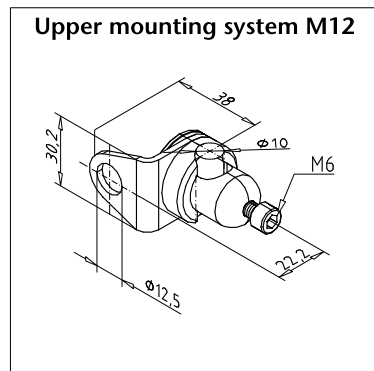
part no. E1.0055/0



part no. E1.0070/0

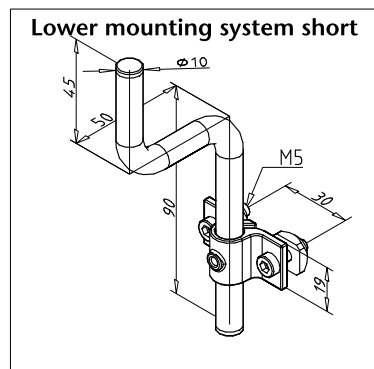


part no. E1.0068/0

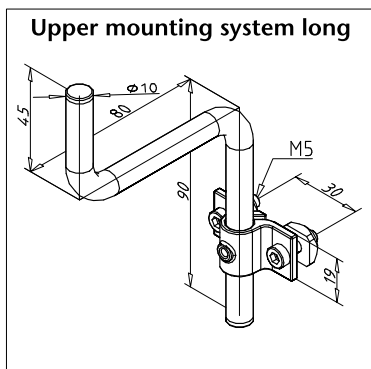


part no. E1.0069/0

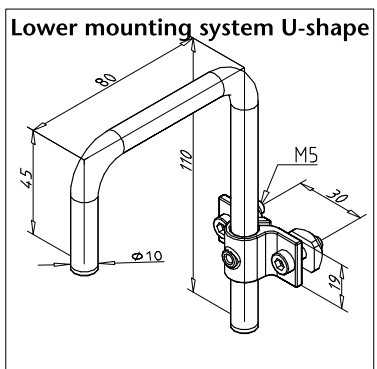
Lateral holders



part no. 29.5046/2



part no. 29.5047/2



part no. 29.5048/2

DRIVE AND CONTROL TECHNOLOGY

ELECTRICAL DESIGN, SWITCH CABINET MANUFACTURING, SOFTWARE DEVELOPMENT AND VISUALIZATION

Solutions and services from a single source

Comprehensive solutions ranging from problem analysis to commissioning are applied effectively and help to reduce resources. We not only provide approved components for plant construction and automation technology – together with our experienced team of professionals we also design and implement individual master plans for material flow and assembly techniques.

All solutions are based on our flexible modular system consisting of profiles, linear guides and elements for ergonomic workplace design. These are complemented by components of pneumatic and control technology, conveyors, workpiece carrier transport systems and drives.

Electrical design

Basis of electrical engineering is hardware design. With our experience in all industry sectors and our long-term cooperation with efficient manufacturers, we are able to select the optimal configuration for each task.

We create the hardware plans using the latest CAD software E-Plan Electric P8. For each development an infor-



mative documentation is thereby generated.

We generally create the control concepts modular with distributed intelligence.

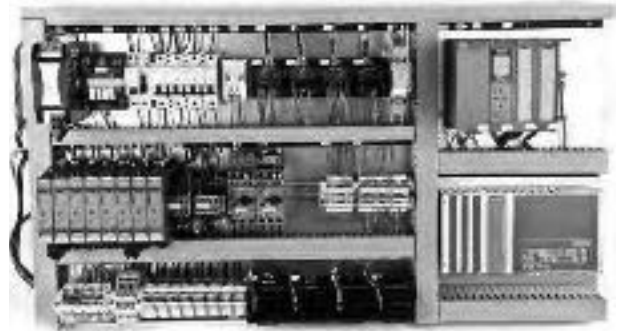
According to the requirements of our customers

and the job definition different bus systems such as Profinet or I / O link are used. The design of the drives is done by our specialists. Here, cost effectiveness and mechanics are considered. In our systems the latest servo technology with integrated safety functions is standard.

From these parts skilled professionals create modules which are then assembled into complete automation solutions for individual tasks.

Our objective is to find the best solution to every problem. Even during the planning phase our clients benefit from our extensive experience covering many branches of industry.

Our team provides comprehensive and professional follow-up from initial design to final implementation.



Switch cabinet manufacturing

Switch cabinets are equipped and wired as specified in electrical engineering design and after approval by our customers.

Intensive functional testing using the latest testing equipment guarantees quality and safe operation of our facilities.

Software development

The sequence programs of our systems are created for PLC or PC control. Programming is done with Simatic Step 7 and the TIA Portal to IEC standard. Manufacturer-independent CoDe-Sys programming is also possible.

The integration of our solutions into the customer's existing ERP can also be realized on request.



Visualization - safely operate and monitor

For safe operation of the plant the unique mapping of control processes is essential. With WinCC flexible we create user interfaces which not only visualize the process, but also visually indicate alarms or display easy to understand help texts for the operator. The operation and setting up of complex systems is made much easier with our mobile HMI panels. The visualization can be individually adjusted by different user levels.

.... Your partner for complete design:

- Consulting
- Planning
- Mechanical and electrical project planning
- Software development and visualization
- Commissioning
- CE compliant versions
- Documentation
- Service such as remote maintenance

MOTORS

SPURE WHEEL BACK-GEARED MOTOR [TYPEE CB, B5]

Technical Data

Flange version with recess for mounting on engine kit $\varnothing 20$ is still a motor flange for D120 part no. 29.5033/0 required.

- Nominal Voltage 230 / 400 V
- 50 Hz
- Protective system IP 44
- Weight 7 - 15 kg



Data given refer to the individual speeds; different levels for one type possible; data sheets upon request.
Can also be supplied with brake, heat detector or separate fan as an option; other equipment upon request.

TYPE	PART NO.	POWER [W]	MIN. OUTPUT SPEED (FOR OUTPUT TORQUE)	MAX. OUTPUT SPEED (FOR OUTPUT TORQUE)
DGM 120-00F	33.0050/1	120	23 U/min (50 Nm)	430 U/min (2,7 Nm)
DGM 120-0F	33.0060/1	120	17 U/min (68 Nm)	57 U/min (20 Nm)
DGM 180-00F	33.0051/1	180	28 U/min (62 Nm)	412 U/min (4,2 Nm)
DGM 180-0F	33.0061/1	180	16 U/min (106 Nm)	61 U/min (28 Nm)
DGM 250-00F	33.0052/1	250	38 U/min (62 Nm)	405 U/min (5,9 Nm)
DGM 250-0F	33.0062/1	250	23 U/min (105 Nm)	114 U/min (21 Nm)
DGM 370-00F	33.0053/1	370	75 U/min (47 Nm)	430 U/min (8,2 Nm)
DGM 370-0F	33.0063/1	370	36 U/min (99 Nm)	360 U/min (9,8 Nm)

PLUG-ON MOTOR FOR CONVEYOR BELT SERIES 45

Technical Data

- Nominal Voltage 230 / 400 V
- 50 Hz
- Protective system IP 44
- Weight approx. 6 kg



For mounting on a drum bearing 45 a torque arm WA part no. 29.5040/0 is required.

TYPE	PART NO.	POWER [W]	OUTPUTSPEED	OUTPUT TORQUE	CONVEYING SPEED
WA10 DT56 M4 - 17	33.0015/0	90	17 U/min	20 Nm	2,6 m/min
WA10 DT56 M4 - 22	33.0016/0	90	22 U/min	18 Nm	3,4 m/min
WA10 DT56 M4 - 33	33.0017/0	90	33 U/min	15 Nm	5,1 m/min
WA10 DT56 L4 - 67	33.0018/0	120	67 U/min	13 Nm	10,5 m/min
WA10 DT56 L4 - 79	33.0019/0	120	79 U/min	11 Nm	12,4 m/min
WA10 DT56 L4 - 127	33.0020/0	120	127 U/min	7,7 Nm	19,9 m/min
WA10 DT56 L4 - 159	33.0021/0	120	159 U/min	6,3 Nm	24,9 m/min

PLUG-ON MOTOR FOR CONVEYOR BELT SERIES 90*

Technical Data

- Nominal Voltage 230 / 400 V
- 50 Hz
- Protective system IP 44
- Weight approx. 7 – 13 kg



For mounting on a drum bearing 90 a torque arm is required.

Torque arm WA20 (part no. 29.5036/0) or torque arm WA30 (part no. 29.5037/0)

TYPE	PART NO.	POWER [W]	OUTPUTSPEED	OUTPUT TORQUE	CONVEYING SPEED	TORQUE SUPPORT
DSGM 180-60	33.0080/0	180	15 U/min	48 Nm	4.3 m/min	WA20
DSGM 250-48	33.0081/0	250	27 U/min	44 Nm	7.6 m/min	WA20
DSGM 370-39	33.0082/0	370	35 U/min	63 Nm	10 m/min	WA30
DSGM 370-27	33.0083/0	370	50 U/min	49 Nm	14.1 m/min	WA30
DSGM 370-19	33.0084/0	370	71 U/min	38 Nm	20 m/min	WA30
DSGM 550-24	33.0085/0	550	115 U/min	32 Nm	32.5 m/min	WA20

* other performances and conversions on request

FREQUENCY TRANSFORMER FU 370 PP

PART NO. 33.0126/0

Technical Data

- Built-in on / off switch
- Mode 1Q (without brake - Chopper)
- Powernet overvoltage and undervoltage monitoring
- motor load monitoring
- Short-circuit monitoring phase / phase, phase / earth
- Adjustable acceleration and deceleration ramp
- Adjustable voltage boost at low output frequency
- Power cord with safety plug 230 V and motor cable, ELPUR, 5m long orange safety plug, color
- EMC filter, Class B
- IP 66 / NEMA 4X enclosure
- Equipped with a control unit, which allows operating the drives without additional devices by default.
- Output power motor side max. Motor power 0.37 kW
- Rated output current max. 2.3 A
- Output voltage 3 x 0...230 V
- 150% overload for 60 seconds
- Input voltage powergrid side rated voltage 230V
- Input current 6.7 A
- Frequency 50 - 60 Hz
- General data Ambient temperature -10 ° C to + 40 ° C
- Heat loss at rated power 11 W
- Dimensions H / W / D: 232 x 161 x 179 mm



MAGNETIC MEASURING SYSTEM

MAGNETIC MEASURING SYSTEM ML

Length and stroke measurement is a standard task in machine and plant construction. A modern and economical solution is the ML magnetic length measurement system with magnetic tape, magnetic sensor, measurement display, or evaluation electronics. The advantages of this system are primarily the direct measurement procedure, being wear-resistant, the simple and economical installation, and the high precision that is possible. The core of this measurement system is the magnetic tape: a flexible, plastic band filled with magnetic particles. Using this tape, a magnetic sensor is moved along and the magnetic fields is probed at regular intervals without making contact. The direction of motion and increments are derived from these scanning signals and processed further in a control system or displayed via the measurement display.

LCD meter display with battery operation incl. Magnetic sensor (part no. 33.0038/0)

- 6-digit LCD display with 14mm character height
- Surface mount housing, aluminum powder coated RAL 5010
- Dimensions W = 125mm, H = 65mm, depth = 85mm.
- Power Battery C (R14, 1.5V)
- Battery compartment on right side
- With mounted magnetic sensor (cable length 0.5m) for fitting to stop slide over Bracket
- Operating temperature -5 to to +45 ° C
- Speed max. 3m / sec, counting frequency to 1MHz
- Actual value memory / offset value, selectable
- Absolute - Incremental - Conversion
- Measuring tolerance ± 0.1 mm / m



Measuring display for 230V connection part no. 33.0036/0

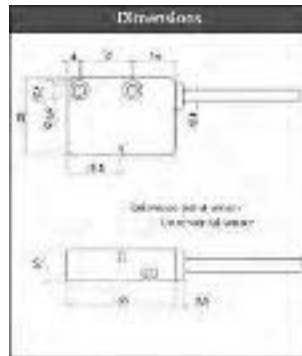
- 6-digit LCD display with 14mm character height
- Surface mount housing, aluminum powder coated RAL 5010
- Dimensions W = 1115mm, H = 70, depth = 120mm.
- Power supply 230V AC plug.
- 9-pin Sub-D sensor connection via plug-in, TTL 5VDC
- Operating temperature -5 to to +45 ° C
- Speed max. 3m / sec, counting frequency to 1MHz
- Actual value memory / offset value, selectable
- Magnetic Sensor part no. 33.0037/0
Please order separately specifying the desired cable length



MAGNETIC MEASURING SYSTEM


Magnetic sensor with integrated processor
part no. 33.0037/0

- Non-contact measuring scanning unit with integrated digital evaluation
- Detecting the magnetic signals, with index pulse, resolution 10 microns
- In connection with the above-depicted meter
- Suitable for MiniTec profiles, connecting cable integrated (2 m) and D-sub connector (larger cable lengths on request up to 20 m).


Magnetic tape part no. 33.0028/0
Techn. data / Items supplied

- Magnetic tape for installation on MiniTec profile surface, length max. 80 m, width 10 mm
- (optional: 5 mm tape width for sticking into the profile groove)

Application

- For all MiniTec linear guides with rails made from profiles
- Length measuring devices
- Material feeding

Assembly

- Stick magnetic tape on profile surface
- Attach sensor on slide
- Distance to the magnetic tape: 1.1 ± 0.9 mm

Please indicate desired measuring length
(round up to full meters).



PNEUMATIC SYSTEM

The profiles can be used as an air guide and are also visually appealing and economical. The MiniTec standard profiles are particularly well suited for compressed air supply.

Commercially available connectors can be used without special connection components.

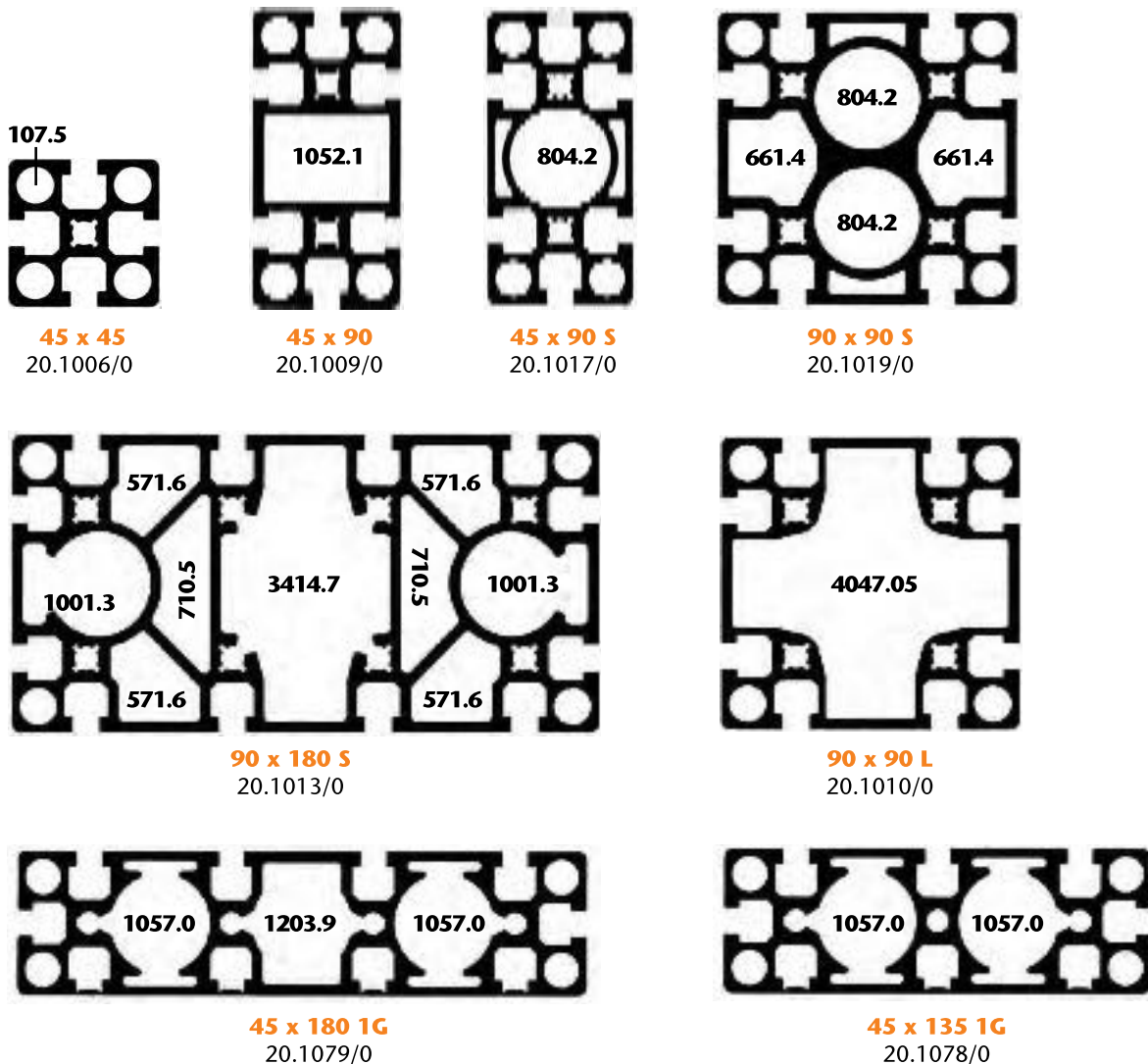
All standard pneumatic elements with thread G 1/8" und G 1/4" can be used with all standard MiniTec profiles. Fixing is possible at any desired point.

The standard profile 45 x 45 provides 4 pipes; in the larger profiles 4 pipes and 1 air chamber are included. Parts are required for faceconnection.

The Ø 11.7 mm bore in the standard profiles can be re-bored to G 1/4" for fastening standard screw connectitons. Max. pressure: for round chambers 20 bar; for others: 8 bar.

Usable air pipings

All dimensions in mm²



PNEUMATIC SYSTEM

PNEUMATIC CONNECTION PLATE 45
 PNEUMATIC CONNECTION PLATE 45 X 90
 PNEUMATIC CONNECTION PLATE 90



THREAD	WEIGHT	PART NO.
G 1/8"	0.170 kg	24.1107/0
G 1/4"	0.168 kg	24.1107/2
G 3/8"	0.165 kg	24.1107/3

PNEUMATIC CONNECTION PLATE 45

Technical Data/Items supplied

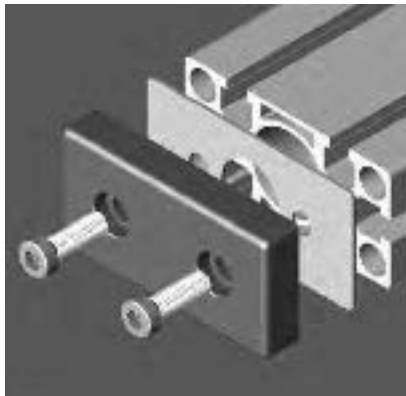
- Aluminium pressure die casting, powder-coated, grey
- One O-ring
- Fastening kit

Applications

- Lateral connection of pneumatic connections at profiles 45 x 90 and 90 x 90

Assembly

- Fasten on to profile grooves with fastening kit
- Drill \varnothing 12 mm hole in the profile center.



THREAD	WEIGHT	PART NO.
G 1/8"	0.181 kg	24.1105/0
G 1/4"	0.178 kg	24.1105/2
G 3/8"	0.174 kg	24.1105/3

PNEUMATIC CONNECTION PLATE 45 X 90

Technical Data/Items supplied

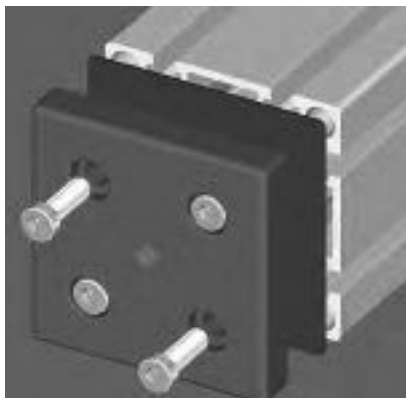
- Aluminium pressure die casting, powder-coated, grey
- Sealing plate
- Fastening kit

Applications

- Closing of chambers of profiles 45 x 90 for connection of pneumatic couplings

Assembly

- Insert sealing plate
- Fasten on to 2 central bores \varnothing 7.5 mm with fastening kit



THREAD	WEIGHT	PART NO.
G 1/8"	0.434 kg	24.1106/0
G 1/4"	0.429 kg	24.1106/2
G 3/8"	0.421 kg	24.1106/3

PNEUMATIC CONNECTION PLATE 90

Technical Data/Items supplied

- Aluminium pressure die casting, powder-coated, grey
- Sealing plate
- Fastening kit

Applications

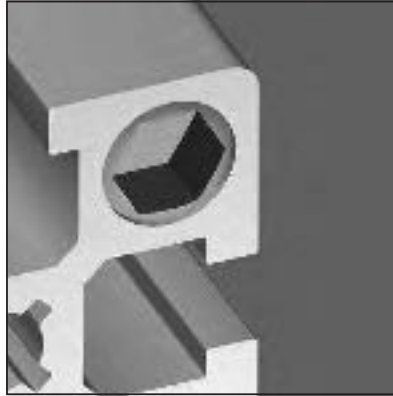
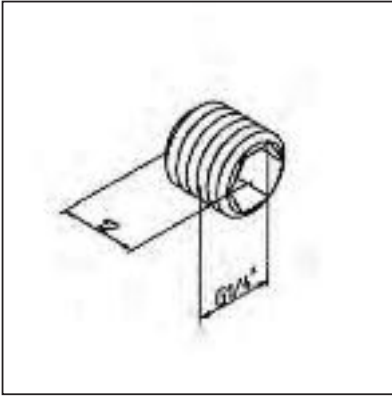
- Closing of chambers of profiles 90 x 90 for connection of pneumatic couplings

Assembly

- Insert sealing plate
- Fasten on to 4 central bores \varnothing 7.5 mm with fastening kit

PLUG

part no. 24.1104/0



TECHN. DATA / ITEMS SUPPLIED

- Brass	
- Weight	0,006 kg

APPLICATIONS

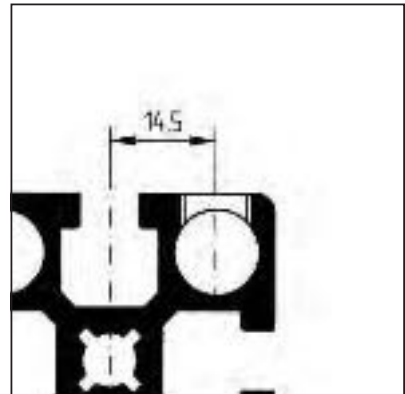
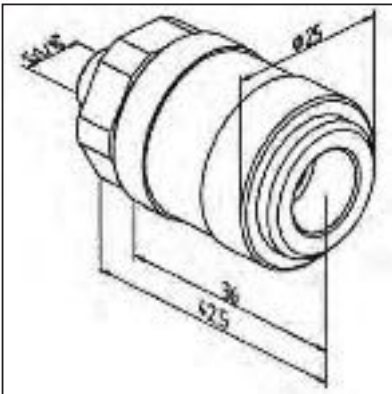
- Closure for profile chambers Ø 11,7 mm

ASSEMBLY

- Thread the round profile chambers Ø 11,7 mm to G 1/4 "
- Screw in the plug by using sealing tape

QUICK COUPLING 1/8

part no. 24.1109/0



TECHN. DATA / ITEMS SUPPLIED

- Brass, nickel plated, NW 7	
- Connection G 1/8", A/F 22	
- Weight	0,064 kg

APPLICATIONS

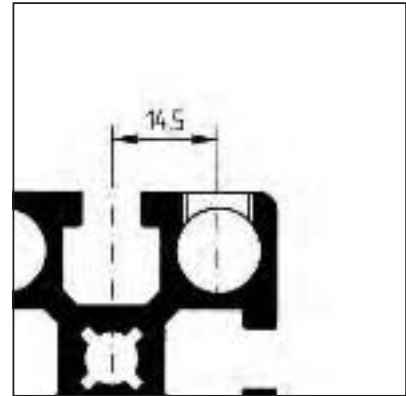
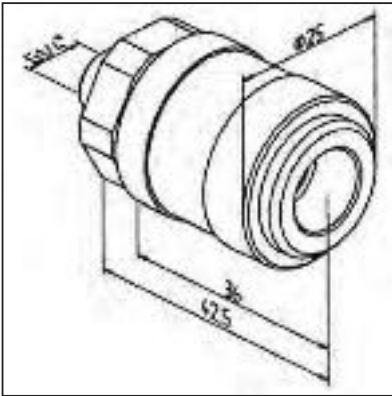
- Pressed air connection at any desired point on profile surface or faces, Ø 11,7 mm

ASSEMBLY

- Bore thread G 1/8" in profile surface; distance from center of profile groove: 14,5 mm

QUICK COUPLING 1/4

part no. 24.1110/0

**TECHN. DATA / ITEMS SUPPLIED**

- Brass, nickel plated, NW 7
- Connection G 1/4", A/F 22
- Weight 0,065 kg

APPLICATIONS

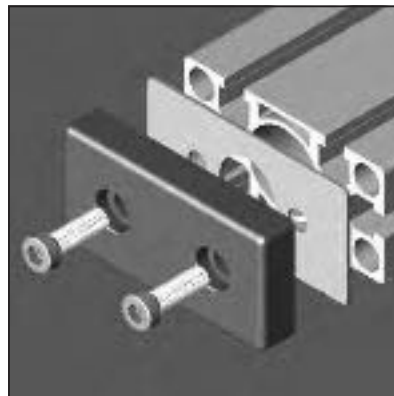
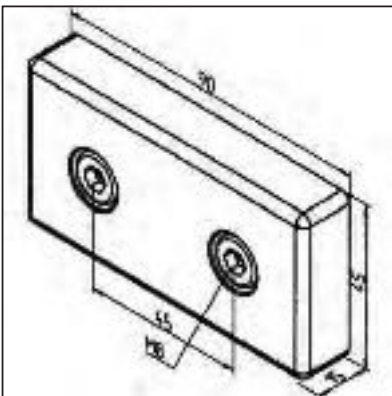
- Pressed air connection at any desired point on profile surface or faces, \varnothing 11,7 mm

ASSEMBLY

- Bore thread G 1/4" in profile surface; distance from center of profile groove: 14,5 mm

PNEUMATIC END PLATE 45 X 90

part no. 24.1105/7

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium GD, powder coated, grey
- Sealing plate
- Fastening kit
- Weight 0,181 kg

APPLICATIONS

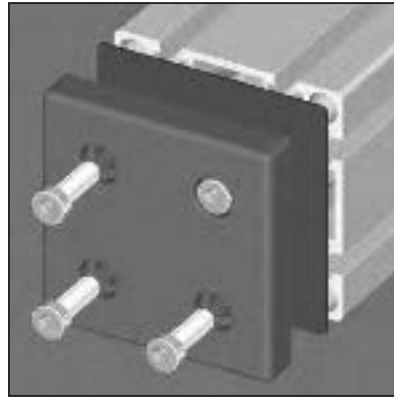
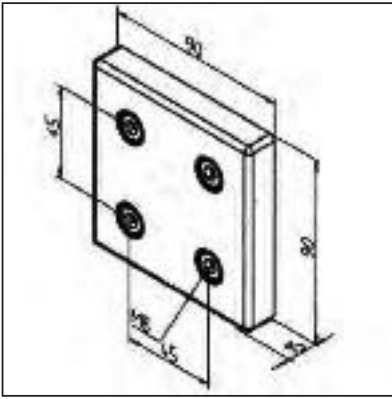
- Closing of chamber ends of profiles 45 x 90

ASSEMBLY

- Insert sealing plate
- Attachment on 2 central bores \varnothing 7,5 with fastening kit

PNEUMATIC END PLATE 90 X 90

part no. 24.1106/7



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Sealing plate
- Fastening kit
- Weight 0,434 kg

APPLICATIONS

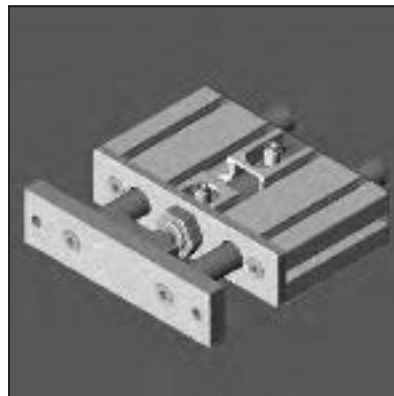
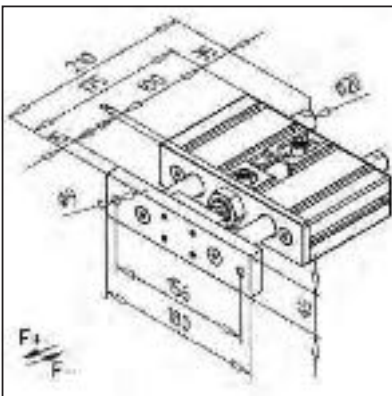
- Closing of chambers of profiles 90 x 90 for connection of pneumatic couplings

ASSEMBLY

- Insert sealing plate
- Attachment on 4 central bores $\varnothing 7,5$ with fastening kit from supply schedule

PNEUMATIC LIFTING UNIT 15

part no. 24.1201/0



TECHN. DATA / ITEMS SUPPLIED

- Incorporated into profile 45 x 180
- Overall cylinder size $\varnothing 25$ mm
- Guide shafts $\varnothing 20$ mm
- F+ with 6 bar = 256 N
- F- with 6 bar = 220 N
- Stroke = 15 mm
- Completely assembled with dual acting cylinder
- Weight 3,405 kg

APPLICATIONS

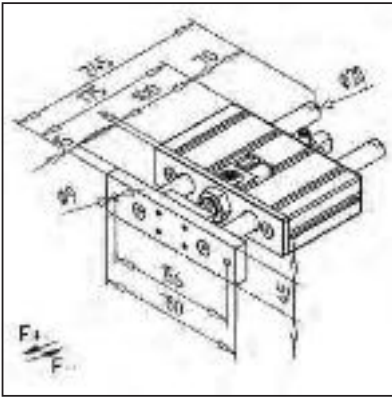
- Lifting and lowering of loads
- Attachment for gripper loc. Cit.
- Positioning of parts

ASSEMBLY

- With mounting angle on profile construction
- Other stroke lengths on request

PNEUMATIC LIFTING UNIT 50

part no. 24.1205/0



TECHN. DATA / ITEMS SUPPLIED

- Incorporated into profile 45 x 180	
- Cylinder Ø 25 mm	
- Guide shafts Ø 20 mm	
- F+ with 6 bar =	265 N
- F- with 6 bar =	220 N
- Stroke =	50 mm
- Completely assembled with dual acting cylinder	
- Weight	3,45 kg

APPLICATIONS

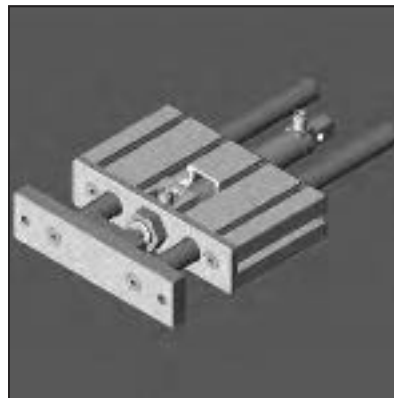
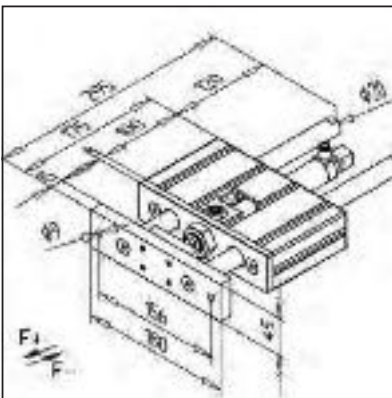
- Lifting and lowering of loads
- Attachment for gripper loc. Cit.
- Positioning of parts

ASSEMBLY

- With mounting angle on profile construction
- Other stroke lengths on request

PNEUMATIC LIFTING UNIT 100

part no. 24.1210/0



TECHN. DATA / ITEMS SUPPLIED

- Incorporated into profile 45 x 180	
- Cylinder Ø 25 mm	
- Guide shafts Ø 20 mm	
- F+ with 6 bar =	265 N
- F- with 6 bar =	220 N
- Stroke =	100 mm
- Completely assembled with dual acting cylinder	
- Weight	3,52 kg

APPLICATIONS

- Lifting and lowering of loads
- Attachment for gripper loc. Cit.
- Positioning of parts

ASSEMBLY

- With mounting angle on profile construction
- Other stroke lengths on request

HYDRAULIC SYSTEM

Technical Data/Items supplied

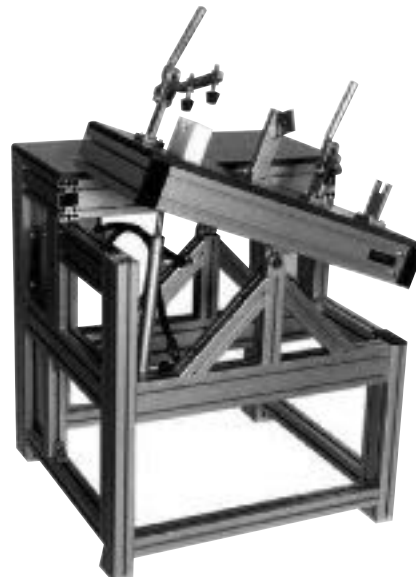
- Hydraulic hand pump for 1 to 6 cylinders
- Cylinders with 150 - 500 mm stroke
- Hydraulic tubes PA 4 mm
- Single-acting cylinders
- Minimum load for return ~ 5 kg
- Temperature from -20°C to + 45°C

Application

- Lifting and lowering of tables, work benches, terminals etc.

Assembly

- Screw pump at desired position onto the profile groove with screws M6
- Fasten cylinder into aluminium profile "S" with adaptor rings
- Attach cylinder onto profile groove with adaptor plate



Available special models and accessories

- Attachment parts for pumps and add-on cylinders according to customer request
- Attachment set 45 for add-in cylinder **part no. 27.0005/0** for all profiles with bore \varnothing 32 except for profile 90 x 90 S and 90 x 180 S. For these, please use attachment set 90, **part no. 27.0006/0**
- Service kit with oil, screw connections, special spanner, hose cutter, and filling injector

Use great caution when working on the hydraulics. To avoid penetration of air into the hydraulic system, we recommend having this work performed by us.



HYDRAULIC SYSTEM

COMPLETE SYSTEM WITH ADD-ON CYLINDER LA
COMPLETE SYSTEM WITH ADD-IN CYLINDER LB

Complete system with add-on cylinder LA – manually

PUMP	PA	PA	PB	PB	PB	PB
SYSTEM LOAD	150 kg	300 kg	350 kg			
NUMBER OF CYLINDERS	1	2	3	4	5	6
LA 150 MAN.	27.0118/1	27.0118/2	27.0118/3	27.0118/4	27.0118/5	27.0118/6
LA 200 MAN.	27.0122/1	27.0122/2	27.0122/3	27.0122/4	27.0122/5	27.0122/6
LA 300 MAN.	27.0126/1	27.0126/2	27.0126/3	27.0126/4	27.0126/5	27.0126/6
LA 400 MAN.	27.0130/1	27.0130/2	27.0130/3	27.0130/4	27.0130/5	27.0130/6
LA 500 MAN.	27.0134/1	27.0134/2	27.0134/3	27.0134/4	27.0134/5	27.0134/6

Complete system with add-on cylinder LA – electrically

LA 150 ELECTR.	27.0119/1	27.0119/2	27.0119/3	27.0119/4	27.0119/5	27.0119/6
LA 200 ELECTR.	27.0123/1	27.0123/2	27.0123/3	27.0123/4	27.0123/5	27.0123/6
LA 300 ELECTR.	27.0127/1	27.0127/2	27.0127/3	27.0127/4	27.0127/5	27.0127/6
LA 400 ELECTR.	27.0131/1	27.0131/2	27.0131/3	27.0131/4	27.0131/5	27.0131/6
LA 500 ELECTR.	27.0135/1	27.0135/2	27.0135/3	27.0135/4	27.0135/5	27.0135/6



Complete system with add-in cylinder LB – manually

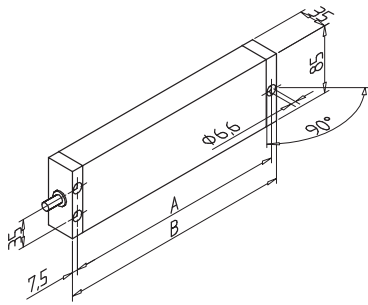
PUMP	PA	PA	PB	PB	PB	PB
SYSTEM LOAD	150 kg	300 kg	350 kg			
NUMBER OF CYLINDERS	1	2	3	4	5	6
LB 150 MAN.	27.0120/1	27.0120/2	27.0120/3	27.0120/4	27.0120/5	27.0120/6
LB 200 MAN.	27.0124/1	27.0124/2	27.0124/3	27.0124/4	27.0124/5	27.0124/6
LB 300 MAN.	27.0128/1	27.0128/2	27.0128/3	27.0128/4	27.0128/5	27.0128/6
LB 400 MAN.	27.0132/1	27.0132/2	27.0132/3	27.0132/4	27.0132/5	27.0132/6
LB 500 MAN.	27.0136/1	27.0136/2	27.0136/3	27.0136/4	27.0136/5	27.0136/6

Complete system with add-in cylinder LB – electrically

LB 150 ELECTR.	27.0121/1	27.0121/2	27.0121/3	27.0121/4	27.0121/5	27.0121/6
LB 200 ELECTR.	27.0125/1	27.0125/2	27.0125/3	27.0125/4	27.0125/5	27.0125/6
LB 300 ELECTR.	27.0129/1	27.0129/2	27.0129/3	27.0129/4	27.0129/5	27.0129/6
LB 400 ELECTR.	27.0133/1	27.0133/2	27.0133/3	27.0133/4	27.0133/5	27.0133/6
LB 500 ELECTR.	27.0137/1	27.0137/2	27.0137/3	27.0137/4	27.0137/5	27.0137/6

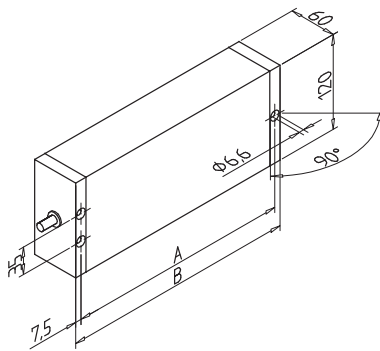
HYDRAULIC SYSTEM

HYDRAULIC PUMPS PA FOR 1-2 CYLINDER
 HYDRAULIC PUMPS PB FOR 3-6 CYLINDER
 ADD-ON CYLINDER LA



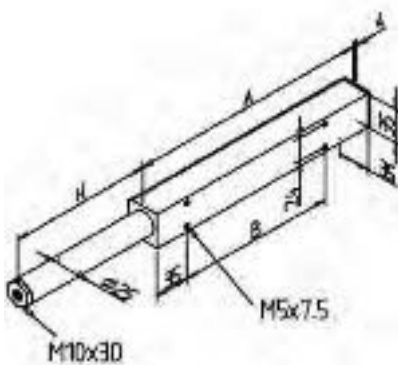
Hydraulic pumps PA for 1-2 Cylinder

TYPE	Stroke H mm	Dimension A mm	Dimension B mm
PA 150	150	283,5	298,5
PA 200	200	343,5	358,5
PA 300	300	465,5	480,5
PA 400	400	585,5	600,5
PA 500	500	707,5	722,5



Hydraulic pumps PB for 3-6 Cylinder

TYPE	Stroke H mm	Dimension A mm	Dimension B mm
PB 150	150	283,5	298,5
PB 200	200	343,5	358,5
PB 300	300	465,5	480,5
PB 400	400	585,5	600,5
PB 500	500	707,5	722,5



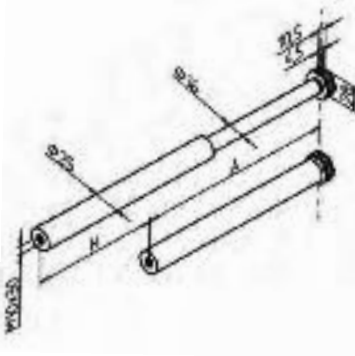
Add-on Cylinder LA

TYPE	Stroke H mm	Length A mm	Length B mm	lateral load kg max.
LA 150	150	252	165	130
LA 200	200	317	240	97
LA 300	300	442	340	65
LA 400	400	542	340	48
LA 500	500	667	450	29

For mounting on a variety of structures by means of adapter plates.

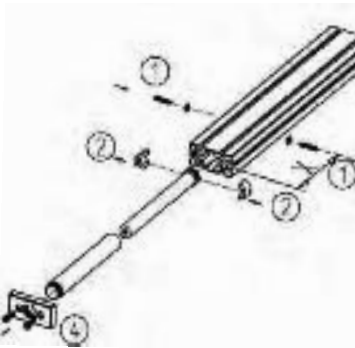
HYDRAULIC SYSTEM

ADD-IN CYLINDER LB
 ATTACHMENT SET 45 FOR ADD-IN CYLINDER
 ATTACHMENT SET 90 FOR ADD-IN CYLINDER



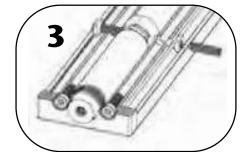
Add-on Cylinder LB

TYPE	Stroke H mm	Length A mm	lateral load kg max.
LB 150	150	235	130
LB 200	200	300	97
LB 300	300	425	65
LB 400	400	525	48
LB 500	500	650	29



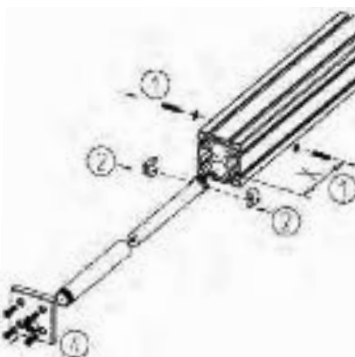
Attachment set 45 for add-in cylinder (part no. 27.0005/0)

Suitable for all stroke lengths and profile 45 x 90 S, 45 x 135 G and 45 x 180 G



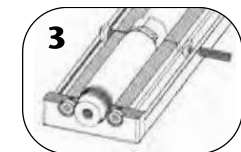
Installation

- 1) Bore \varnothing 8,5 mm in distance "X" from profile end
- 2) Place two holder pieces on cylinder and insert into the profile bore \varnothing 32 mm
- 3) Position holder pieces according to dimension table (below) and drill, fix with set screw
- 4) Screw guide pipe into connection plate, insert into profile and tighten



Attachment set 90 for add-in cylinder (part no. 27.0006/0)

Suitable for all stroke lengths and for profile 90 x 90 S and 90 x 180



Installation

- 1) Bore \varnothing 8,5 mm in distance "X" from profile end
- 2) Place two holder pieces on cylinder and insert into the profile bore \varnothing 32 mm
- 3) Position holder pieces according to dimension table (below) and drill, fix with set screw
- 4) Screw guide pipe into connection plate, insert into profile and tighten

Table of Dimensions for Attachment Set 45 and 90

CYLINDER	LB 150	LB 200	LB 300	LB 400	LB 500
DISTANCE X (mm)	224	289	414	514	639

2



260 2.1 LINEAR MODULE LMS 90



265 2.2 LINEAR MODULE LMZ 90



267 2.3.1 LINEAR SYSTEM LR MODULES



283 2.3.2 LINEAR SYSTEM LR COMPONENTS



322 2.4 MINI-ADJUSTING-UNITS



326 2.5 ADJUSTMENT UNITS



330 2.6 SLIDES



337 2.7.1 LINEAR SYSTEM LB MODULES

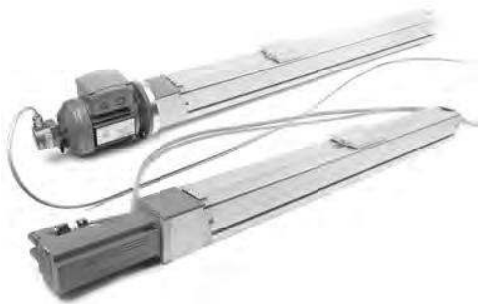


339 2.7.2 LINEAR SYSTEM LB COMPONENTS

LINEAR SYSTEM

LINEARMODUL LMS 90

The linear module LMS 90 is designed for applications requiring precision and durability with minimal installation space. It is constructed for a stroke up to 2845 mm. The guide with the standard grid dimension 90 x 90 mm of our modular system is based on highly accurate rail systems which are integrated into a profile system. The high performance linear rail guides are built to perform 10000 km.



GUIDE OPTIONS

- High performance linear rail guides, with permanent lubrication, service performance 10,000 km (Version S1 and S2).
- Plastic slide ways for very economical applications (Version G)

TECHNICAL SPECIFICATION

- Compact carrier profile 90x90 with standard profile grooves, compatible with all MiniTec construction profiles
- Completely closed module, guide groove covered with VA steel strip
- Guides and spindle easily accessible due to removable cover profiles
- Special grooves for internal or external attachment of position detection sensors
- Easy mounting of external switches on lateral profile grooves



SPINDELE OPTIONS

- **K** Ball screw, tolerance class T7, right-hand thread, maximum axial clearance max. 0.04 mm, repeatability 52 µm/300 mm
- **T** Trapezoidal thread spindle 16x4, optionally pre-loaded with increased accuracy

For all units, the spindle nuts are designed with relubrication.

- Slides made of aluminium, precision machined all over, prepared for attachments with 4 connection threads M8 with 45 mm spacing
- Stroke max 2845 mm
- 2 bearing units with precision ball bearings, lifetime lubricated, prepared for motor attachment with Ø 10 mm pins
- Optional version with keyway or adapter plate, machined according to motor specification

TECHNICAL DATA

TYPE	SPINDLE	DL. SIGN.	NO. OF LINEAR SLIDES	PART NO.	MAX. MOVEMENT SPEED	SLIDE LENGTH WL	MAX. STROKE
LMS 90	T 16x4	G	4	28.1001/0	0.03 m/s	135 mm	1845 mm
LMS 90	K 16x5	S1	2	28.1000/0	0.25 m/s	90 mm	2845 mm
LMS 90	K 16x10	S1	2	28.1000/1	0.5 m/s	90 mm	2845 mm
LMS 90	K 16x16	S1	2	28.1000/2	0.8 m/s	90 mm	2845 mm
LMS 90	K 16x5	S2	4	28.1002/0	0.25 m/s	135 mm	2800 mm
LMS 90	K 16x10	S2	4	28.1002/1	0.5 m/s	135 mm	2800 mm
LMS 90	K 16x16	S2	4	28.1002/2	0.8 m/s	135 mm	2800 mm

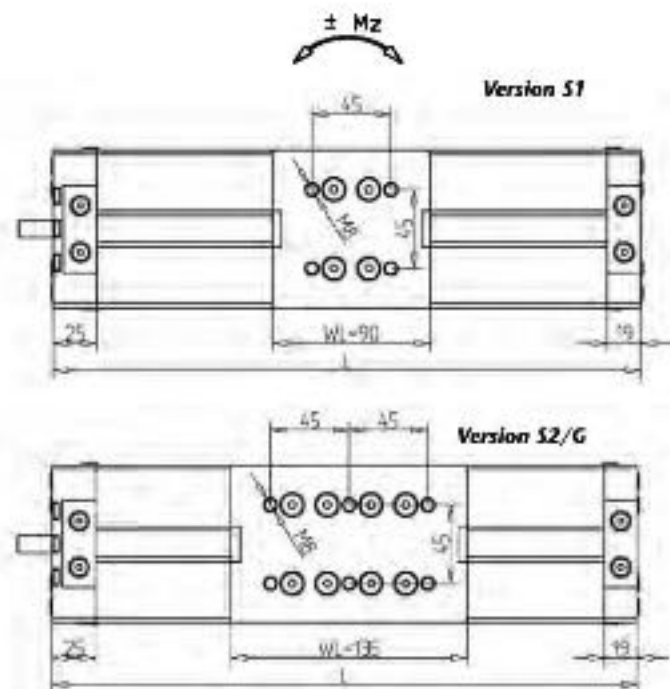
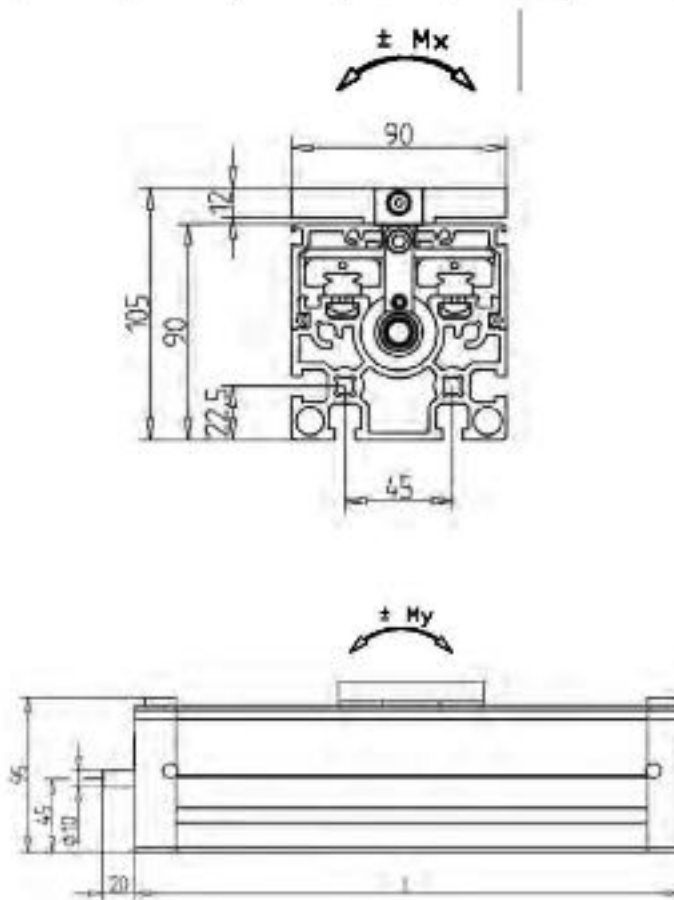
TYPE	LOAD RATING N		ALLOWABLE STATIC TORQUE (Nm)		
	Cdyn	Cstat	Mx	My	Mz
S1	7620	11180	54	54	54
S2	15240	22360	108	108	108
G	2800	2800	22	22	22

SPINDLE

- T** Trapezoidal thread spindle
- K** Ball screw

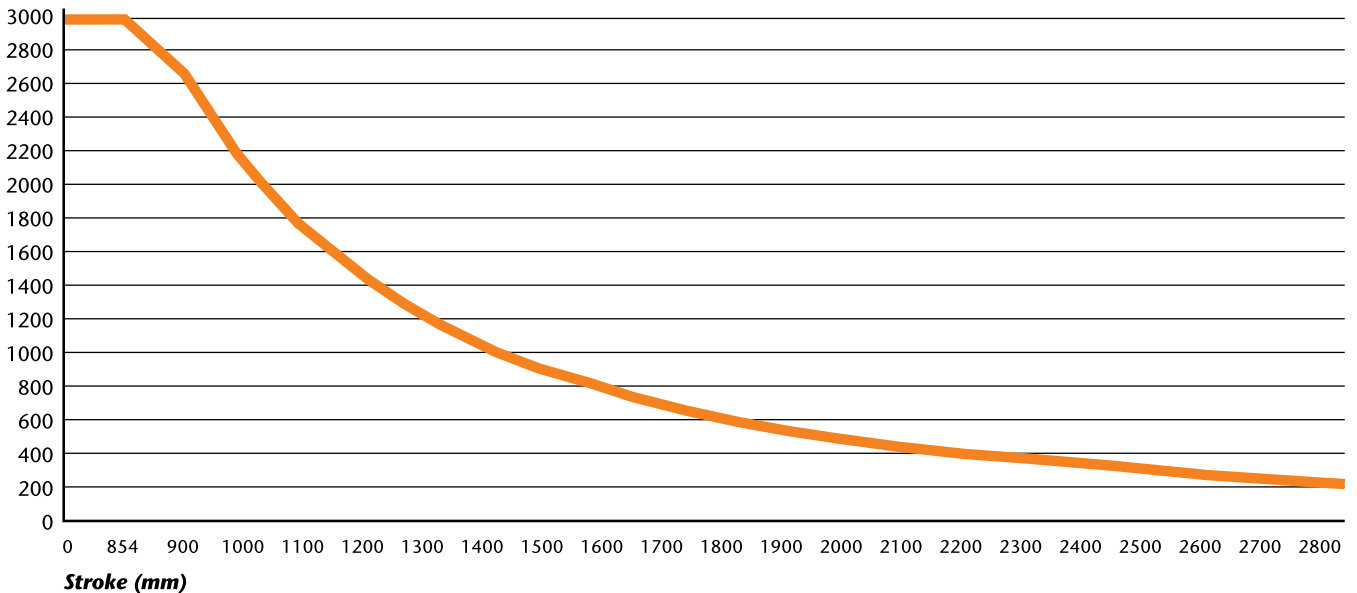
GUIDE

- G** 2 slide ways each with 2 linearguides, size 15
- S** 2 rail guide each with 1 linearguides, size 15
- S2** 2 rail guide each with 2 linearguides, size 15



TECHNICAL DATA

MAXIMUM ROTATION SPEED, STROKE DEPENDENT

Rotation speed (rpm)

On request, the unit can also be equipped with an internal spindle support. Corresponding to the stroke the rotation speed can thereby be considerably increased.

ORDER ADVICE

Please indicate part no. and stroke length required – or total length L.

(xx.xxxx/x + stroke length (H) or total length L)

Calculation of the maximum rotation speed ($n_{\max.}$):

$$n_{\max.} = \frac{1.963 \times 10^9}{(H-45)^2}$$

L Total length (L) = stroke length (H) + slide length (WL) + 50 mm

H Stroke length

wl Slide length

For further information or product support, please call our service team on +49 (0)6373 8127-0 | info@minitec.de

MOTOR KITS & DRIVE PACKAGES

MOTOR KITS FOR LMS 90

MOTOR KIT LMS 90 DRM

(part no. 28.1040/0)

Motor adaptor kit LMS for three-phase asynchronous motor (for drive unit package with three-phase asynchronous motor; part no. 33.1010/0 or 33.1020/0)

Scope of supply

- Clutch housing made of profile
incl. adapter plate
- Clutch
- Fastening kit

**MOTOR KIT LMS 90 SERVO**

(part no. 28.1041/0)

Motor adaptor kit LMS for servo motor (for drive unit package with synchronous servo motor; part no. 33.1030/0)

Scope of supply

- Clutch housing made of profile
incl. adapter plate
- Clutch
- Fastening kit

**OPTIONS**

- Special designed adapter plates and clutches 4m for special motor

DRIVE PACKAGE FOR LMS 90

DRIVE PACKAGE LMS 90 DRM-POSI

(part no. 33.1020/0)

Three-phase asynchronous motor without transmitter feedback with frequency converter for standard positioning by switch

Scope of supply

- Three-phase asynchronous motor 0.18kW; 1320 1/min, 50Hz, equipped with temperature sensor
- Motor cable, length 5 m
- Transmitter cable, length 5 m
- Drive unit converter MDX61B for table positioning by IO, installation in switch box by customer
- 2 pcs. inductive proximity switches for T-slots for end position of axis (switch NC)
- 1 pc. inductive proximity switch for T-slots for end position of axis (switch NO)
- Motor adaptor kit LMS 90 DRM (part no. 28.1040/0)

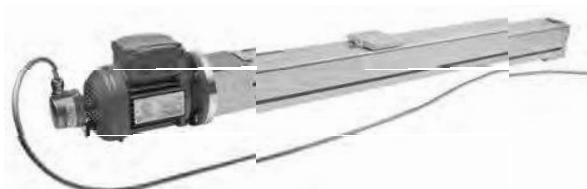
DRIVE PACKAGE LMS 90 DRM-ECO

(part no. 33.1010/0)

Three-phase asynchronous motor without transmitter feedback with frequency converter for standard positioning by switch

Scope of supply

- Three-phase asynchronous motor 0.18kW; 1320 1/min, 50Hz, equipped with temperature sensor
- Motor cable, length 5 m
- Drive unit converter MC07B, actuation by IO, installation in switch box by customer
- 2 pcs. inductive proximity switches for T-slots for end position of axis (switch NC)
- 1 pc. inductive proximity switch for T-slots for end position of axis (switch NO)
- Motor adaptor kit LMS 90 DRM (part no. 28.1040/0)



MOTOR KITS & DRIVE PACKAGES

DRIVE PACKAGE LMS 90 SERVO

(part no. 33.1030/0)

Synchronous motor with drive unit converter for dynamical applications for table positioning

Scope of supply

- Synchronous servo motor with 2.4 Nm nominal torque, 3000 1/min, version with resolver and temperature sensor
- Motor cable, length 5 m
- Transmitter cable, length 5 m
- Drive unit converter MDX61B for table positioning by IO, installation in switch box by customer
- 2 pcs. inductive proximity switches for T-slots for end position of axis (switch NC)
- 1 pc. inductive proximity switch for T-slots for end position of axis (switch NO)
- Motor adaptor kit LMS 90 Servo (part no. 28.1041/0)

**Options**

- Motor with brake
- Motor with absolute value sensor
- PROFIBus / PPOFIsafe / PROFINET / Ethercat interface card for drive unit converter
- Additional sensors, e.g. for additional creep speed- / stop-positions

POSITIONING SYSTEMS – READY FOR CONNECTION

The new high performance module LMS 90 is also available as ready-to-install system with drive and control unit.

Suitable packages for each requirement are available – from the very economical design 'ECO' to the high performance design with servo drive. Commissioning and application programming will be done by MiniTec if required.

Thanks to the standardised profile geometry, all LMS axes can be combined among each other or even with all other linear modules from MiniTec.



LINEAR MODULE LMZ 90 WITH TIMING BELT (PART NO. 28.0400/0)

- Compact carrier profile with standard t-slots. Compatible to MiniTec construction profiles,
- Integrated rail size 20
- With two slides, covered by timing belt
- Permanent lubrication. Lubrication system for a service performance up to 10.000 km
- Aluminium slide (processed on all sides) with integrated timing belt tensioner and 6 connection threads M8.
- 2 deflection units with precision ball bearings, mounted on carrier profile by using MiniTec power-lock fastener, prepared for built-on motors with connection shaft \varnothing 17mm, with feather key. The adapter plate can be processed according to desired motor specifications.
- Infeed: 200 mm/rotation
- Max. allowable belt tractive force: 3.500 N
- Timing belt 25 AT 10, strengthened with steel wire. Mounted with preload.
- Max. stroke $X = 3.800$ mm
- Assembly of switches lateral on t-slots with standard components of the MiniTec Profile-System.
- Speed: max. 3m/s
- Basic weight: 5.200 g
- Weight/100mm stroke: 800g



LINEAR MODULE LMZ 90 WITH TIMING BELT (PART NO. 28.0400/0)

DELIVERABLE VERSIONS

- Module completely assembled with drive connection, but without drive
- Customised module completely assembled with gear and engine
- Customized module completely assembled with gear, engine and control system

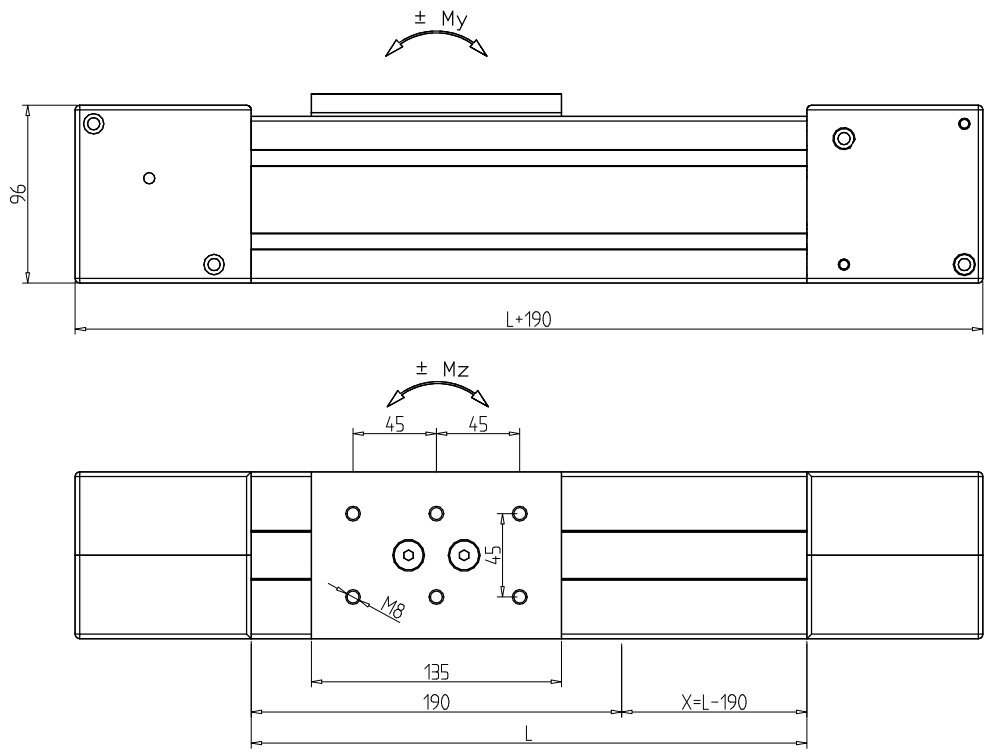
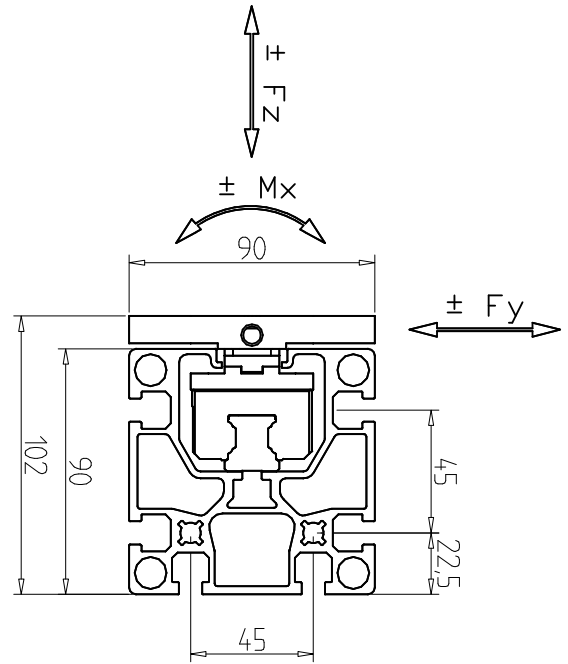
APPLICATION

- Pick-and-Place
- Robotic palletizer
- Measuring systems
- Feedings
- Handling systems

OPERATING CONDITIONS

Please consider that the max. allowable deflection of 3.5 mm / 4000 mm for cantilever assemblies. To guarantee high stability, we recommend to support the module every 300 to 600mm (particularly for modules with a high dynamic load).

LOAD RATING N		ALLOWABLE STATIC TORQUE		
Cdyn	Cstat	Mx	My	Mz
18800	24400	128	240	128



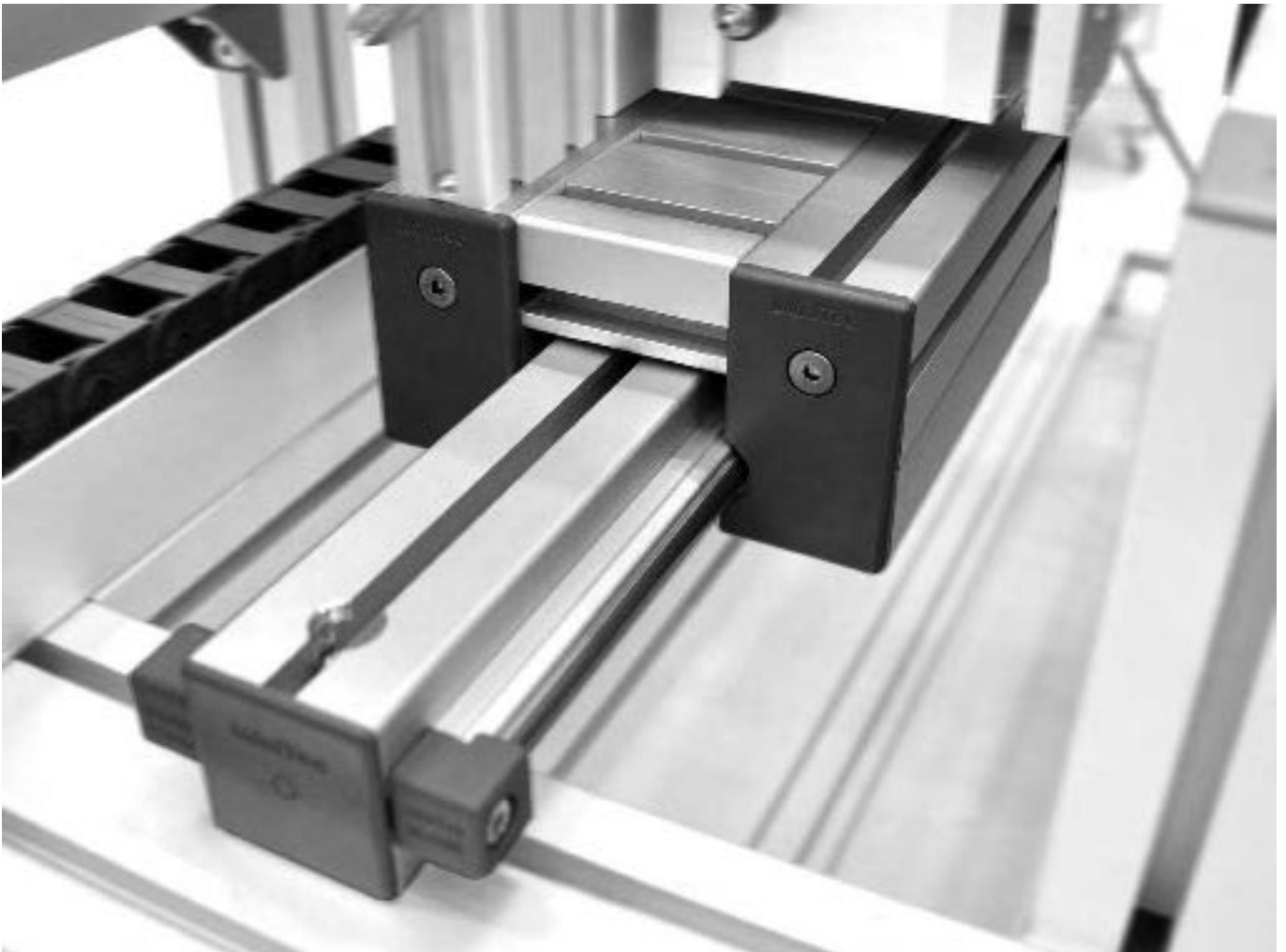
READY FOR USE MODULS – LINEAR SYSTEM LR

The following pages show you our pre-finished LR modules. To place an order, please define the stroke and total length required.

The linear system LR is based on double-row angular contact bearings made of bearing steel, hardened and ground precision shafts 1.1214 (Cf 53). Any required stroke length can be implemented. The slides are equipped with double-row roller bearings with gothic arch outer grooves. For very high loads multiple bearings are attached with steel-T-Slot bars directly to the slideplate giving the construction great rigidity. No special bearing profiles are required for the assembly. The clearance between bearings and shafts can be adjusted by eccentric bushings.

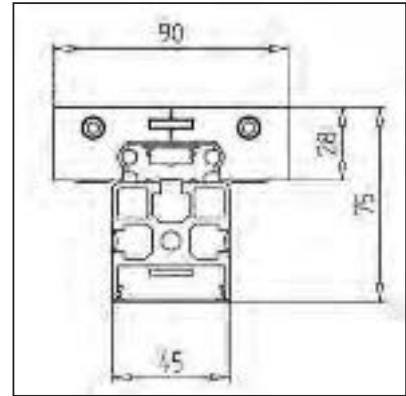
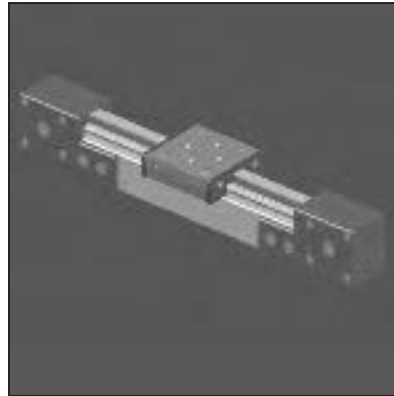
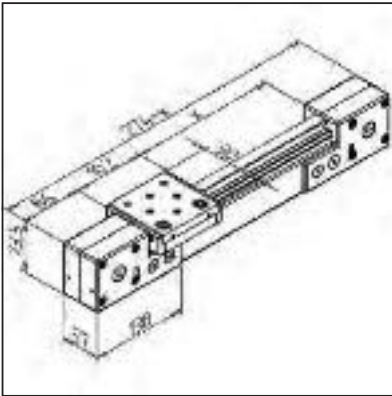
Both closed and open-frame slides with any desired length or width can be fabricated. Linear modul LR 6 X/Y-tables are easily constructed by the attachment of 4 bearings on to the top of the slide. The guide rails for this configuration are made from profile 45 x 32. End caps LR and cover profile AL also fit the Y-axis.

The slides are completely covered, lubrication felts are fitted in the endcaps which clean and grease the shafts. For maintenance purposes the felts can be exchanged quickly and easily without tools. This advantage is important for applications in rough working conditions



MODULE LR 6 Z 45

part no. 28.0500/0



TECHN. DATA / ITEMS SUPPLIED

- Linear-guide, ready for use assembled from:
- 1x Rail LR 6 with precision-steel-shafts \varnothing , 6mm, h6, with profile 45 x 45 R
- 1x Slide LW 6 Z with timing belt fastener
- 2x timing- belt reverse units
- 1x timing belt 16 AT 5, steel-reinforced
- Weight (without profile) 2,25 kg
- Weight/100 mm stroke 0,322 kg
- Please specify travel "X" and bore of timing belt reverse unit (\varnothing 11 mm/ \varnothing 14 mm/None)
- Please specify travel "X" and bore of timing belt reverse unit (\varnothing 11 mm/ \varnothing 14 mm/None)

APPLICATIONS

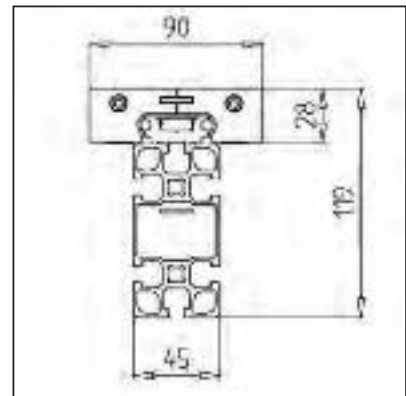
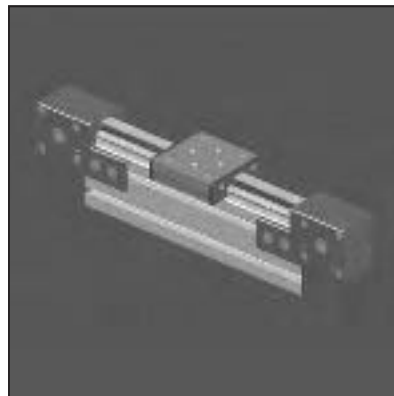
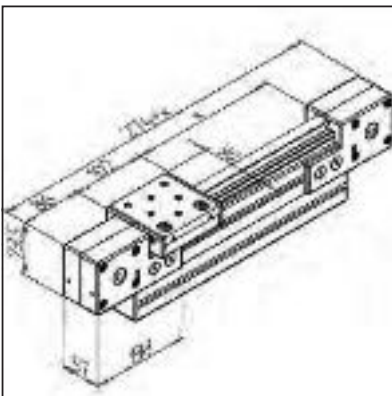
- MiniTec linear guide systems LR 6
- Material-handling
- Measuring devices
- Doors

ASSEMBLY

- Timing-belt tensioners integrated in reverse-units

MODULE LR 6 Z 90

part no. 28.0501/0



TECHN. DATA / ITEMS SUPPLIED

- Linear-guide, ready for use assembled from:
- 1x Rail LR 6 with precision-steel-shafts \varnothing , 6mm, h6, with profile 45 x 45 R
- 1x Slide LW 6 Z with timing belt fastener
- 2x timing- belt reverse units
- 1x timing belt 16 AT 5, steel-reinforced
- Basis weight (without profile) 2,25 kg
- Weight/100 mm stroke 0,453 kg
- Please specify travel "X" and bore of timing belt reverse unit (\varnothing 11 mm/ \varnothing 14 mm/None)
- Please specify travel "X" and bore of timing belt reverse unit (\varnothing 11 mm/ \varnothing 14 mm/None)

APPLICATIONS

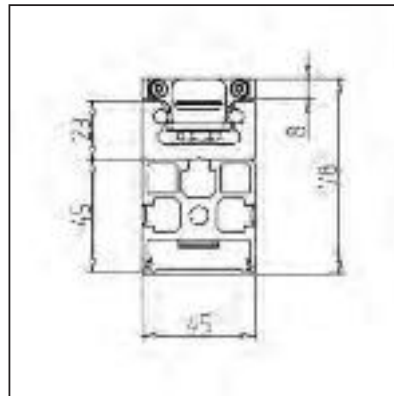
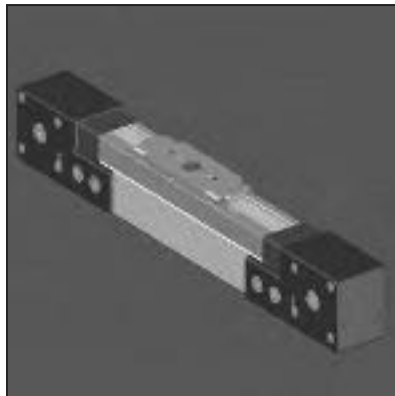
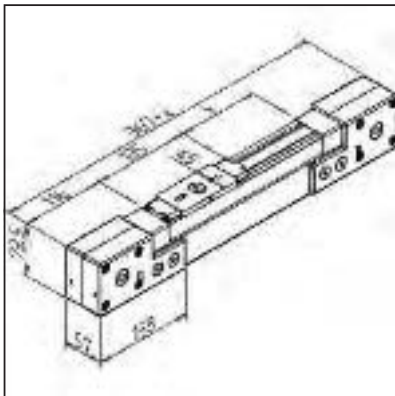
- MiniTec linear guide systems LR 6
- Material-handling
- Measuring devices
- Precise guidance of doors or large drawers

ASSEMBLY

- Timing-belt tensioners integrated in reverse-units

MODULE LR 6 Z COMPACT - 45

part no. 28.0503/0



TECHN. DATA / ITEMS SUPPLIED

- Linear guide, ready for use, consisting of:
- 1x Rail LR 6 with precision-steel-shafts, h6, Ø 6 mm, h6, with carrier profile 45 x 45 R, 1x slide LW 6 Z with timing belt fastener, 2x timing-belt pulleys, 1x timing belt 16 AT 5, steel-reinforced
- Weight 2,977 kg
- Weight/100 mm stroke 0,407 kg
- Please specify travel "X" and deviation
- Stainless version part no. 28.0503/1

APPLICATIONS

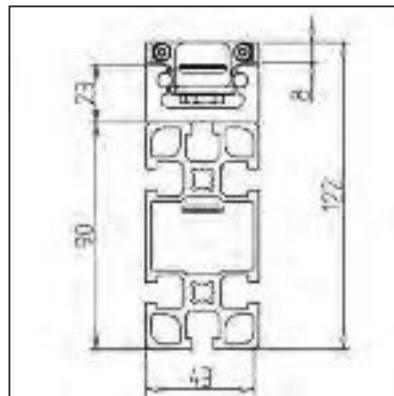
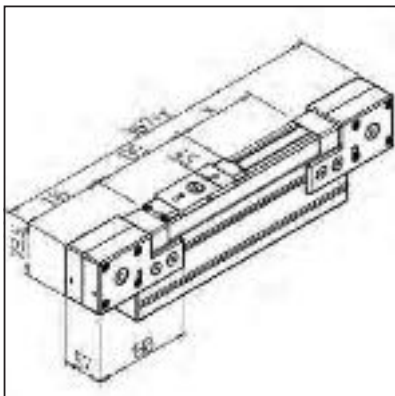
- Material-handling
- Measuring devices
- Adjustment devices

ASSEMBLY

- Timing-belt tensioners integrated in reverse-units

MODULE LR 6 Z COMPACT - 90

part no. 28.0504/0



TECHN. DATA / ITEMS SUPPLIED

- Linear guide, ready for use, consisting of:
- 1 Rail LR 6 with precision-steel-shafts, h6, Ø 6 mm, , with carrier profile 45 x 90, 1 slide LW 6 Z with timing belt pulleys, 2 timing-belt pulleys, 1 timing belt 16 AT 5, steel-reinforced
- Weight 3,305 kg
- Weight/100 mm stroke 0,547 kg
- Please specify travel "X" and deviation
- Stainless version part no. 28.0504/1

APPLICATIONS

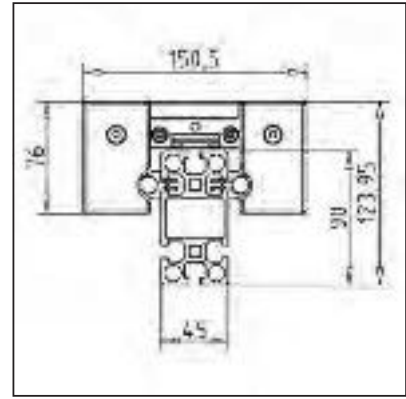
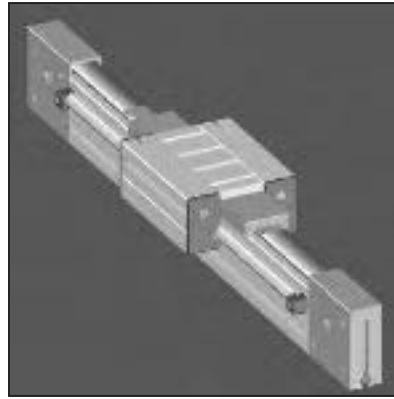
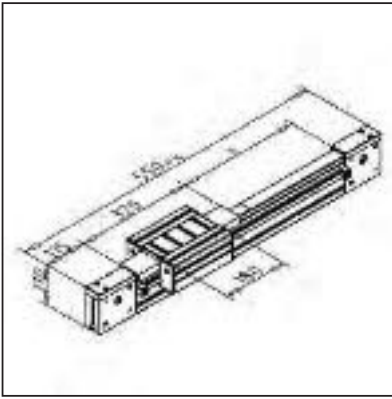
- Material-handling
- Measuring devices
- Adjustment devices

ASSEMBLY

- Timing-belt tensioners integrated in reverse-units

LINEAR GUIDE LR 12 - 45

part no. 28.0600/0



TECHN. DATA / ITEMS SUPPLIED

- Linear guide, ready for use, consisting of:
- 1x Rail 45 x 90 H with shaft retention device
- 2x timing-belt pulley T45
- 2x timing-belt tensioners
- 1x slide LW 45,
- 1x timing belt 32 AT 10

- Weight 7,37 kg

- Weight/100 mm stroke 0,656 kg

- Please specify travel "X" and deviation
- Stainless version part no. 28.0600/1

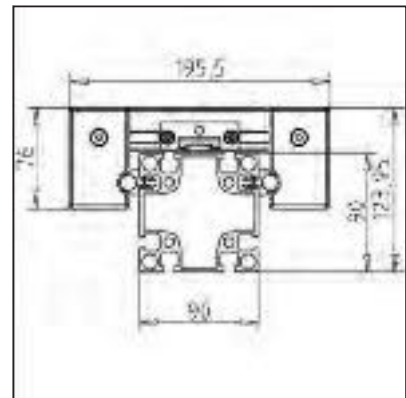
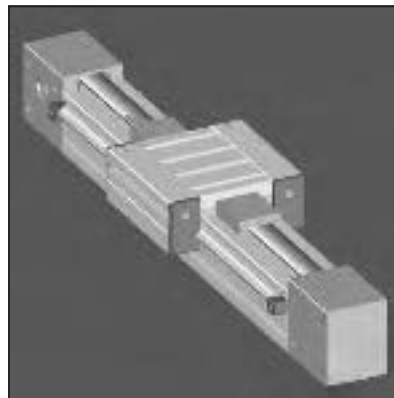
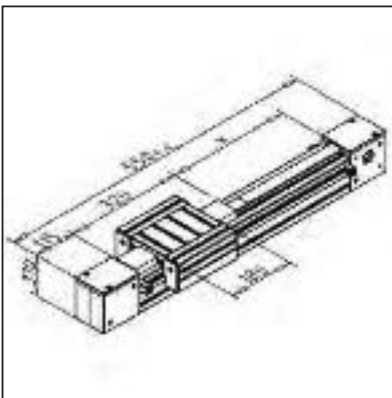
APPLICATIONS

- Material-handling
- Measuring devices
- Adjustment devices

ASSEMBLY

LINEAR GUIDE LR 12 - 90

part no. 28.0601/0



TECHN. DATA / ITEMS SUPPLIED

- Linear guide, ready for use, consisting of:
- 1x Rail LR 12 - 90 with shaft retention device
- 2x timing-belt pulley T90
- 2x timing-belt tensioners
- 1x slide LW 90,
- 1x timing belt 32 AT 10

- Weight 11,65 kg

- Weight/100 mm stroke 0,827 kg

- Please specify travel "X" and deviation
- Stainless version part no. 28.0601/1

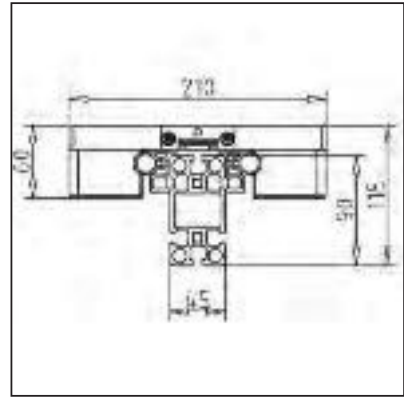
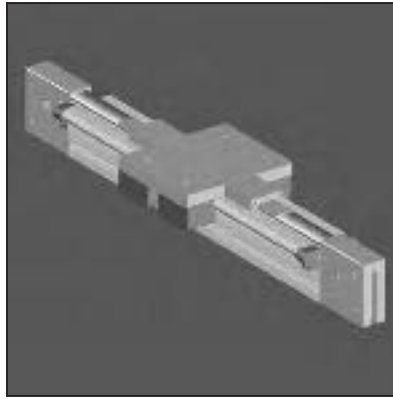
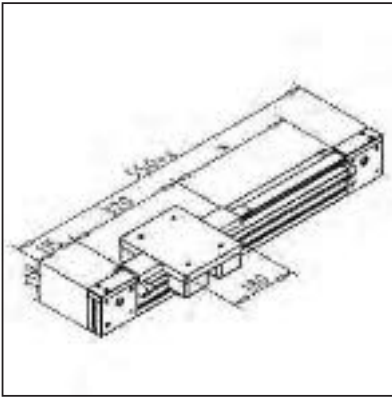
APPLICATIONS

- Material-handling
- Measuring devices
- Adjustment devices

ASSEMBLY

LINEAR GUIDE LR 16 - 45 X 90

part no. 28.0802/0



TECHN. DATA / ITEMS SUPPLIED

- Linear guide, ready for use, consisting of:
- 1x Rail LR 16 - 45 x 90 with shaft retention device
- 2x timing-belt pulley T90
- 2x timing-belt tensioners
- 1x slide LW 16-45,
- 1x timing belt 32 AT 10

- Weight 10,19 kg

- Weight/100 mm stroke 0,908 kg

- Please specify travel "X" and deviation

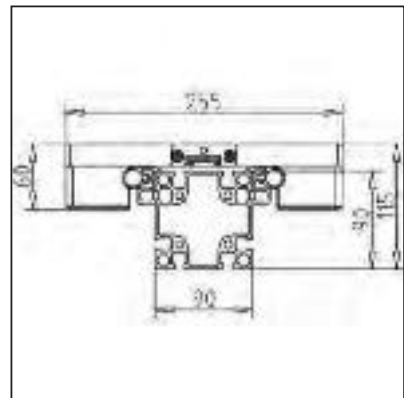
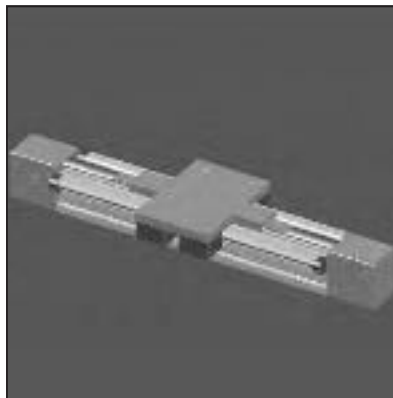
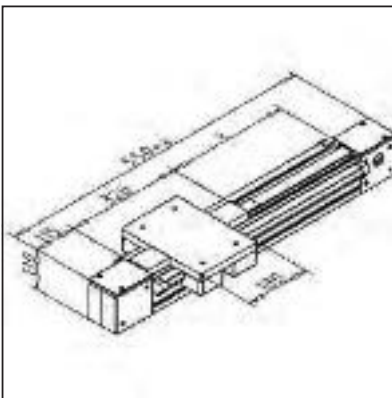
APPLICATIONS

- Material-handling
- Measuring devices
- Adjustment devices

ASSEMBLY

LINEAR GUIDE LR 16 - 90

part no. 28.0800/0



TECHN. DATA / ITEMS SUPPLIED

- Linear guide, ready for use, consisting of:
- 1x Rail LR 16 - 90 with shaft retention device
- 2x timing-belt pulley T90
- 2x timing-belt tensioners
- 1x slide LW 16-90,
- 1x timing belt 32 AT 10

- Weight 14,45 kg

- Weight/100 mm stroke 1,08 kg

- Please specify travel "X" and deviation

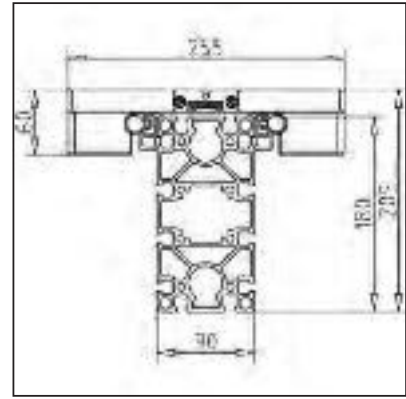
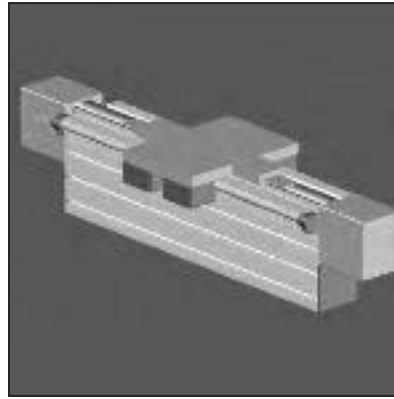
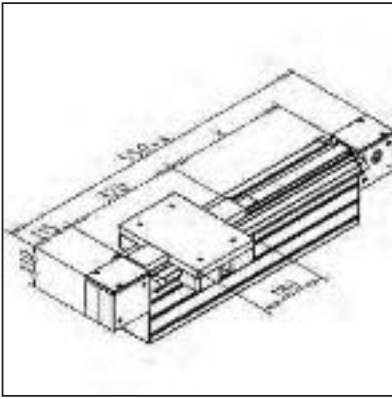
APPLICATIONS

- Material-handling
- Measuring devices
- Adjustment devices

ASSEMBLY

LINEAR GUIDE LR 16 - 90 X 180

part no. 28.0801/0



TECHN. DATA / ITEMS SUPPLIED

- Linear guide, ready for use, consisting of:
- 1x Rail LR 16 - 90 x 180 with shaft retention device
- 2x timing-belt pulley T90
- 2x timing-belt tensioners
- 1x slide LW 16-90,
- 1x timing belt 32 AT 10

- Weight 17,51 kg

- Weight/100 mm stroke 1,741 kg

- Please specify travel "X" and deviation

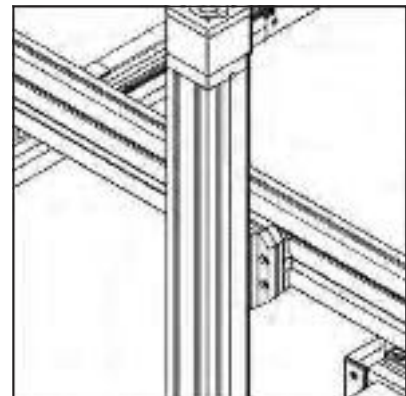
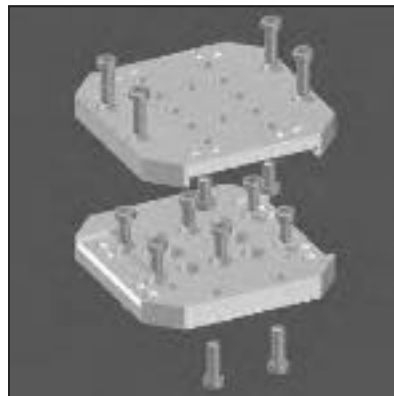
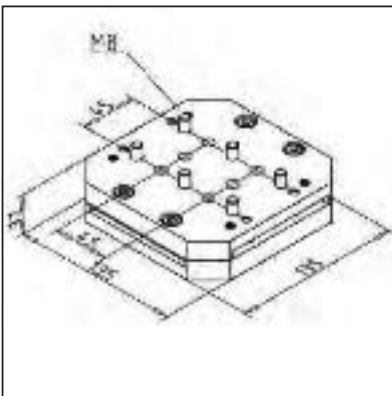
APPLICATIONS

- Material-handling
- Measuring devices
- Adjustment devices

ASSEMBLY

MOUNTING KIT 90 S-S

part no. 28.0264/0



TECHN. DATA / ITEMS SUPPLIED

- Adapter plate 90, aluminium, natural anodised

- Fastening kit

- Weight 1,487 kg

APPLICATIONS

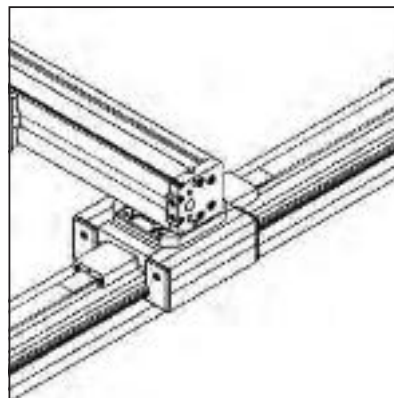
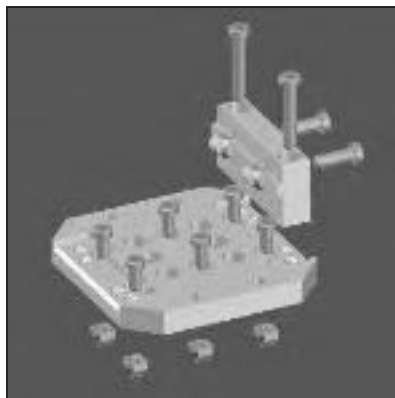
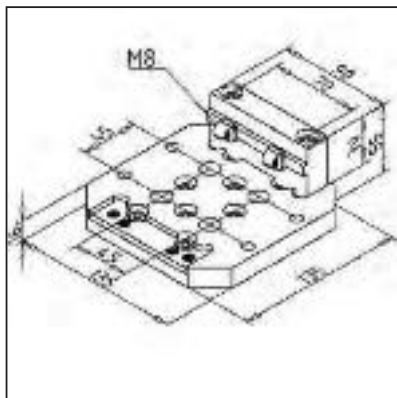
- For connection of 2 axes under 90°

ASSEMBLY

- Both plates mounted on slides to connect:
 - LMS with LMS / LMZ or
 - LMZ with LMZ / LMS or
 - LR12 with LMS / LMZ

MOUNTING KIT 90 S-A 90°

part no. 28.0173/0



TECHN. DATA / ITEMS SUPPLIED

- Adapter plate 90, aluminium, natural anodised
- Fastening kit
- Weight 1,039 kg

APPLICATIONS

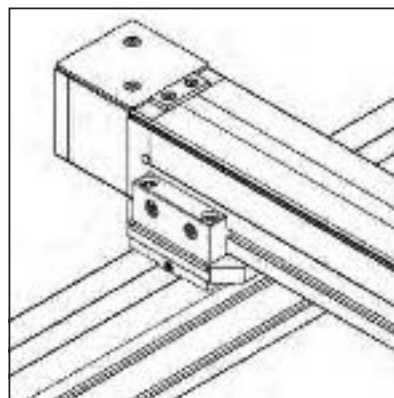
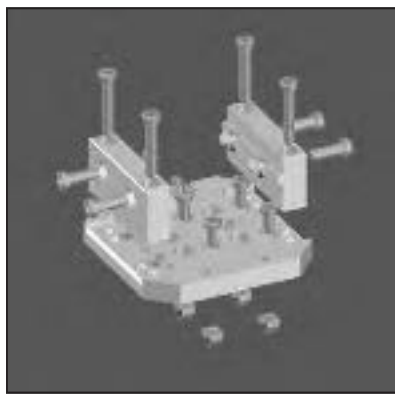
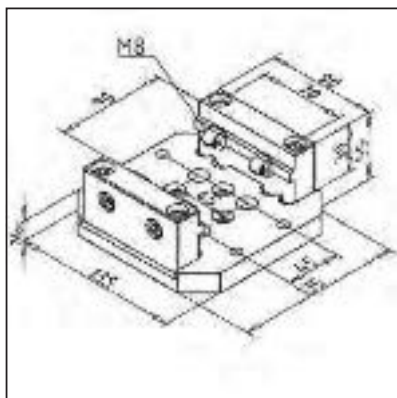
- For connection of 2 axes under 90°

ASSEMBLY

- Big plate is mounted on slide of:
 - LR6 or
 - LR6 compact or
 - LMS or
 - LMZ or
 - LR12 e.g. LW 45 / LW 90 or
 - slides of adjusting units
- Small plate is mounted on:
 - Carrier profile of the transverse axis

MOUNTING KIT 90 S-A 180°

part no. 28.0265/0



TECHN. DATA / ITEMS SUPPLIED

- Adapter plate 90, aluminium, natural anodised
- Fastening kit
- Weight 1,359 kg

APPLICATIONS

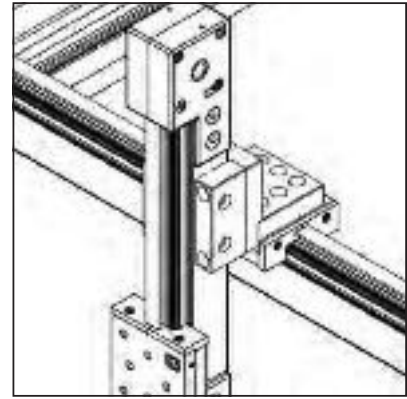
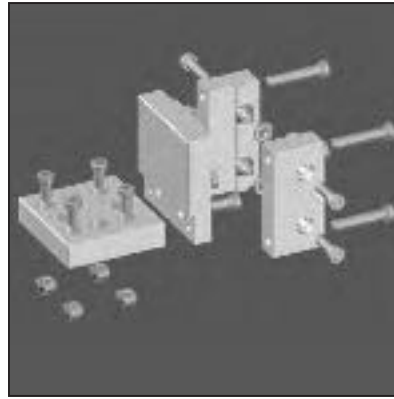
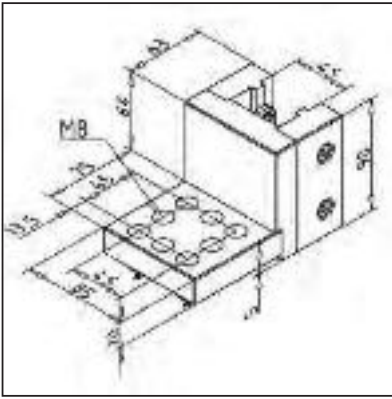
- For connection of 2 axes under 90°

ASSEMBLY

- Big plate is mounted on slide of:
 - LR6 or
 - LR6 compact or
 - LMS or
 - LMZ or
 - LR12 e.g. LW 45 / LW 90 or
 - slides of adjusting units
- Small plates are mounted on:
 - Carrier profile of the transverse axis

MOUNTING KIT 45 S-A 90°

part no. 28.0174/0



TECHN. DATA / ITEMS SUPPLIED

- Adapter plate 90, aluminium, natural anodised
- Fastening kit
- Weight 1,547 kg

APPLICATIONS

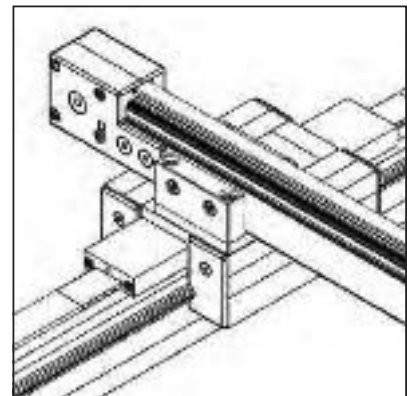
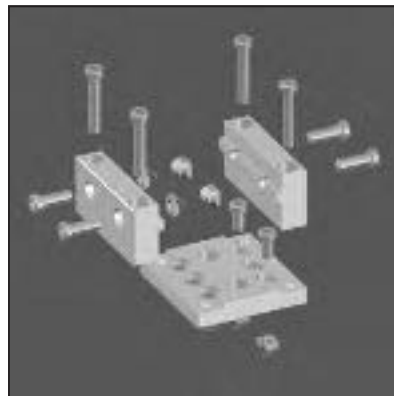
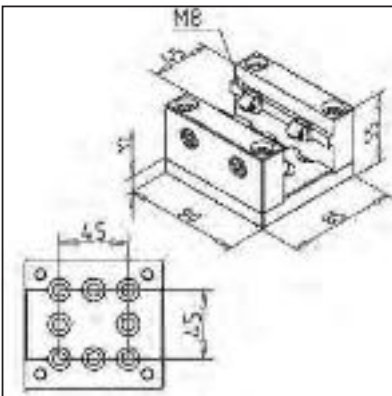
- For connection of 2 axes under 90°

ASSEMBLY

- Big plate is mounted on slide of:
 - LR6 or
 - LR6 compact
- Small plates are mounted on:
 - Carrier profile of the transverse axis

MOUNTING KIT 45 S-A 180°

part no. 28.0175/0



TECHN. DATA / ITEMS SUPPLIED

- Adapter plate 90, aluminium, natural anodised
- Fastening kit
- Weight 0,937 kg

APPLICATIONS

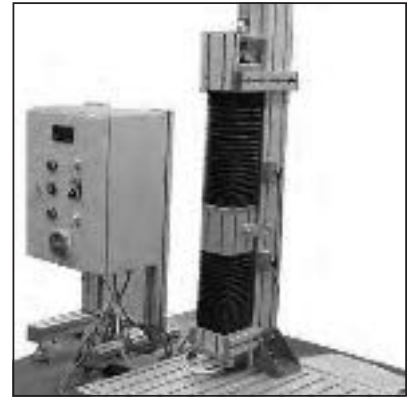
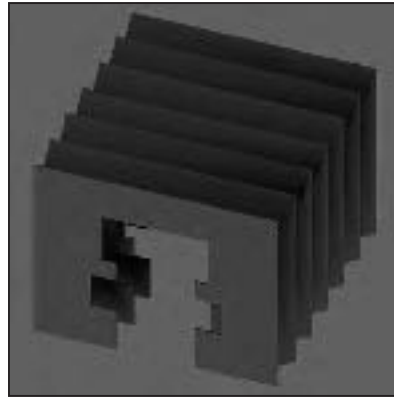
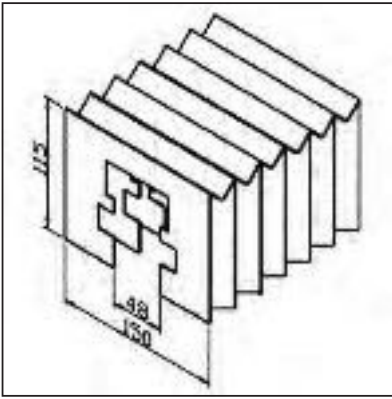
- For connection of 2 axes under 180°

ASSEMBLY

- Big plate is mounted on slide of:
 - LR6 or
 - LR6 compact or
 - LMS or
 - LMZ or
 - LR12 e.g. LW 45 / LW 90 or
 - slides of adjusting units
- Small plates are mounted on:
 - Carrier profile of the transverse axis

PROTECTIVE BELLOW LR 45

part no. 33.3007/0



TECHN. DATA / ITEMS SUPPLIED

- Plastic, black with plastic frame
- Without fastening kit
- Length when pushed together for 1 m travel: - 130 mm
- Weight 0,65 kg/m
- max. Length 6 m

APPLICATIONS

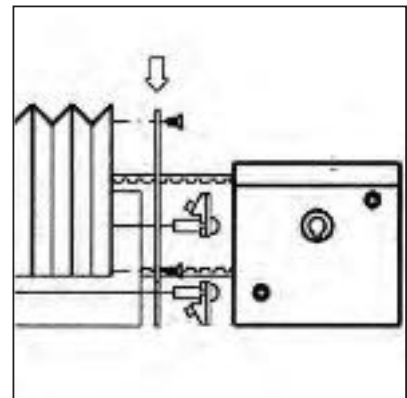
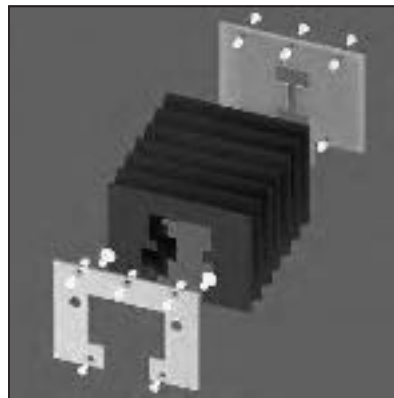
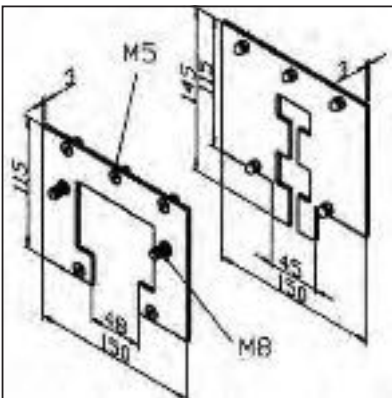
- Cover of MiniTec linear guides LR 45
- Rough working conditions, dust, chips

ASSEMBLY

- Push bellow onto rail
- Fix ends with fastening kit for protective bellow **part no. 33.3010/0**
- The travel length is reduced by approx. 22% when bellow is used
- Caution: Consider higher friction moment when dimensioning drive unit!

FASTENING KIT FOR PROTECTIVE BELLOW LR 45

part no. 33.3010/0



TECHN. DATA / ITEMS SUPPLIED

- 1 End frame slide
- 1 End frame pulley
- Fastening kit for frame and bellow

APPLICATIONS

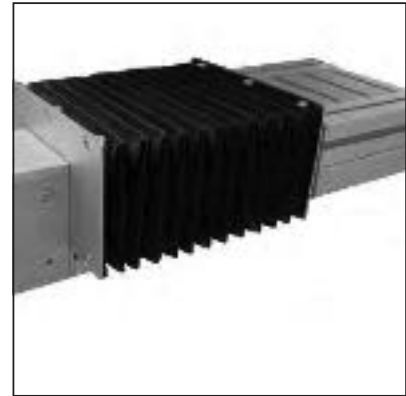
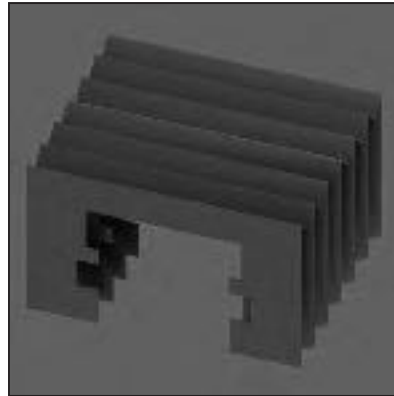
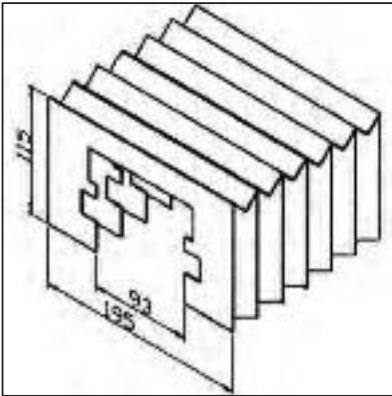
- Fastening of protective bellow LR 45 on slide LW 45
- Fastening of protective bellow LR 45 on timing belt pulley T 45

ASSEMBLY

- Fasten end frame on slide
- Push protective bellow on rail
- Loosen power-lock fastener on the pulley side and insert end frame pulley between rail and timing belt pulley; tighten power-lock fastener
- Fasten protective bellow by means of the supplied screws on the end frame

PROTECTIVE BELLOW LR 90

part no. 33.3008/0



TECHN. DATA / ITEMS SUPPLIED

- Plastic, black with plastic frame
- Without fastening kit
- Length when pushed together for 1 m travel: - 130 mm
- Weight 0,75 kg/m
- max. Length 6 m

APPLICATIONS

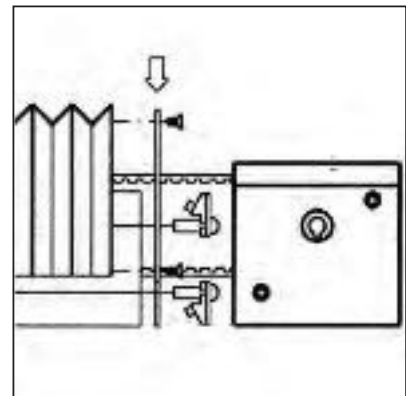
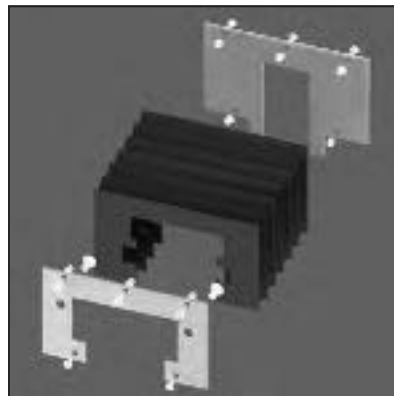
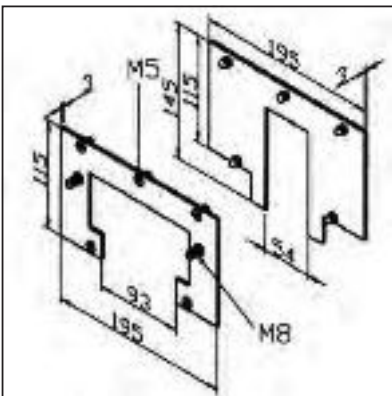
- Cover of MiniTec linear guides LR 90
- Rough working conditions, dust, chips

ASSEMBLY

- Push bellow onto rail
- Fix ends with fastening kit for protective bellow a **part no. 33.3011/0** at slide or reverse unit
- The travel length is reduced by approx. 22% when bellow is used
- Caution: Consider higher friction moment when dimensioning drive unit!

FASTENING KIT FOR PROTECTIVE BELLOW LR 90

part no. 33.3011/0



TECHN. DATA / ITEMS SUPPLIED

- 1 End frame slide
- 1 End frame pulley
- Fastening kit for frame and bellow

APPLICATIONS

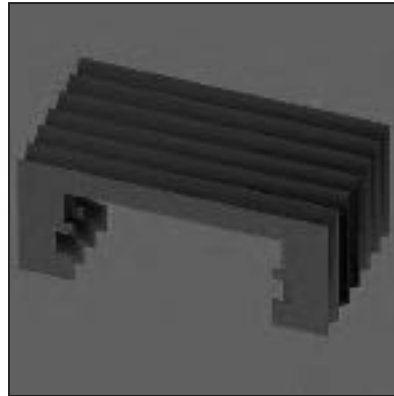
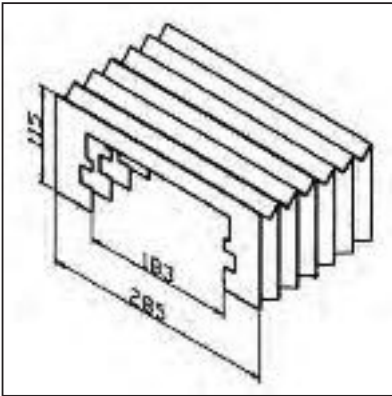
- Cover of MiniTec linear guides LR 90
- Rough working conditions, dust, chips

ASSEMBLY

- Fasten end frame on slide
- Push protective bellow on rail
- Loosen power-lock fastener on the pulley side and insert end frame pulley between rail and timing belt pulley; tighten power-lock fastener
- Fasten protective bellow by means of the supplied screws on the end frame

PROTECTIVE BELLOW LR 180

part no. 33.3009/0



TECHN. DATA / ITEMS SUPPLIED

- Plastic, black with plastic frame
- Without fastening kit
- Length when pushed together for 1 m travel: - 110 mm
- Weight 0,95 kg/m
- max. Length 6 m

APPLICATIONS

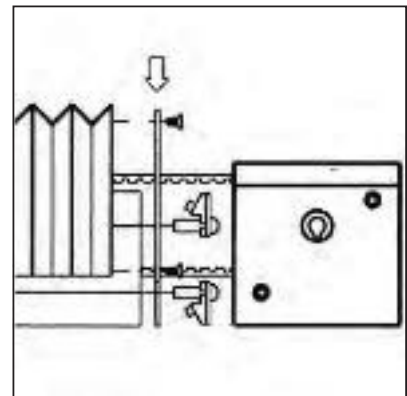
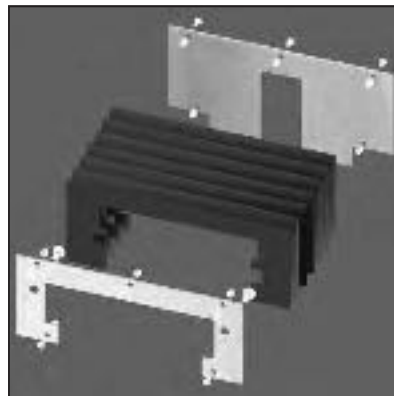
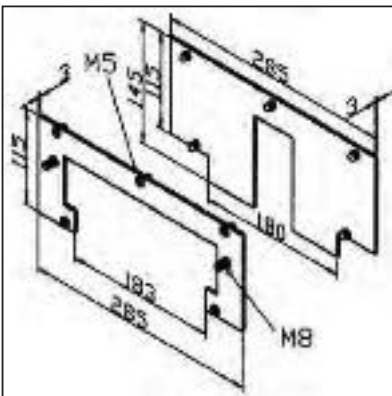
- Cover of MiniTec linear guides LR 180
- Rough working conditions, dust, chips

ASSEMBLY

- Push bellow onto rail
- Fix ends with fastening kit for protective bellow a **part no. 33.3012/0** at slide or reverse unit
- The travel length is reduced by approx. 22% when bellow is used
- Caution: Consider higher friction moment when dimensioning drive unit!

FASTENING KIT FOR PROTECTIVE BELLOW LR 180

part no. 33.3012/0



TECHN. DATA / ITEMS SUPPLIED

- 1 End frame slide
- 1 End frame pulley
- Fastening kit for frame and bellow

APPLICATIONS

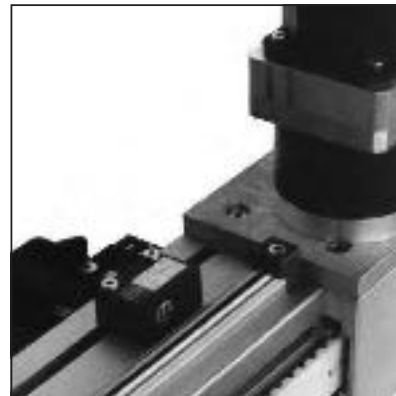
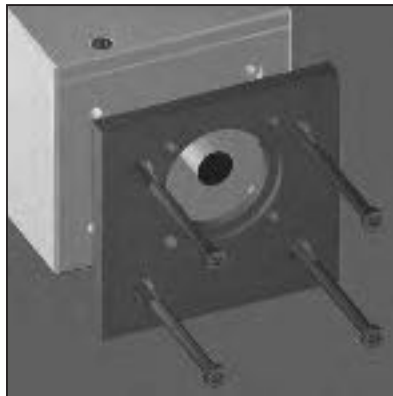
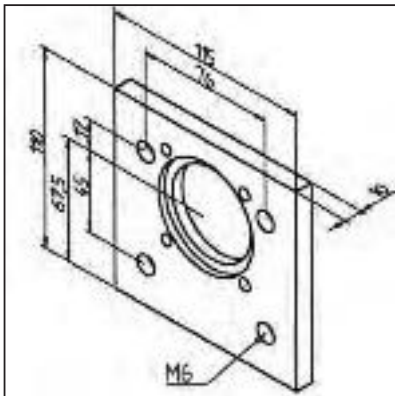
- Fastening of protective bellow LR 180 on slide LW 180

ASSEMBLY

- Fasten end frame on slide
- Push protective bellow on rail
- Loosen power-lock fastener on the pulley side and insert end frame pulley between rail and timing belt pulley; tighten power-lock fastener
- Fasten protective bellow by means of the supplied screws on the end frame

ADAPTOR PLATE

part no. 28.0112/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural
- Dimension according to customers specification

APPLICATIONS

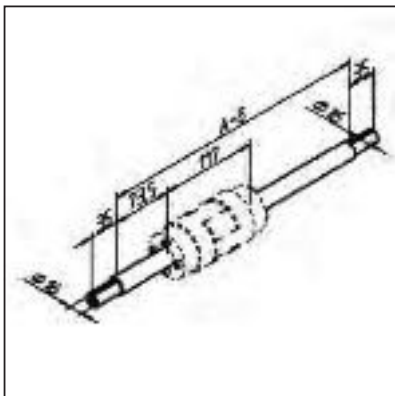
- Attachment of motors, timing belt pulley and counter

ASSEMBLY

- Mount on timing belt pulley

CONNECTING SHAFT 45

part no. 17.1706/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, Ø 20 mm
- Length and processing of ends according to customer specification
- 2 pieces, clutch not included
- Fastening kit
- Weight 2,47 kg/m
- Spring

APPLICATIONS

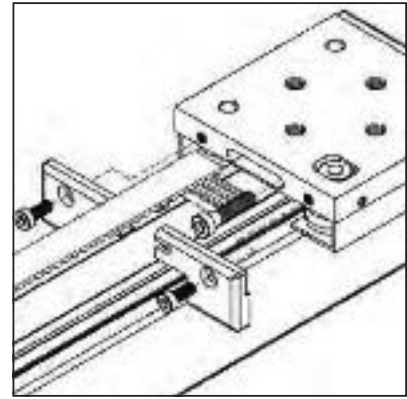
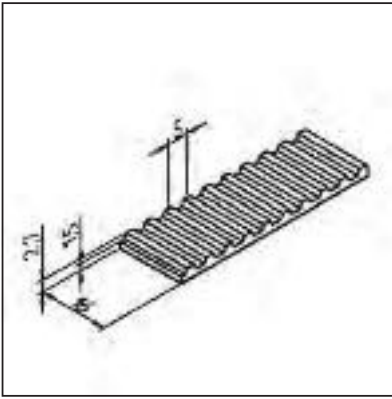
- Simultaneous transmission of 2 parallel linear guides
- Install support bearing for longer shafts

ASSEMBLY

- Fasten shafts with spring in timing belt pulley
- Connect both shaft pieces with clutch **part no. 28.0180/0**

TIMING BELT 16 AT 5

part no. 28.0502/0



TECHN. DATA / ITEMS SUPPLIED

- PUR white, steel-wire reinforced	
- Type 16 AT 5	
- Weight	0,052 kg/m
- Load max.	1260 N

APPLICATIONS

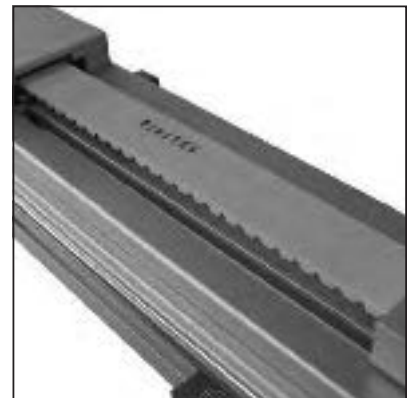
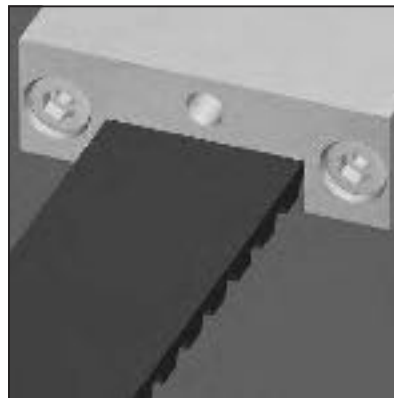
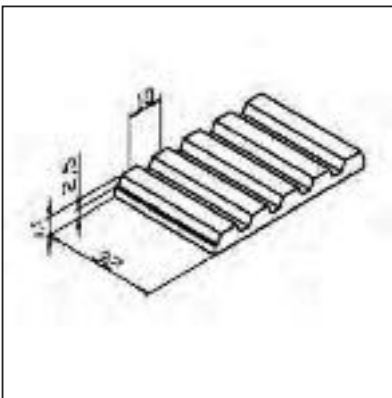
- Suitable for all MiniTec linear guides LR 6 Z

ASSEMBLY

- Fix both sides in slide LR 6 Z
 - Calculation of belt length:
 $2 \times \text{rail length} + 260 \text{ mm}$

TIMING BELT 32 AT 10

part no. 28.0093/0



TECHN. DATA / ITEMS SUPPLIED

- PUR white, reinforced with integrated wires	
- Type 32 AT 10	
- Weight	0,19 kg/m
- Load max.	4750 N

APPLICATIONS

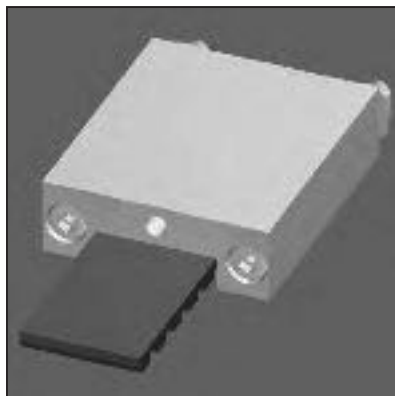
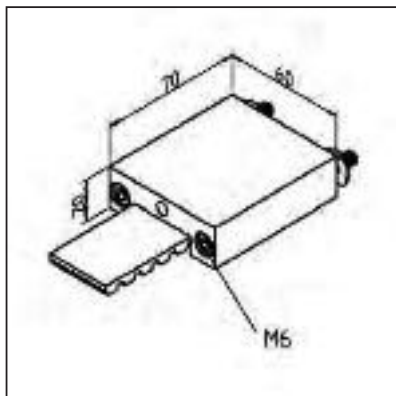
- For MiniTec linear guides LR 12 and LR 16
 - For belt drives

ASSEMBLY

- Fix timing belt on timing belt tensioner

TIMING BELT TENSIONER

part no. 28.0090/0



TECHN. DATA / ITEMS SUPPLIED

- Housing, aluminium, natural anodized
- Tensioning plug, steel, zinc plated with matelung with 3 teeth
- Fitting for timing belt AT 10
- Fastening kit
- Weight 0,236 kg
- **Stainless version part no. 28.0090/1**

APPLICATIONS

- For each end of the timing belt a timing belt tensioner is required
- For MiniTec linear guides LR 12 and LR 16
- For MiniTec belt drive

ASSEMBLY

- Subsequent fastening on the face of the slide with fastening kit
- After fixing on slide face, tension the belt central tensioning screw M8, 5 A/F
- Recommend stretching after assembly

CONNECTION OF MOTORS

TIMING BELT PULLEY LR 6 & LR 6 COMPACT

Rotary-current-, step or servo-motors with max. shaft diameter of 14 mm are suitable. Assemble directly on the timing belt pulley. The pulley bore with fitting key groove and the connection side of the reverse unit will be designed according to customer specification.

TIMING BELT PULLEY T 45

Rotary-current-, step or servo-motors with max. shaft diameter of 16mm are suitable. Assemble directly on the timing belt pulley. The pulley bore with fitting key groove and the connection side of the reverse unit will be designed according to customer specification.

TIMING BELT PULLEY T 90

Rotary-current-, step or servo-motors with max. shaft diameter of 24 mm are suitable. Assemble directly on the timing belt pulley. The pulley bore with fitting key groove and the connection side of the reverse unit will be designed according to customer-specification.

CALCULATION OF TIMING BELT LENGTH

When using T 45 and T90

$$2 \times \text{rail length} + 2 \times 210 \text{ mm (Pulley)}$$

$$- \text{slide length} - 2 \times 20 \text{ mm (Belt tensioner)}$$

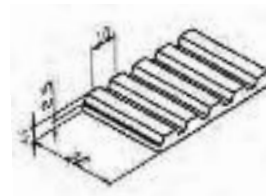
$$= 2 \times \text{rail length} - \text{slide length} + 380 \text{ mm}$$

When using LR6

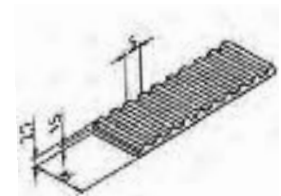
$$2 \times \text{rail length} + 260 \text{ mm}$$

When using LR6 compact (Timing belt 16 AT 5)

$$2 \times \text{rail length} + 220 \text{ mm}$$



Timing belt 32 AT 10
part no. 28.0093/0



Timing belt 16 AT 5
part no. 28.0502/0

Technical data of the pulleys in the Timing belt pulley

TIMING BELT PULLEY	LR 6	T 45 (LR 12 & LR 16)	T 90 (LR 12 & LR 16)
Effective diameter	56.05 mm	58.6 mm	58.6 mm
Timing belt width	16 mm	32 mm	32 mm
Teeth	36	19	19
Bore for driving shaft	10 mm	8 mm	8 mm
Reborable to max.	14 mm	16 mm	30 mm
Traverse (1 rotation)	180 mm	190 mm	190 mm
Timing belt	16AT5	32AT10	32AT10
Belt length in pulley	160 mm	210 mm	210 mm

COMPONENTS – LINEARSYSTEM LR

The linear system LR is based on double-row angular contact bearings made of bearing steel, hardened and ground precision shafts 1.1214 (Cf 53). Any required stroke length can be implemented. The slides are equipped with double-row roller bearings with gothic arch outer grooves. For very high loads multiple bearings are attached with steel-T-Slot bars directly to the slideplate giving the construction great rigidity. No special bearing profiles are required for the assembly. The clearance between bearings and shafts can be adjusted by eccentric bushings.

Both closed and open-frame slides with any desired length or width can be fabricated. Linear modul LR 6 X/Y-tables are easily constructed by the attachment of 4 bearings on to the top of the slide. The guide rails for this configuration are made from profile 45 x 32. End caps LR and cover profile AL also fit the Y-axis.

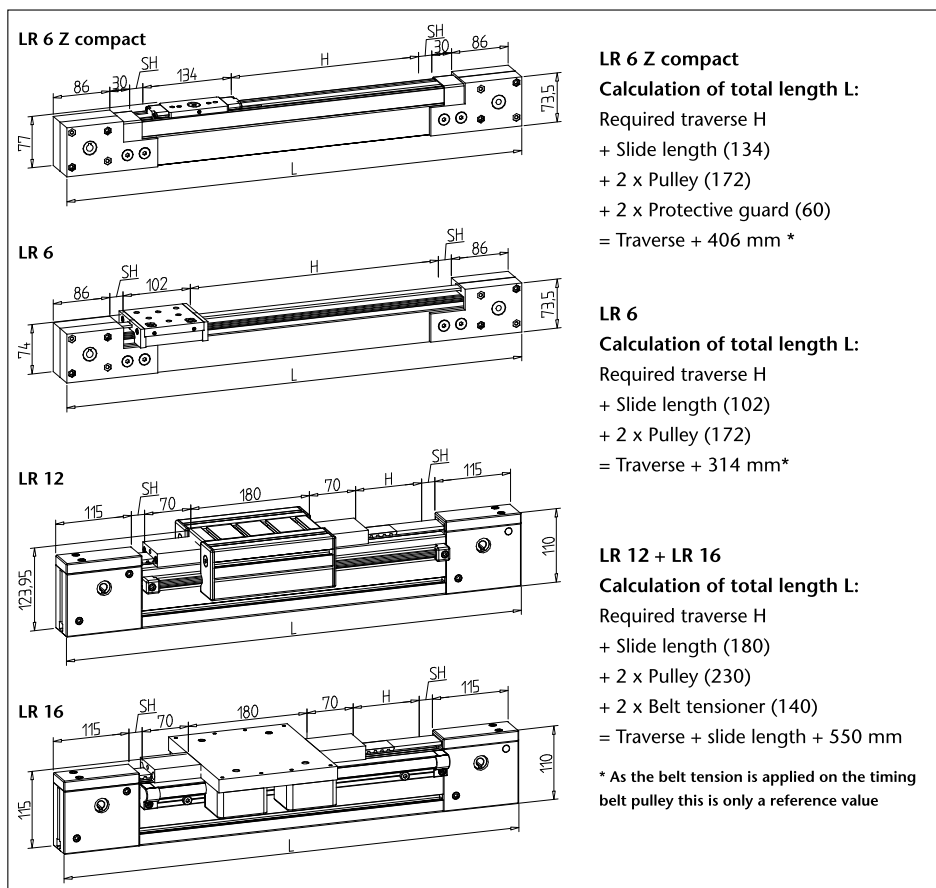
The slides are completely covered, lubrication felts are fitted in the endcaps which clean and grease the shafts. For maintenance purposes the felts can be exchanged quickly and easily without tools. This advantage is important for applications in rough working conditions

Both closed and open-frame slides with any desired length or width can be fabricated. Please specify the desired dimensions A and B when ordering.

X/Y-tables are easily constructed by the attachment of 4 bearings on to the top of the slide. The guide rails for this configuration are made from profile 45 x 32. End caps LR and cover profile AL also fit the yaxis.



X/Y-table



Optionally calculate and specify safety distances „SH“.

RAILS

THE MINITEC PROFILE SYSTEM IS THE IDEAL CARRIER FOR LINEAR TECHNOLOGY.
ALL MINITEC PROFILES (EXCEPT UL) CAN BE FITTED WITH A SHAFT SUPPORT AND A SHAFT.



LR 6 compact
part no. 28.0119/0



LR 6 S
part no. 28.0525/0



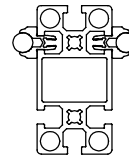
LR 12
Rail 19
part no. 28.0009/0



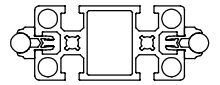
LR 12
Rail 32
part no. 28.0010/0



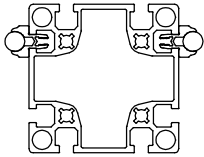
LR 12
Rail 45
part no. 28.0006/0



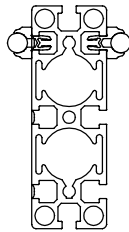
LR 12
Rail 45 x 90 H
part no. 28.0007/2



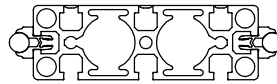
LR 12
Rail 45 x 90 F
part no. 28.0007/1



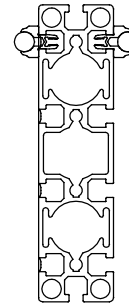
LR 12
Rail 90
part no. 28.0008/0



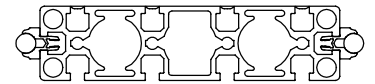
LR 12
Rail 135 H
part no. 28.0012/2



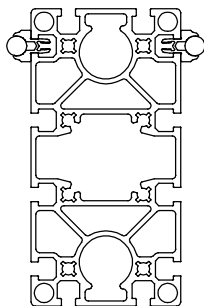
LR 12
Rail 135 F
part no. 28.0012/1



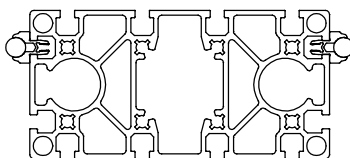
LR 12
Rail 45 x 180 H
part no. 28.0013/2



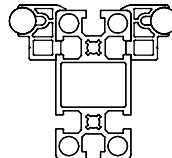
LR 12
Rail 45 x 180 F
part no. 28.0013/1



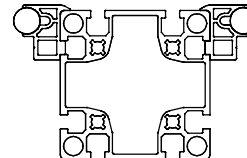
LR 12
Rail 180 H
part no. 28.0011/2



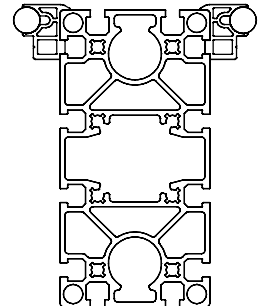
LR 12
Rail 180 F
part no. 28.0011/1



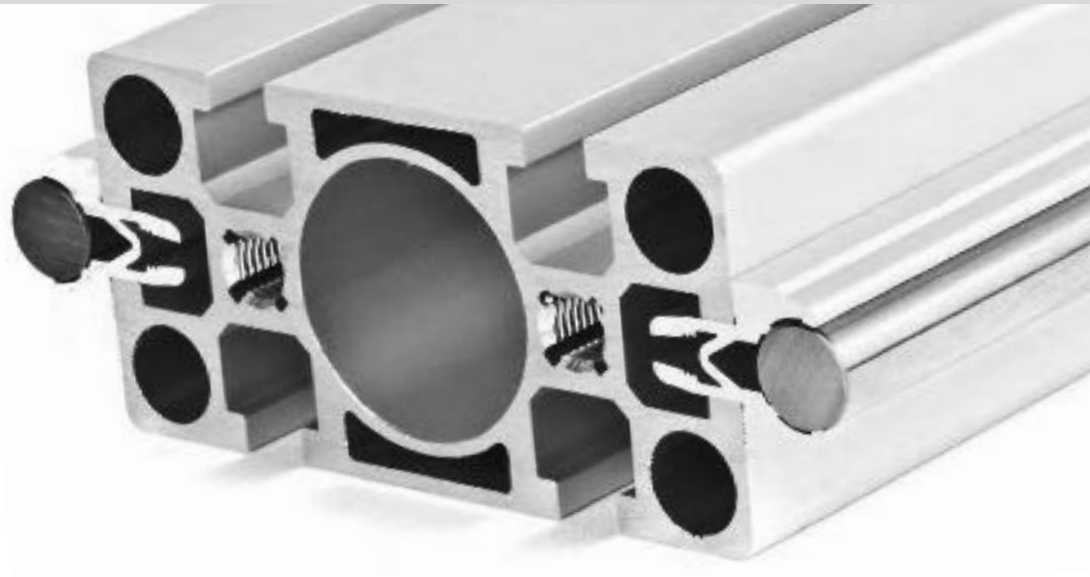
LR 16
Rail LR 16 45 x 90 H
part no. 28.0820/0



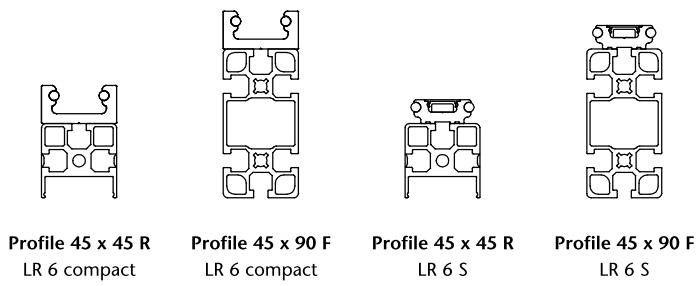
LR 16
Rail LR 16 90
part no. 28.0821/0



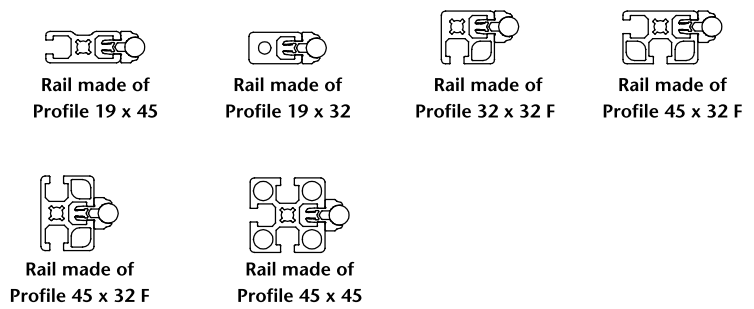
LR 16
Rail LR 16 90 x 180 H
part no. 28.0822/0



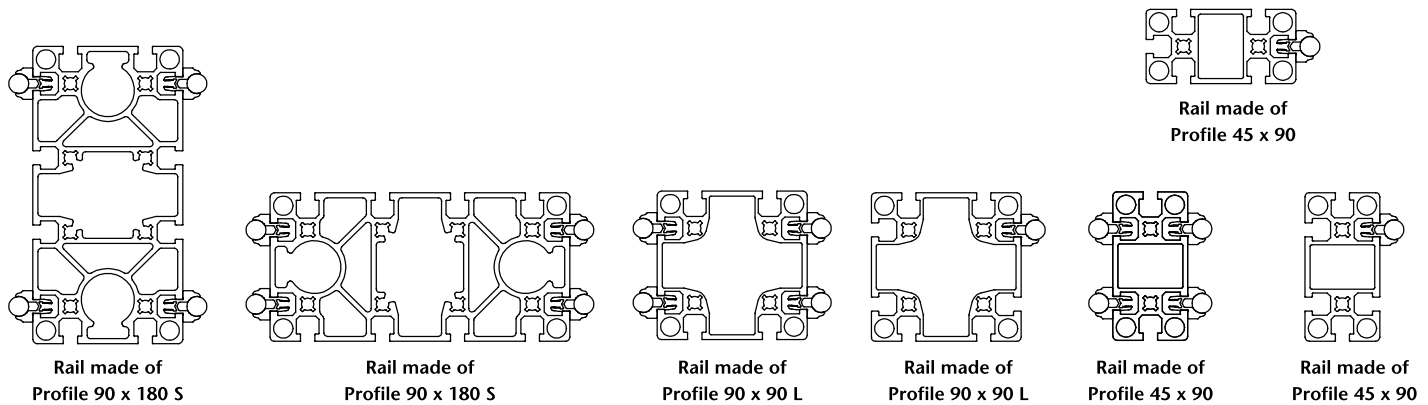
LR 6 compact and LR 6 S – other possible combinations:



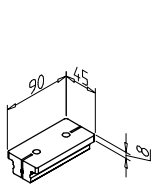
LR 12 – other possible combinations:



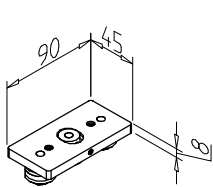
LR 12 – other possible combinations:



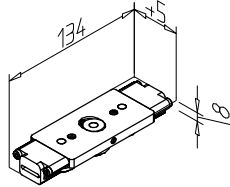
CONSTRUCTION DESIGN OF SLIDES



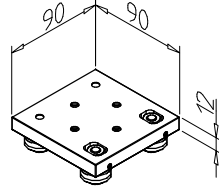
Slide
LR 6 compact
part no. 28.0127/0



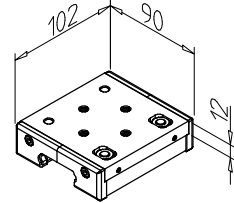
LR 6 compact
part no. 28.0140/0



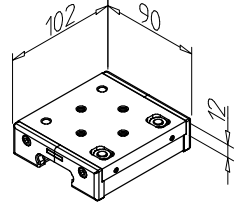
LR 6 Z compact
part no. 28.0520/0



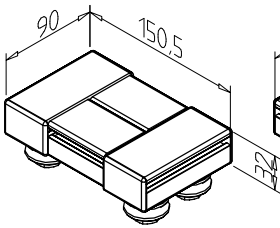
LR 6
part no. 28.0138/0



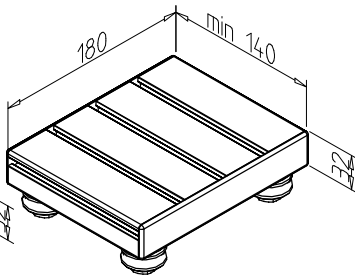
LR 6 with cover
part no. 28.0138/1



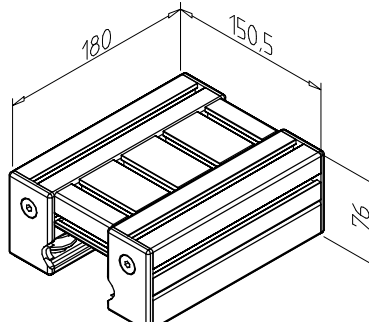
LR 6 Z
part no. 28.0138/2



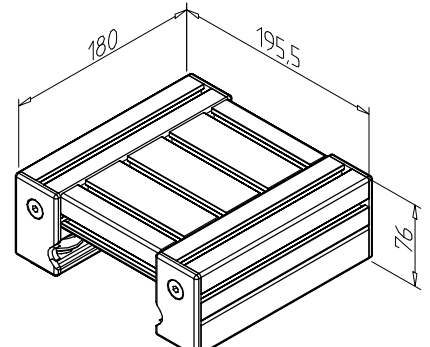
LW 32
part no. 28.0088/0



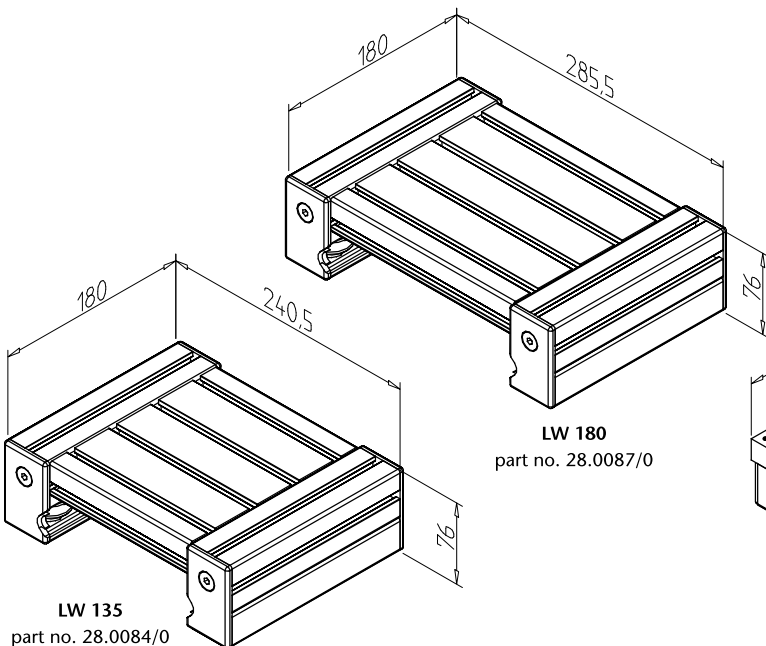
LW 32 E
part no. 28.0089/0



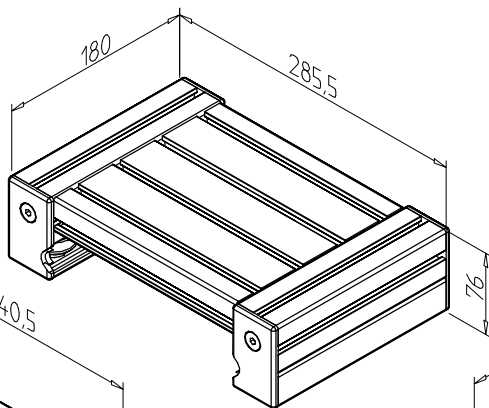
LW 45
part no. 28.0091/0



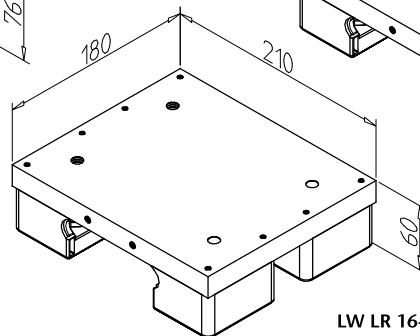
LW 90
part no. 28.0092/0



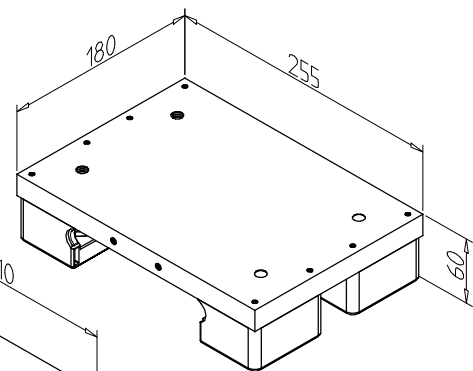
LW 135
part no. 28.0084/0



LW 180
part no. 28.0087/0

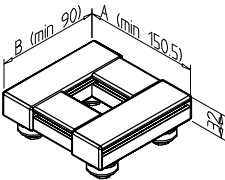


LW LR 16-45
part no. 28.0810/0

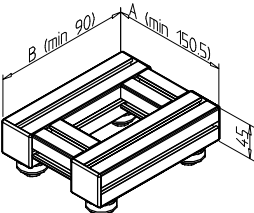


LW LR 16-90
part no. 28.0822/0

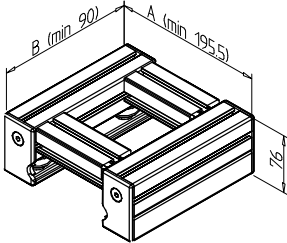
Special slide models:



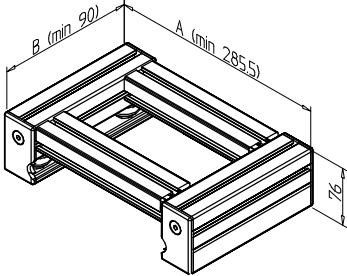
LW 32 special model
(Open Frame)
part no. 28.0089/2S



LW 45 special model
(Open Frame)
part no. 28.0091/4S



LW 90 special model
(Open Frame)
part no. 28.0092/3S



LW 180 special model
(Open Frame)
part no. 28.0087/2S



POSSIBLE COMBINATIONS OF RAILS AND SLIDES

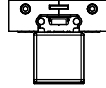
LW LR 6 compact
Rail LR 6 compact



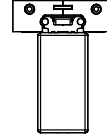
LW LR 6 compact
Rail aus Profile 45x90F



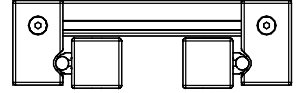
Slide LR 6
Rail LR 6 S/45



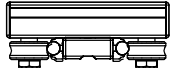
Slide LR 6
Rail LR 6 S/90



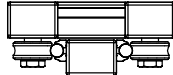
Slide LW 135
2x special rail made
of Profile 45x45



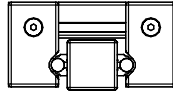
LW 32 E
Rail 19



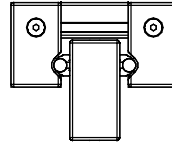
LW 32
Rail 32



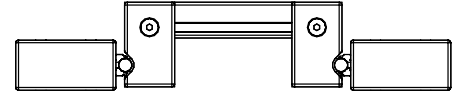
LW 45
Rail 45



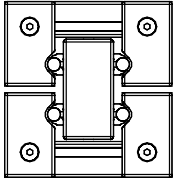
LW 45
Rail 45x90H



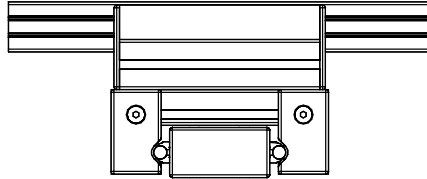
Special carriage
2x special rail made of
Profile 45x90



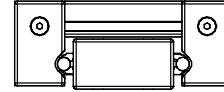
2x LW 45
Special rail made of
Profile 45x90



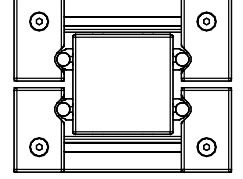
2x LW 90
Rail 45x90F



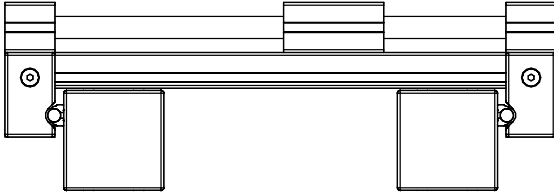
LW 90
Rail 45x90F



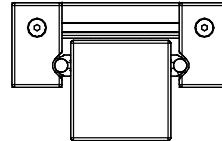
2x LW 90
Special rail made of
90x90L



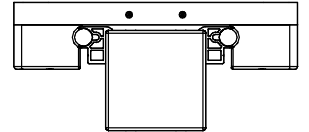
Special slide
2x special rail made of
Profile 90x90L



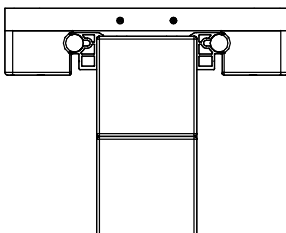
LW 90
Rail 90



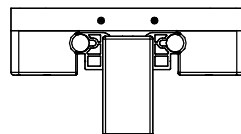
LW LR 16-90
Rail LR 16-90



LW LR 16-90
Rail LR 16-90x180H



LW LR 16-45
Rail LR 16-45



LOAD CAPACITY

LINEAR SYSTEM		LR 6		LR 12				LR 16	
SLIDE	LR 6 COMPACT	SLIDE LR 6 WITH 4 BEARINGS L = 90 mm	SLIDE 45 WITH 4 BEARINGS L = 180 mm	SLIDE 90 WITH 4 BEARINGS L = 180 mm	SLIDE 135 WITH 4 BEARINGS L = 180 mm	SLIDE 180 WITH 4 BEARINGS L = 180 mm	SLIDE 180 WITH 8 BEARINGS L = 360 mm	SLIDE LR 16-45	SLIDE LR 16-90
Mx max.	40 Nm	30 Nm	79 Nm	107 Nm	130 Nm	165 Nm	240 Nm	158 Nm	214 Nm
My max.	40 Nm	75 Nm	120 Nm	120 Nm	120 Nm	120 Nm	275 Nm	288 Nm	288 Nm
Mz max.	40 Nm	40 Nm	202 Nm	202 Nm	202 Nm	202 Nm	470 Nm	323 Nm	323 Nm
Fy max.	700 N	800 N	3500 N	3500 N	3500 N	3500 N	7000 N	7000 N	7000 N
Fz max.	1100 N	640 N	1500 N	1500 N	1500 N	1500 N	3000 N	3000 N	3000 N

Maximal Speed

Slide 45 - 180: 10 m/sec

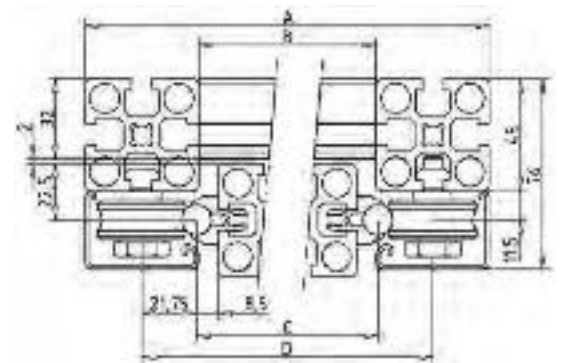
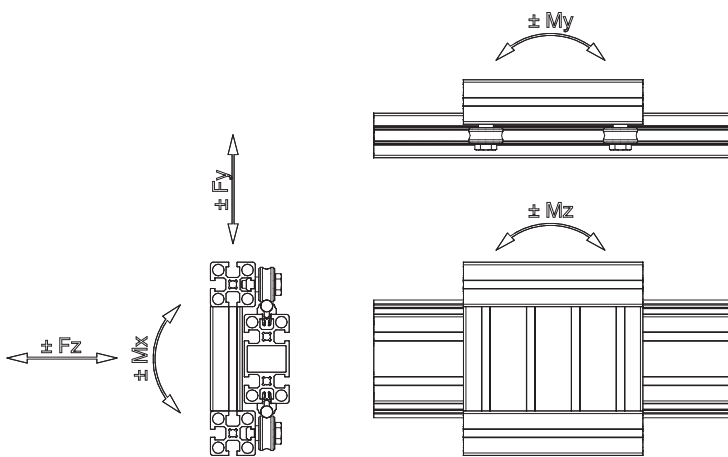
Slide LR 6: 5 m/sec

CALCULATING THE PERMISSIBLE MOMENT LOAD DEPENDING ON THE CARRIAGE LENGTH, WITH 4 BEARINGS:

$$M_y \text{ max.} = 0.89 \cdot (L-45) \text{ Nm}$$

$$M_z \text{ max.} = 1.50 \cdot (L-45) \text{ Nm}$$

L = Slide length

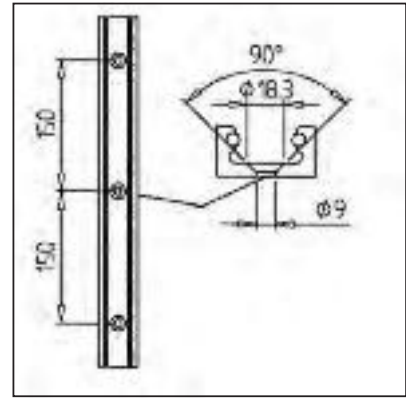
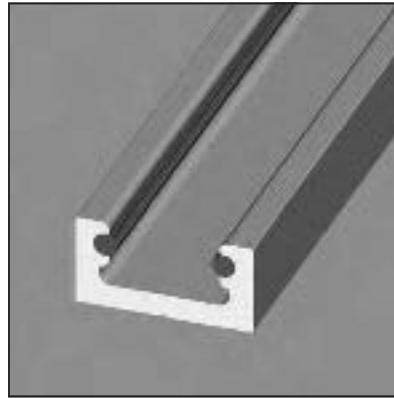
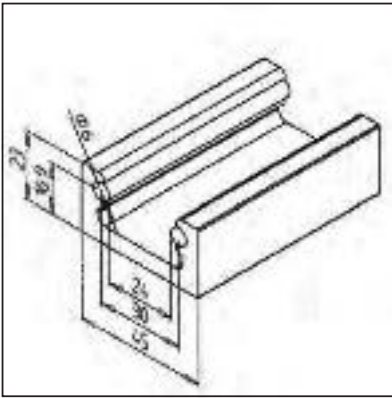


REFERENCE VARIABLE

SLIDE TYPE / DIMENSION	LR 6 COMPACT	LR 6	LW 45	LW 90	LW 135	LW 180	LR 16-45	LR 16-90
A	45	90	150.5	195.5	240.5	285.5	210	255
B	-	-	60.5	105.5	150.5	195.5	-	-
C	30	32	62	107	152	197	85	130
D	2	60	105.5	150.5	195.5	240.5	149.5	194.5

RAIL LR 6 COMPACT

part no. 28.0119/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural anodized E6/EV 1
- 2 Shafts \varnothing 6 mm, Cf 53 h6, steel
- With fixing bores \varnothing 8,5 mm, grid: 150 mm
- Weight 1,779 kg/m
- Length 6 m
- **Stainless version part no. 28.0149/0**

APPLICATIONS

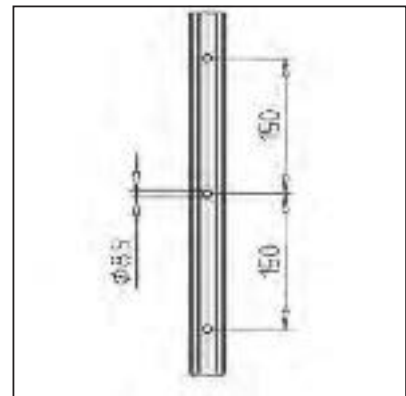
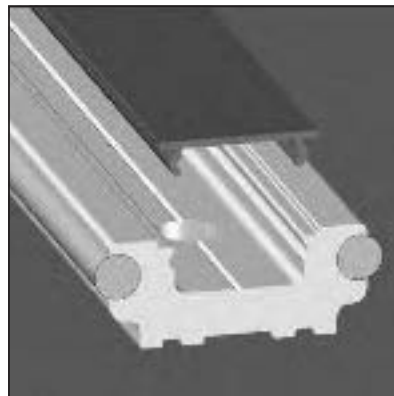
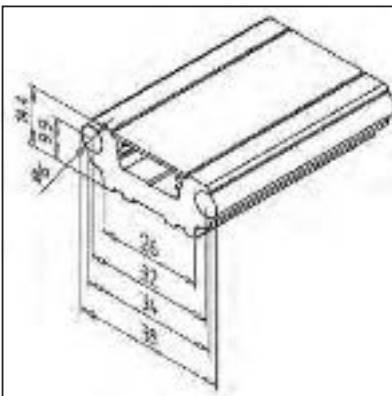
- Material-handling
- Measuring devices
- Doors

ASSEMBLY

- Fasten rail with countersunk screws M8 x 20 and square nut M8 on MiniTec profile

RAIL LR 6 S

part no. 28.0525/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized E6/EV 1
- 2 shafts \varnothing 6 h6
- Drilled ready for installation
- Weight 1,180 kg/m
- Length 6 m
- **Stainless version part no. 28.0526/0**

APPLICATIONS

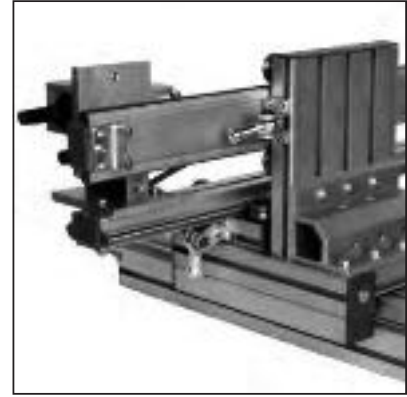
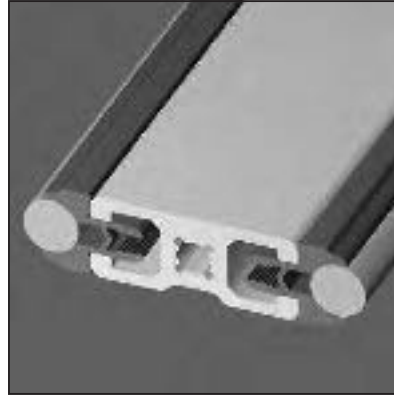
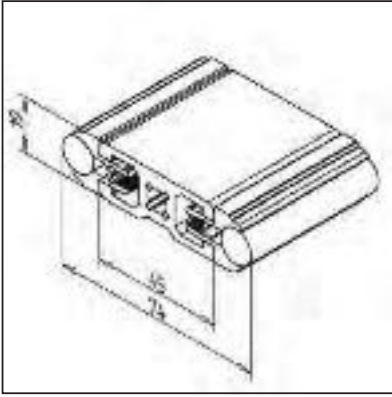
- MiniTec linear guide systems LR 6
- Material-handling
- Measuring devices
- Doors

ASSEMBLY

- Fasten rail with hex socket cap screws M8 x 20 and square nut M8 on MiniTec profile
- Optionally: Cover profile **part no. 22.1160/0**

RAIL 19

part no. 28.0009/0

**TECHN. DATA / ITEMS SUPPLIED**

- Profile 19 x 45
- Both sides with shaft supporting profile and shafts $\varnothing 12$ h6, ready for use
- Without end caps
- Weight 3,666 kg/m
- Length 6 m
- **Stainless version part no. 28.0009/3**

APPLICATIONS

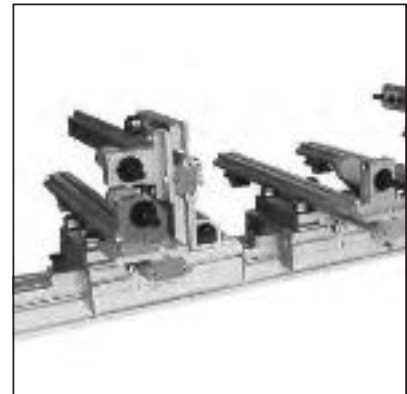
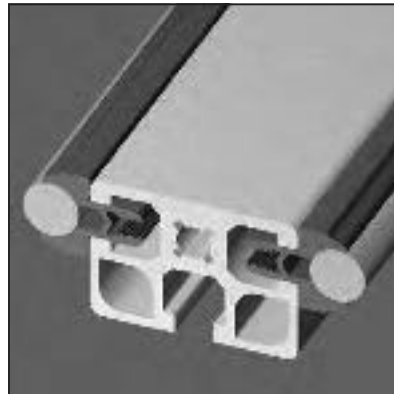
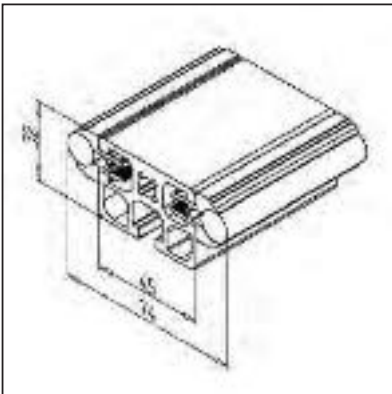
- Linear guides
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- Load capacity: see page 289

RAIL 32

part no. 28.0010/0

**TECHN. DATA / ITEMS SUPPLIED**

- Profile 45 x 32 F
- Both sides with shaft supporting profile and shafts $\varnothing 12$ h6, ready for use
- Without end caps
- Weight 4,161 kg/m
- Length 6 m
- **Stainless version part no. 28.0010/3**

APPLICATIONS

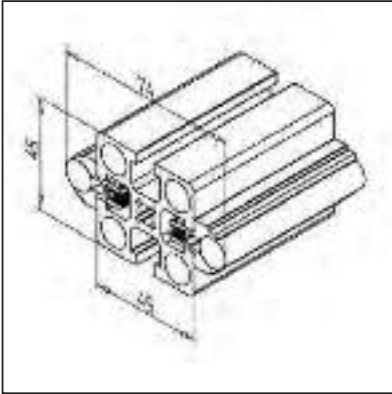
- Linear guides
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- Load capacity: see page 289

RAIL 45

part no. 28.0006/0



TECHN. DATA / ITEMS SUPPLIED

- Profile 45 x 45
- Both sides with shaft supporting profile and shafts Ø 12mm, h6, ready for use
- Without end caps
- Weight 4,796 kg/m
- Length 6 m
- **Stainless version part no. 28.0006/3**

APPLICATIONS

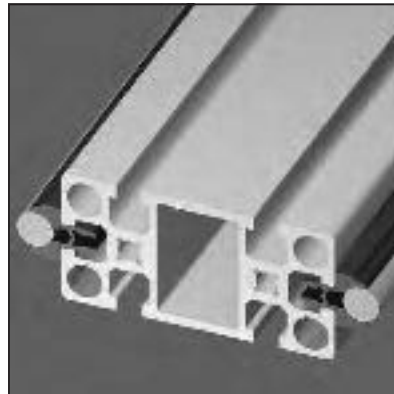
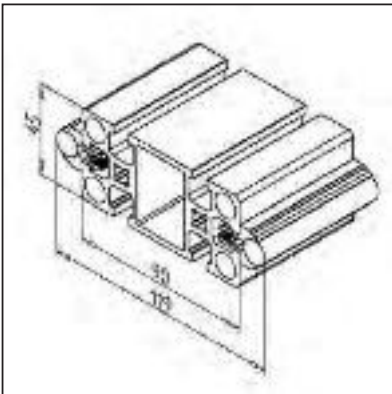
- Linear guides
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- Load capacity: see page 289

RAIL 45 X 90 F

part no. 28.0007/1



TECHN. DATA / ITEMS SUPPLIED

- Profile 45 x 90
- Both sides with shaft supporting profile and shafts Ø 12 mm, h6, ready for use
- Without end caps
- Weight 6,190 kg/m
- Length 6 m
- **Stainless version part no. 28.0007/3**

APPLICATIONS

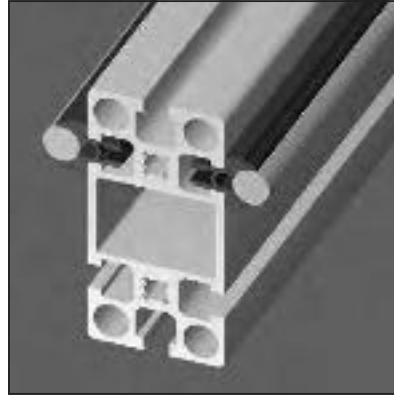
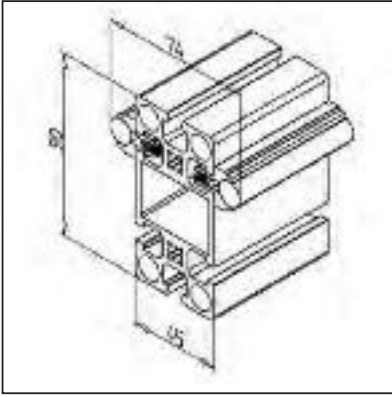
- Linear guides
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- Load capacity: see page 289

RAIL 45 X 90 H

part no. 28.0007/2

**TECHN. DATA / ITEMS SUPPLIED**

- Profile 45 x 90
- Both sides with shaft supporting profile and shafts \varnothing 12 mm, h6, ready for use
- Without end caps
- Weight 6,190 kg/m
- Length 6 m
- **Stainless version part no. 28.0007/4**

APPLICATIONS

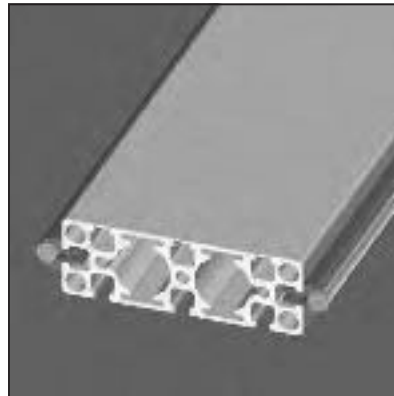
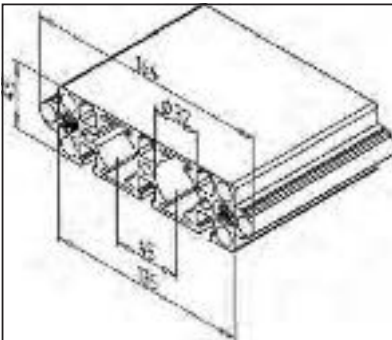
- Linear guides
- Belt return in profile
- Longer rails with shafts put together

ASSEMBLY

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- Load capacity: see page 289

RAIL 135 F

part no. 28.0012/1

**TECHN. DATA / ITEMS SUPPLIED**

- Profile 45 x 135 1G
- Both sides with shaft supporting profile and shafts \varnothing 12 h6, ready for use
- Without end caps
- Weight 8,09 kg/m
- Length 6 m
- **Stainless version part no. 28.0012/3**

APPLICATIONS

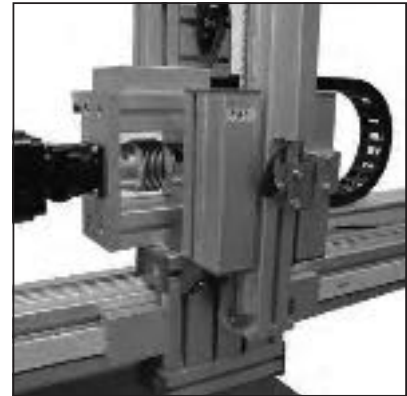
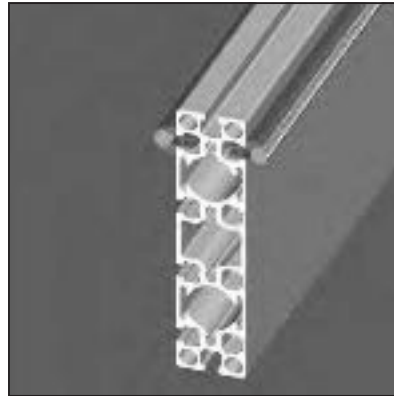
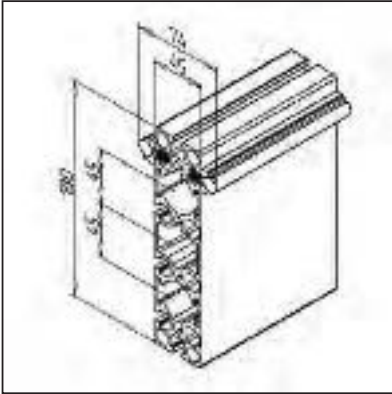
- Linear guides
- Longer rails with shafts put together

ASSEMBLY

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- Load capacity: see page 289

RAIL 45 X 180 H

part no. 28.0013/2

**TECHN. DATA / ITEMS SUPPLIED**

- Profile 45 x 180 1G
- Both sides with shaft supporting profile and shafts $\varnothing 12$ h6, ready for use
- Without end caps
- Weight 9,466 kg/m
- Length 6 m
- **Stainless version part no. 28.0013/4**

APPLICATIONS

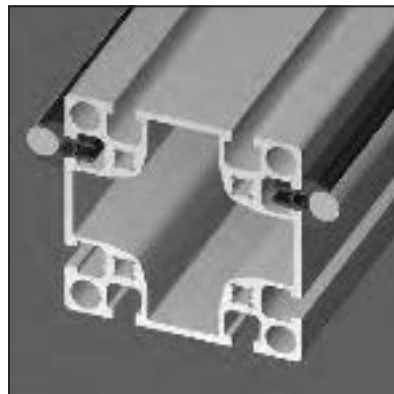
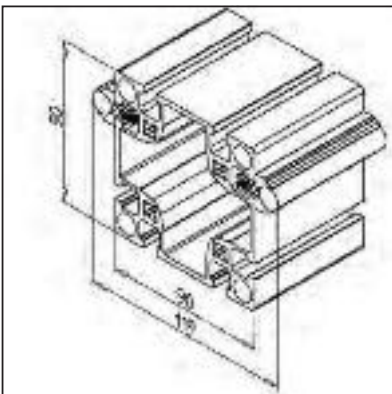
- Linear guides
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- Load capacity: see page 289

RAIL 90

part no. 28.0008/0

**TECHN. DATA / ITEMS SUPPLIED**

- Profile 90 x 90 L
- Both sides with shaft supporting profile and shafts $\varnothing 12$ mm, h6, ready for use
- Without end caps
- Weight 7,88 kg/m
- Length 6 m
- **Stainless version part no. 28.0008/3**

APPLICATIONS

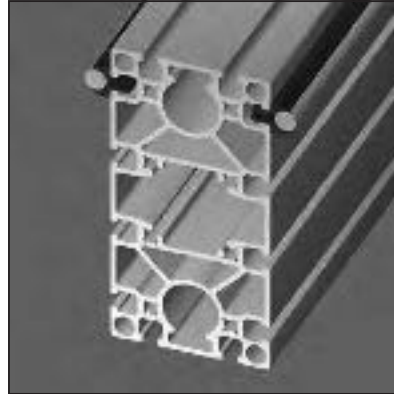
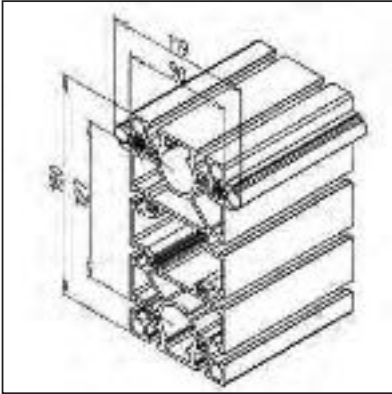
- Linear guides
- Timing belt return inside the profile
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- Load capacity: see page 289

RAIL 180 H

part no. 28.0011/2



TECHN. DATA / ITEMS SUPPLIED

- Profile 90 x 180 S
- Both sides with shaft supporting profile and shafts $\varnothing 12$ h6, ready for use
- Without end caps
- Weight 14,516 kg/m
- Length 6 m
- **Stainless version part no. 28.0011/4**

APPLICATIONS

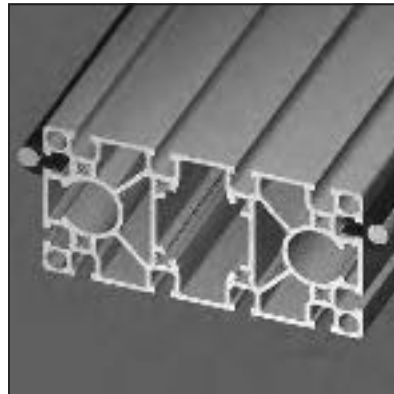
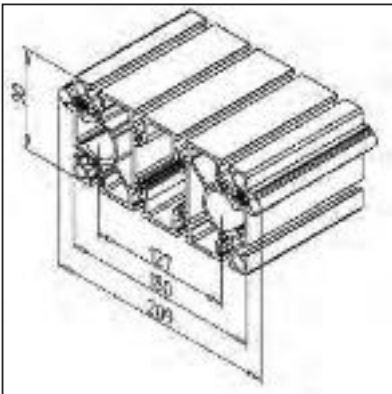
- Linear guides
- Timing belt return inside the profile
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- Load capacity: see page 289

RAIL 180 F

part no. 28.0011/1



TECHN. DATA / ITEMS SUPPLIED

- Profile 90 x 180 S
- Both sides with shaft supporting profile and shafts $\varnothing 12$ h6, ready for use
- Without end caps
- Weight 14,516 kg/m
- Length 6 m
- **Stainless version part no. 28.0011/3**

APPLICATIONS

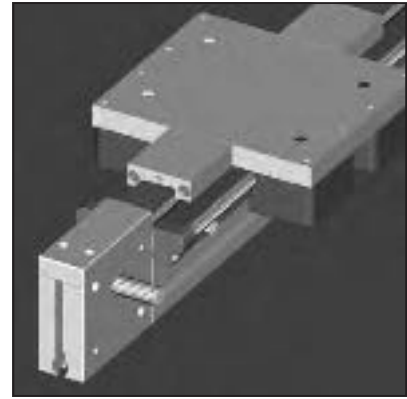
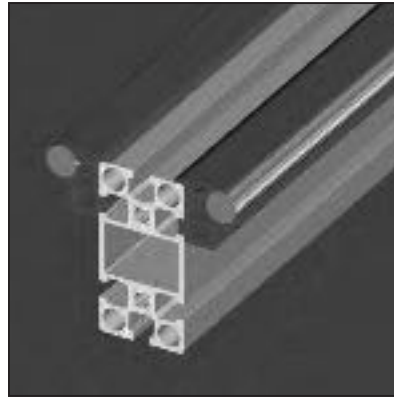
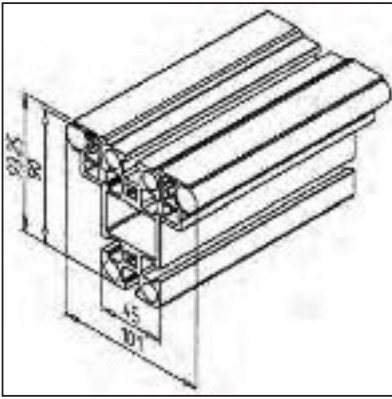
- Linear guides
- Timing belt return inside the profile
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or for high speed applications, we recommend the use of shaft retention devices **part no. 28.0052/0**
- Load capacity: see page 289

RAIL LR 16 - 45 X 90 H

part no. 28.0820/0

**TECHN. DATA / ITEMS SUPPLIED**

- Profile 45 x 90
- With shaft supporting profile LR 16 and shaft with diameter \varnothing 16 mm, h6 on both sides, assembled ready to fit
- Without end caps
- Weight 7,979 kg/m
- Length 6 m

APPLICATIONS

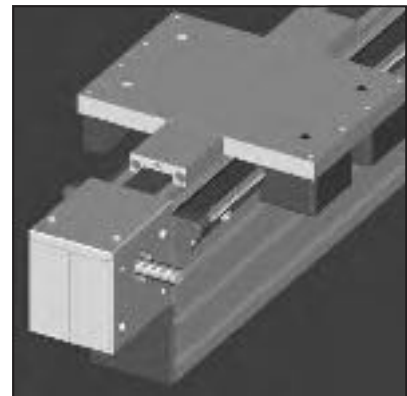
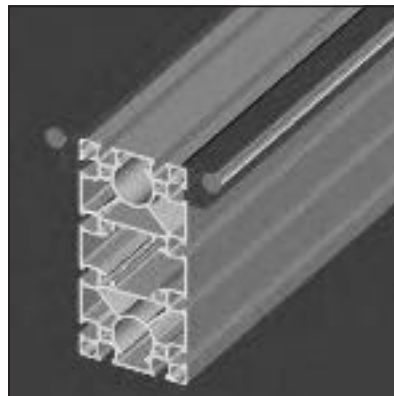
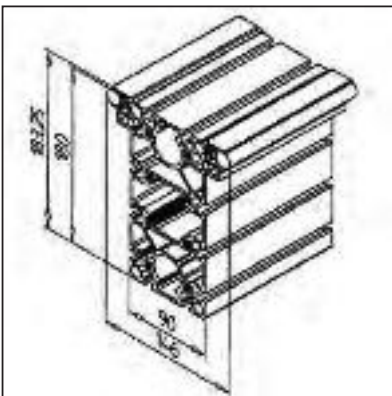
- Linear guides for high load capacity
- Timing belt return in profile
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or high speed applications we recommend the use of shaft retention device LR 16 **part no. 28.0808/0 and part no. 28.0809/0**

RAIL LR 16 - 90X180 H

part no. 28.0822/0

**TECHN. DATA / ITEMS SUPPLIED**

- Profile 90 x 180 S
- With shaft supporting profile and shaft with diameter 16 h6 on both sides, assembled ready to fit
- Without end caps
- Weight 16,278 kg/m
- Length 6 m

APPLICATIONS

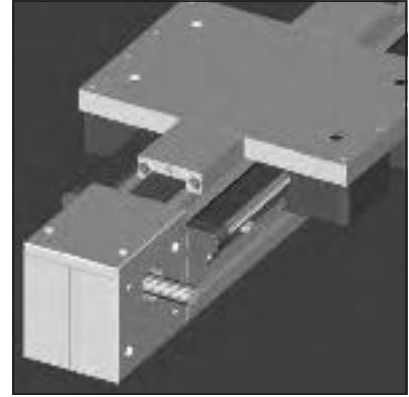
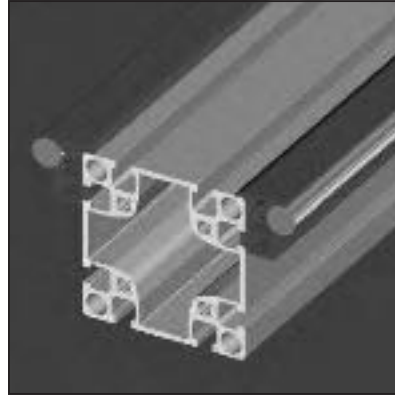
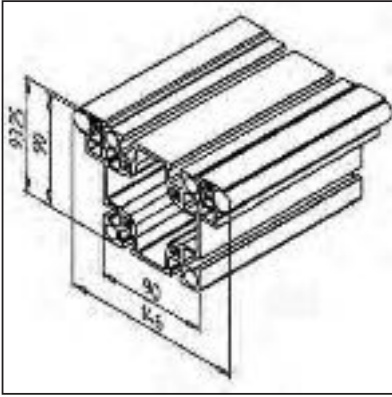
- Linear guides for high load capacity
- Timing belt return in profile
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or high speed applications we recommend the use of shaft retention device LR 16 **part no. 28.0808/0 and 28.0809/0**

RAIL LR 16 - 90

part no. 28.0821/0



TECHN. DATA / ITEMS SUPPLIED

- Profile 90 x 90
- With shaft supporting profile LR 16 and shaft with diameter \varnothing 16 mm, h6 on both sides, assembled ready to fit
- Without end caps
- Weight 10,067 kg/m
- Length 6 m

APPLICATIONS

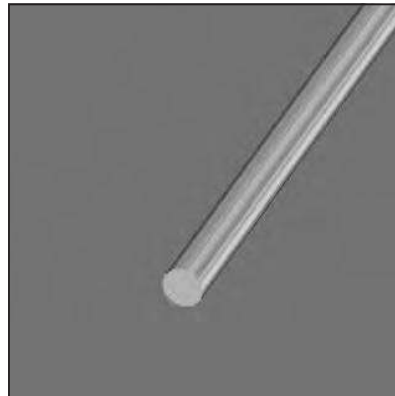
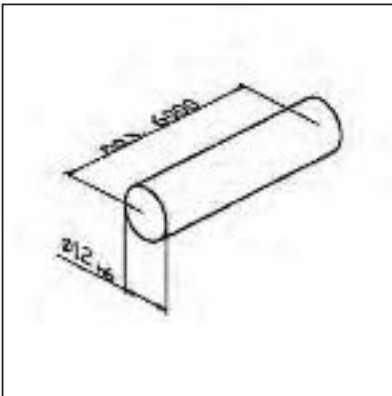
- Linear guides for high load capacity
- Toothed belt return in profile
- Longer rails with composite shafts possible

ASSEMBLY

- For vertical use or high speed applications we recommend the use of shaft retention device LR 16 **part no. 28.0808/0 and part no. 28.0809/0**

SHAFT 12

part no. 17.1741/0



TECHN. DATA / ITEMS SUPPLIED

- Cf 53, hardened 60 + 5 HRC, precision ground h6
- Weight 0,888 kg/m
- max. Length 6 m
- **Stainless version part no. 17.1760/0**

APPLICATIONS

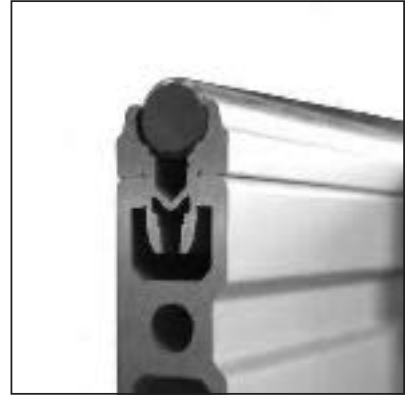
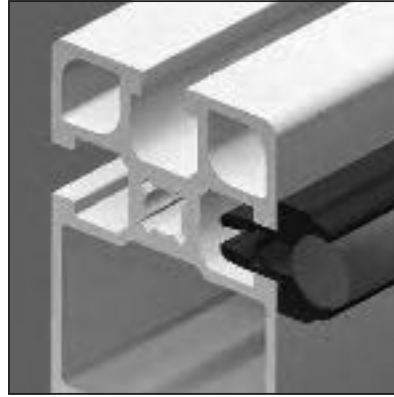
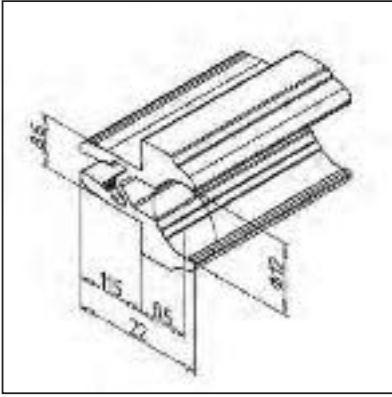
- All MiniTec linear guides LR

ASSEMBLY

- Press shaft into supporting profile with appropriate tool (plastic mallet)
- For rails L > 6000 mm assemble profile, shaft supporting profile and shaft with offset joints

SHAFT SUPPORTING PROFILE

000784 part no. 28.0002/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural anodized E6/EV1	
- Weight	0,365 kg/m
- Length	6 m

APPLICATIONS

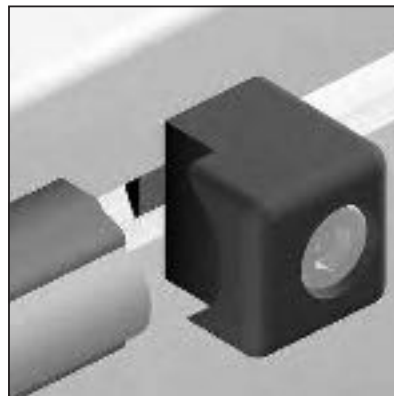
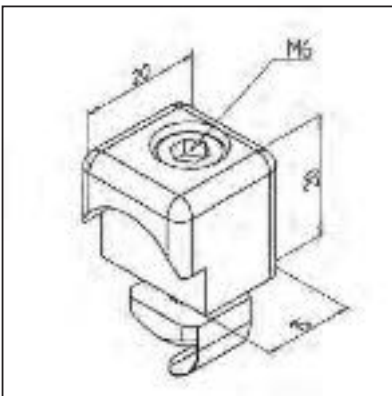
- MiniTec linear guides LR/LG

ASSEMBLY

- Press into the groove of rail profile
- If necessary clamp with set screw M5 x 10 in position
- Press shaft into supporting profile with appropriate tool (plastic mallet)

SHAFT RETENTION DEVICE

part no. 28.0052/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium , powder coated, grey	
- Fastening kit	
- Weight	0,03 kg
- Stainless version part no. 28.0053/0	

APPLICATIONS

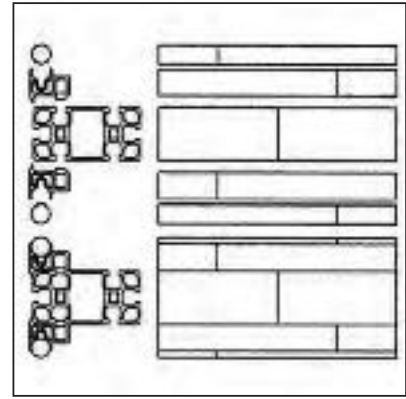
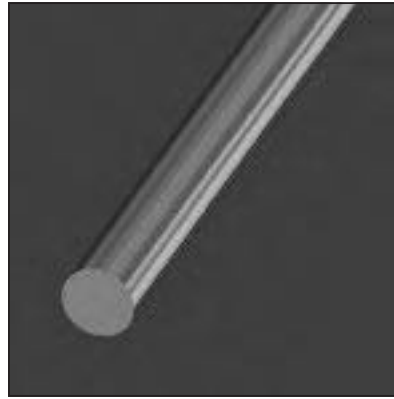
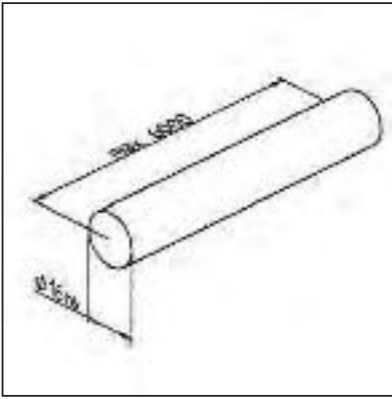
- Axial retention of shafts in dynamically stressed linear guides

ASSEMBLY

- Fasten the retention device at both shaft ends with fastening kit
- No processing required

SHAFT 16

part no. 17.1743/0



TECHN. DATA / ITEMS SUPPLIED

- Cf 53, hardened 60 ± 5 HRC, precision ground h6

- Weight 1,578 kg/m

- max. Length 6 m

APPLICATIONS

- MiniTec linear guide LR 16

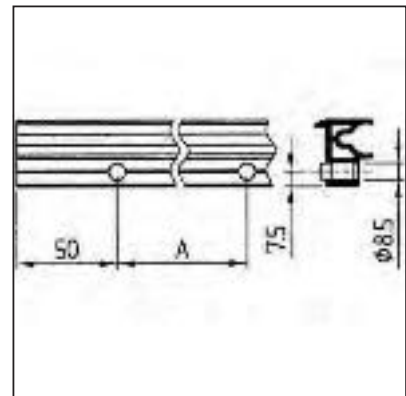
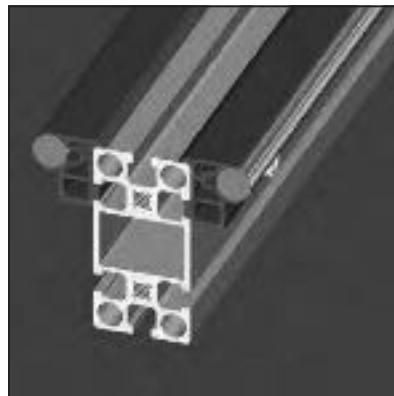
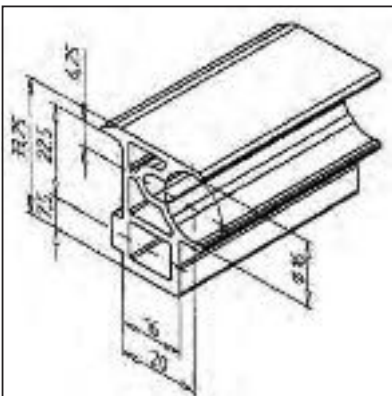
ASSEMBLY

- Carefully hammer into the shaft carrier profile with a plastic-tipped hammer

- On guides with $L > 6000$ mm assemble profile, shaft support and shaft with offset joints

SHAFT SUPPORTING PROFILE LR 16

part no. 28.0019/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium natur, eloxiert E6 / EV1

- Weight 0,845 kg/m

- Length 6 m

APPLICATIONS

- MiniTec linear guide LR16

ASSEMBLY

- Bore $\varnothing 8.5$ in the shaft supporting profile

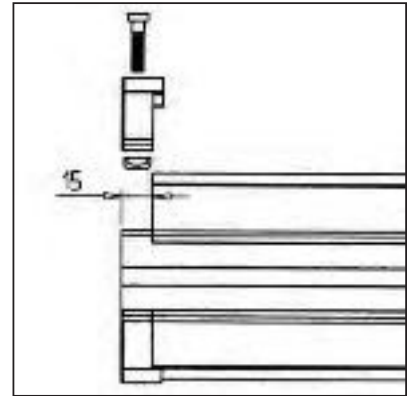
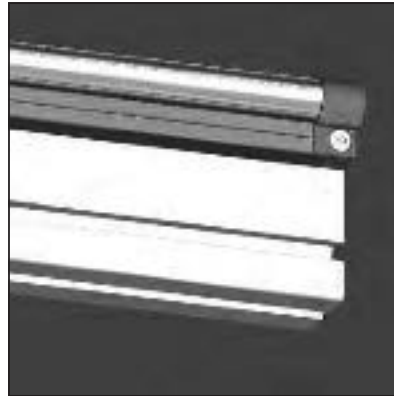
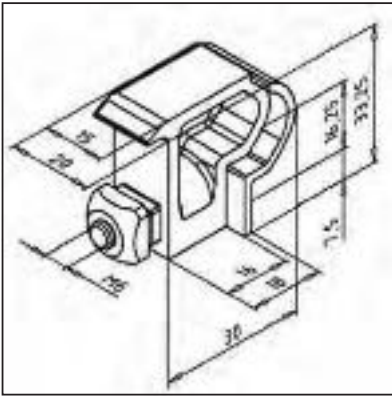
- Recommended distance: 50 mm from the edge, then approximately every 200 - 300 mm

- Fasten to the supporting profile using M8 x 30 hex socket head screw and M8 square nut

- Hammer the shaft into the shaft supporting profile with a plastic-tipped hammer

SHAFT FASTENER LEFT LR 16

part no. 28.0809/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium GD, powder coated, grey
- With fastening kit
- Weight 0,04 kg

APPLICATIONS

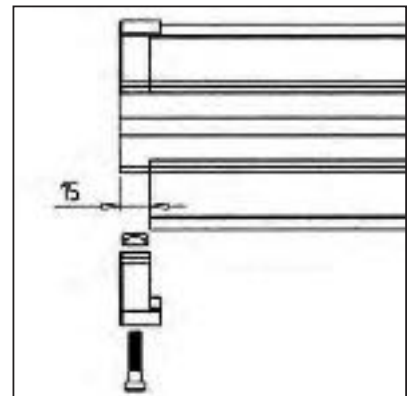
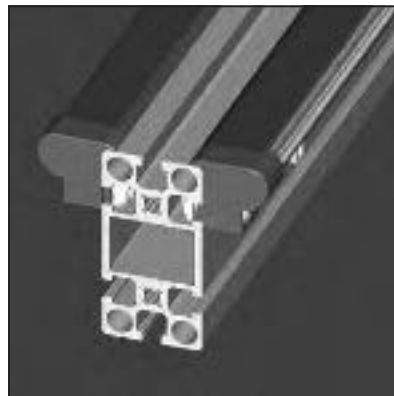
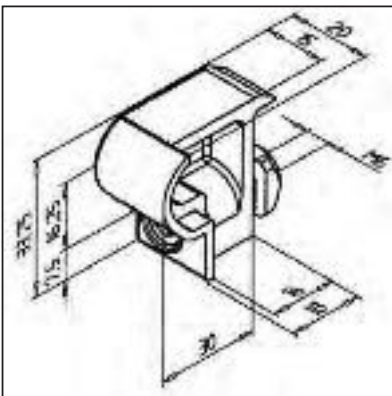
- Axial fastening of shafts in linear guides subject to heavy dynamic stress

ASSEMBLY

- Shaft carrier profile and shafts must be 15 mm shorter on each side than the supporting profile
- Attach the shaft fastener at both ends of the shaft with supplied fastening kit
- No processing necessary

SHAFT RETENTION DEVICE RIGHT LR 16

part no. 28.0808/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium GD, powder coated, grey
- Fastening kit
- Weight 0,04 kg

APPLICATIONS

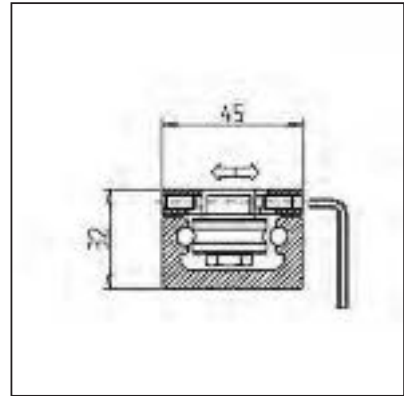
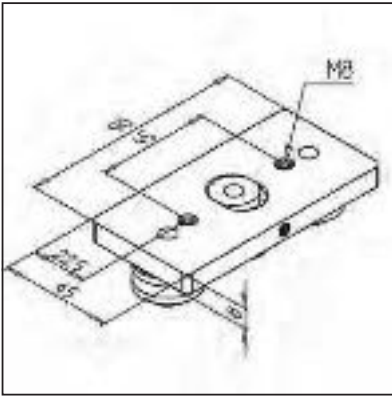
- Axial fastening of shafts in linear guides subject to heavy dynamic stress

ASSEMBLY

- Shaft carrier profile and shafts must be 15 mm shorter on each side than the supporting profile
- Attach the shaft fastening at both ends of the shaft with supplied fastening kit
- No processing necessary

SLIDE LR6 COMPACT

part no. 28.0140/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, all faces machined
- 3 Double row, angular-contact bearings
- Assembled ready for use
- Weight 0,194 kg
- **Stainless version part no. 28.0148/0**

APPLICATIONS

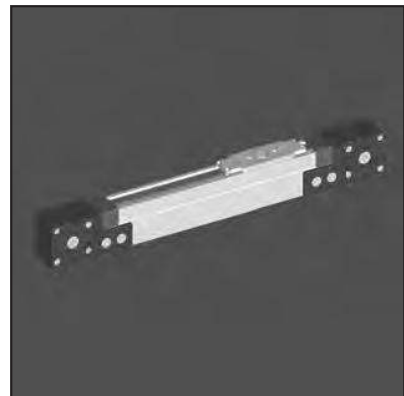
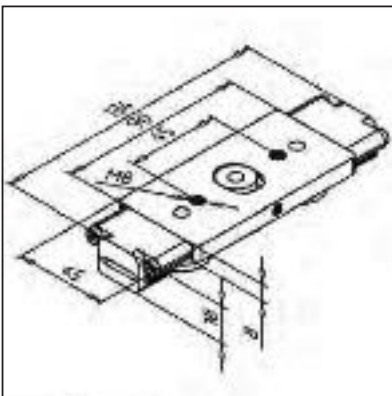
- MiniTec linear guide systems LR 6
- Material-handling
- Measuring devices
- Doors
- Rail **part no. 28.0119/0**

ASSEMBLY

- Slip slide onto rail
- Adjust clearance with key 2,5 A/F

SLIDE LR 6 Z COMPACT

part no. 28.0520/0



TECHN. DATA / ITEMS SUPPLIED

- aluminium all faces processed
- triple row, angular-contact bearings
- mounted with concentric fixing bushes
- Weight 0,192 kg
- **Stainless version part no. 28.0524/0**

APPLICATIONS

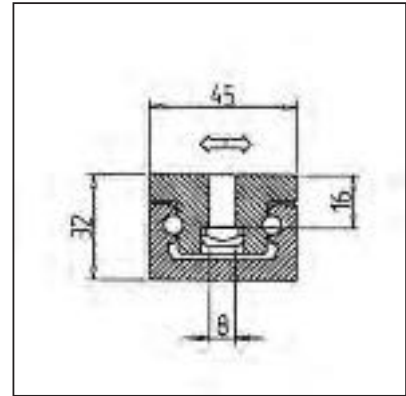
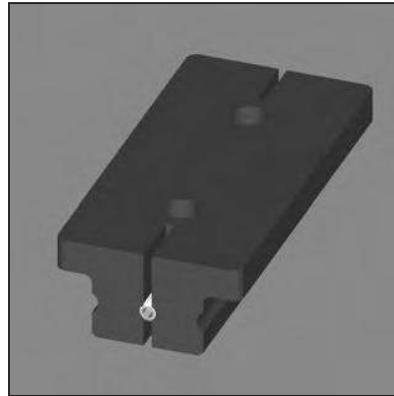
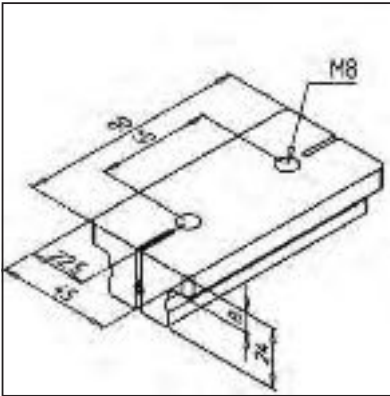
- MiniTec linear guide system LR6
- material-handling in areas with shortage of space
- use with rail LR6 compact **part no. 28.0119/0** and timing belt pulley LR6

ASSEMBLY

- slip slide onto rail
- adjust clearance with key 2,5 A/F
- For simple equipment

SLIDE LR 6 COMPACT

part no. 28.0127/0

**TECHN. DATA / ITEMS SUPPLIED**

- Slide PEUHMW, black
- With square nut M8, steel zinc plated
- Weight 0,068 kg

APPLICATIONS

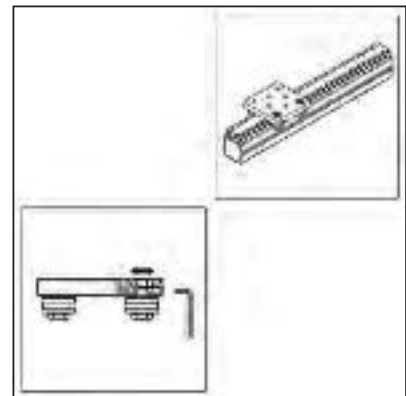
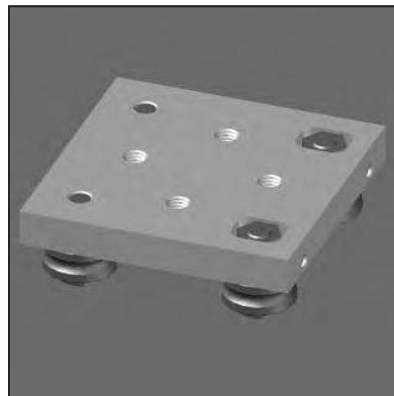
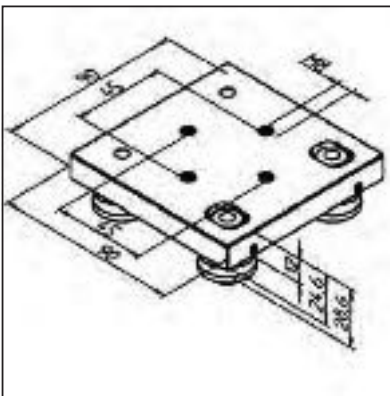
- Material-handling
- Measuring devices
- Doors
- For rail **part no. 28.0119/0**

ASSEMBLY

- Slip slide onto rail
- Adjust slide clearance with hexagon key

SLIDE LR 6

part no. 28.0138/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, all faces machined
- Double row, angular-contact bearings
- Assembled ready for use
- Weight 0,396 kg
- **Stainless version part no. 28.0139/0**

APPLICATIONS

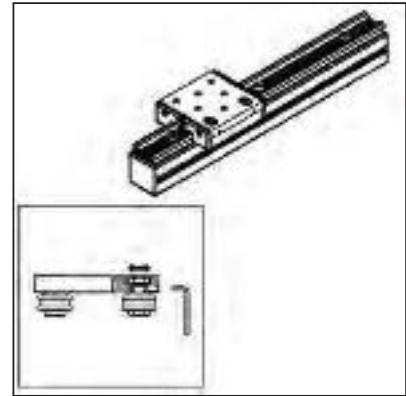
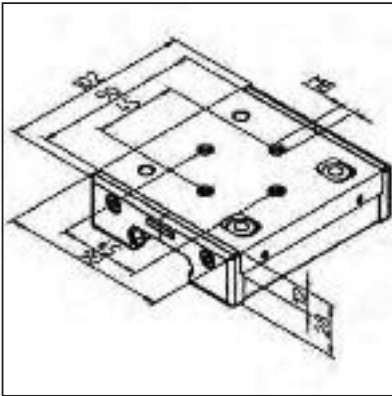
- MiniTec linear guide systems LR 6
- Material-handling
- Measuring devices
- Doors
- For rail **part no. 28.0119/0**

ASSEMBLY

- Slip slide onto rail
- Adjust clearance with key 2,5 A/F
- Tighten fixing screw with a torque of 15 Nm
- When used in extreme environment, use slide LR6 with cover, **part no. 28.0138/1**

SLIDE LR 6 WITH COVER

part no. 28.0138/1



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, all faces machined
- Double row, angular-contact bearings LR6
- 4 concentric fixing bush
- 4 covers, plastic grey, with spring loaded greasing-felts
- Weight 0,458 kg
- **Stainless version part no. 28.0139/1**

APPLICATIONS

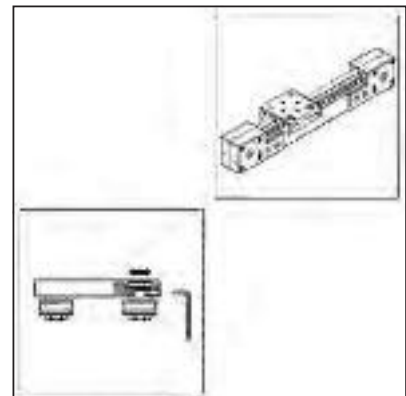
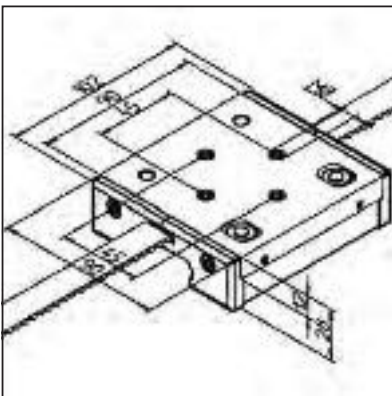
- MiniTec linear guide systems LR 6
- Jigs
- Sliding doors
- Large drawers
- For rail **part no. 28.0119/0**

ASSEMBLY

- Slip slide onto rail
- Adjust clearance with key 2,5 A/F
- Recommended torque: 15 Nm
- Saturate greasing felts with appropriate oil

SLIDE LR 6 Z

part no. 28.0138/2



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, all faces machined
- Double row, angular-contact bearings LR6
- 4 concentric fixing bush
- 4 covers, plastic grey, with spring loaded greasing-felts
- Belt fixing device integrated into slide-plate
- Weight 0,502 kg
- **Stainless version part no. 28.0139/2**

APPLICATIONS

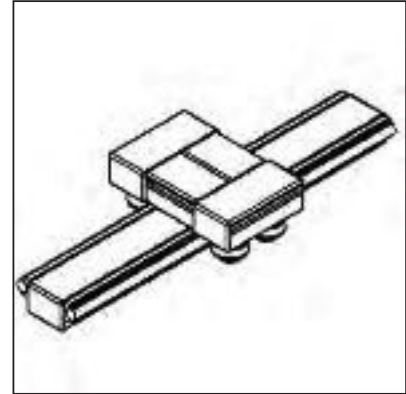
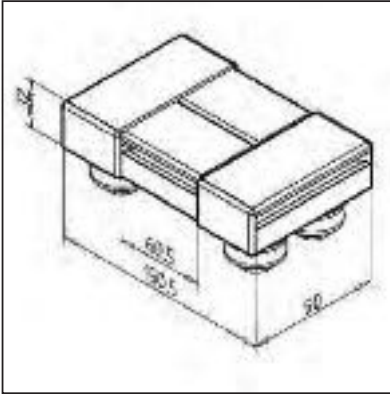
- MiniTec linear guide systems LR 6
- Material-handling devices
- For rail **part no. 28.0119/0**

ASSEMBLY

- Slip slide onto rail
- Adjust clearance with key 2,5 A/F
- Recommended torque: 15 Nm
- Saturate greasing felts with appropriate oil
- Screw end caps clamping lower covers

SLIDE LW 32

part no. 28.0088/0



TECHN. DATA / ITEMS SUPPLIED

- Slide completely assembled
- 2 concentric and 2 eccentric bearing units
- End caps
- Weight 1,06 kg
- **Stainless version part no. 28.0088/1**

APPLICATIONS

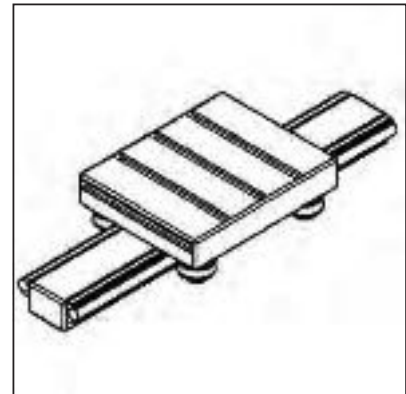
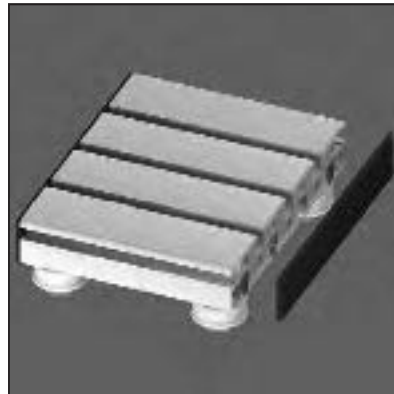
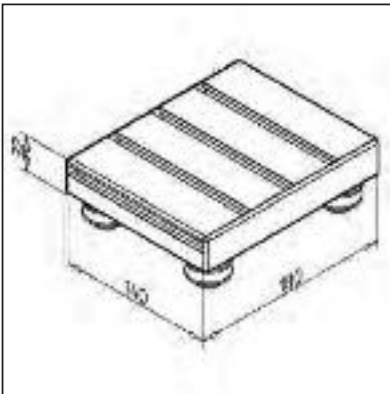
- Handling systems
- Measuring devices
- Automatic advance units
- For rails 19 and 32

ASSEMBLY

- Slip slide on rail 19 or 32; adjust clearance with eccentric bush

SLIDE LW 32 E

part no. 28.0089/0



TECHN. DATA / ITEMS SUPPLIED

- Slide completely assembled
- 2 concentric and 2 eccentric bearing units
- End caps
- Weight 1,92 kg
- **Stainless version part no. 28.0089/1**

APPLICATIONS

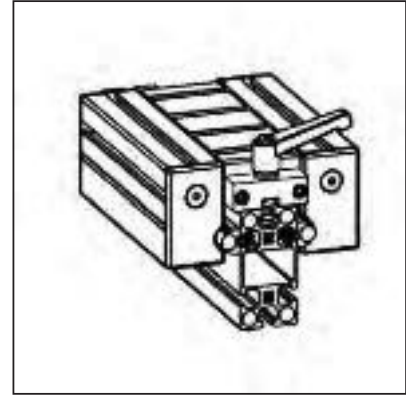
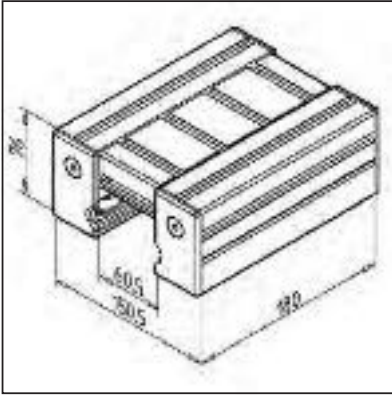
- 1- or multi-axis guides
- Handling systems
- Measuring devices
- For rails 19 and 32

ASSEMBLY

- Slip slide on rail 19 or 32; adjust clearance with eccentric bush

SLIDE LW 45

part no. 28.0091/0



TECHN. DATA / ITEMS SUPPLIED

- Slide completely assembled
- 2 concentric and 2 eccentric bearing units
- End caps LR and 2 cover profiles LR
- Weight 2,26 kg
- **Stainless version part no. 28.0091/3**

APPLICATIONS

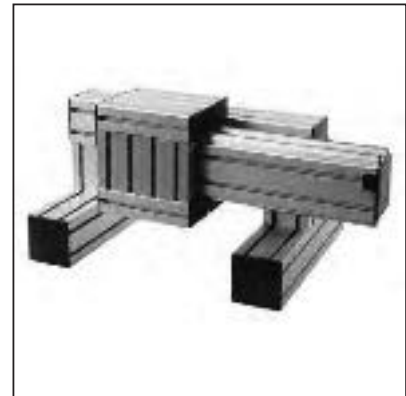
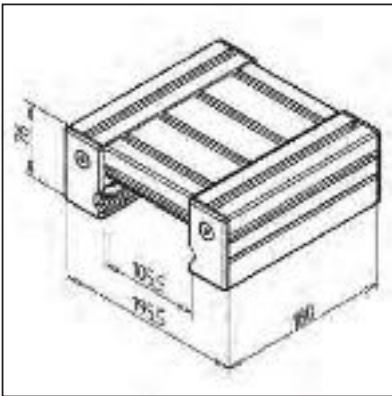
- 1- or multi-axis guides
- Linear robots
- Handling systems
- Measuring devices
- For rails 45, 45 x 90 H, 45 x 180 H and 135 H

ASSEMBLY

- Assemble slide on rail 45 or 45 x 90 H, adjust clearance with eccentric bush
- Assemble cover and greasing system
- **OPTIONS:**
- Slide clamping unit **part no. 28.0270/0**

SLIDE LW 90

part no. 28.0092/0



TECHN. DATA / ITEMS SUPPLIED

- Slide completely assembled
- 2 concentric and 2 eccentric bearing units
- End caps LR and Cover profiles LR
- Weight 2,7 kg
- **Stainless version part no. 28.0092/2**

APPLICATIONS

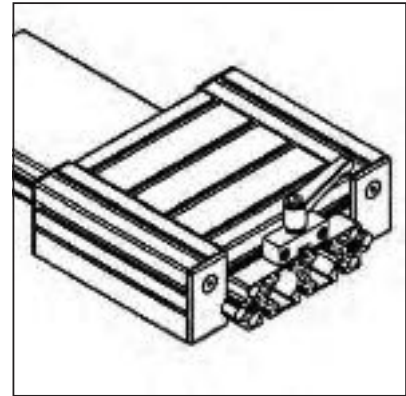
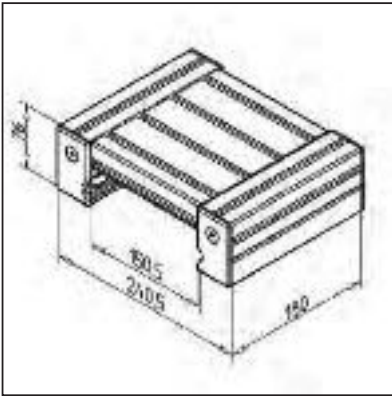
- 1- or multi-axis guides
- Linear robots
- Handling systems
- Measuring devices
- For rails 45 x 90 F, 90 x 90, 90 x 180 H

ASSEMBLY

- Assemble slide on rail 45 x 90 F, rail 90 or rail 90 x 180 H; adjust clearance with eccentric bush
- Assemble cover and greasing system
- **OPTIONS:**
- Slide clamping **part no. 28.0270/0**

SLIDE LW 135

part no. 28.0084/0

**TECHN. DATA / ITEMS SUPPLIED**

- Slide completely assembled
- 2 concentric and 2 eccentric bearing units
- End caps LR and Cover profiles LR
- Weight 3,15 kg
- **Stainless version part no. 28.0084/1**

APPLICATIONS

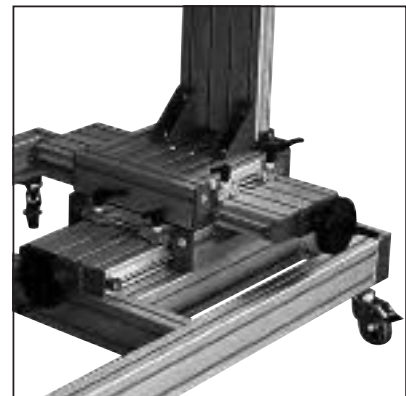
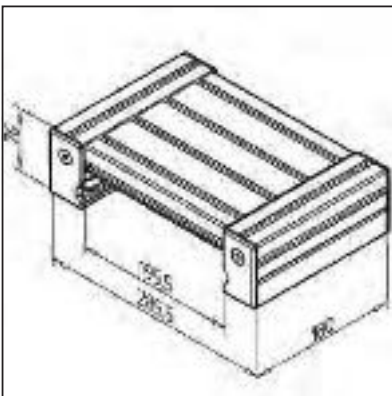
- 1- or multi-axis guides
- Linear robots
- Handling systems
- Measuring devices
- For rails 135 F

ASSEMBLY

- Assemble slide on rail 45 x 135; adjust clearance with eccentric bush
- Assemble cover and greasing system
- **OPTIONS:**
- Slide clamping unit **part no. 28.0270/0**

SLIDE LW 180

part no. 28.0087/0

**TECHN. DATA / ITEMS SUPPLIED**

- Slide completely assembled
- 2 concentric and 2 eccentric bearing units
- End caps LR and Cover profiles LR
- Weight 3,59 kg
- **Stainless version part no. 28.0087/1**

APPLICATIONS

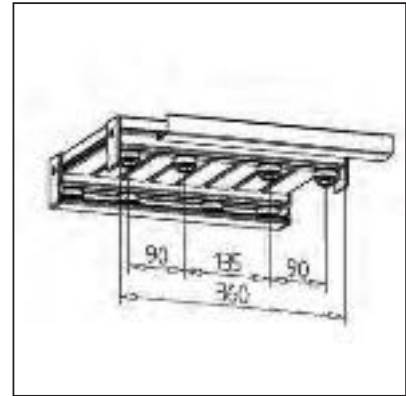
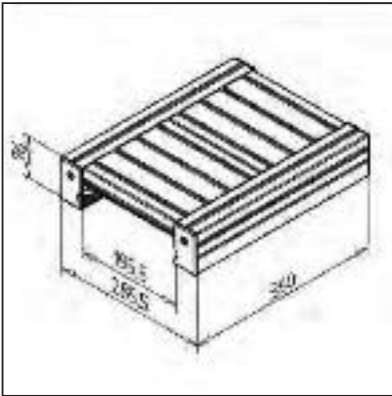
- 1- or multi-axis guides
- Linear robots
- Handling systems
- Measuring devices
- For rails 45 x 180 F and 90 x 180 F

ASSEMBLY

- Assemble slide on rail 90 x 180; adjust clearance with eccentric bush
- Assemble cover and greasing system
- **OPTIONS:**
- Slide clamping unit **part no. 28.0270/0**

SLIDE LW 180

part no. 28.0087/3



TECHN. DATA / ITEMS SUPPLIED

- Slide completely assembled
- 2 concentric and 2 eccentric bearing units
- End caps LR and Cover profiles LR
- Weight 7,379 kg
- **Stainless version part no. 28.0087/1**

APPLICATIONS

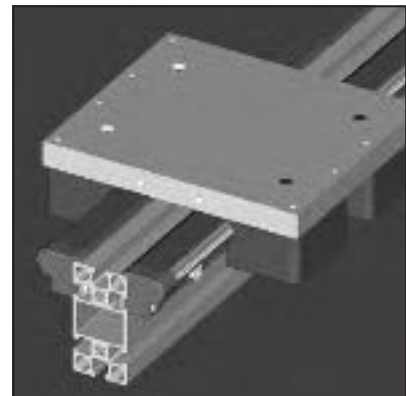
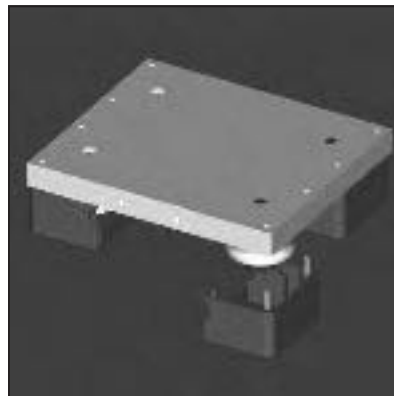
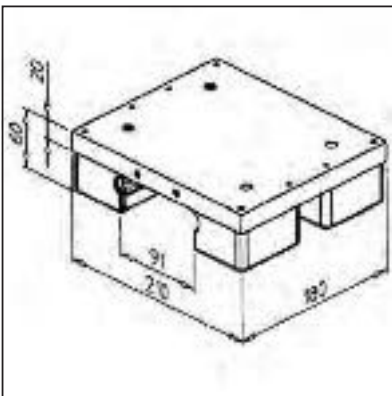
- 1- or multi-axis guides
- Linear robots
- Handling systems
- Measuring devices
- For rails 45 x 180 F and 90 x 180 F

ASSEMBLY

- Assemble slide on rail 90 x 180; adjust clearance with eccentric bush
- Assemble cover and greasing system
- **OPTIONS:**
- Slide clamping unit **part no. 28.0270/0**

SLIDE LR 16 - 45

part no. 28.0810/0



TECHN. DATA / ITEMS SUPPLIED

- With 2 concentric and 2 eccentric bearing units

APPLICATIONS

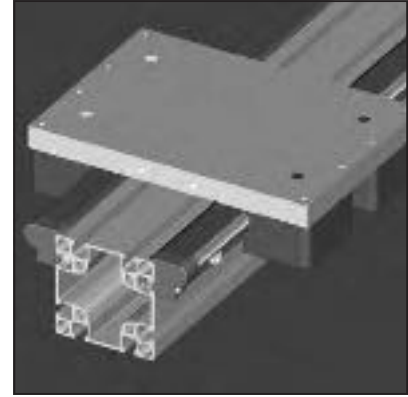
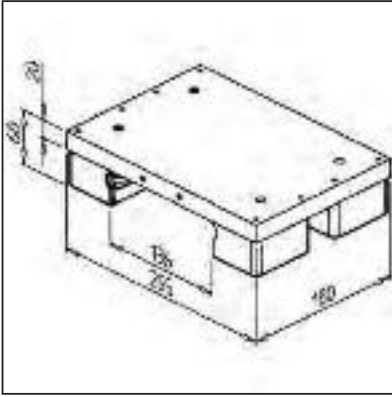
- Single and multi-axis guidance
- Linear robot
- Handling equipment
- Measuring equipment
- For rail LR16 45 x 90 H

ASSEMBLY

- Push the trolley onto the rails, adjust for zero play with eccentric fastening set
- Mount the covering and lubrication system

SLIDE LR 16 - 90

part no. 28.0811/0

**TECHN. DATA / ITEMS SUPPLIED**

- Fully assembled trolley
- With 2 concentric and 2 eccentric bearing units

APPLICATIONS

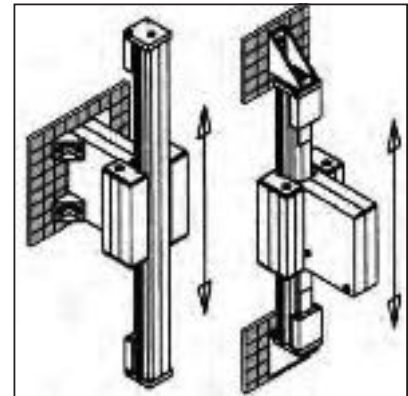
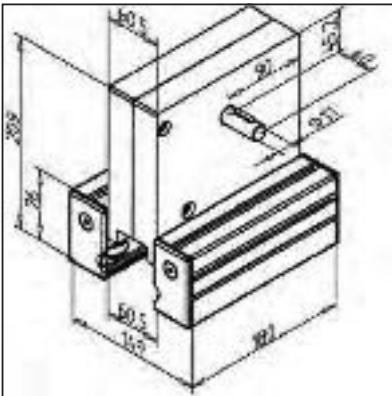
- Single and multi-axis guidance
- Linear robot
- Handling equipment
- Measuring equipment
- For rail LR16 90 and LR16 90x180 H

ASSEMBLY

- Push the trolley onto the rails, adjust for zero play with eccentric fastening set
- Mount the covering and lubrication system

BELT DRIVE 45

part no. 28.0248/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium
- Shaft end $\varnothing 17$ for motor connection
- 2 idler pulleys aluminium, integrated in linear slide LW 45
- Weight 6,320 kg

APPLICATIONS

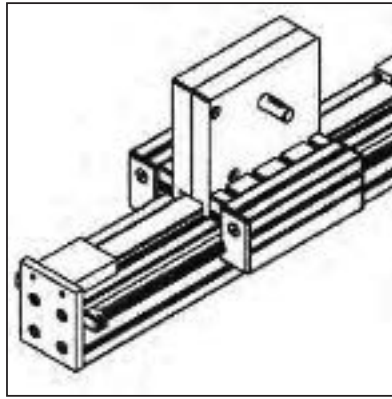
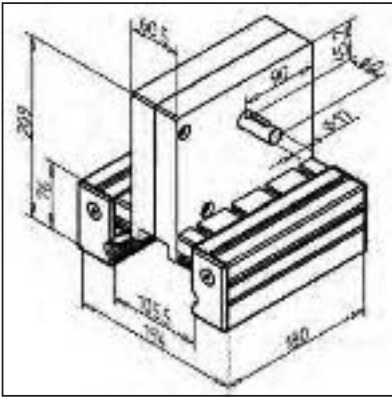
- MiniTec linear guides LR with extremely long travels, z-axis
- Use with rail 45, 45 x 90 H, 45 x 135 H and 45 x 180 H

ASSEMBLY

- Push the timing belt through the drive, slide drive on the rail and adjust clearance
- Fasten timing belt ends with timing belt tensioner **part no. 28.0090/0** and fastening plate for rail 45 **part no. 28.0054/0** or for rail 45 x 90 H **part no. 28.0056/0** on the rail ends
- Tighten the timing belt
- Calculation of the timing belt: rail length + 212 mm

BELT DRIVE 90

part no. 28.0249/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium
- Shaft end Ø 17 for motor connection
- 2 idler pulleys aluminium, integrated in linear slide LW 90
- Weight 6,790 kg

APPLICATIONS

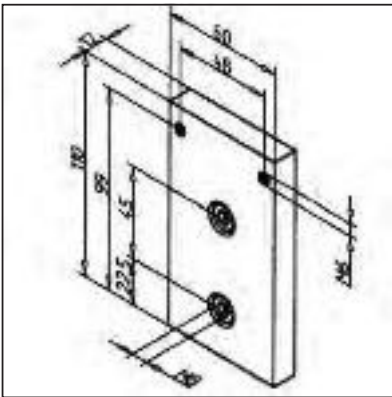
- MiniTec linear guides with extremely long travels, z-axis
- Use with rail 45 x 90 F, rail 90 or 90 x 180 H

ASSEMBLY

- Push the timing belt through the drive, slide drive on the rail and adjust clearance
- Fasten timing belt ends with timing belt tensioner **part no. 28.0090/0** and fastening plate for rail 45 **part no. 28.0057/0** or for rail 45 x 90 F **part no. 28.0055/0** on the rail ends
- Tighten the timing belt
- Calculation of the timing belt: rail length + 212 mm

FASTENING KIT FOR TIMING BELT TENSIONING DEVICE 45 X 90 H

part no. 28.0056/0



TECHN. DATA / ITEMS SUPPLIED

- Plate aluminium, natural anodized
- Fastening kit
- Weight 0,089 kg

APPLICATIONS

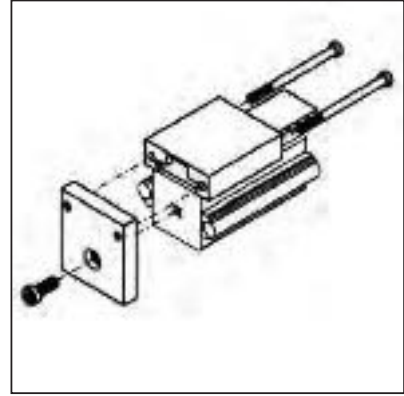
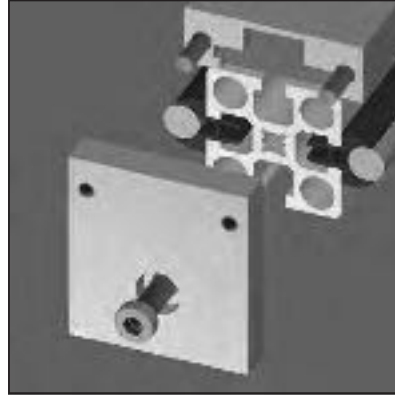
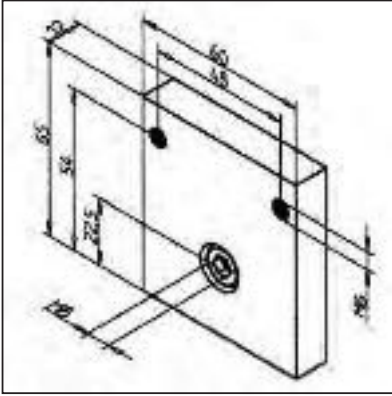
- For each timing belt tensioner one fastening kit is necessary
- Attachment of timing belt tensioner on rail 45 x 90 H in connection with belt drive

ASSEMBLY

- Fasten with fastening kit from supply schedule on rail end; thread M8 required
- Mount timing belt tensioner

FASTENING KIT FOR TIMING BELT TENSIONING DEVICE 45

part no.
28.0054/0



TECHN. DATA / ITEMS SUPPLIED

- Plate aluminium, natural anodized
- Fastening kit
- Weight 0,089 kg

APPLICATIONS

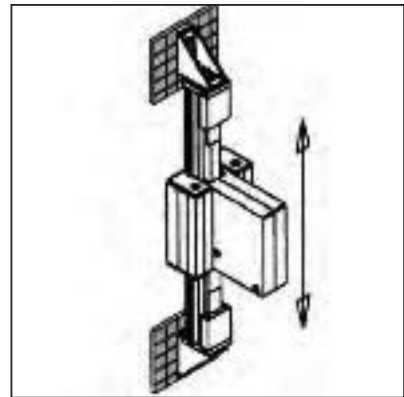
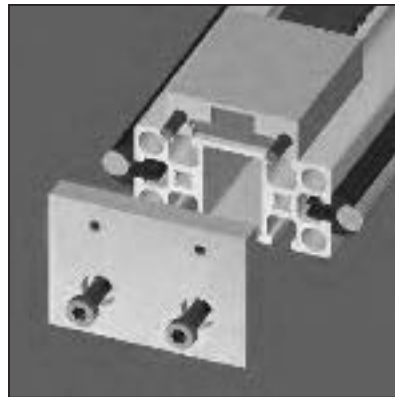
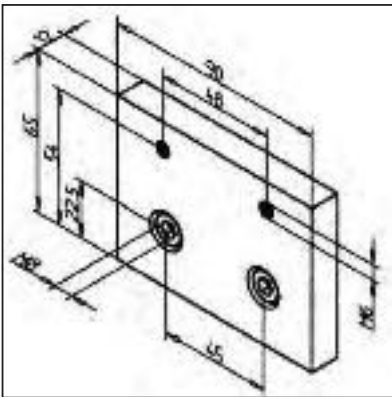
- **In connection with belt drive**
- For each timing belt tensioner one fastening kit is necessary
- Attachment of timing belt tensioner on rail 45

ASSEMBLY

- Fasten with fastening kit from supply schedule on rail end; thread M8 required
- Mount timing belt tensioner

FASTENING KIT FOR TIMING BELT TENSIONING DEVICE 45 X 90 F

part no. 28.0055/0



TECHN. DATA / ITEMS SUPPLIED

- Plate aluminium, natural anodized
- Fastening kit
- Weight 0,089 kg

APPLICATIONS

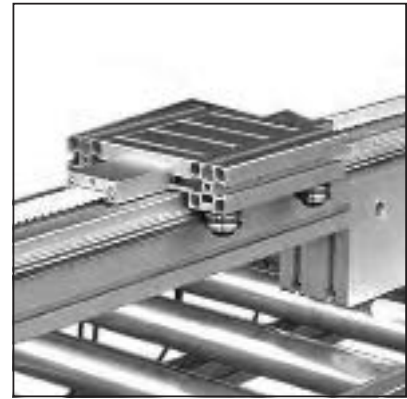
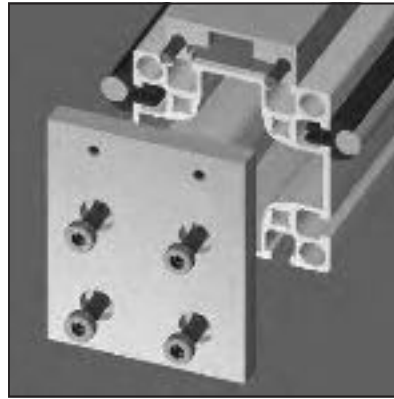
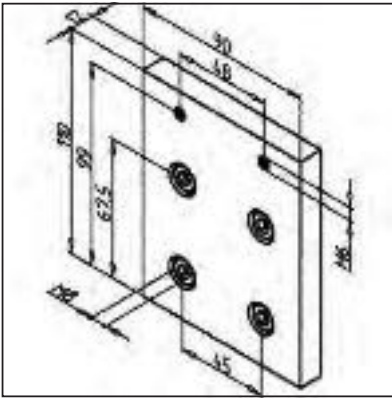
- For each timing belt tensioner one fastening kit is necessary
- Attachment of timing belt tensioner on rail 45 x 90 F in connection with belt drive

ASSEMBLY

- Fasten with fastening kit from supply schedule on rail end; thread M8 required
- Mount timing belt tensioner

FASTENING KIT FOR TIMING BELT TENSIONING DEVICE 90

part no. 28.0057/0



TECHN. DATA / ITEMS SUPPLIED

- Plate aluminium, natural anodized
- Fastening kit
- Weight 0,089 kg

APPLICATIONS

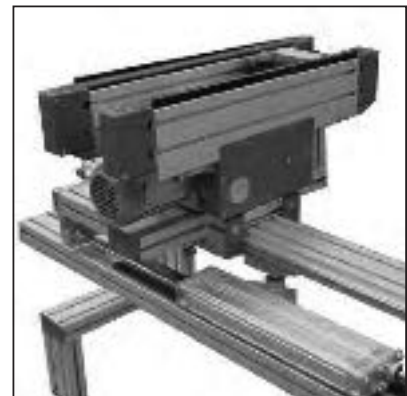
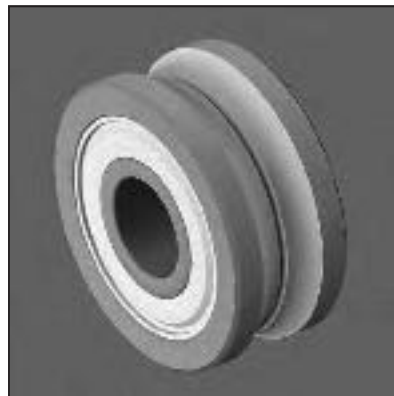
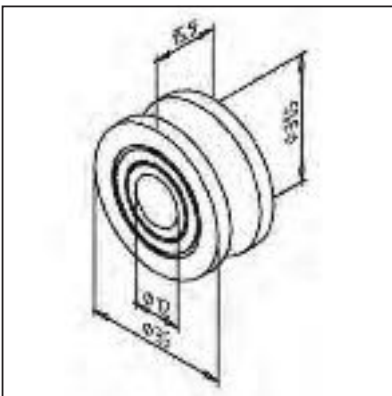
- For each timing belt tensioner one fastening kit is necessary
- Attachment of timing belt tensioner on rail 90 in connection with belt drive

ASSEMBLY

- Fasten with fastening kit from supply schedule on rail end; thread M8 required
- Mount timing belt tensioner

BALL BEARING LR 12

part no. 28.0001/0



TECHN. DATA / ITEMS SUPPLIED

- Double-row angular contact bearing
- For shaft 12
- Load capacity:
- dyn. C = 10.50 kN
- stat. C₀ = 6.00 kN
- Weight 0,068 kg
- **Stainless version part no. 28.0001/1**

APPLICATIONS

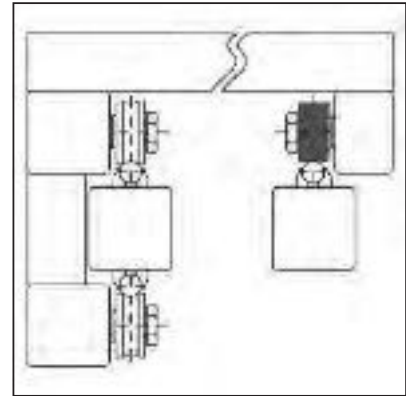
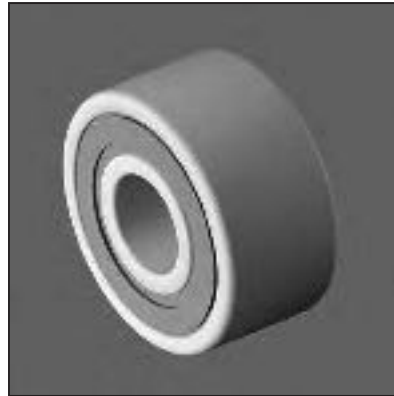
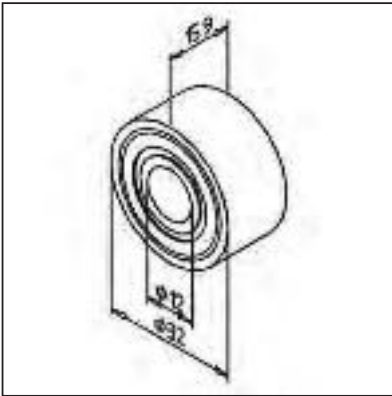
- All MiniTec linear guides LR

ASSEMBLY

- With fastening kit LRK part no. 28.0021/0 or LRE part no. 28.0022/0

BALL BEARING LR 12 L

part no. 28.0005/0

**TECHN. DATA / ITEMS SUPPLIED**

- Double-row angular contact bearing	
- Load capacity:	
- dyn. C =	8.60 kN
- stat. C ₀ =	5.10 kN
- Weight	0,06 kg

APPLICATIONS

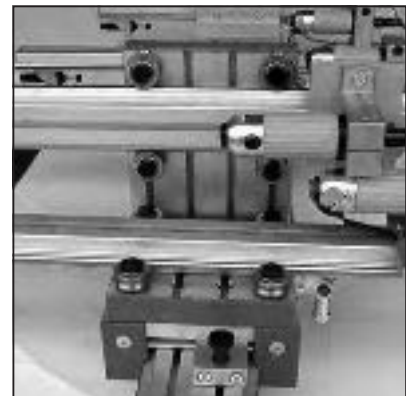
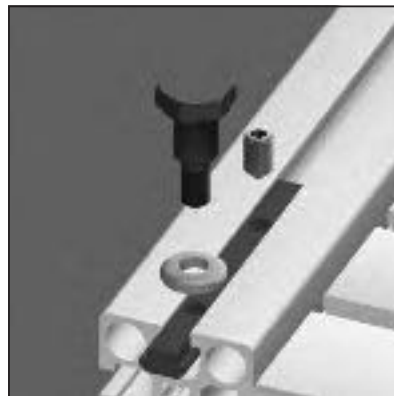
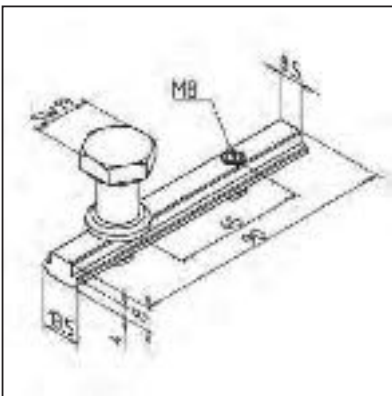
- MiniTec linear guides with movable and fixed bearing side
- Balancing deviations in distance in parallel linear systems

ASSEMBLY

- With fastening kit LRK part no. 28.0021/0 or LRE part no. 28.0022/0

FIXING KIT LRK

part no. 28.0021/0

**TECHN. DATA / ITEMS SUPPLIED**

- 1 T-slot bar, steel, zinc plated with set screw	
- 1 Bolt M8 concentric, steel, black-finished	
- 1 Washer 3,5 mm, steel, precision ground, back finished	
- Weight	0,1 kg
- Stainless version part no. 28.0021/1	

APPLICATIONS

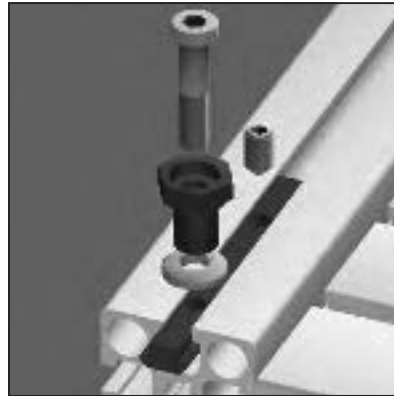
- All MiniTec linear guides LR
- Concentric attachment of ball bearings LR 12

ASSEMBLY

- Fix T-slot bar in groove of lower slide side with the set screws at inner position
- Threads M8 without set screws are used for the fixing bolts
- Insert bolt in the bearing and washer bore, Tighten firmly on T-slot bar with spanner 19 A/F
- Recommend locking torque: 25 Nm

FIXING KIT LRE

part no. 28.0022/0



TECHN. DATA / ITEMS SUPPLIED

- T-slot bar, steel, zinc plated with set screw
- Eccentric bush, steel, black-finished
- Bolt M8, steel, black
- Washer 3,5 mm, steel, precision ground, black finished
- Weight 0,1 kg
- **Stainless version part no. 28.0022/1**

APPLICATIONS

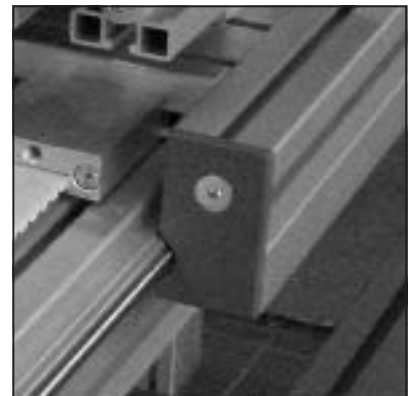
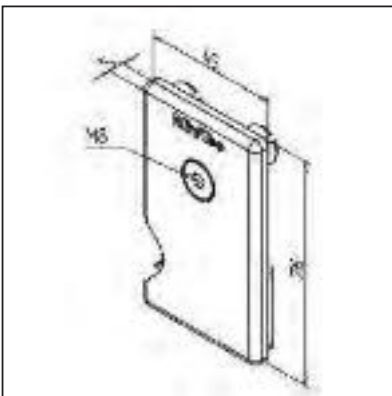
- All MiniTec linear guides LR
- Eccentric attachment of ball bearings LR 12

ASSEMBLY

- Mounting of T-slot bar: see fastening kit LRK
- Insert eccentric bush in the bearing and washer bore, retighten T-slot bar with key 4 A/F
- Adjust bush with ring spanner width 19 mm (turn for freedom from clearance with 0,9 - 1 Nm) and fix bolt
- Recommend locking torque: 25 Nm

END CAP LR (RIGHT)

part no. 28.0004/1



TECHN. DATA / ITEMS SUPPLIED

- ABS with integrated, spring-mounted stripping and greasing felt
- Fastening kit
- Weight 0,03 kg
- Also deliverable in black, **part no. 28.0004/0**

APPLICATIONS

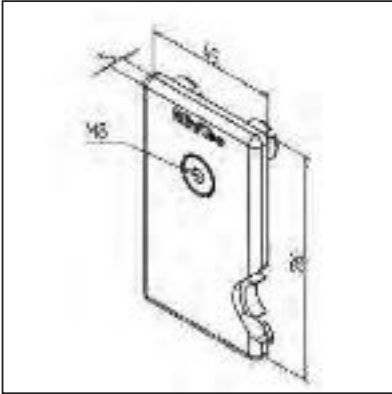
- All MiniTec linear guides LR

ASSEMBLY

- Insert cover profile between the end caps
- Insert the lubricated felts and press fastening peg in profile 45 x 45 of the slide plate
- Use fastening kit
- Clean and relubricate the felt or replace it when necessary **part no. 28.0004/8**

END CAP LR (LEFT)

part no. 28.0004/3

**TECHN. DATA / ITEMS SUPPLIED**

- ABS with integrated, spring-mounted stripping and greasing felt

- Fastening kit

- Weight 0,03 kg

- Also deliverable in black,
part no. 28.0004/2

APPLICATIONS

- All MiniTec linear guides LR

ASSEMBLY

- Insert cover profile between the end caps

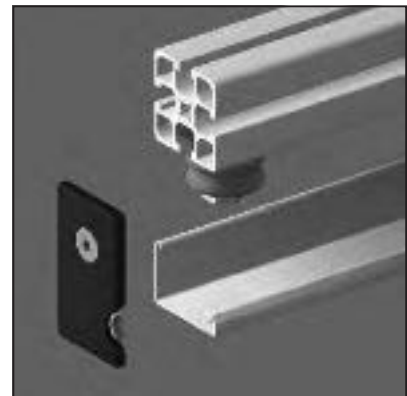
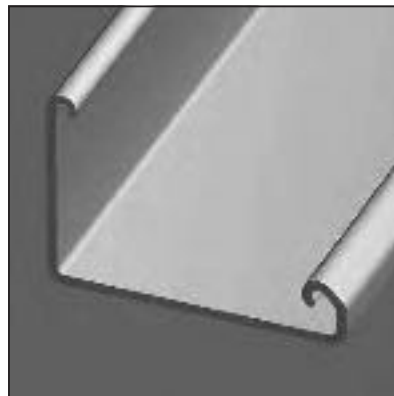
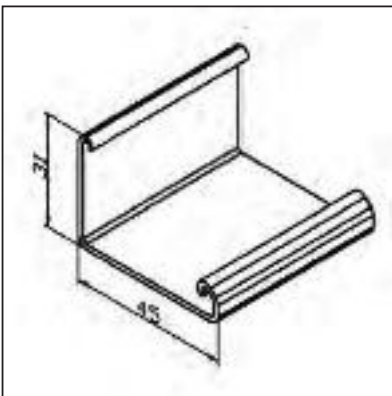
- Insert the lubricated felts and press fastening peg in profile 45 x 45 of the slide plate

- Use fastening kit

- Clean and relubricate the felt or replace it
part no. 28.0004/8 when necessary

COVER PROFILE LR

part no. 28.0049/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, natural anodized E6/EV1

- Weight 0,362 kg/m

- Length 6,000 m

APPLICATIONS

- All MiniTec linear guides LR

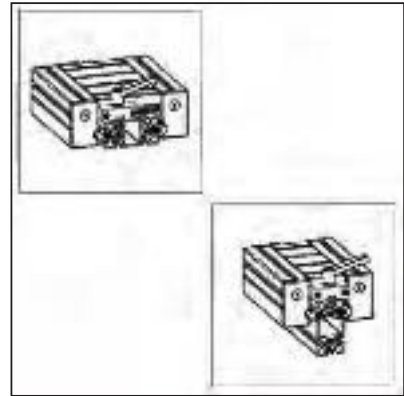
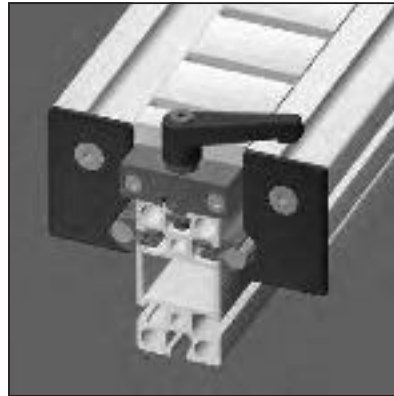
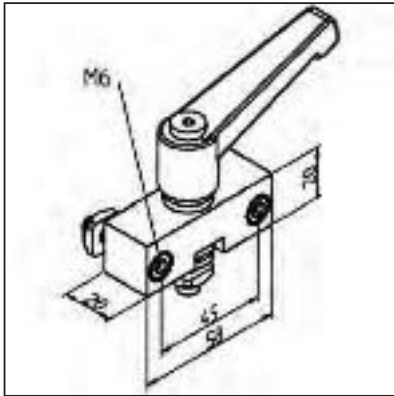
ASSEMBLY

- Cut profile according to the length of the slide

- Insert the cover profile between the end caps; insert the felts; fasten the end caps LR on the slide by means of the supplied screws

SLIDE CLAMPING UNIT (TOP) LWG / LWN / LW

part no. 28.0270/0



TECHN. DATA / ITEMS SUPPLIED

- Housing, aluminium, anodized E2/E6/EV1
- Clamp
- Fastening kit
- Weight 0,225 kg

APPLICATIONS

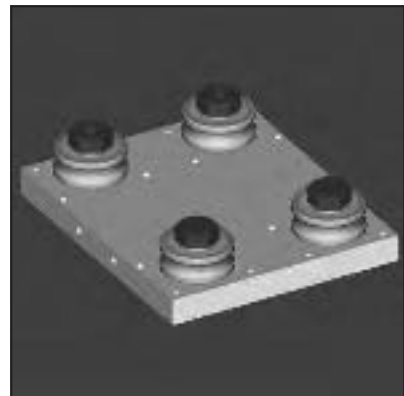
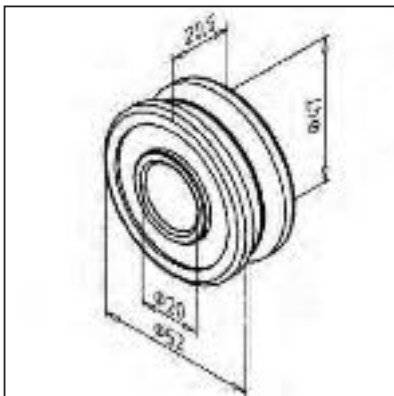
- Clamping of MiniTec slide LW and slides LWN / LWG on rail surface
- Clamping of MiniTec adjusting units

ASSEMBLY

- Preadjust clamping shaft and lead it in profile groove
- Insert plastic element
- Mount housing block
- Secure clamping lever with mounting adhesive on clamping shaft

BALL BEARING LR 16

part no. 50.1726/0



TECHN. DATA / ITEMS SUPPLIED

- Double-row angular contact bearing
- For shaft \varnothing 16
- Load capacity:
- dyn. C = 19.90 kN
- stat. C₀ = 12.60 kN
- Weight 0,2 kg

APPLICATIONS

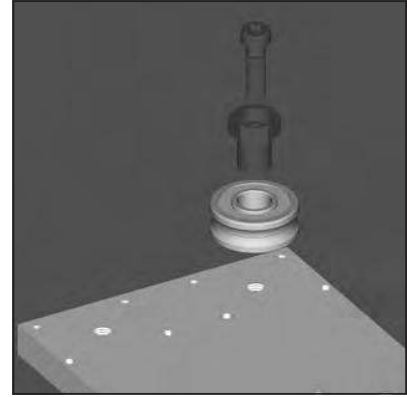
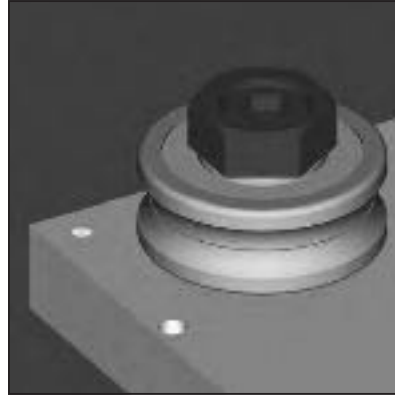
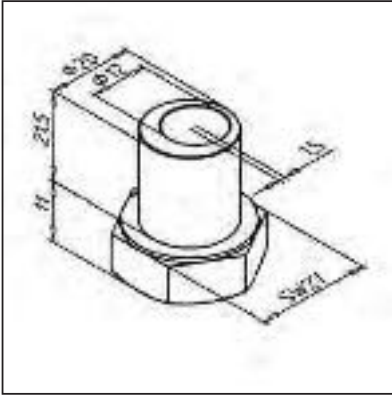
- MiniTec linear guides LR 16

ASSEMBLY

- Fastening with central bush **part no. 28.0814/0** or adjustable with eccentric bush **part no. 28.0813/0** and M 12 x 40 bolt **part no. 21.1257/0**

ECCENTRIC BUSH

part no. 28.0813/0



TECHN. DATA / ITEMS SUPPLIED

- Eccentric bush, steel, black-finished
- Weight 0,059 kg

APPLICATIONS

- MiniTec linear guides LR 16
- Eccentric fastening of ball bearings LR 16

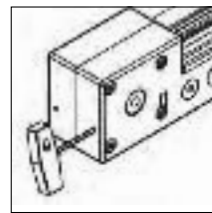
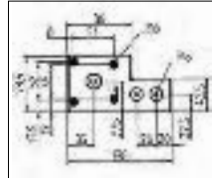
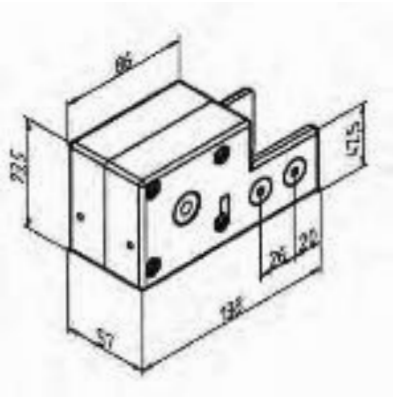
ASSEMBLY

- Insert screw M12 x 40 **part no. 21.1257/0** into eccentric bush and assemble loosely with bearing
- Adjust the bearing by turning the eccentric bush with the spanner (wrench size 27) for zero play (with 0.9 - 1 Nm torque resistance) and hold the eccentric bush in this position. Tighten the bolt.
- Recommended tightening torque: 50Nm

TIMING BELT PULLEY

LR 6 & LR 6 COMPACT
T 45 (LR 12 + LR 16)

LR 6 & LR 6 COMPACT

**Techn. data/items supplied**

- Aluminium GD, power coated, grey
- Assembled ready for use

Applications

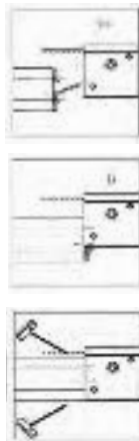
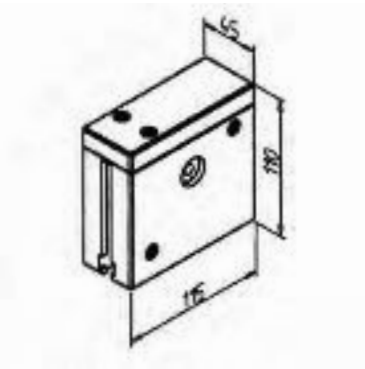
- For MiniTec linear guides LR 6 Z

Assembly

- Insert square-nuts M8 in rail
- Lead timing belt through reverse unit
- Slip reverse unit on rail and prefix screws
- Fix timing belt on slide
- Tighten timing belt at reverse unit with key 3 A/F - if necessary from both sides
- Tighten fixing screws

BORE FOR DRIVING SHAFT	WEIGHT	PART NO.	PART NO. STAINLESS STEEL VERSION
without	0.96 kg	28.0510/0	28.0509/0
Ø 10 mm	0.96 kg	28.0510/1	28.0509/1
Ø 11 mm	0.96 kg	28.0510/2	28.0509/2
Ø 14 mm	0.96 kg	28.0510/3	28.0509/3

T 45 (LR 12 + LR 16)

**Techn. data/items supplied**

- Aluminium, anodized E6/EV1
- Completely assembled with pulley
- 2 ball bearings
- top cover is mounted

Applications

- For MiniTec linear guides LR, freely combinable

Assembly

- Form threads M8 in both rail ends and mount power-lock fastener **part no. 21.1018/0**
- Pass belt through the rail and through pulley unit
- Insert pulley unit from top
- Tighten set screw
- Tighten timing belt with timing belt tensioner
- Use profile connector H **part no. 21.1018/1** when mounting the stainless steel version.

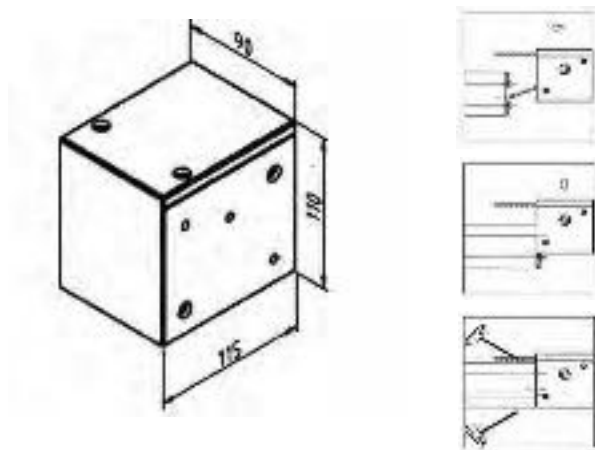
BORE FOR DRIVING SHAFT	WEIGHT	PART NO.	PART NO. STAINLESS STEEL VERSION
without	1.170 kg	28.0083/0	28.0046/0
Ø 11 mm	1.168 kg	28.0083/2	28.0046/2
Ø 12 mm	1.168 kg	28.0083/6	28.0046/6
Ø 14 mm	1.167 kg	28.0083/3	28.0046/3
Ø 15 mm	1.165 kg	28.0083/5	28.0046/5
Ø 16 mm	1.165 kg	28.0083/4	28.0046/4

TIMING BELT PULLEY

T 90 (LR 12 + LR 16)

T 90 (LR 12 + LR 16)

TIMING BELT PULLEY T 90 (LR 12 + LR 16)

**Techn. data/items supplied**

- Aluminium, anodized E6/EV1
- Completely assembled with pulley
- 2 ball bearings
- top cover is mounted

Applications

- For MiniTec linear guides LR 45 x 90 F, LR 90, LR 180

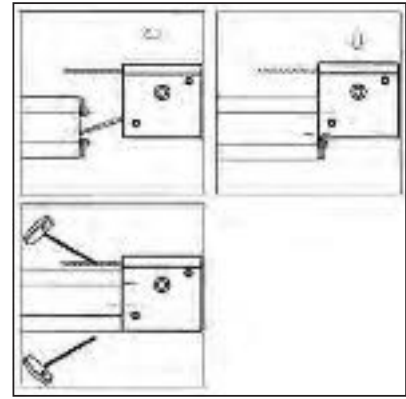
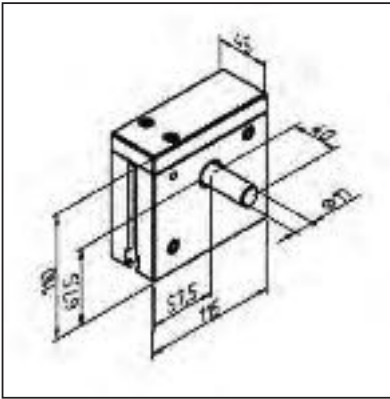
Assembly

- Form threads M8 in both rail ends and mount power-lock fastener **part no. 21.1018/0**
- Pass belt through the rail and through pulley unit
- Insert pulley unit from top
- Tighten set screw
- Tighten timing belt with timing belt tensioner
- Use profile connector H **part no. 21.1018/1** when mounting the stainless steel version.

BORE FOR DRIVING SHAFT	WEIGHT	PART NO.	PART NO. STAINLESS STEEL VERSION
without	2.800 kg	28.0082/0	28.0045/0
Ø 11 mm	2.798 kg	28.0082/2	28.0045/2
Ø 14 mm	2.795 kg	28.0082/3	28.0045/3
Ø 16 mm	2.789 kg	28.0082/4	28.0045/4
Ø 19 mm	2.775 kg	28.0082/5	28.0045/5
Ø 20 mm	2.773 kg	28.0082/7	28.0045/7
Ø 24 mm	2.164 kg	28.0082/6	28.0045/6

TIMING BELT PULLEY T 45 Z

part no. 28.0083/1

**TECHN. DATA / ITEMS SUPPLIED**

- Anodized E6 / EV1
- Completely assembled with pulley and shaft end
- 2 ball-bearings
- Top cover mounted
- Weight 1,200 kg
- **Stainless version part no. 28.0046/1**
- Drive pin available in differing diameter, length, and with feather key groove

APPLICATIONS

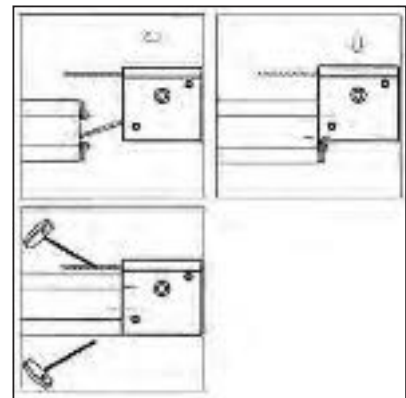
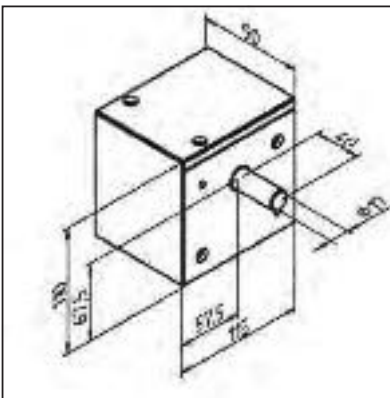
- All MiniTec linear guides

ASSEMBLY

- Form thread M8 and mount MiniTec power-lock fastener **part no. 21.1018/0**
- Pass belt through the rail and through pulley unit
- Insert pulley unit from top
- Tighten power-lock fastener
- Tighten the timing belt
- Use to mount stainless version power lock fastener H **part no. 21.1018/1**

TIMING BELT PULLEY T 90 Z

part no. 28.0082/1

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, anodized E6 / EV1
- Main casting completely assembled with pulley and shaft end
- 2 ball-bearings
- Top cover mounted
- Weight 2,850 kg
- **Stainless version part no. 28.0045/1**
- Drive pin available in differing diameter, length, and with feather key groove

APPLICATIONS

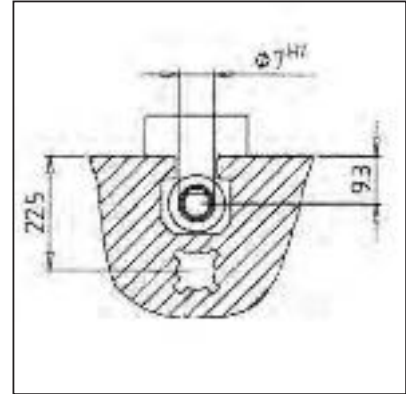
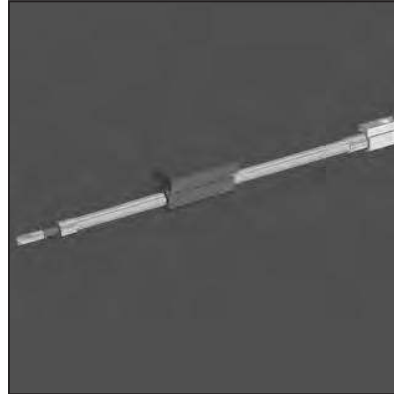
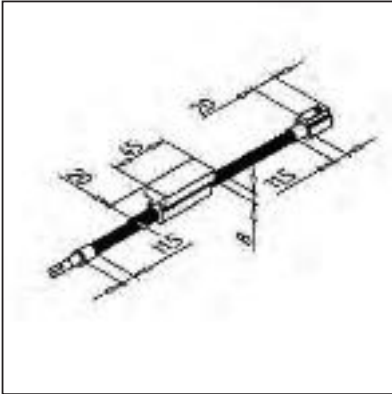
- All MiniTec linear guides

ASSEMBLY

- Form thread M8 and mount MiniTec power-lock fastener **part no. 21.1018/0**
- Pass belt through the rail and through pulley unit
- Insert pulley unit from top
- Tighten power-lock fastener
- Tighten the timing belt
- Use to mount stainless version power lock fastener H **part no. 21.1018/1**

MINI ADJUSTING UNIT FITTING KIT

part no. 28.0350/0



TECHN. DATA / ITEMS SUPPLIED

- Without carrier profile, handwheel and bearing block for mounting into existing equipment
- VA spindle M8 x 1.25
- Brass slide
- Max. load 1 - 2 kg
- **Please quote stroke length**

APPLICATIONS

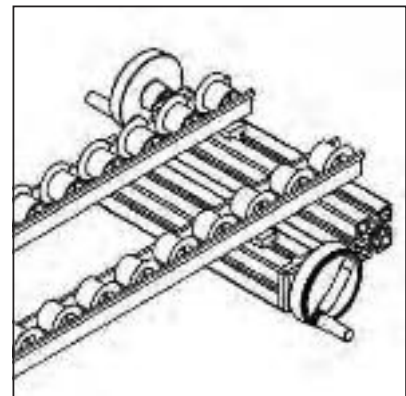
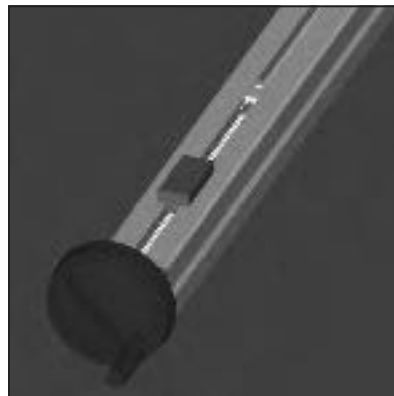
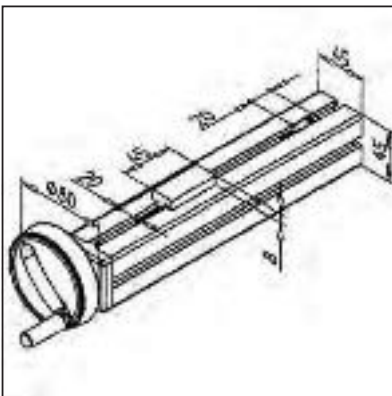
- For adjustment of the lateral guides on conveying equipment
- For adjusting sensor holders or light barriers
- For simple equipment

ASSEMBLY

- With MiniTec power-lock fastener
- Push into the profile groove and fasten the end block

MINI ADJUSTING UNIT WITH PROFILE 45 X 45

part no. 28.0354/0



TECHN. DATA / ITEMS SUPPLIED

- With carrier profile 45 x 45 F
- VA spindle M8 x 1.25
- Brass slide
- Max. loading 1 - 2 kg
- **Please quote stroke length**

APPLICATIONS

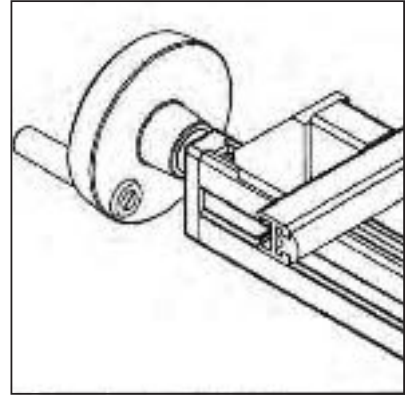
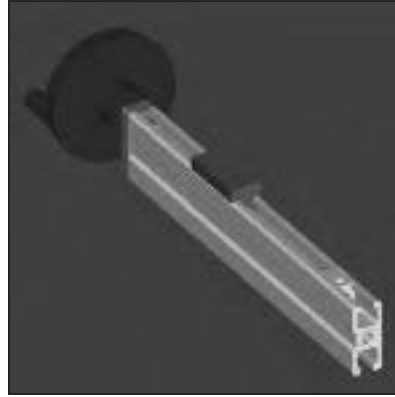
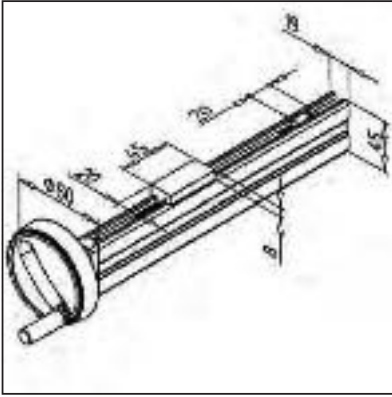
- For adjustment of the lateral guides on conveying equipment
- For adjusting sensor holders or light barriers
- For simple equipment

ASSEMBLY

- With MiniTec power-lock fastener
- Can also be fastened with a mounting bracket
- Also available without carrier profile, **part no. 28.0354/1**

MINI ADJUSTING UNIT WITH PROFILE 19 X 45

part no. 28.0352/0



TECHN. DATA / ITEMS SUPPLIED

- With carrier profile 19 x 45
- VA spindle M8 x 1.25
- Brass slide
- Max. loading 1 - 2 kg
- **Please quote stroke length**

APPLICATIONS

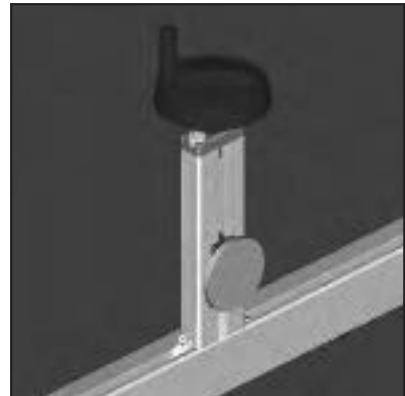
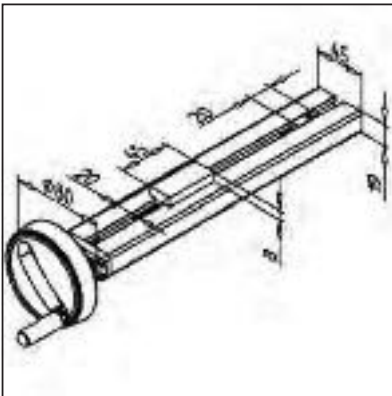
- For adjustment of the lateral guides on conveying equipment
- For adjusting sensor holders or light barriers
- For simple equipment

ASSEMBLY

- With MiniTec power-lock fastener
- Can also be fastened with a mounting bracket
- Also available without carrier profile, **part no. 28.0352/1**

MINI ADJUSTING UNIT WITH PROFILE 19 X 45

part no. 28.0359/0



TECHN. DATA / ITEMS SUPPLIED

- With carrier profile 19 x 45
- VA spindle M8 x 1.25
- Brass slide
- Max. loading 1 - 2 kg
- **Please quote stroke length**

APPLICATIONS

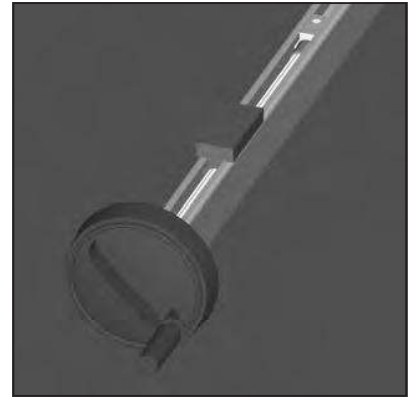
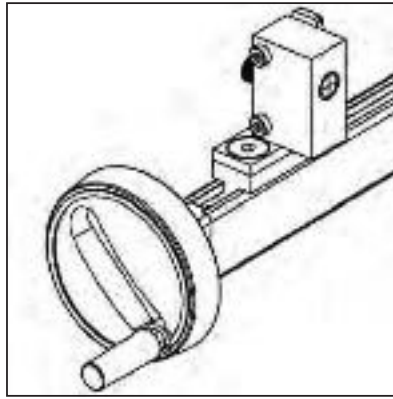
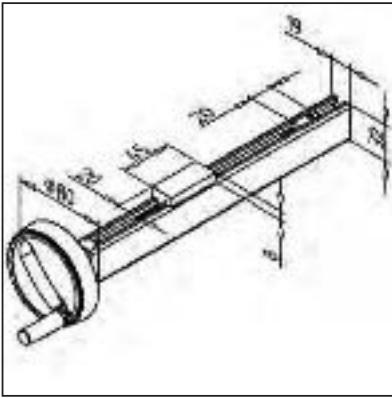
- For adjustment of the lateral guides on conveying equipment
- For adjusting sensor holders or light barriers
- For simple equipment

ASSEMBLY

- With MiniTec power-lock fastener
- Mounting possible also by angle
- Also available without carrier profile, **part no. 28.0352/1**

MINI ADJUSTING UNIT WITH PROFILE 19 X 32

part no. 28.0351/0



TECHN. DATA / ITEMS SUPPLIED

- With carrier profile 19 x 32
- VA spindle M8 x 1.25
- Brass slide
- Max. loading 1 - 2 kg
- **Please quote stroke length**

APPLICATIONS

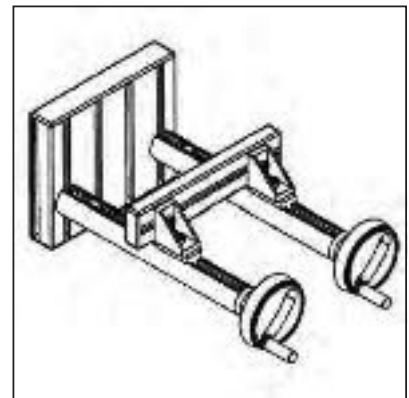
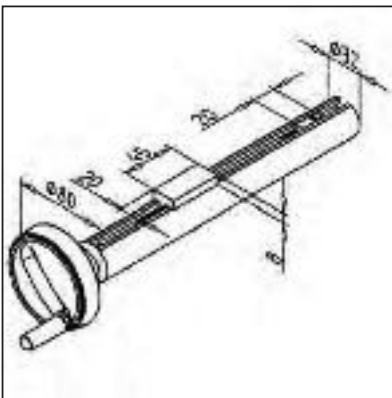
- For adjustment of the lateral guides on conveying equipment
- For adjusting sensor holders or light barriers
- For simple equipment

ASSEMBLY

- With MiniTec power-lock fastener
- Can also be fastened with a mounting bracket
- Also available without carrier profile, **part no. 28.0351/1**

MINI ADJUSTING UNIT WITH HANDLE PROFILE 32

part no. 28.0353/0



TECHN. DATA / ITEMS SUPPLIED

- With carrier profile handle profile 32
- VA spindle M8 x 1.25
- Brass slide
- Max. loading 1 - 2 kg
- **Please quote stroke length**

APPLICATIONS

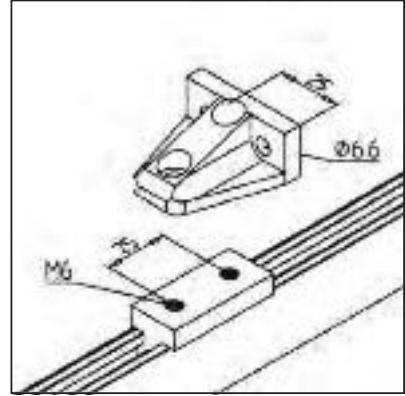
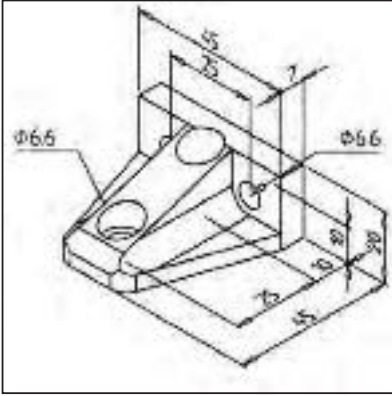
- For adjustment of the lateral guides on conveying equipment
- For adjusting sensor holders or light barriers
- For simple equipment

ASSEMBLY

- With MiniTec power-lock fastener
- Can also be fastened with a mounting bracket
- Fasten with strap handle profile 32, **part no. 22.1022/0**
- Also available without carrier profile, **part no. 28.0353/1**

BRACKET CONSOLE FOR MINIATURE ADJUSTMENT UNIT

part no.
28.0371/0



TECHN. DATA / ITEMS SUPPLIED

- Console aluminium, natural anodized
- Without fastening kit
- Weight 0,044 kg

APPLICATIONS

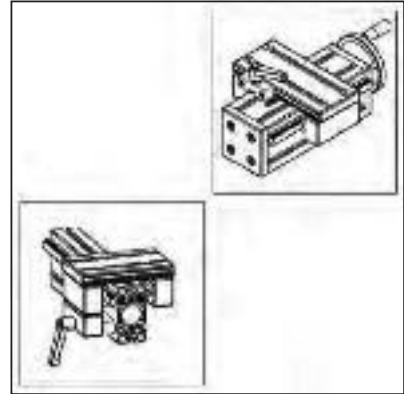
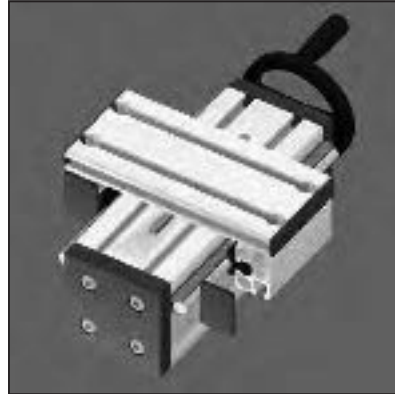
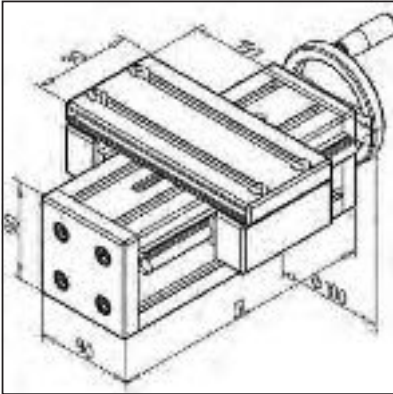
- For connection of two adjustment units
part no. 28.0351/0, 28.0352/0 and 28.0353/0
- For connecting small loads, such as light barriers, sensors etc.

ASSEMBLY

- Each with two M6 threads, 10 mm deep, grid 25 mm placed into slides
- Connect adjustment units with cylinder head screws M6x15

ADJUSTING UNIT VEW 90

part no. 28.0183/0



TECHN. DATA / ITEMS SUPPLIED

- Slide plate of profile 19 x 90
- ACME screw 16 x 4
- Basic length 120 mm (0 mm stroke)
- Basic weight 3,03 kg
- Weight/100 mm stroke 1,12 kg
- Please indicate desired length of stroke

APPLICATIONS

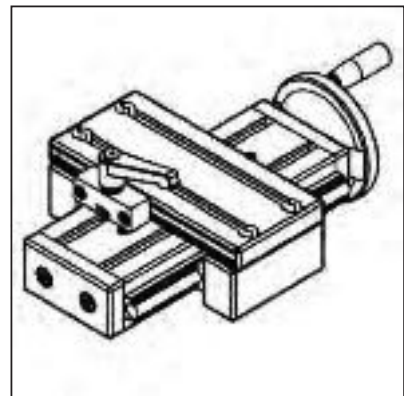
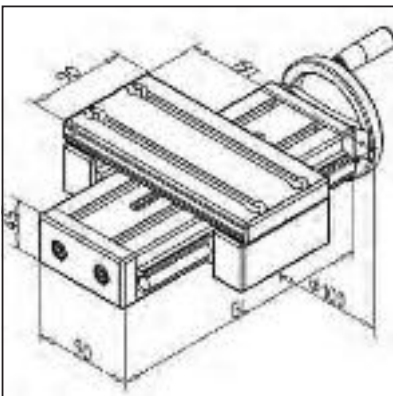
- Adjustment of conveyor systems
- Adjustment of feeders
- Adjustable devices

SPECIAL DESIGNS

- Slide plate made of profile 32 x 180
- Different length of stroke
- Digital display
- Angular drive
- Spindle adapter
- Shafts stainless
- Options:
With slide clamping unit (Top)
part no. 28.0183/1
With slide clamping unit (Lateral)
part no. 28.0183/2

ADJUSTING UNIT VEW 45 X 90 F

part no. 28.0181/0



TECHN. DATA / ITEMS SUPPLIED

- Slide plate of profile 19 x 90
- ACME screw 16 x 4
- Basic length (GL) 120 mm (0 mm stroke)
- Basic weight 2,31 kg
- Weight/100 mm stroke 0,75 kg
- Please indicate desired length of stroke

APPLICATIONS

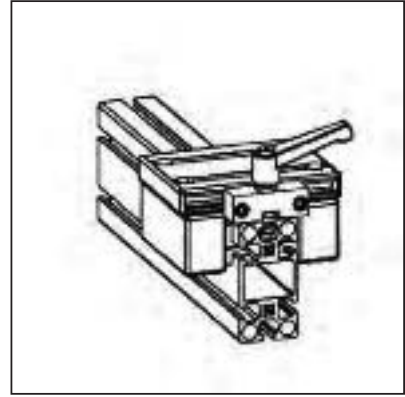
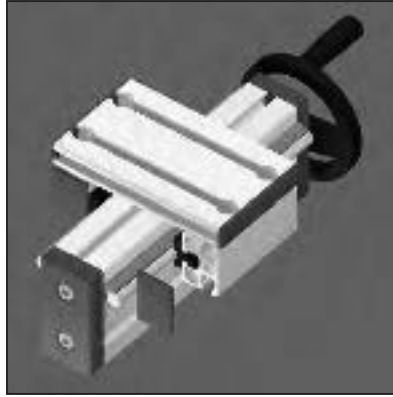
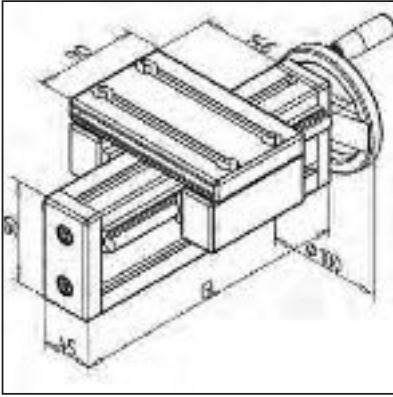
- Adjustment of conveyor systems
- Adjustment of feeders
- Adjustable devices

SPECIAL DESIGNS

- Slide plate made of profile 32 x 180
- Different slide lengths
- Digital display
- Angular drive
- Spindle adapter
- Shafts stainless
- OPTIONS:
With slide clamping unit (Top)
part no. 28.0181/1

ADJUSTING UNIT VEW 45 X 90 H

part no. 28.0182/0



TECHN. DATA / ITEMS SUPPLIED

- Slide plate of profile 19 x 90
- ACME screw 16 x 4
- Basic length (GL) 120 mm (0 mm stroke)
- Basic weight 2,109 kg
- Weight/100 mm stroke 0,74 kg
- Please indicate desired length of stroke

APPLICATIONS

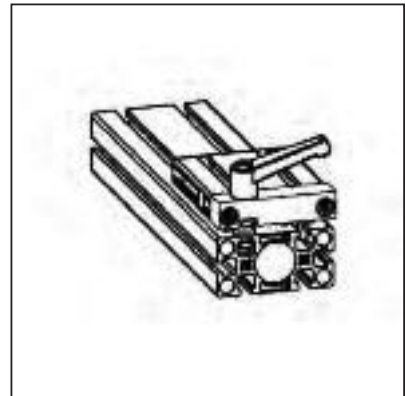
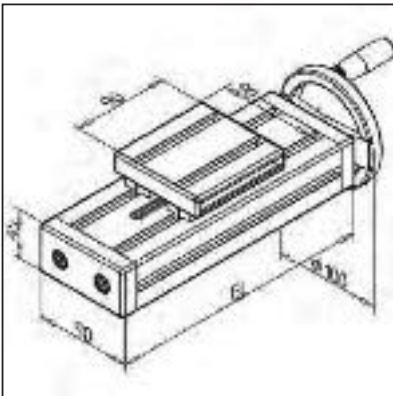
- Adjustment of conveyor systems
- Adjustment of feeders
- Adjustable devices

SPECIAL DESIGNS

- Slide plate made of profile 32 x 180
- Different slide lengths
- Digital display
- Angular drive
- Shafts stainless
- OPTIONS:
With slide clamping unit (Top)
part no. 28.0182/1
With slide clamping unit (Lateral)
part no. 28.0182/2

ADJUSTING UNIT VEN 45 X 90 S

part no. 28.0187/0



TECHN. DATA / ITEMS SUPPLIED

- Slide plate of profile 19 x 90
- ACME screw 16 x 4
- Basic length (GL) 120 mm (0 mm stroke)
- Basic weight 2,280 kg
- Weight/100 mm stroke 0,5 kg
- Please indicate desired length of stroke

APPLICATIONS

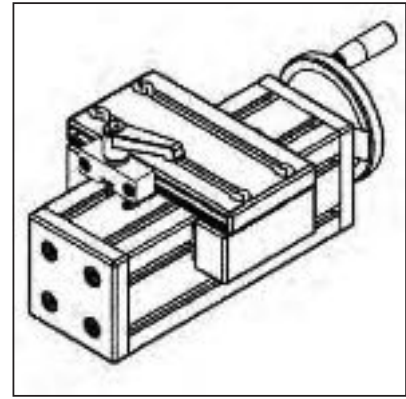
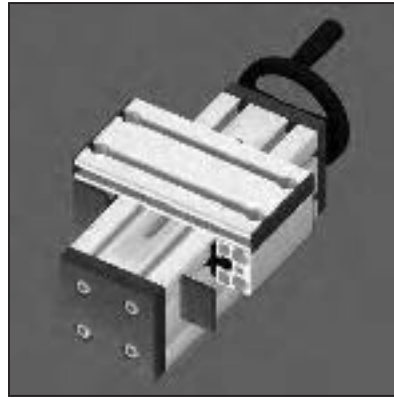
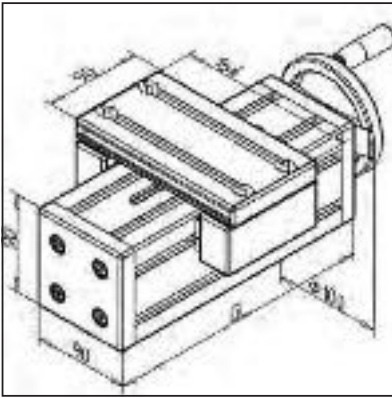
- Adjustment of conveyor systems
- Adjustment of feeders
- Adjustable devices

SPECIAL DESIGNS

- Slide plate made of profile 32 x 180
- Different slide lengths
- Digital display
- Angular drive

ADJUSTING UNIT VEN 90

part no. 28.0186/0



TECHN. DATA / ITEMS SUPPLIED

- Slide plate of profile 19 x 90
- ACME screw 16 x 4
- Basic length (GL) 120 mm (0 mm stroke)
- Basic weight 2,75 kg
- Weight/100 mm stroke 0,87 kg
- Please indicate desired length of stroke

APPLICATIONS

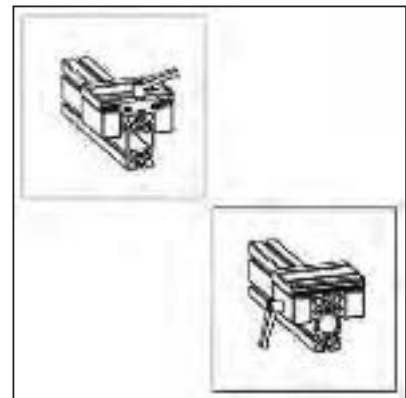
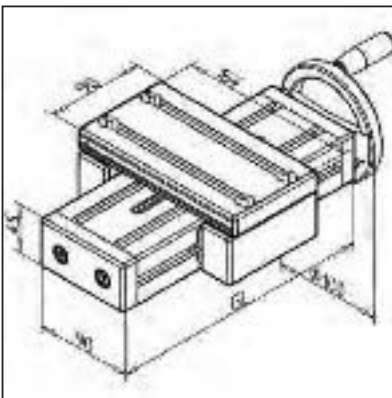
- Adjustment of conveyor systems
- Adjustment of feeders
- Adjustable devices

SPECIAL DESIGNS

- Slide plate made of profile 32 x 180
- Different slide lengths
- Digital display
- Angular drive
- Spindle adapter

ADJUSTING UNIT VEN 45 X 90 F

part no. 28.0188/0



TECHN. DATA / ITEMS SUPPLIED

- Slide plate of profile 19 x 90
- ACME screw 16 x 4
- Basic length (GL) 120 mm (0 mm stroke)
- Basic weight 2,05 kg
- Weight/100 mm stroke 0,5 kg
- Please indicate desired length of stroke

APPLICATIONS

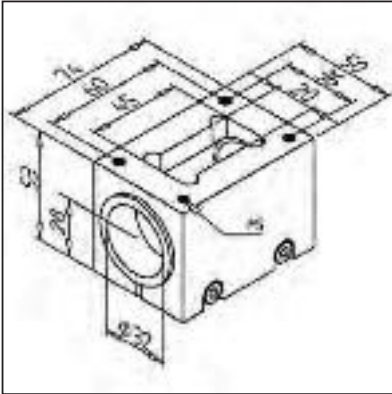
- Adjustment of conveyor systems
- Adjustment of feeders
- Adjustable devices

SPECIAL DESIGNS

- Slide plate made of profile 32 x 180
- Different slide lengths
- Digital display
- Angular drive
- Spindle adapter

SLIDE G 32

part no. 28.0355/0



TECHN. DATA / ITEMS SUPPLIED

- Slide aluminium anodized
- Slide bearing, plastic
- Without adjusting units
- Weight 0,314 kg

APPLICATIONS

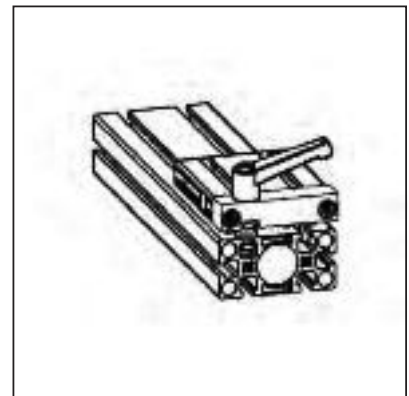
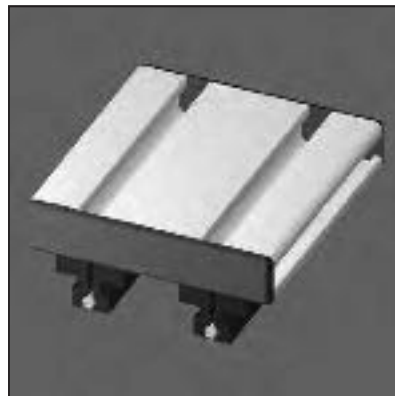
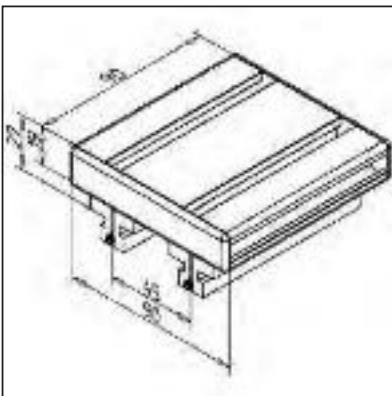
- To adjust light barriers, reflectors, lateral guides etc.

ASSEMBLY

- Insert the slides of the mini adjustment unit into the sliding guides and turn the spindle
- Adjust clearance by M6 tensioning screw
- Fasten the spindle bearing to the handle profile 32

SLIDE LWN-S

part no. 28.0170/0



TECHN. DATA / ITEMS SUPPLIED

- Slide completely assembled
- 2 slide rails LN-S
- End caps
- Clearance adjusted
- Load max. 450 N
- Weight 0,261 kg

APPLICATIONS

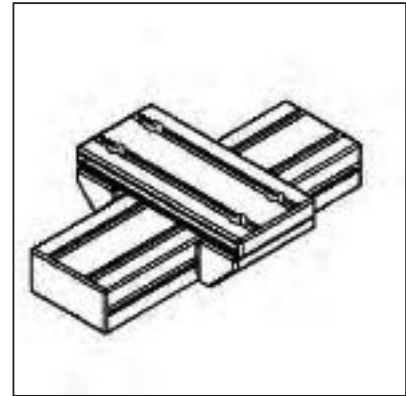
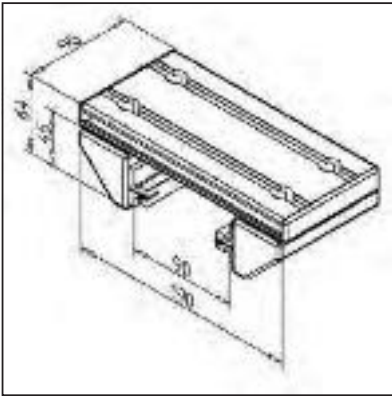
- Simple linear guides
- Automatic advance units

SPECIAL DESIGNS

- With slide clamping unit (Top)
part no. 28.0170/1
- Slide plate made of aluminium profile 32 x 180
- Different slide lengths

SLIDE LWN 45/45° - 90

part no. 28.0197/0

**TECHN. DATA / ITEMS SUPPLIED**

- Slide completely assembled	
- 2 slide rails LN	
- End caps	
- Clearance adjusted	
- Load max.	450 N
- Weight	0,782 kg

APPLICATIONS

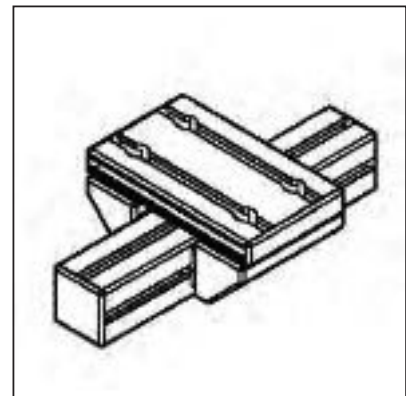
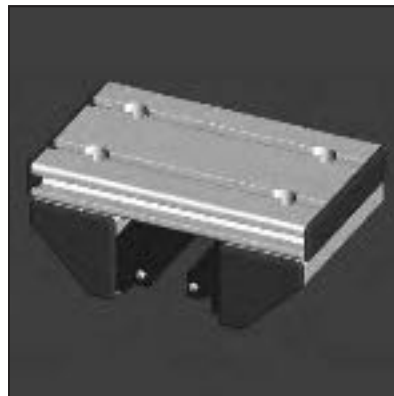
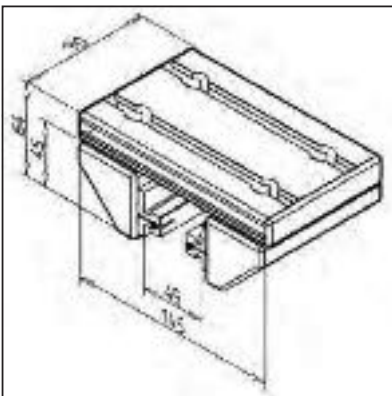
- Simple linear guides
- Automatic advance units

SPECIAL DESIGNS

- With slide clamping unit (Top) part no. 28.0197/1
- Slide plate made of aluminium profile 32 x 180
- Different slide lengths

SLIDE LWN 45/45° - 45

part no. 28.0196/0

**TECHN. DATA / ITEMS SUPPLIED**

- Slide completely assembled	
- 2 slide rails LN	
- End caps	
- Clearance adjusted	
- Load max.	450 N
- Weight	0,699 kg

APPLICATIONS

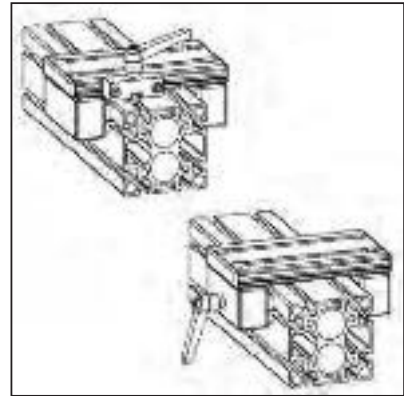
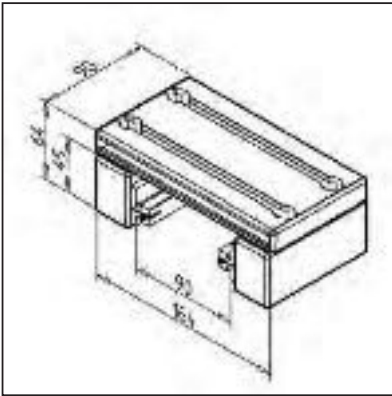
- Simple linear guides
- Automatic advance units

SPECIAL DESIGNS

- With slide clamping unit (Top) part no. 28.0196/1
- Slide plate made of aluminium profile 32 x 180
- Different slide lengths

SLIDE LWN 32 X 45 - 90

part no. 28.0193/0



TECHN. DATA / ITEMS SUPPLIED

- Slide completely assembled
- 2 slide rails LN
- End caps
- Clearance adjusted
- Load max. 450 N
- Weight 0,762 kg

APPLICATIONS

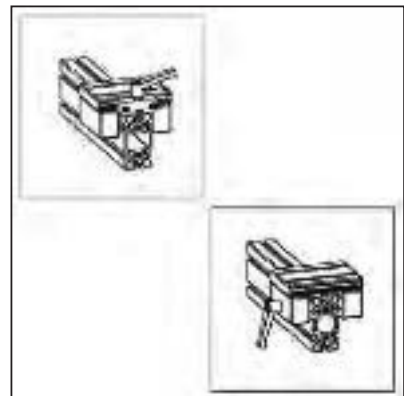
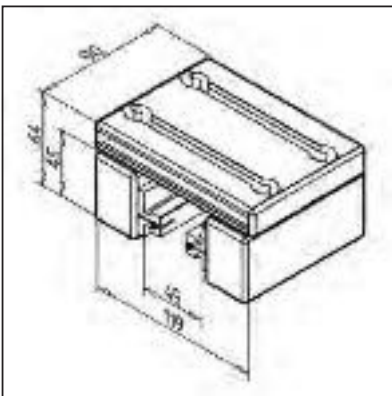
- Simple linear guides
- Automatic advance units

SPECIAL DESIGNS

- With slide clamping unit (Top)
part no. 28.0193/1
- With slide clamping unit (Lateral)
part no. 28.0193/2
- Slide plate made of aluminium profile 32 x 180
- Different slide lengths

SLIDE LWN 32 X 45 - 45

part no. 28.0192/0



TECHN. DATA / ITEMS SUPPLIED

- Slide completely assembled
- 2 slide rails LN
- End caps
- Clearance adjusted
- Load max. 450 N
- Weight 0,678 kg

APPLICATIONS

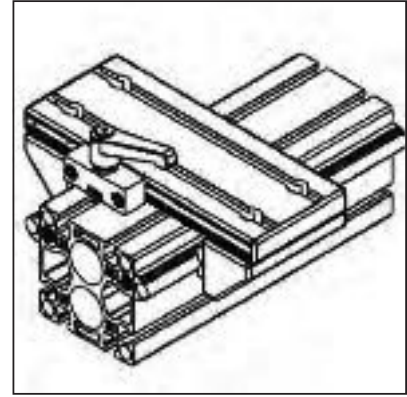
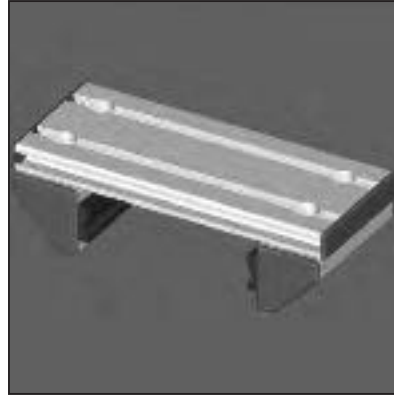
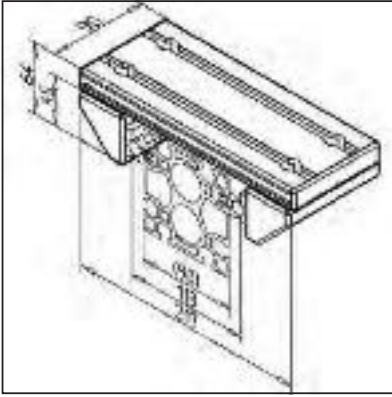
- Simple linear guides
- Automatic advance units

SPECIAL DESIGNS

- With slide clamping unit (Top)
part no. 28.0192/1
- With slide clamping unit (Lateral)
part no. 28.0192/2
- Slide plate made of aluminium profile 32 x 180
- Different slide lengths

SLIDE LWG 45/45° - 90

part no. 28.0137/0

**TECHN. DATA / ITEMS SUPPLIED**

- Slide completely assembled	
- 2 slide rails LG	
- End caps	
- Clearance adjusted	
- Load max.	450 N
- Weight	0,849 kg

APPLICATIONS

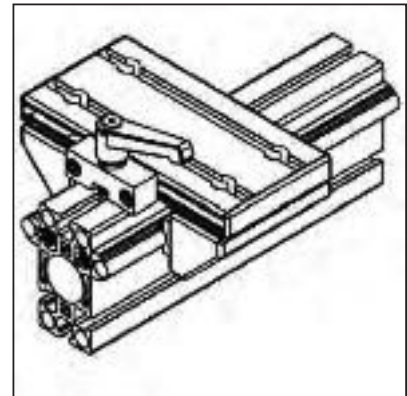
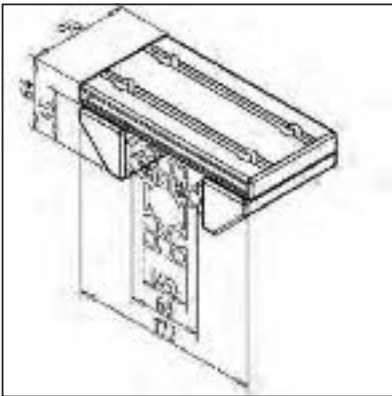
- Simple linear guides
- Automatic advance units
- For rail 90 with shafts Ø 12 mm

SPECIAL DESIGNS

- With slide clamping unit (Top) part no. 28.0137/1
- Slide plate made of aluminium profile 32 x 180
- Different slide lengths

SLIDE LWG 45/45° - 45

part no. 28.0136/0

**TECHN. DATA / ITEMS SUPPLIED**

- Slide completely assembled	
- 2 slide rails LG	
- End caps	
- Clearance adjusted	
- Load max.	450 N
- Weight	0,759 kg

APPLICATIONS

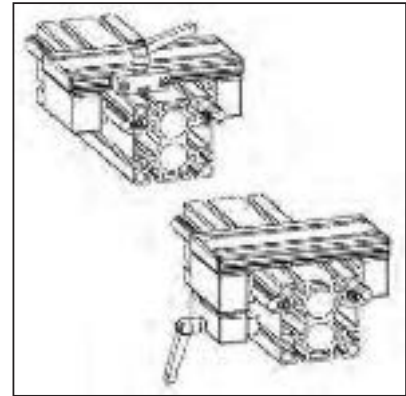
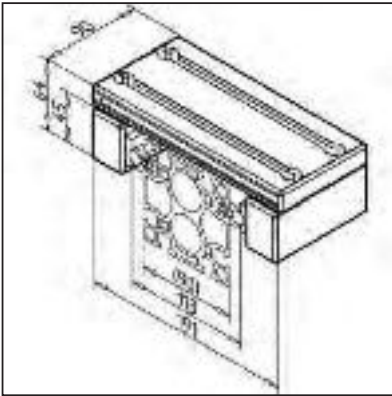
- Simple linear guides
- Automatic advance units
- For rail 45 with shafts Ø 12 mm

SPECIAL DESIGNS

- With slide clamping unit (Top) part no. 28.0136/1
- Slide plate made of aluminium profile 32 x 180
- Different slide lengths

SLIDE LWG 32 X 45 - 90

part no. 28.0133/0



TECHN. DATA / ITEMS SUPPLIED

- Slide completely assembled
- 2 slide rails LG
- End caps
- Clearance adjusted
- Load max. 450 N
- Weight 0,762 kg

APPLICATIONS

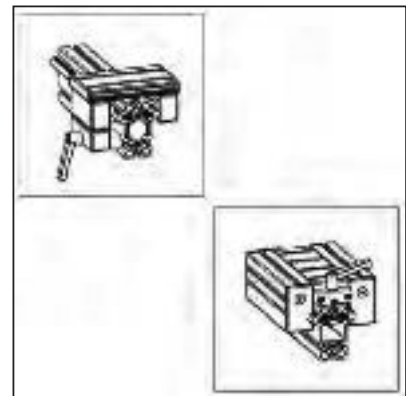
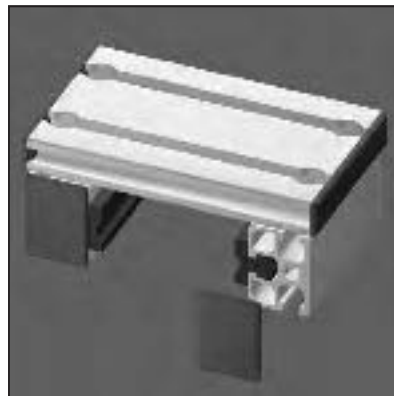
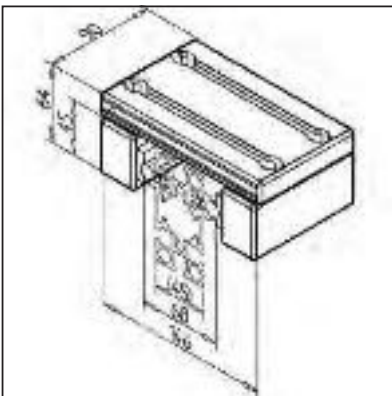
- Simple linear guides
- Automatic advance units
- For rail 90 with shafts Ø 12 mm

SPECIAL DESIGNS

- With slide clamping unit (Top)
part no. 28.0133/1
- With slide clamping unit (Lateral)
part no. 28.0133/2
- Slide plate made of aluminium profile 32 x 180
- Different slide lengths

SLIDE LWG 32 X 45 - 45

part no. 28.0132/0



TECHN. DATA / ITEMS SUPPLIED

- Slide completely assembled
- 2 slide rails LG
- End caps
- Clearance adjusted
- Load max. 450 N
- Weight 0,726 kg

APPLICATIONS

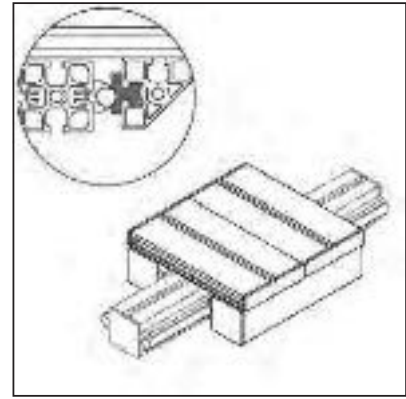
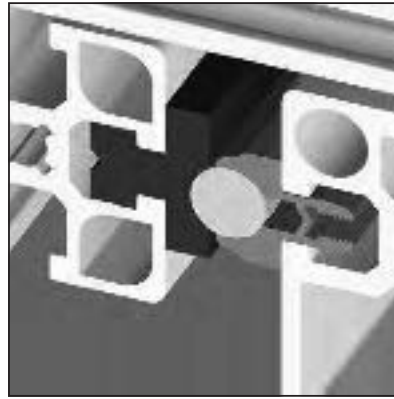
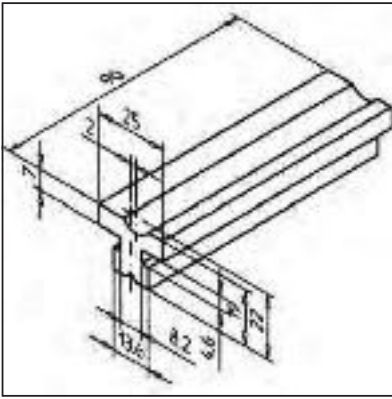
- Simple linear guides
- Automatic advance units
- For rail 45 with shafts Ø 12 mm

SPECIAL DESIGNS

- With slide clamping unit (Top)
part no. 28.0132/1
- With slide clamping unit (Lateral)
part no. 28.0132/2
- Slide plate made of aluminium profile 32 x 180
- Different slide lengths

SLIDE RAIL LG

part no. 22.1094/0



TECHN. DATA / ITEMS SUPPLIED

- Hard plastic PE-UHMW, black
- 2 set screws
- Max. surface pressure: 10 N/mm²
- Weight 0,032 kg

APPLICATIONS

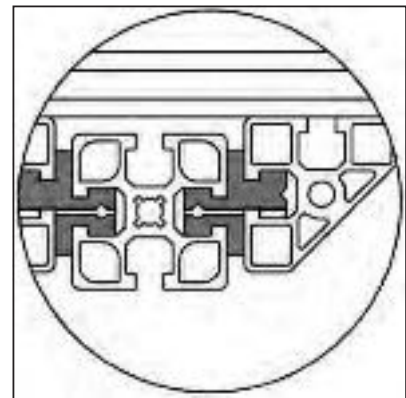
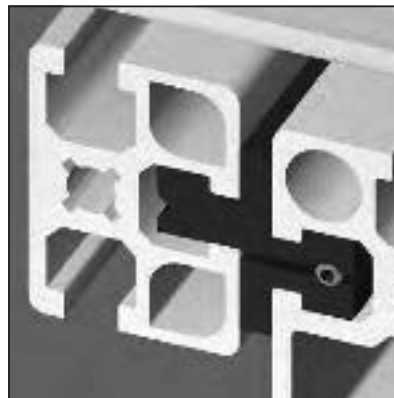
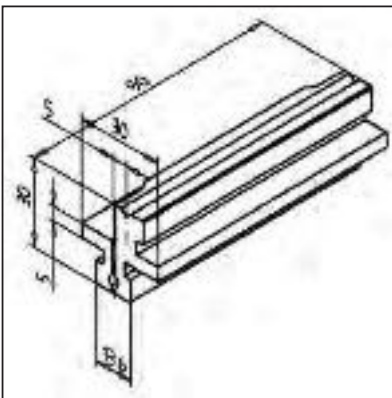
- Slide guides LG

ASSEMBLY

- Insert into groove of lateral guide profile
- Secure with set screw

SLIDE RAIL LN

part no. 22.1095/0



TECHN. DATA / ITEMS SUPPLIED

- Hard plastic PE-UHMW, black
- Fastening kit
- Max. surface pressure: 10 N/mm²
- Weight 0,03 kg

APPLICATIONS

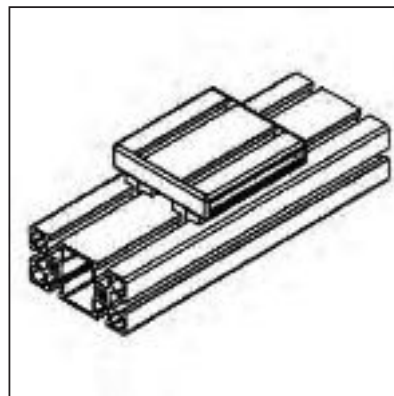
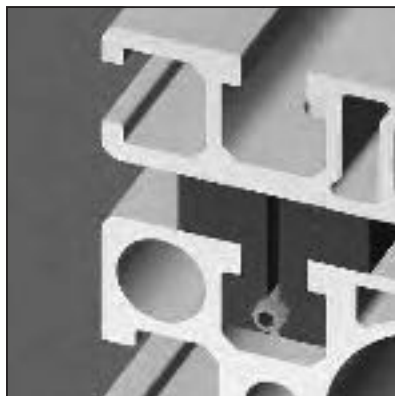
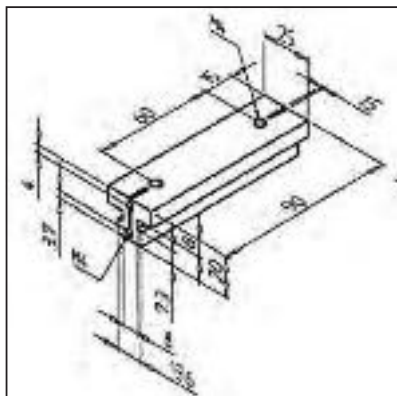
- Slide guides LN
- Adjusting units
- Heavy sliding doors
- Drawers

ASSEMBLY

- Connect with slide plate
- Insert into grooves of the guide profile
- Adjust without clearance, use fastening kit

SLIDE RAIL LN-S

part no. 22.1096/0



TECHN. DATA / ITEMS SUPPLIED

- Hard plastic PE-UHMW, black
- 2 set screws M5 x 10
- Max. surface pressure: 10 N/mm²
- Weight 0,03 kg

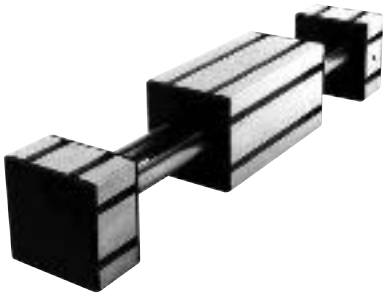
APPLICATIONS

- Slide guides LN-S
- Adjusting units
- Automatic advance units
- Workpiece support

ASSEMBLY

- Insert into profile groove
- Adjust without clearance
- Connect with slide plate

LINEARSYSTEM LB



The LB design is based on LME 20 linear ball bearings that are built into our construction profile in the specially provided bore holes. Precision shafts D 20 mm provide the high load capacity of this guide. The LB design offers substantial advantages for short travelling distances and high stroke frequencies.

Especially compact and economical, the guide elements are based on our solid precision ball bushings from the LME series with integrated sealing rings to provide high reliability under rough conditions.

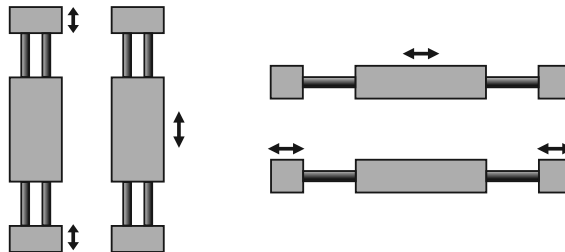
Calculation of lifetime

$$L = \frac{C}{F} \cdot 10^5$$

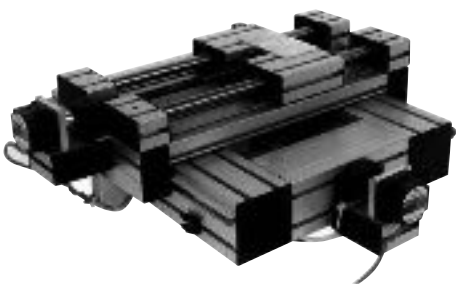
L = lifetime

C = dynamic load rating

F = resultant external forces



MiniTec LB series linear guides are particularly suitable for short strokes of up to 1 meter. The modular system provides absolute flexibility in the design of the guide. The ball bushings with solid outer ring made from hardened and ground bearing steel are mounted directly into the profile $\varnothing 32$ bores of the extra strong profile 45 x 135, 45 x 180, 90 x 180, 90 x 45 S and 90 x 90 S.



The axial position of the bushes is secured with one-component glue. The ball-bushing combines low friction, limited clearance, low noise and long life.

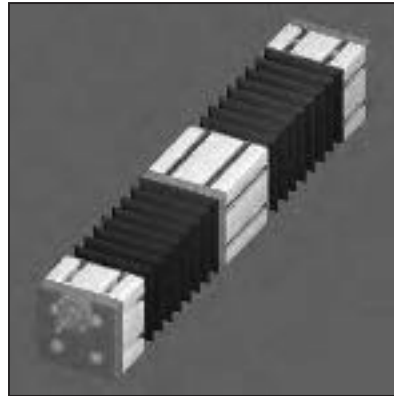
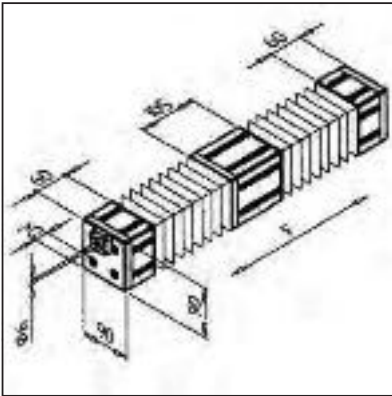
When designing a linear system LB, shaft deflection under load of max. 0.5° must be considered.

Linear guides LB are available completely assembled with ball-screw on request.

All components are also available in stainless versions.

LINEAR MODULE LB 90

part no. 28.0178/0



TECHN. DATA / ITEMS SUPPLIED

- Linear module made of profile 90 x 90; ready for use
- Drive unit with rolled circulating ball spindle RNCT 1003 Ø 10 mm, incline 3
- Incline fault / 300: 12 µm (class C3)
- Slide guidance on 4 linear ball bearings with hardened ground precision shafts Ø 20 mm, total length max. 760 mm

TECHN. DATA / ITEMS SUPPLIED

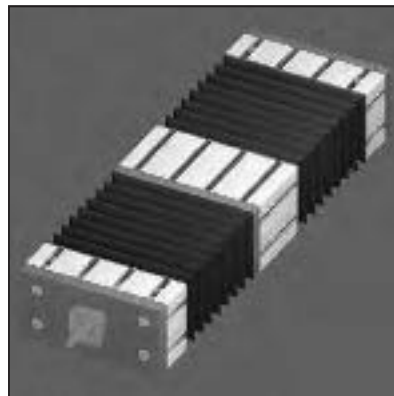
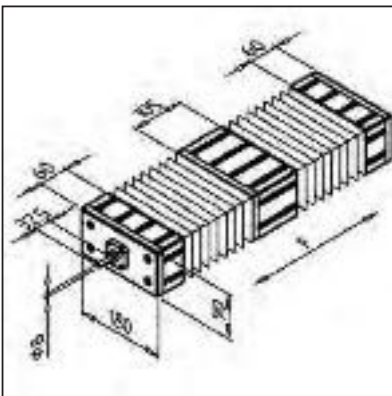
- Shaft end processed at fixed bearing side according to customer specification for motor and crank connection
- Shafts and spindles covered with protective bellows
- Positioning accuracy: ± 0,1 mm

APPLICATIONS

- Handling systems
- Z-axis in portals
- Multiple axis systems
- Grabbing units

LINEAR MODULE LB 180

part no. 28.0179/0



TECHN. DATA / ITEMS SUPPLIED

- Linear module made of profile 90 x 180; ready for use
- Drive unit with rolled circulated ball spindle RNCT 1404-3,4 Ø 14 mm, incline 4
- Incline fault / 300: 12 µm (class C3)
- Slide guidance on 4 linear ball bearings with hardened ground precision shafts Ø 20 mm, total length max. 950 mm

TECHN. DATA / ITEMS SUPPLIED

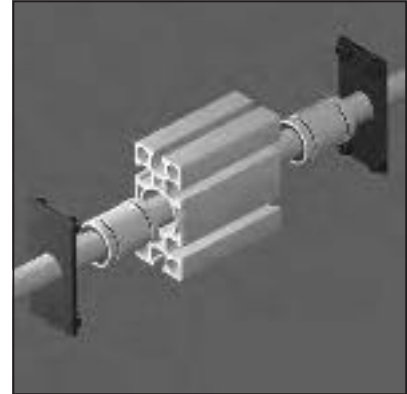
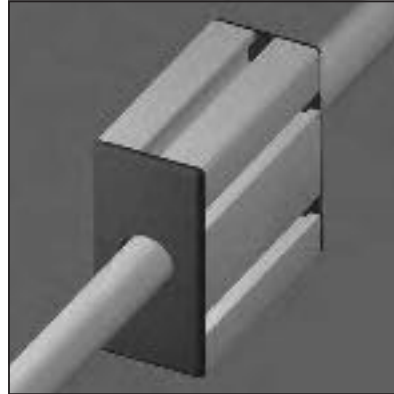
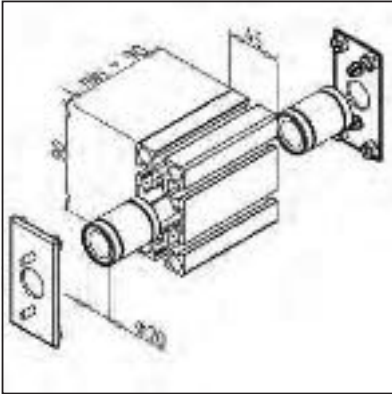
- Shaft end processed at fixed bearing side according to customer specification for motor and crank connection
- Shafts and spindles covered with protective bellows
- Positioning accuracy: ± 0,1 mm

APPLICATIONS

- Handling systems
- Z-axis in portals
- Multiple axis systems
- Grabbing units

SLIDE LB 45

part no. 28.0150/0

**TECHN. DATA / ITEMS SUPPLIED**

- Profile 45 x 90 S
- Completely assembled with 2 ball bushings LME 20 UU
- Profile face covered with end caps LB 45, grey
- Weight 0,550 kg
- **Other length on request**

APPLICATIONS

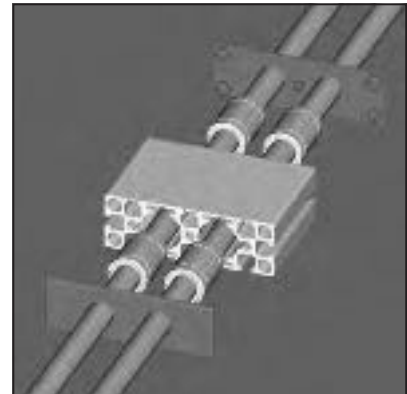
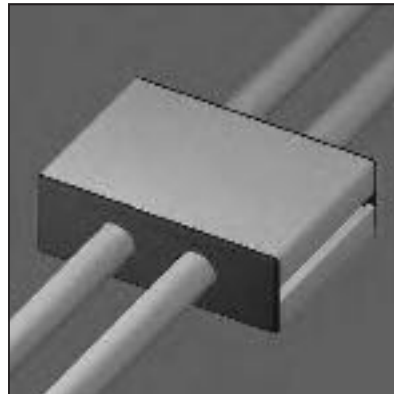
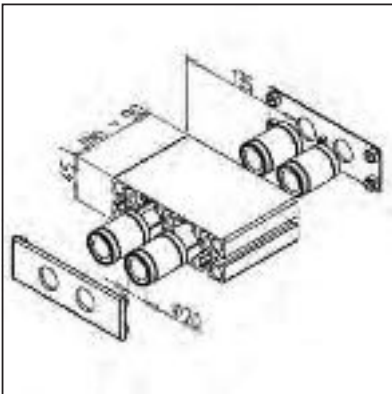
- All MiniTec linear systems LB

ASSEMBLY

- Lead shaft through slide

SLIDE LB 45 X 135

part no. 28.0155/0

**TECHN. DATA / ITEMS SUPPLIED**

- Profile 45 x 135
- Completely assembled with 2 ball bushings LME 20 UU
- Profile face covered with end caps LB 45 x 135, grey
- Weight 0,865 kg
- **Other length on request**

APPLICATIONS

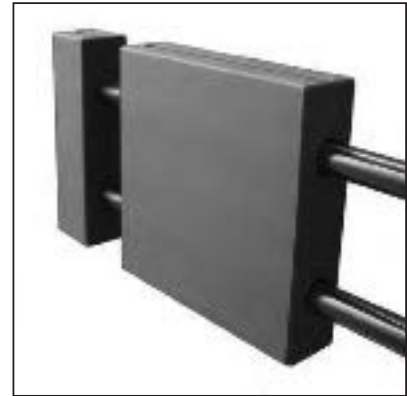
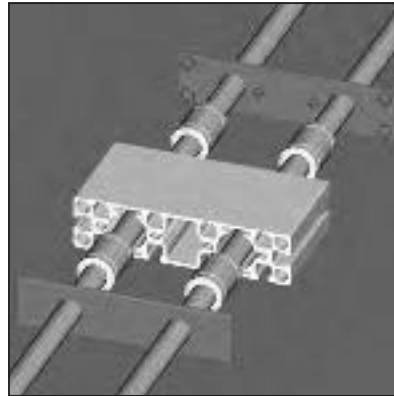
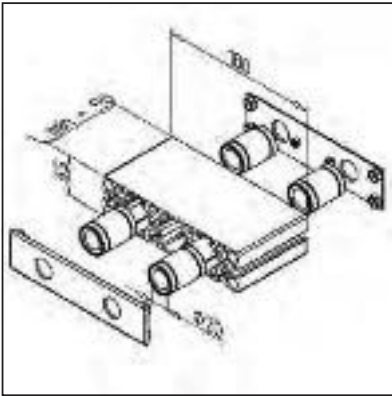
- All MiniTec linear systems LB

ASSEMBLY

- Lead shaft through slide

SLIDE LB 45 X 180

part no. 28.0156/0



TECHN. DATA / ITEMS SUPPLIED

- Profile 45 x 180
- Completely assembled with 2 ball bushings LME 20 UU
- Profile face covered with end caps LB 45 x 180, grey
- Weight 1,007 kg
- **Other length on request**

APPLICATIONS

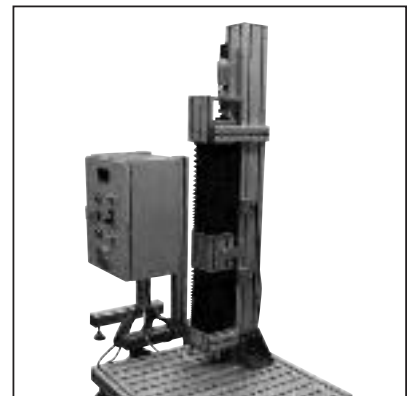
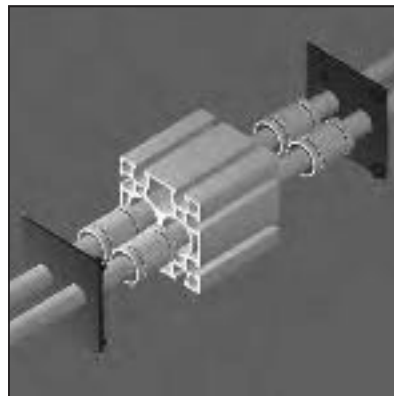
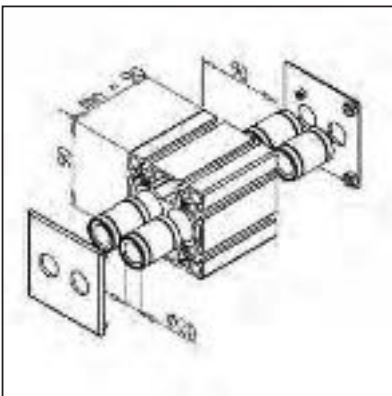
- All MiniTec linear systems LB

ASSEMBLY

- Lead shaft through slide

SLIDE LB 90

part no. 28.0152/0



TECHN. DATA / ITEMS SUPPLIED

- Profile 90 x 90 S
- Completely assembled with 4 ball bushings LME 20 UU
- Profile face covered with end caps LB 90, grey
- Weight 1,070 kg
- **Other length on request**

APPLICATIONS

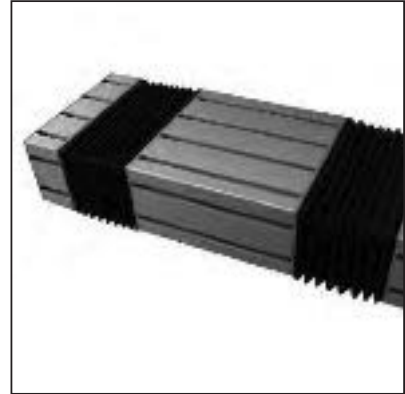
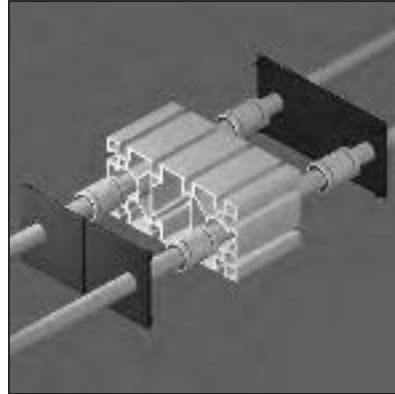
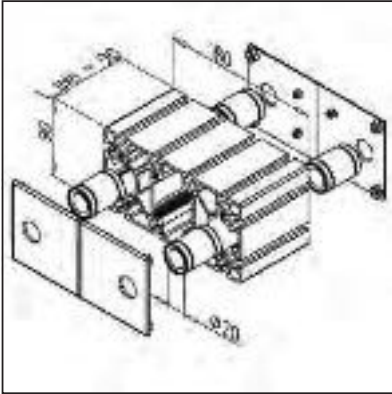
- All MiniTec linear systems LB

ASSEMBLY

- Lead shaft through slide

SLIDE LB 180

part no. 28.0143/0



TECHN. DATA / ITEMS SUPPLIED

- Profile 90 x 180 S
- Completely assembled with 4 ball bushings LME 20 UU
- Profile face covered with end caps LB 180, grey
- Weight 1,500 kg
- **Other length on request**

APPLICATIONS

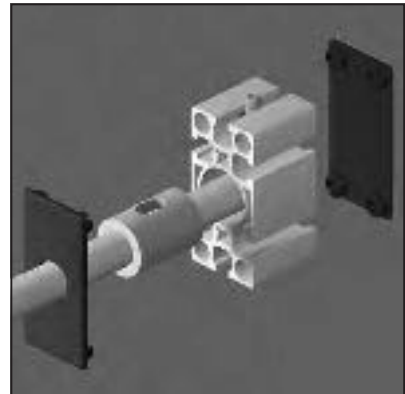
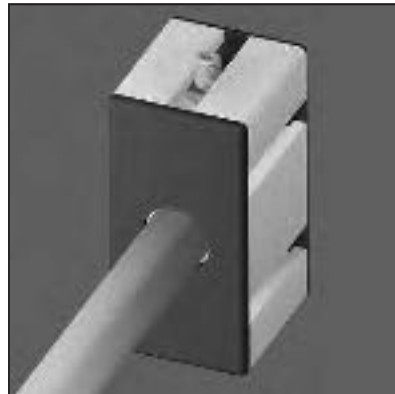
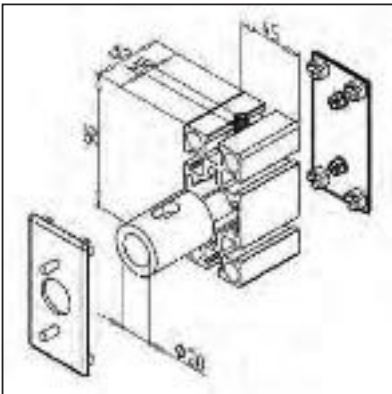
- All MiniTec linear systems LB

ASSEMBLY

- Lead shaft through slide

SHAFT SUPPORT BLOCK WB 45

part no. 28.0151/0



TECHN. DATA / ITEMS SUPPLIED

- Profile 45 x 90 S
- Completely assembled with centering bush
- Shaft side with end cap LB 45, grey
- Outer side with end cap 45 x 90, grey
- Weight 0,526 kg

APPLICATIONS

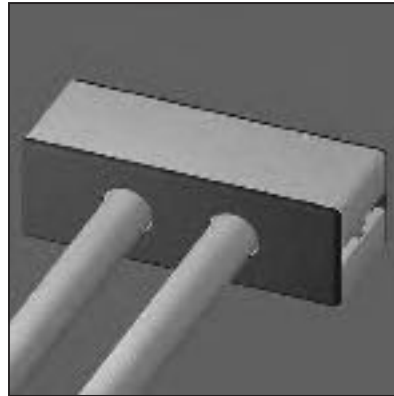
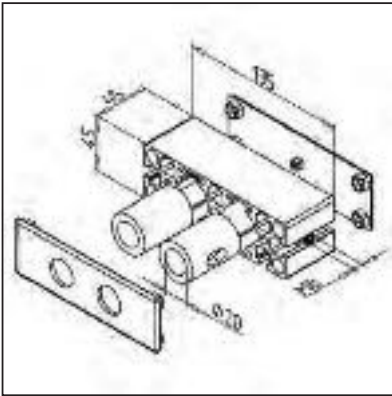
- Fastening shafts Ø 20 in MiniTec linear systems LB 45

ASSEMBLY

- Insert shaft
- Tighten with set screw M8 x 35

SHAFT SUPPORT BLOCK WB 45 X 135

part no. 28.0157/0



TECHN. DATA / ITEMS SUPPLIED

- Profile 45 x 135
- Completely assembled with centering bush
- Shaft side with end cap LB 45 x 135, grey
- Outer side with end cap 45 x 135, grey
- Weight 0,530 kg

APPLICATIONS

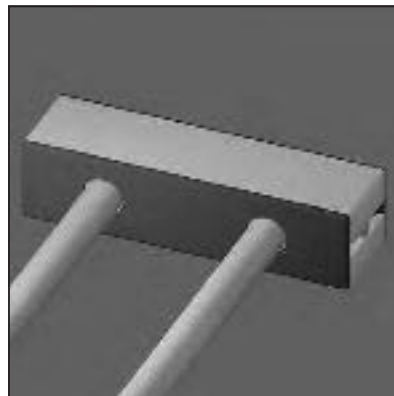
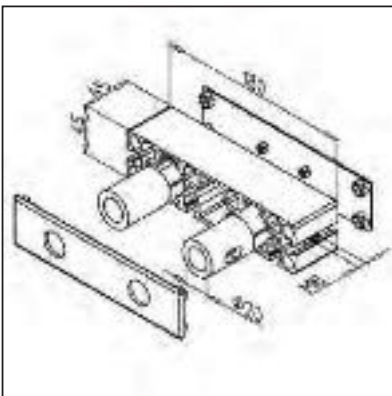
- Fastening shafts Ø 20 in MiniTec linear systems LB 45

ASSEMBLY

- Insert shaft
- Tighten with set screw M8 x 35

SHAFT SUPPORT BLOCK WB 45 X 180

part no. 28.0159/0



TECHN. DATA / ITEMS SUPPLIED

- Profile 45 x 180
- Completely assembled with centering bush
- Shaft side with end cap LB 45 x 180, grey
- Outer side with end cap 45 x 180, grey
- Weight 0,770 kg

APPLICATIONS

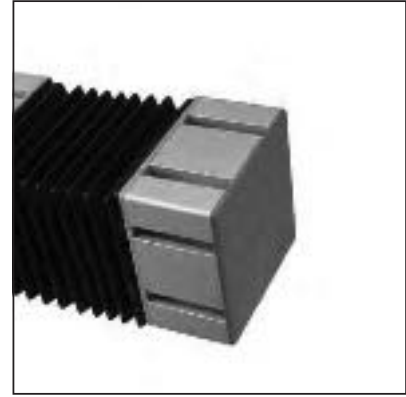
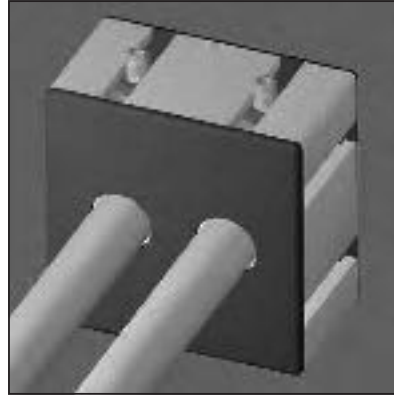
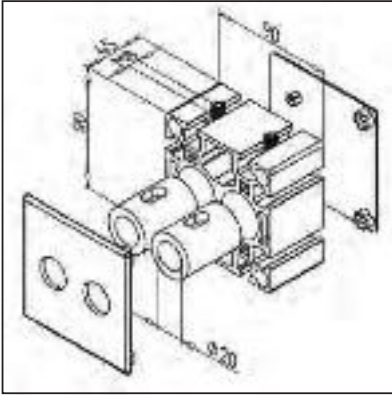
- Fastening shafts Ø 20 in MiniTec linear systems LB 45

ASSEMBLY

- Insert shaft
- Tighten with set screw M8 x 35

SHAFT SUPPORT BLOCK WB 90

part no. 28.0153/0

**TECHN. DATA / ITEMS SUPPLIED**

- Profile 90 x 90 S
- Completely assembled with 2 centering bush
- Shaft side with end cap LB 90, grey
- Outer side with end cap 90 x 90, grey
- Weight 0,410 kg

APPLICATIONS

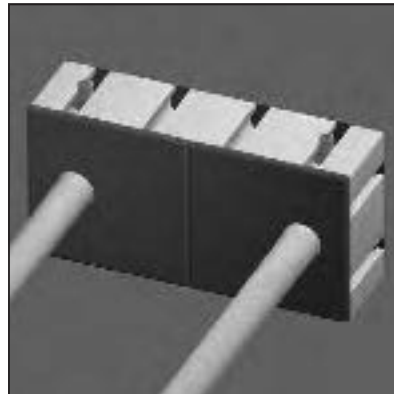
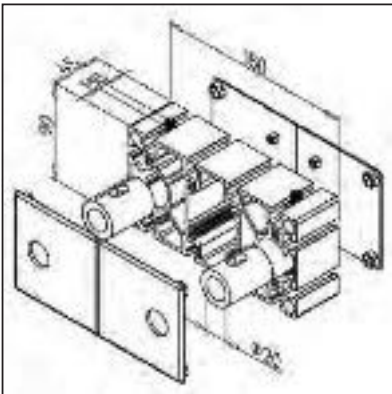
- Fastening shafts Ø 20 in MiniTec linear systems LB 90

ASSEMBLY

- Insert shaft
- Tighten with set screw M8 x 35

SHAFT SUPPORT BLOCK WB 180

part no. 28.0144/0

**TECHN. DATA / ITEMS SUPPLIED**

- Profile 90 x 180 S
- Completely assembled with 2 centering bush
- Shaft side with end cap LB 180, grey
- Outer side with 2 end cap 90 x 90, grey
- Weight 0,650 kg

APPLICATIONS

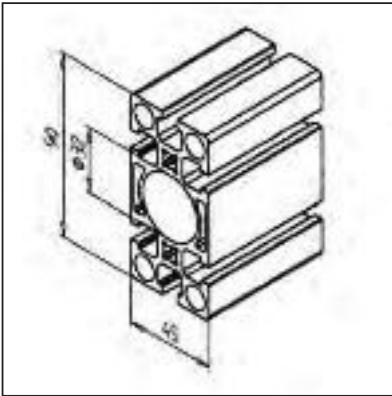
- Fastening shafts Ø 20 in MiniTec linear systems LB 180

ASSEMBLY

- Insert shaft
- Tighten with set screw M8 x 35

PROFILE 45 X 90 S

part no. 20.1017/0



TECHN. DATA / ITEMS SUPPLIED

- I _x =	113,487 cm ⁴
- I _y =	30,719 cm ⁴
- W _x =	25,219 cm ³
- W _y =	13,653 cm ³
- Weight	3,860 kg/m
- Length	6 m
- Packing unit	24 m

APPLICATIONS

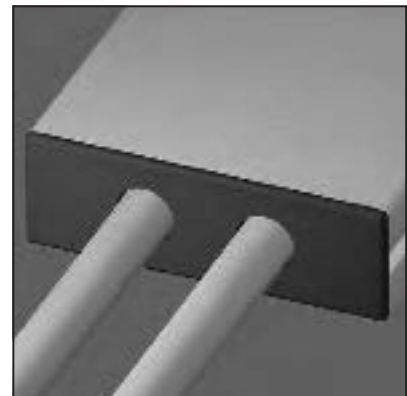
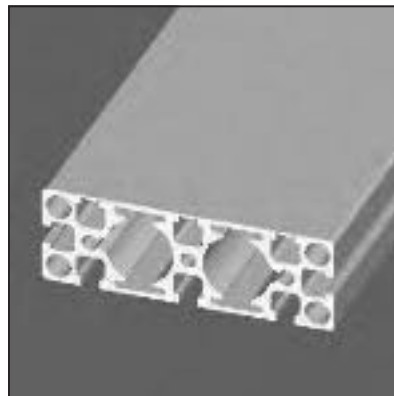
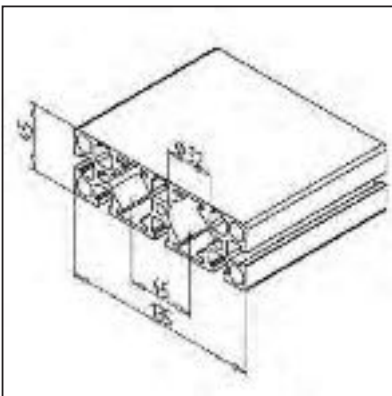
- General constructions
- Linear guides LB as slide
- Pillar guides
- Use as a compressed air line with connecting plate and seal kit
- Central bore Ø 32 mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders

ASSEMBLY

- MiniTec power-lock fastener
- Cross bolt-fastener
- Angle 45 / 90
- Screw connection

PROFILE 45 X 135 1G

part no. 20.1078/0



TECHN. DATA / ITEMS SUPPLIED

- I _x =	47,064 cm ⁴
- I _y =	359,242 cm ⁴
- W _x =	20,618 cm ³
- W _y =	53,221 cm ³
- Weight	5,570 kg/m
- Length	6 m
- Packing unit	12 m

APPLICATIONS

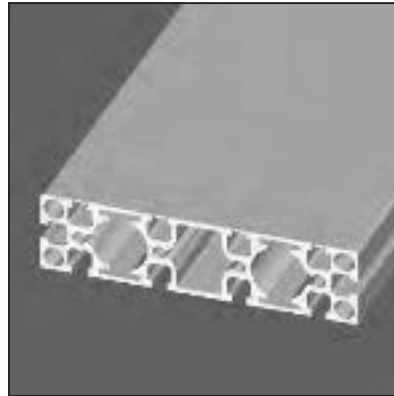
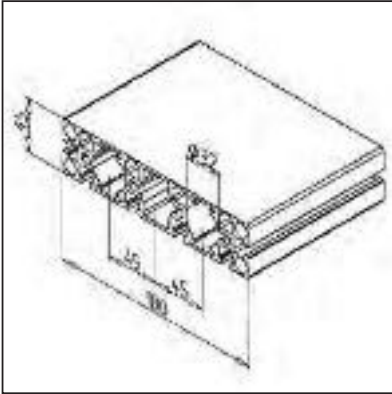
- General constructions, particularly useful in the food industry, in medical engineering and for the filling of beverages, where strict hygienic standards are set
- Linear guides as slide
- Central bore Ø 32 mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders

ASSEMBLY

- MiniTec power-lock fastener
- 3 closed t-slots can be opened up to any length with the tear-off lever
part no. 26.0815/0

PROFILE 45 X 180 1G

part no. 20.1079/0

**TECHN. DATA / ITEMS SUPPLIED**

- I _x =	61,015 cm ⁴
- I _y =	810,885 cm ⁴
- W _x =	26,704 cm ³
- W _y =	90,097 cm ³
- Weight	6,954 kg/m
- Length	6 m
- Packing unit	12 m

APPLICATIONS

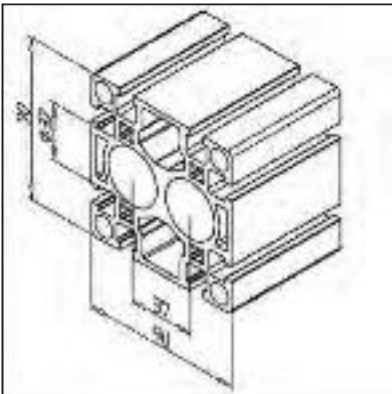
- General constructions, particularly useful in the food industry, in medical engineering and for the filling of beverages, where strict hygienic standards are set
- Linear guides LB as slide
- Central bore Ø 32 mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders

ASSEMBLY

- MiniTec power-lock fastener
- 4 closed t-slots can be opened up to any length with the tear-off lever
part no. 26.0815/0

PROFILE 90 X 90 S

part no. 20.1019/0

**TECHN. DATA / ITEMS SUPPLIED**

- I _x =	223,949 cm ⁴
- I _y =	208,888 cm ⁴
- W _x =	49,766 cm ³
- W _y =	46,419 cm ³
- Weight	7,514 kg/m
- Length	6 m
- Packing unit	12 m

APPLICATIONS

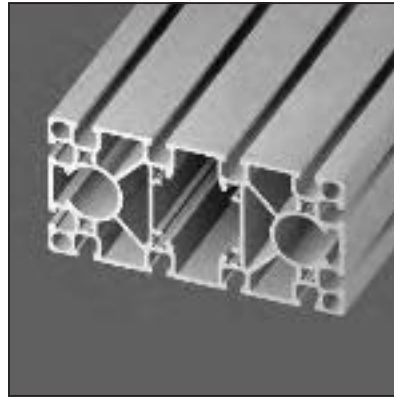
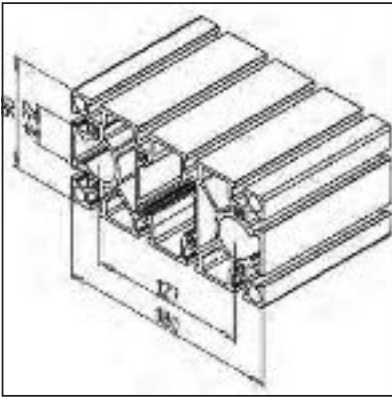
- General heavy duty constructions
- Linear guides LB as slide
- Central bore Ø 32 mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders

ASSEMBLY

- MiniTec power-lock fastener
- Angle 45 or 90
- Screw connection

PROFILE 90 X 180 S

part no. 20.1013/0



TECHN. DATA / ITEMS SUPPLIED

- Ix =	376,784 cm ⁴
- Iy =	1421,865 cm ⁴
- wx =	83,729 cm ³
- wy =	157,983 cm ³
- Weight	11,482 kg/m
- Length	6 m
- Packing unit	6 m

APPLICATIONS

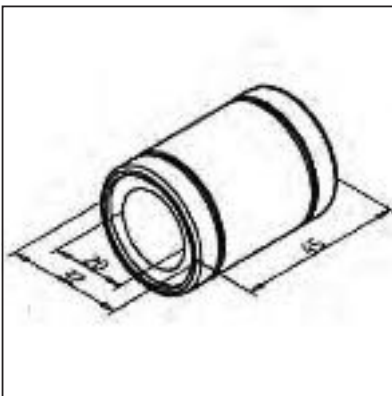
- General heavy duty constructions
- Linear guiding LB as slide
- Central bore Ø 32 mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders

ASSEMBLY

- MiniTec power-lock fastener
- Angle 45 or 90
- Screw connection

BALL BUSHING LME 20 UU

part no. 10.1745/0



TECHN. DATA / ITEMS SUPPLIED

- Housing 100 Cr6	
- 2 integrated sealing rings, heat resistant up to 110°C, for higher temperatures up to 180°C use ball bushing with steel cage	
- Load:	
- dyn. C =	880 N
- stat. C ₀ =	1.400 N
- Weight	0,090 kg

APPLICATIONS

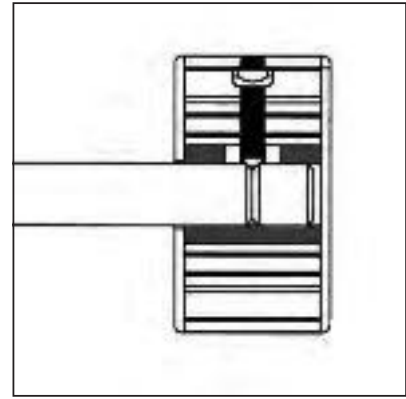
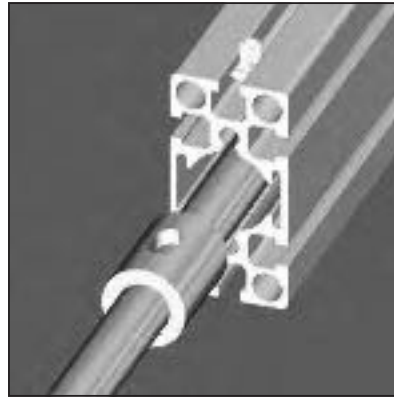
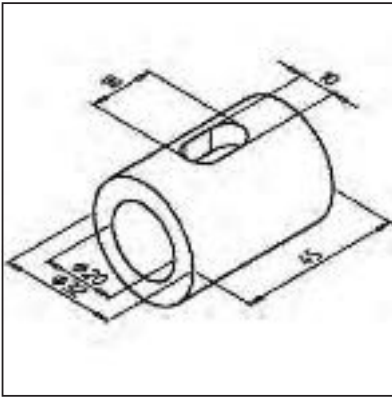
- Precision linear guides
- Linear guide system LB
- Lifting-tables
- Quattro-units

ASSEMBLY

- Push in bore 32 of the profile
- Axial securing with housing adhesive

CENTERING BUSH

part no. 28.0146/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium, natural
- Weight 0,067 kg

APPLICATIONS

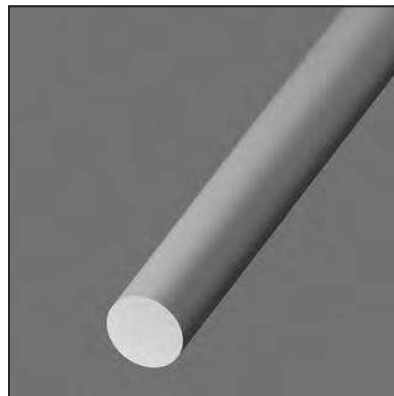
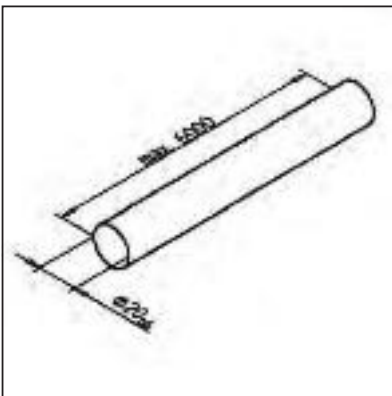
- Central clamping of shafts for all shaft supporting blocks of the MiniTec-linear system LB

ASSEMBLY

- Insert centering bush in bore $\varnothing 32$ mm
- Insert shaft
- Attachment with set screw M8 x 35

SHAFT 20

part no. 17.1744/0

**TECHN. DATA / ITEMS SUPPLIED**

- Cf53, inductive hardened 60 +5 HRC ground h6
- Weight 2,466 kg/m
- Length 6 m

APPLICATIONS

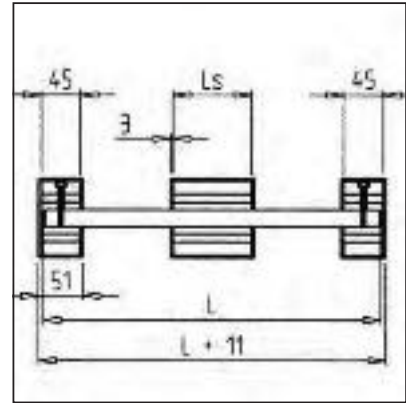
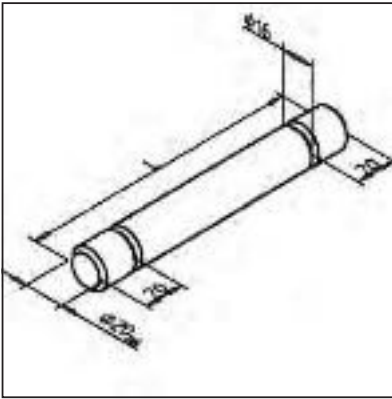
- Linear guide system LB

ASSEMBLY

- With centering bush in shaft support block

SHAFT 20 FOR LB-SYSTEM

part no. 28.0154/0



TECHN. DATA / ITEMS SUPPLIED

- Steel Cf53, inductive hardened 60 +5 HRC grinded
- Tolerance h6
- Processed for shaft support block WB
- Weight 0,067 kg/m
- Please indicate measure L

APPLICATIONS

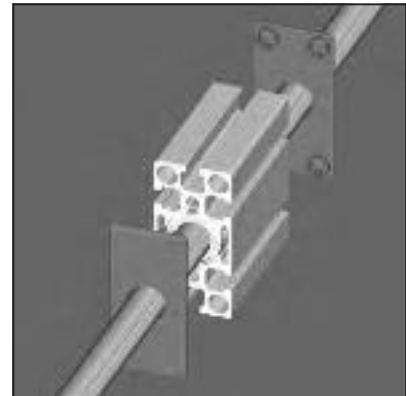
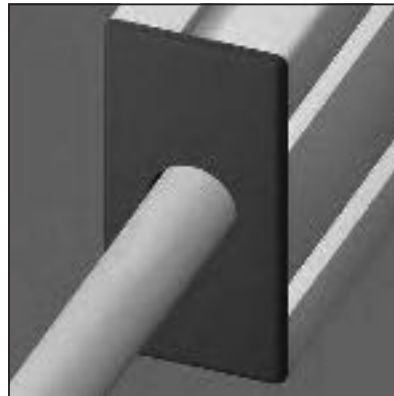
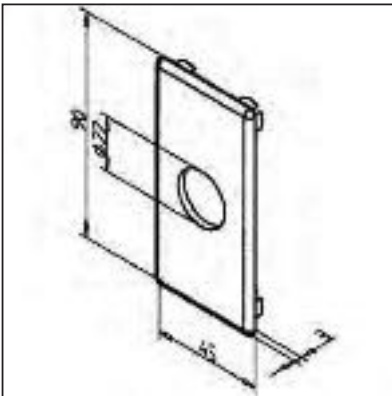
- MiniTec linear guides LB
- In each direction usable

ASSEMBLY

- Insert in shaft support
- Clamp with set screw M8 x 35

END CAP LB 45

part no. 28.0094/1



TECHN. DATA / ITEMS SUPPLIED

- ABS, non-aging and oil resistant, grey
- On request also deliverable in black
- 1 centric bore Ø 22 mm
- Weight 0,095 kg/m

APPLICATIONS

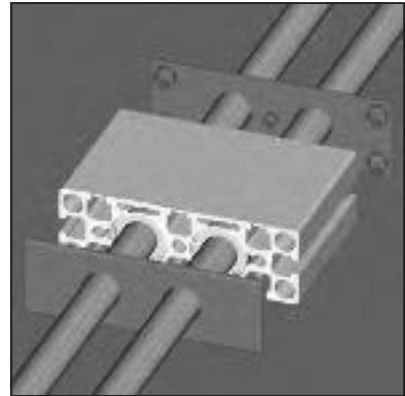
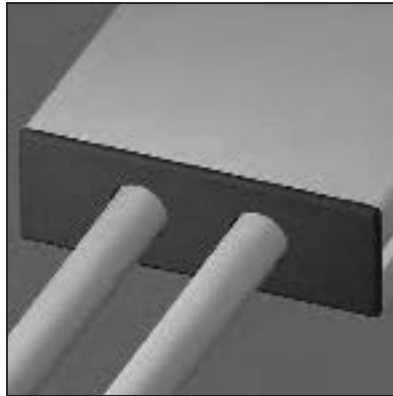
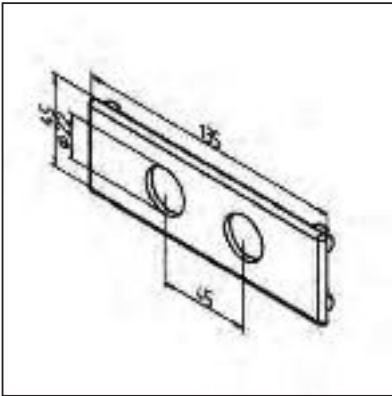
- Face covering of linear slides LB 45
- Face covering of shaft support block WB 45 (shaft side)

ASSEMBLY

- Press into profile bores

END CAP LB 45 X 135

part no. 28.0101/1



TECHN. DATA / ITEMS SUPPLIED

- ABS, non-aging and oil resistant, grey
- On request also deliverable in black
- 2 bores \varnothing 22 mm
- Weight 0,017 kg

APPLICATIONS

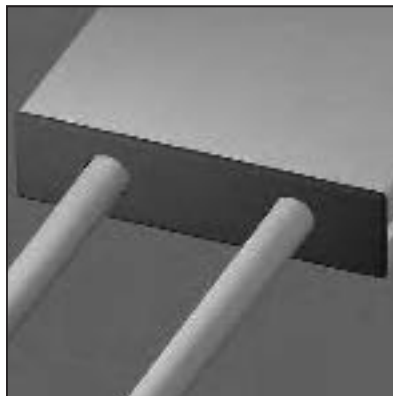
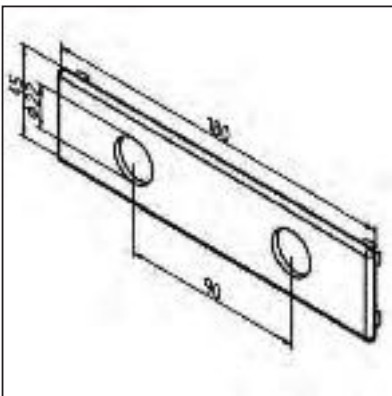
- Face covering of linear slides LB 45 x 135
- Face covering of shaft support blocks WB 45 x 135

ASSEMBLY

- Press into profile bores

END CAP LB 45 X 180

part no. 28.0102/1



TECHN. DATA / ITEMS SUPPLIED

- ABS, non-aging and oil resistant, grey
- On request also deliverable in black
- 2 bores \varnothing 22 mm
- Weight 0,020 kg

APPLICATIONS

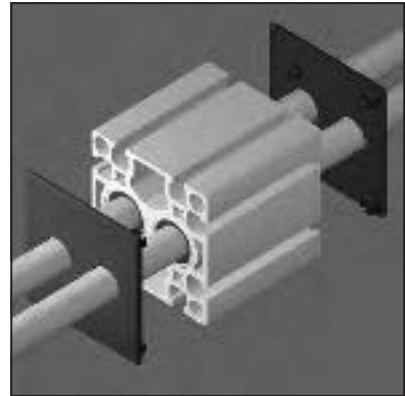
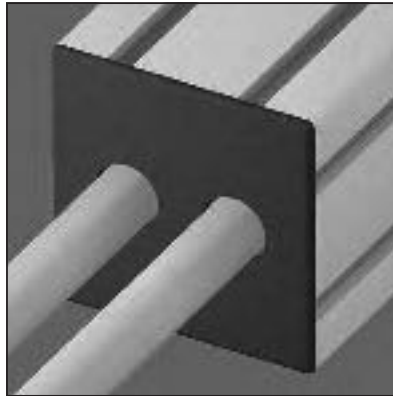
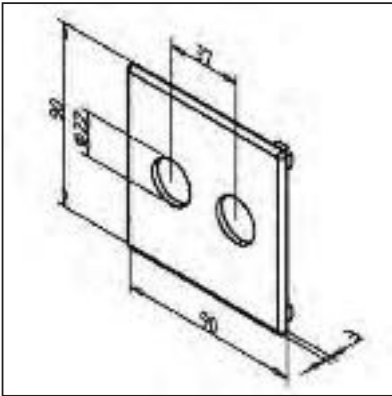
- Face covering of linear slides LB 45 x 180
- Face covering of shaft support blocks WB 45 x 180

ASSEMBLY

- Press into profile bores

END CAP LB 90

part no. 28.0095/1



TECHN. DATA / ITEMS SUPPLIED

- ABS, non-aging and oil resistant, grey
- On request also deliverable in black,
part no. 28.0095/0
- 2 bores \varnothing 22 mm
- Weight 0,0165 kg

APPLICATIONS

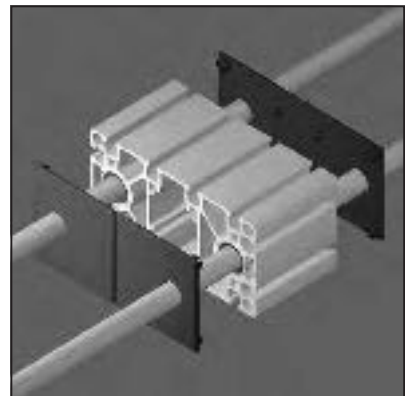
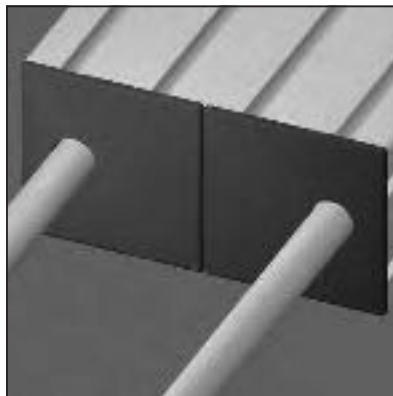
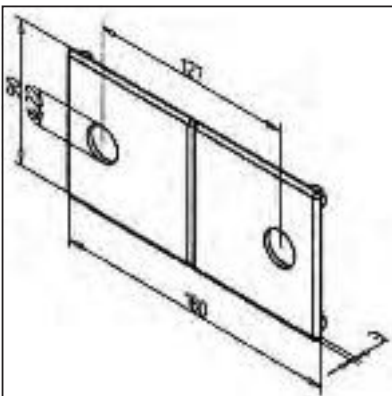
- Face covering of linear slides LB 90
- Face covering of shaft support blocks WB 90

ASSEMBLY

- Press into profile bores

END CAP LB 180

part no. 28.0103/1



TECHN. DATA / ITEMS SUPPLIED

- ABS, non-aging and oil resistant, grey
- On request also deliverable in black,
part no. 28.0103/0
- 2 bores \varnothing 22 mm
- Weight 0,037 kg

APPLICATIONS

- Face covering of linear slides LB 180
- Face covering of shaft support blocks WB 180

ASSEMBLY

- Press into profile bores

3



357 3.1 BASE FRAMES



360 3.2 HEIGHT-ADJUSTABLE TABLES



372 3.3 TABLETOPS



377 3.4 COUNTER CABINETS



385 3.5 LIGHTING



392 3.6 ENERGY SUPPLY



394 3.7 ACCESSOIRES



434 3.8 FOOT RESTS



437 3.9 PNEUMATIC



440 3.10 KANBAN-SYSTEMS



452 3.11 MOUNTING DEVICES



457 3.12 ESD-ACCESSOIRES



471 3.13 REQUESTS

WORKPLACE DESIGN



For many years now, MiniTec profile system and MiniTec CADmenu have been setting the standard to process flow, workplaces, factory automation and machine protection. Tailor-made workplaces avoid detrimental compromises. The modular MiniTec system with its associated software is ideal for creating optimal solutions both economically and quickly.

All system components are compatible and can be combined to form production systems.

Flexibility and profitability must not necessarily be competing targets. Manual workplaces allow highly flexible response to changing requirements.

Complex production systems, too, can be arranged economically in connection with the multiple combination possibilities that the MiniTec program offers.

Both manual components - such as roller conveyors, ball transfer systems for KanBan solutions or material trolleys are available for linking workstations.

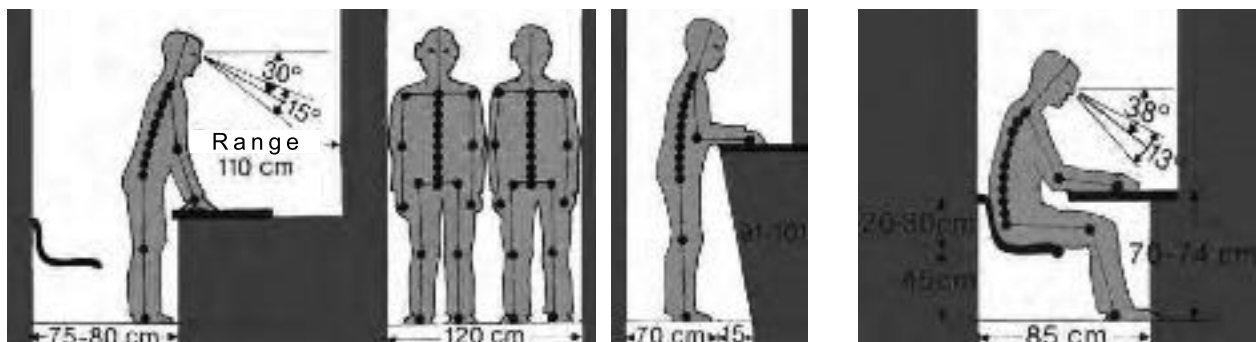
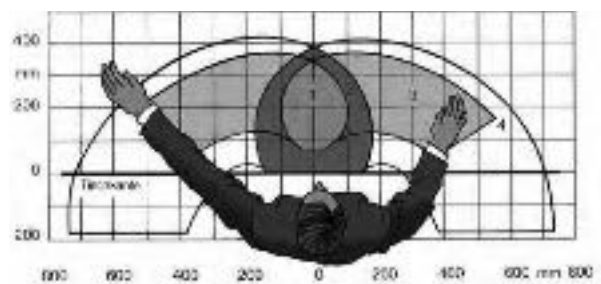
Automatic linking is established using linear axles, belt conveyors or flexible transfer system TSG.

Our design software MiniTec CADmenu is at your free disposal for designing your workplaces. The software helps you in designing workstations of various versions within a short period of time. In addition, the system automatically creates the parts list and an installation plan to option. Automatic design modules for linear technology, protective gear and conveyors are also available.

Proper design of the workplace has largely positive impacts on health, performance, endurance and concentration of employees.



Workplace design by ergonomics is described under harmonized European Standard, e.g. DIN EN ISO 6385. Objective of ergonomic design is, among others, adaptation of workplace, working space, environment and lighting to human properties and skills. The modular system for designing individual workplaces enables optimal adaptation to task and individual employee concerned.



EXAMPLES



BASE FRAME

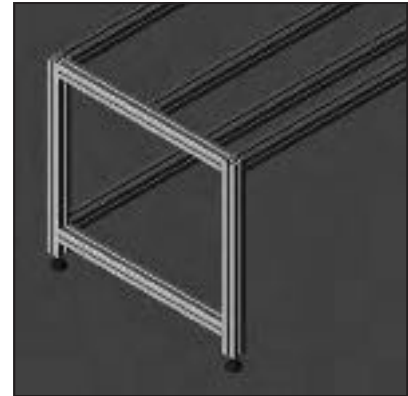
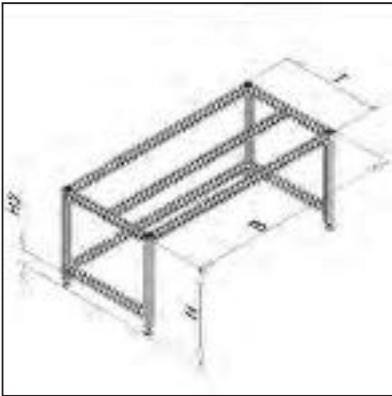
The work table is the core piece of the workplace. Through its flexible, ergonomic and goal-oriented design, it is the base for extremely economically flexible workplace systems.

The following pages show examples of the different work tables.



CONTAINER TABLE

part no. 32.0111/0



TECHN. DATA / ITEMS SUPPLIED

- Basic frame, profile 45 x 45 F, anodized E6/EV1
- Foot GD, height-adjustable for floor level compensation
- Mounted electrically conductive with MiniTec power-lock fastener
- Without tabletop
- Tabletops: See page
- Max. dimensions: B=2000 mm, T=1000 mm

TECHN. DATA / ITEMS SUPPLIED

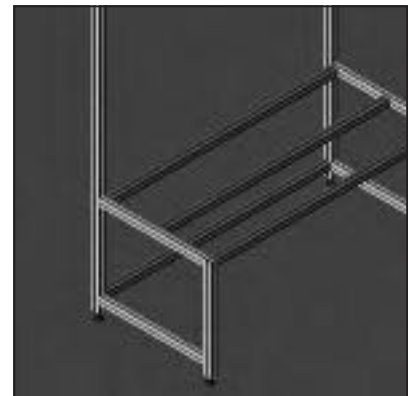
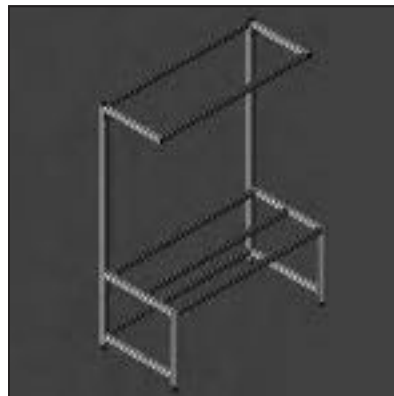
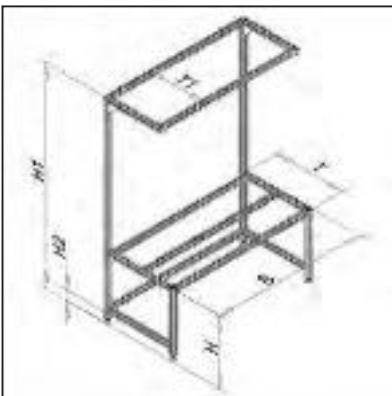
- Seated work position (without tabletop): H = 678 mm
- Standing work position (without tabletop): H = 878 mm
- OPTION: Protection panels, chipboard 8 mm, light grey
- Please specify desired dimensions B, T and H

TECHN. DATA / ITEMS SUPPLIED

- Preferred size:
B= 1000 mm, T= 700 mm, H=678 - 1500N
part no. 32.0111/1
B= 1200 mm, T= 700 mm, H=678 - 1000N
part no. 32.0111/2
B= 1500 mm, T= 700 mm, H=678 - 800N
part no. 32.0111/3
B= 2000 mm, T= 700 mm, H=678 - 800N
part no. 32.0111/4
- higher loading capacity on request
- Portal optional retrofit 32.0205/0

CONTAINER TABLE WITH GANTRY

part no. 32.0112/0



TECHN. DATA / ITEMS SUPPLIED

- Basic frame, profile 45 x 45 F, anodized E6/EV1
- Foot GD PA -M10 Ø45, height-adjustable for floor level compensation
- Mounted electrically conductive with MiniTec power-lock fastener
- Without tabletop
- Tabletops: See page
- Max. dimensions: B=2000 mm, T=1000 mm

TECHN. DATA / ITEMS SUPPLIED

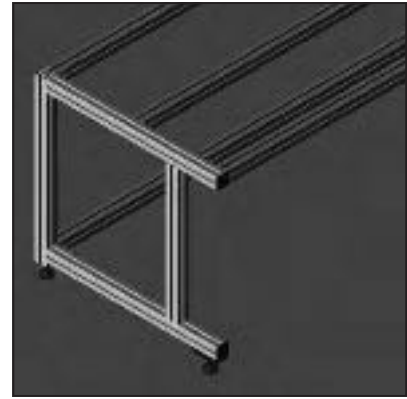
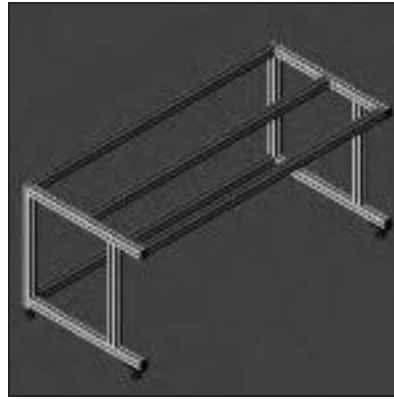
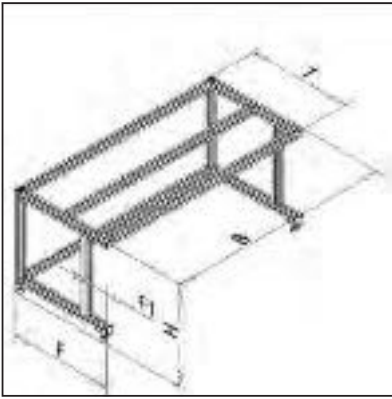
- Seated work position (without tabletop): H = 678 mm
- Standing work position (without tabletop): H = 878 mm
- OPTION: Protection panels, chipboard 8 mm, light grey
- Please specify desired dimensions B, T and H

TECHN. DATA / ITEMS SUPPLIED

- Preferred size:
T=700 mm, H=678 mm, H1=2100mm, T1=600mm, H2=100mm,
B=1000mm, maximum load: 1500N
part no. 32.0112/1
B=1200mm, maximum load: 1000N
part no. 32.0112/2
B=1500mm, maximum load: 800N
part no. 32.0112/3
B=2000mm, maximum load: 800N
part no. 32.0112/4
- higher loading capacity on request

DESK TABLE

part no. 32.0121/0

**TECHN. DATA / ITEMS SUPPLIED**

- Basic frame, profile 45 x 45 F, anodized E6/EV1
- Foot GD PA -M10 Ø45, height-adjustable for floor level compensation
- Mounted electrically conductive with MiniTec power-lock fastener
- Without tabletop
- Tabletops: See page
- Max. dimensions: B=2000 mm, T=1000 mm

TECHN. DATA / ITEMS SUPPLIED

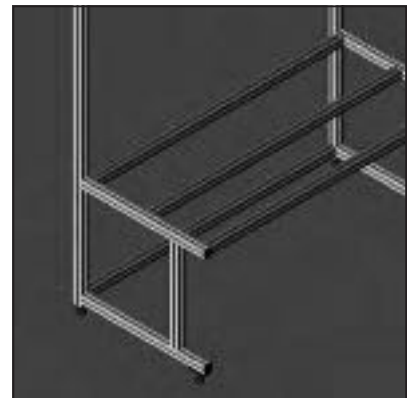
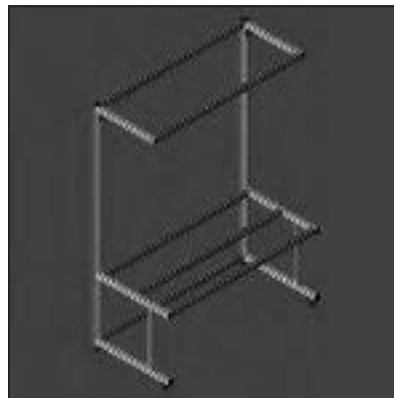
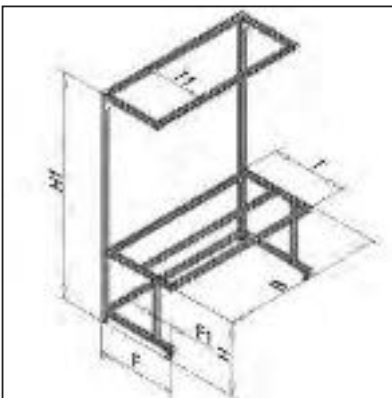
- Seated work position (without tabletop): H = 678 mm
- Standing work position (without tabletop): H = 878 mm
- OPTION: Protection panels, chipboard 8 mm, light grey
- Please specify desired dimensions B, T, H, F and F1

TECHN. DATA / ITEMS SUPPLIED

- Preferred size:
B= 1000 mm, T= 700 mm, H=678 - 1500N
part no. 32.0121/1
B= 1200 mm, T= 700 mm, H=678 - 1000N
part no. 32.0121/2
B= 1500 mm, T= 700 mm, H=678 - 800N
part no. 32.0121/3
B= 2000 mm, T= 700 mm, H=678 - 800N
part no. 32.0121/4
- higher loading capacity on request
- Portal optional retrofit 32.0205/0

DESK TABLE WITH GANTRY

part no. 32.0122/0

**TECHN. DATA / ITEMS SUPPLIED**

- Basic frame, profile 45 x 45 F, anodized E6/ EV1
- Foot GD PA -M10 Ø45, height-adjustable for floor level compensation
- Mounted electrically conductive with MiniTec power-lock fastener
- Without tabletop
- Tabletops: See page
- Max. dimensions: B=2000 mm, T=1000 mm

TECHN. DATA / ITEMS SUPPLIED

- Seated work position (without tabletop): H = 678 mm
- Standing work position (without tabletop): H = 878 mm
- OPTION: Protection panels, chipboard 8 mm, light grey
- Please specify desired dimensions B, T, H, H1 and H2

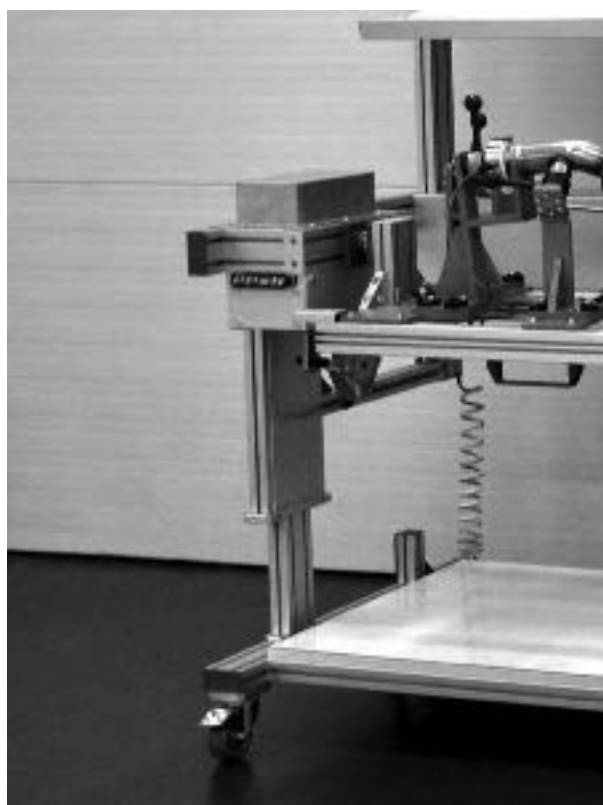
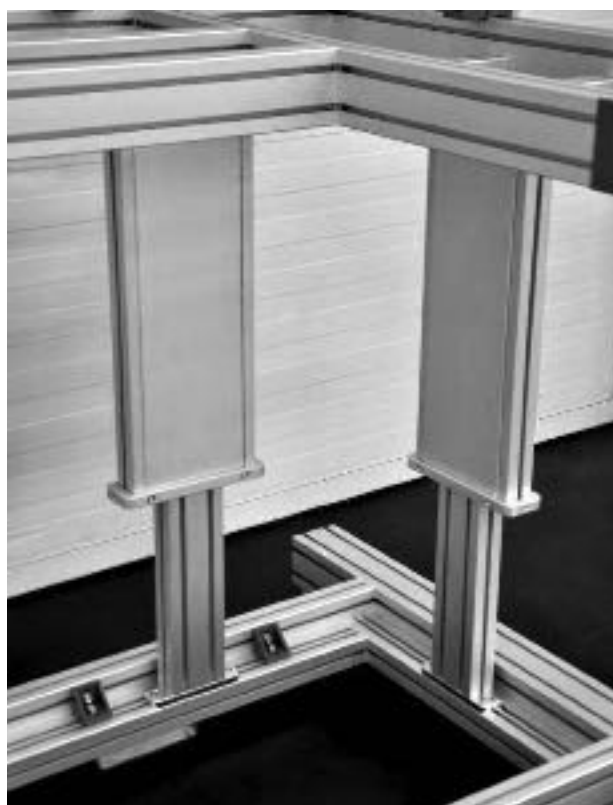
TECHN. DATA / ITEMS SUPPLIED

- Preferred size:
T= 700 mm, H= 678 mm, H1=2100mm, T1=600mm, F=700mm, F1 150mm
B=1000mm, maximum load: 1500N
part no. 32.0122/1
B=1200mm, maximum load: 1000N
part no. 32.0122/2
B=1500mm, maximum load: 800N
part no. 32.0122/3
B=2000mm, maximum load: 800N
part no. 32.0122/4
- higher loading capacity on request

HEIGHT-ADJUSTABLE TABLES

Elbow-room is an important prerequisite for non-tiring, concentrated work. The height-adjustable tables allow fast and simple adaptation to the individual height of the employee concerned. Beyond that, the operating position

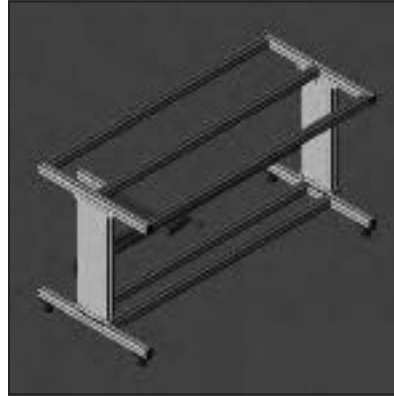
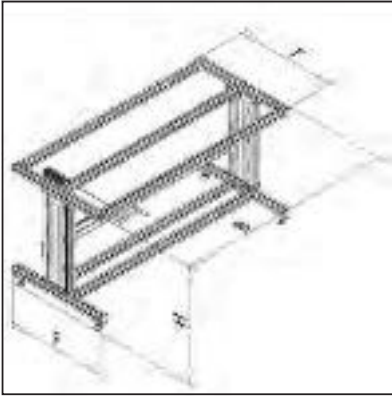
between standing and seating may be varied during the course of the workday. Permanent postural deformities are thus prevented.





HYDRAULICALLY HEIGHT-ADJUSTABLE TABLE

part no. 32.0080/0



TECHN. DATA / ITEMS SUPPLIED

- Basic frame, profile 45x45 F, anodized E6/EV1
- Foot GD PA -M10 Ø45, height-adjustable for floor level compensation
- Mounted electrically conductive with MiniTec power-lock fastener
- Table with several supports on request
- max. Load: 2000 N, higher load capacity on request
- **higher loading capacity on request**
- ESD on request

TECHN. DATA / ITEMS SUPPLIED

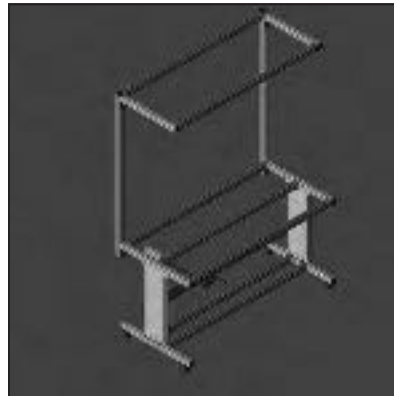
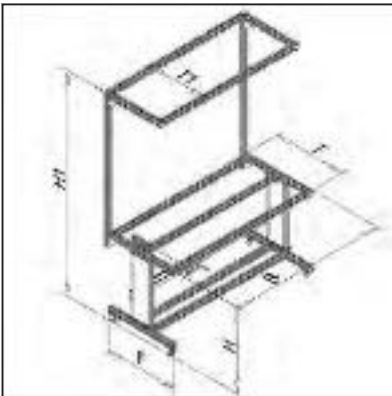
- Height adjustment: Hand pump with retractable crank handle, mounted underneath tabletop, synchronous table adjustment with 2 simplex-acting hydraulic cylinders in column sleeves
- Without tabletop, tabletops: See page
- **Please specify desired dimensions B, T, H and F**

TECHN. DATA / ITEMS SUPPLIED

- Adjustment range upper tabletop edge: 300mm
- Max. dimensions: B=2000 mm
T=1000 mm
- Standard height (without tabletop): H = 705 mm or 805 mm
- Preferred size:
B= 1000 mm, F/T= 700 mm, H=805 - 1200N **part no. 32.0080/1**
B= 1200 mm, F/T= 700 mm, H=805 - 1200N **part no. 32.0080/2**
B= 1500 mm, F/T= 700 mm, H=805 - 1200N **part no. 32.0080/3**
B= 2000 mm, F/T= 700 mm, H=805 - 1200N **part no. 32.0080/4**
- Portal optional retrofit **32.0205/0**

HYDRAULICALLY HEIGHT-ADJUSTABLE TABLE

part no. 32.0082/0



TECHN. DATA / ITEMS SUPPLIED

- Basic frame, profile 45x45 F, anodized E6/EV1
- Foot GD PA -M10 Ø45, height-adjustable for floor level compensation
- Mounted electrically conductive with MiniTec power-lock fastener
- Table with several supports on request
- max. Load: 2000 N, higher load capacity on request
- **higher loading capacity on request**
- ESD on request

TECHN. DATA / ITEMS SUPPLIED

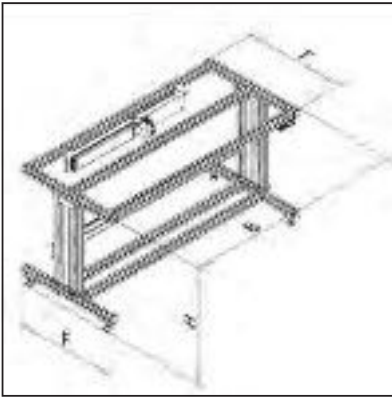
- Height adjustment: Hand pump with retractable crank handle, mounted underneath tabletop, synchronous table adjustment with 2 simplex-acting hydraulic cylinders in column sleeves
- Without tabletop, tabletops: See page
- **Please specify desired dimensions B, T, H, F, H1 and T1**

TECHN. DATA / ITEMS SUPPLIED

- Adjustment range upper tabletop edge: 300mm
- Max. dimensions: B=2000 mm
T=1000 mm
- Standard height (without tabletop): H = 705 mm or 805 mm
- Preferred size:
T= 700 mm, H=805, H1=2100mm, T1=600mm, F=700mm, maximale Last: 1200N
B= 1000 mm **part no. 32.0082/1**
B= 1200 mm **part no. 32.0082/2**
B= 1500 mm **part no. 32.0082/3**
B= 2000 mm **part no. 32.0082/4**

ELECTRICALLY HEIGHT-ADJUSTABLE TABLE

part no. 32.0070/0



TECHN. DATA / ITEMS SUPPLIED

- Basic frame, profile 45 x 45 F, anodized E6/EV1
- Foot GD PA - M10 Ø45, height-adjustable for floor level compensation
- Mounted electrically conductive with MiniTec power-lock fastener
- Max. Load: 3000 N
- ESD on request

TECHN. DATA / ITEMS SUPPLIED

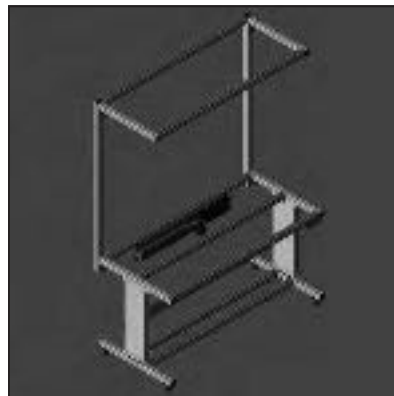
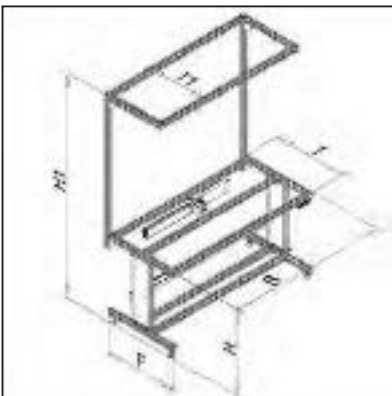
- Height adjustment: With electric servomotor, "Up / Down" switch mounted with 4 programmable positions concealed underneath tabletop, standard connection 240 VAC, synchronous table adjustment with 2 simplex-acting hydraulic cylinders in column sleeves
- Without tabletop, tabletops: See page
- **Please specify desired dimensions B, T, H and F**

TECHN. DATA / ITEMS SUPPLIED

- Adjustment range upper tabletop edge: 280mm
- Max. dimensions: B=2000 mm
T=1000 mm
- Standard height (without tabletop): H = 685 mm or 795 mm
- Preferred size:
B= 1000 mm, F/T= 700 mm, H=805 - 1200N **part no. 32.0070/1**
B= 1200 mm, F/T= 700 mm, H=805 - 1200N **part no. 32.0070/2**
B= 1500 mm, F/T= 700 mm, H=805 - 1200N **part no. 32.0070/3**
B= 2000 mm, F/T= 700 mm, H=805 - 1200N **part no. 32.0070/4**
- Higher load capacity on request
- Portal optional retrofit **32.0210/0**

ELECTRICALLY HEIGHT-ADJUSTABLE TABLE

part no. 32.0071/0



TECHN. DATA / ITEMS SUPPLIED

- Basic frame, profile 45 x 45 F, anodized E6/EV1
- Foot GD PA - M10 Ø45, height-adjustable for floor level compensation
- Mounted electrically conductive with MiniTec power-lock fastener
- Max. Load: 3000 N
- ESD on request

TECHN. DATA / ITEMS SUPPLIED

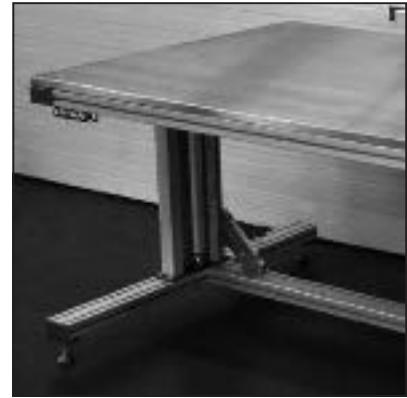
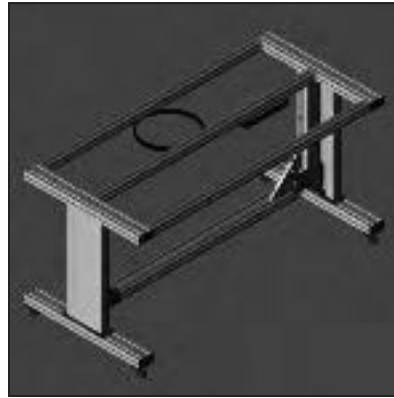
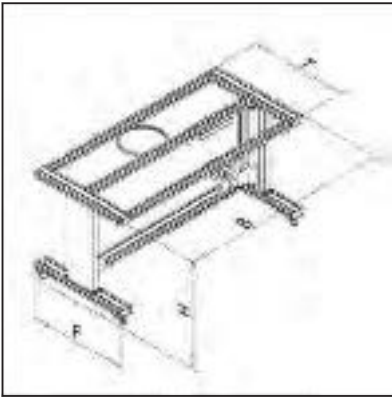
- Height adjustment: With electric servomotor, "Up / Down" switch mounted with 4 programmable positions concealed underneath tabletop, standard connection 240 VAC, synchronous table adjustment with 2 simplex-acting hydraulic cylinders in column sleeves
- Without tabletop, tabletops: See page
- **Please specify desired dimensions B, T, H, F, H1 and T1**

TECHN. DATA / ITEMS SUPPLIED

- Adjustment range upper tabletop edge: 280mm
- Max. dimensions: B=2000 mm
T=1000 mm
- Standard height (without tabletop): H = 685 mm or 795 mm
- Preferred size:
B= 1000 mm, F/T= 700 mm, H=805 - 1200N **part no. 32.0071/1**
B= 1200 mm, F/T= 700 mm, H=805 - 1200N **part no. 32.0071/2**
B= 1500 mm, F/T= 700 mm, H=805 - 1200N **part no. 32.0071/3**
B= 2000 mm, F/T= 700 mm, H=805 - 1200N **part no. 32.0071/4**
- Higher load capacity on request

ELECTRICALLY HEIGHT-ADJUSTABLE TABLE STROKE 400

part no. 32.0075/0



TECHN. DATA / ITEMS SUPPLIED

- Basic frame, profile 45 x 45 F, anodized E6/EV1
- Foot GD PA - M10 Ø45, height-adjustable for floor level compensation
- Max. Load: 3400 N
- **higher loading capacity on request**
- ESD on request

APPLICATIONS

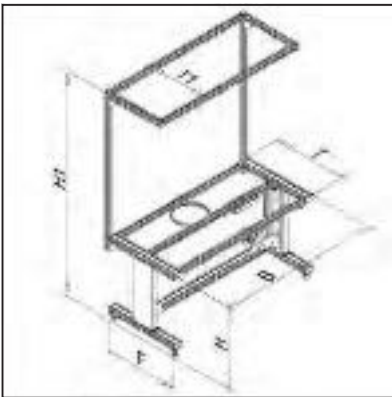
- Height adjustment: With electric servomotor and spindle, "Up / Down" switch mounted concealed underneath tabletop, standard connection 240 VAC,
- **Please specify desired dimensions B, T, H, and F**
- Without tabletop, tabletops: See page

ITEMS SUPPLIED

- Adjustment range upper tabletop edge: 400mm
- Max. dimensions: B=2000 mm, T=1000 mm
- Standard height (without tabletop): H=762mm
- Preferred size:
T= 700 mm, F=700mm,
B= 1000 mm **part no. 32.0075/1**
B= 1200 mm **part no. 32.0075/2**
B= 1500 mm **part no. 32.0075/3**
B= 2000 mm **part no. 32.0075/4**

ELECTRICALLY HEIGHT-ADJUSTABLE TABLE WITH PORTAL STROKE 400

part no. 32.0078/0



TECHN. DATA / ITEMS SUPPLIED

- Basic frame, profile 45 x 45 F, anodized E6/EV1
- Foot GD PA - M10 Ø45, height-adjustable for floor level compensation
- Max. Load: 3400 N
- **higher loading capacity on request**
- ESD on request

APPLICATIONS

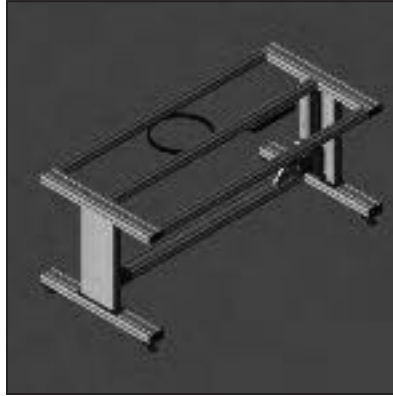
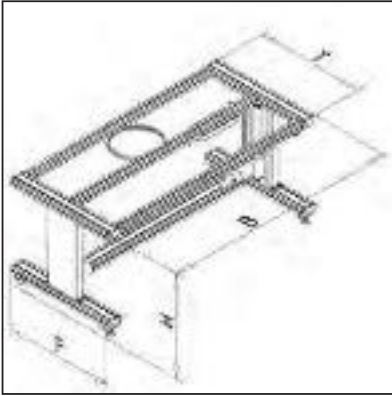
- Height adjustment: With electric servomotor, "Up / Down" switch mounted with 4 programmable positions concealed underneath tabletop, standard connection 240 VAC,
- Without tabletop, tabletops: See page
- **Please specify desired dimensions B, T, H, F, H1 and T1**

ITEMS SUPPLIED

- Adjustment range upper tabletop edge: 400mm
- Max. dimensions: B=2000 mm, T=1000 mm
- Standard height (without tabletop): H=762mm
- Preferred size:
T= 700 mm, F=700mm, H1=2100mm,
T1=600mm
B= 1000 mm **part no. 32.0078/1**
B= 1200 mm **part no. 32.0078/2**
B= 1500 mm **part no. 32.0078/3**
B= 2000 mm **part no. 32.0078/4**

ELECTRICALLY HEIGHT-ADJUSTABLE TABLE STROKE 300

part no. 32.0076/0

**TECHN. DATA / ITEMS SUPPLIED**

- Basic frame, profile 45 x 45 F and 45 x 90 F, anodized E6/EV1
- Foot GD PA - M10 Ø45, height-adjustable for floor level compensation
- Max. Load: 3400 N
- **higher loading capacity on request**
- ESD on request

APPLICATIONS

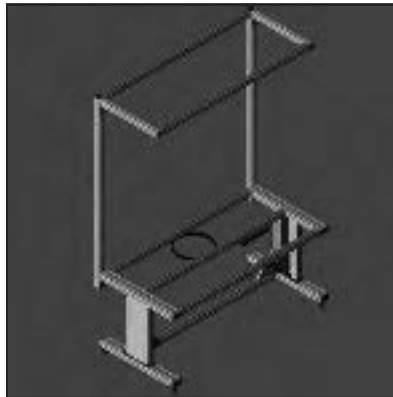
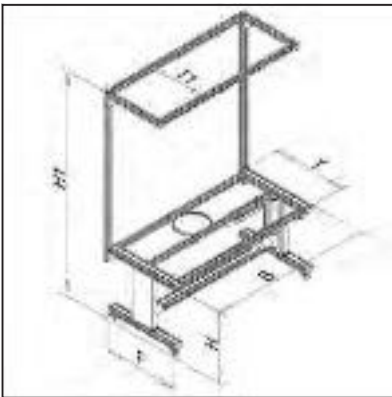
- Height adjustment: With electric servomotor and spindle, "Up / Down" switch mounted concealed underneath tabletop, standard connection 240 VAC,
- Without tabletop, tabletops:
See page 372 et. seq.
- **Please specify desired dimensions B, T and F**

ITEMS SUPPLIED

- Adjustment range upper tabletop edge: 300mm
- Max. dimensions: B=2000 mm, T=1000 mm
- Standard height (without tabletop): H=662mm
- Preferred size:
T= 700 mm, F=700mm
B= 1000 mm **part no. 32.0076/1**
B= 1200 mm **part no. 32.0076/2**
B= 1500 mm **part no. 32.0076/3**
B= 2000 mm **part no. 32.0076/4**

ELECTRICALLY HEIGHT-ADJUSTABLE TABLE WITH GANTRY STROKE 300

part no. 32.0077/0

**TECHN. DATA / ITEMS SUPPLIED**

- Basic frame, profile 45 x 45 F and 45 x 90 F, anodized E6/EV1
- Foot GD PA - M10 Ø45, height-adjustable for floor level compensation
- Max. Load: 3400 N
- **higher loading capacity on request**
- ESD on request

APPLICATIONS

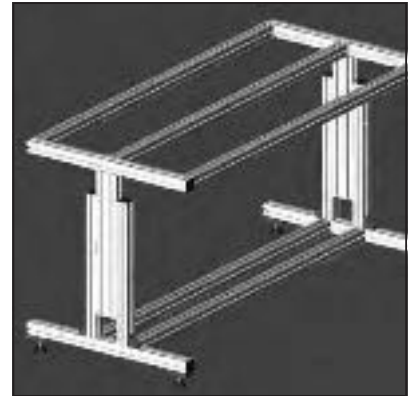
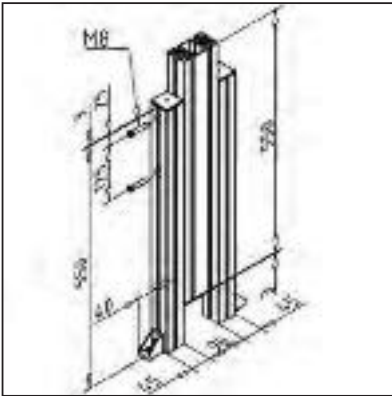
- Height adjustment: With electric servomotor and spindle, "Up / Down" switch mounted concealed underneath tabletop, standard connection 240 VAC,
- Without tabletop, tabletops:
See page 372 et. seq.
- **Please specify desired dimensions B, T, F, H1 and T1**

ITEMS SUPPLIED

- Adjustment range upper tabletop edge: 300mm
- Max. dimensions: B=2000 mm, T=1000 mm
- Standard height (without tabletop): H=662mm
- Preferred size:
T= 700 mm, F=700mm, H1=2100mm, T1=600mm
B= 1000 mm **part no. 32.0077/1**
B= 1200 mm **part no. 32.0077/2**
B= 1500 mm **part no. 32.0077/3**
B= 2000 mm **part no. 32.0077/4**

HEIGHT SETTING FOR WORKTABLE

part no. 32.0335/0



TECHN. DATA / ITEMS SUPPLIED

- Profile 45 x 45 F and 45 x 90 F, anodized E6/EV1
- Installation dimension: 553mm
- Adjustable range: 385mm
- ESD competent **part no. 32.0335/6**

APPLICATIONS

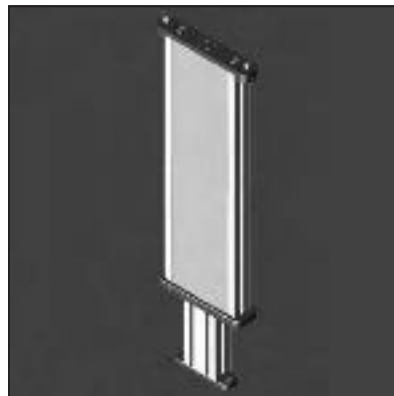
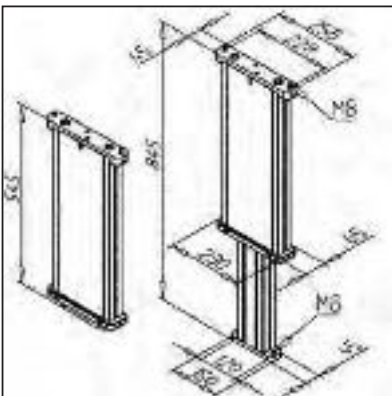
- Simple height-adjustment through double profiles
- Adjustable through release of the screwed fastening

ITEMS SUPPLIED

- 1x height setting completely mounted

TELESCOPIC GUIDE 545 - STROKE 300

part no. 32.0310/0



TECHN. DATA / ITEMS SUPPLIED

- Installation dimension 545 mm
- Stroke 300 mm
- Lifting force 1000 N
- Stroke speed 3 mm / crank rotation
- Up to 6 columns per drive expandable
- Max load with hand drive 2000 N
- Max load with electric drive 6000 N
- Because of higher friction at excentric load the load capacity is reduced
- Weight 6,713 kg

APPLICATIONS

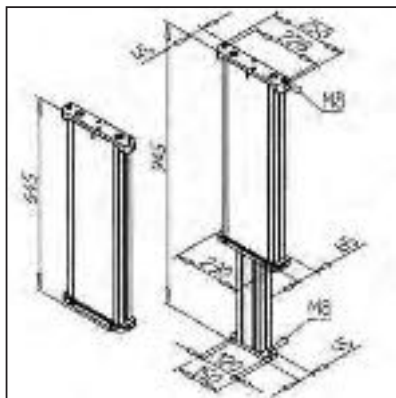
- For raising and lowering the work tables and other equipment
- Minimum load 100N
- The system must not be subjected to tensile stress

ITEMS SUPPLIED

- 1x lifting column, fully assembled and adjusted
- Preassembled hydraulic cylinder, tube length 2,5m, filled and pressed
- Without pump and fastening kit

TELESCOPIC GUIDE 645 - STROKE 300

part no. 32.0320/0

**TECHN. DATA / ITEMS SUPPLIED**

- Installation dimension	645 mm
- Stroke	300 mm
- Lifting force	1000 N
- Stroke speed	3 mm / crank rotation
- Up to 6 columns per drive expandable	
- Max system load with hand drive	2000 N
- Max load system with electric drive	6000 N
- Because of higher friction at excentric load the load capacity is reduced	
- Weight	7,775 kg

APPLICATIONS

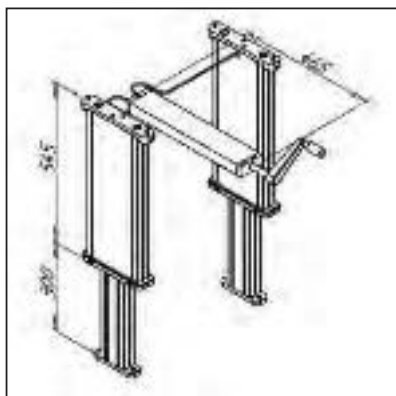
- For raising and lowering the work tables and other equipment
- Minimum load 100 N
- The system must not be subjected to tensile stress

ITEMS SUPPLIED

- 1x lifting column, fully assembled and adjusted
- Preassembled hydraulic cylinder, tube length 2,5m, filled and pressed
- Without pump or fastening kit

TELESCOPIC GUIDE 545 - STROKE 300, MANUAL

part no. 32.0330/0

**TECHN. DATA / ITEMS SUPPLIED**

- Installation dimension	545 mm
- Stroke	300 mm
- Lifting force	2000 N
- Stroke speed	3 mm / crank rotation
- Weight	16,006 kg

APPLICATIONS

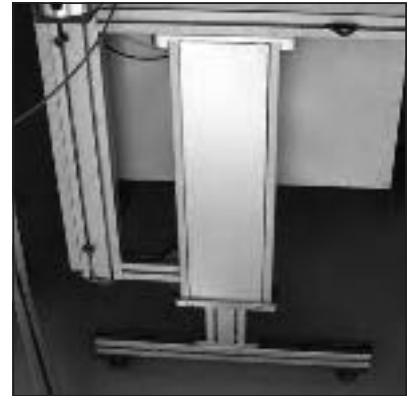
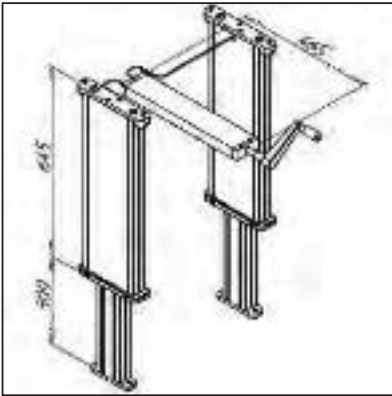
- For raising and lowering the work tables and other equipment
- Multi-column version by request
- Pump short/long
- Minimum load 100 N
- The system must not be subjected to tensile stress

ITEMS SUPPLIED

- 2x lift columns, fully assembled
- 2x integrated hydraulic cylinders
- 1x hydraulic pump with hand-crank

TELESCOPIC GUIDE 645 - STROKE 300, MANUAL

part no. 32.0332/0



TECHN. DATA / ITEMS SUPPLIED

- Installation dimension	645 mm
- Stroke	300 mm
- Lifting force	2000 N
- Stroke speed 3 mm / crank rotation	
- Weight	18,13 kg

APPLICATIONS

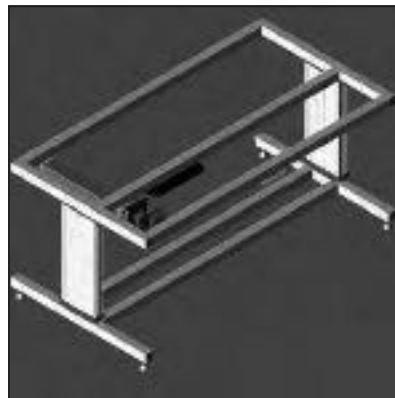
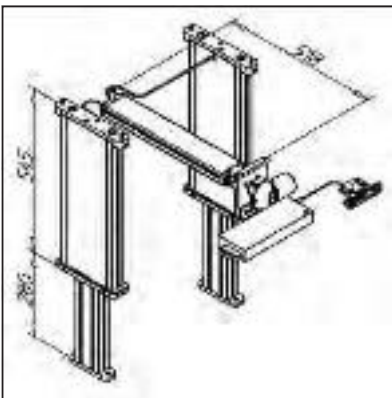
- For raising and lowering the work tables and other equipment
- Multi-column version on request
- Pump short/long
- Minimum load 200 N
- The system must not be subjected to tensile stress

ITEMS SUPPLIED

- 2x lift columns, fully assembled
- 2x integrated hydraulic cylinders
- 1x hydraulic pump with hand-crank

TELESCOPIC GUIDE 545 - STROKE 280, ELECTRICAL

part no. 32.0331/0



TECHN. DATA / ITEMS SUPPLIED

- Installation dimension	545 mm
- Stroke	280 mm
- Lifting force	2000 N
- higher loading capacity on request	
- Stroke speed 9 mm / second	
- Max. system load with several supports	6000 N
- Short-time operation ED 5%	
- Weight	22,555 kg

APPLICATIONS

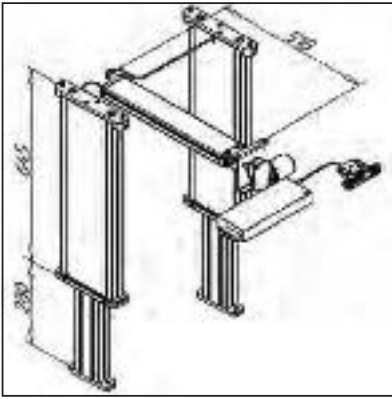
- For raising and lowering the work tables and other equipment
- Multi-column version on request
- The system must not be subjected to tensile stress
- Minimum load 200 N

ITEMS SUPPLIED

- 2x lift columns, fully assembled
- 2x integrated hydraulic cylinders
- 1x electrical hydraulic pump with operating unit

TELESCOPIC GUIDE 645 - STROKE 280, ELECTRICAL

part no. 32.0333/0

**TECHN. DATA / ITEMS SUPPLIED**

- Installation dimension	645 mm
- Stroke	280 mm
- Lifting force	2000 N
- higher loading capacity on request	
- Stroke speed	9 mm / second
- Max. load with several supports	6000 N
- Short-time operation	ED 5%
- Weight	24,679 kg

APPLICATIONS

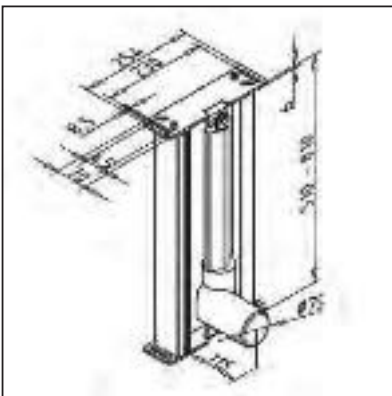
- For raising and lowering the work tables and other equipment
- Multi-column version on request
- The system must not be subjected to tensile stress
- Minimum load 200 N

ITEMS SUPPLIED

- 2x lift columns, fully assembled
- 2x integrated hydraulic cylinders
- 1x electrical hydraulic pump with operating unit

TELESCOPIC GUIDE - STROKE 300, ELECTRICAL

part no. 32.0029/0

**TECHN. DATA / ITEMS SUPPLIED**

- Height adjustment: With electric servomotor and spindle	
- Installation dimension	510 mm
- Stroke	300 mm
- Lifting force	2000 N
- Max. side load	800 N
- Speed	12 mm/s
- Short-time operation	ED 10 %
- Weight	23 kg

APPLICATIONS

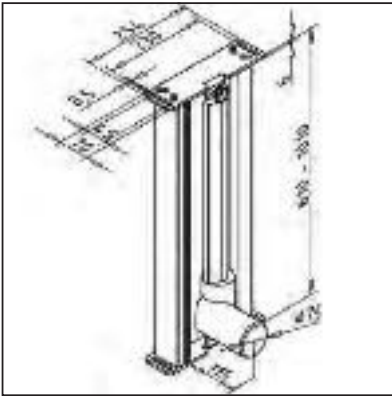
- For raising and lowering the work tables and other equipment
- Other designs on request

ITEMS SUPPLIED

- 2 x telescope lift columns
- 1 x synchronous control 240 V
- 1 x Connection cable
- 1 x "Up/Down" switch
- Optional: Switch with memoryfunction **part no. 32.0047/0**

TELESCOPIC GUIDE - STROKE 400, ELECTRICAL

part no. 32.0030/0



TECHN. DATA / ITEMS SUPPLIED

- Height adjustment: With electric servomotor and spindle	
- Installation dimension	610 mm
- Stroke	400 mm
- Lifting force	2000 N
- Max. side load	800 Nm
- Speed	12 mm/s
- Short-time operation ED 10 %	
- Weight	23 kg

APPLICATIONS

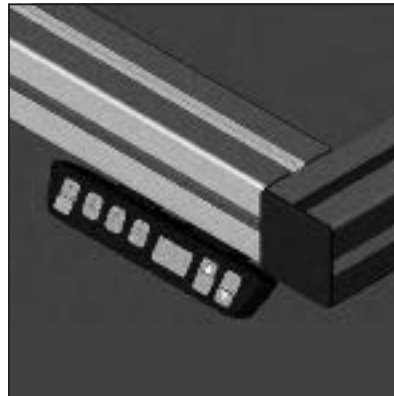
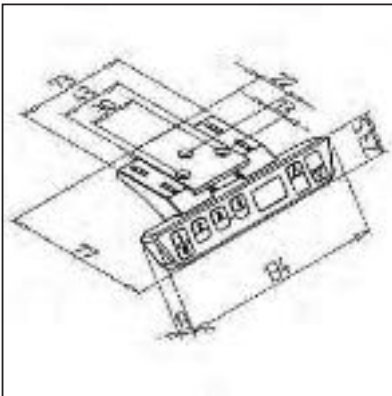
- For raising and lowering the work tables and other equipment
- Other designs on request

ITEMS SUPPLIED

- 2 x telescope lift columns
- 1 x synchronous control 240 V
- 1 x Connection cable
- 1 x "Up/Down" switch
- Optional: Switch with memoryfunction **part no. 32.0047/0**

SWITCH MEMORY + DISPLAY

part no. 32.0047/0



TECHN. DATA / ITEMS SUPPLIED

- Switch with display and 4 positionkeys
- Optional: Extension cable 1m **part no. 27.0110/0**

APPLICATIONS

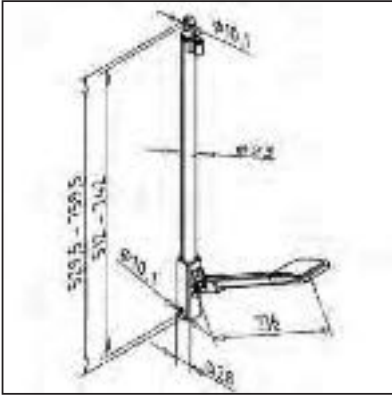
- For procedure of adjustment of height
- Manualy procedure or approach of saved positions

ASSEMBLY

- Use fastening kit

COMPACT HYDRAULIC ACTUATOR 230

part no. 32.0340/0

**TECHN. DATA / ITEMS SUPPLIED**

- Caliber external pipe: 23mm
- Lifting force: 1,5kN
- Stroke: 230mm
- Incl. Mounting material

APPLICATIONS

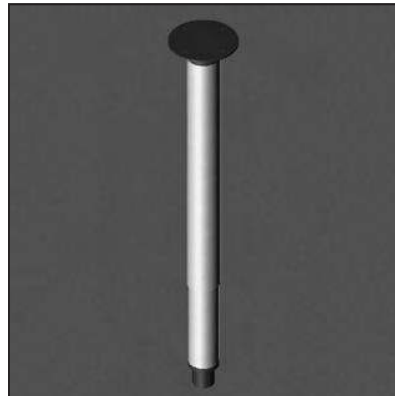
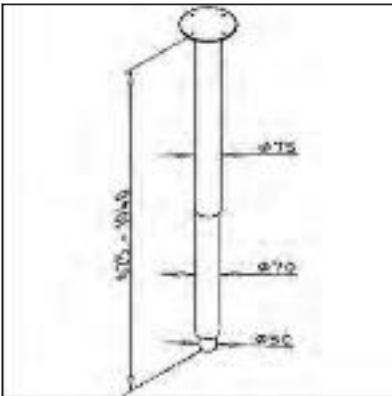
- For raising and lowering the work tables and other equipment

ASSEMBLY

- Use fastening kit

HEIGHT-ADJUSTABLE TABLE COLUMN

part no. 32.0360/0

**TECHN. DATA / ITEMS SUPPLIED**

- Caliber: 75mm
- Lifting force: 120N
- Stroke: 415mm
- Installation dimension: 625mm
- Incl. Mounting material

APPLICATIONS

- For raising and lowering the work tables and other equipment
- Confirmation/Accommodation: Bowden cable L=280mm

ASSEMBLY

- Use fastening kit

TABLETOPS



We offer various tabletops for coping with different assembly tasks. The maximum panel sizes can also be found on the following pages in the item description. Within the listed dimensions we can realize any special size.

The table tops are attached to the base frame with mounting bracket 25 GD-Z and chipboard screws.

	Scratches	Abrasion	Impact	Heat	Moisture	Oil	Chemikals	ESD, antistatic	Light reflection	Thickness
Melaminee	◐	◐	◑	◑	◑	◑	◑	○	●	0.2
Laminate	●	●	●	●	◐	●	◑	○	●	0.8
HPL	●	●	●	●	◐	●	◐	○	●	3.0
Linoleum	◐	●	●	●	◐	●	◑	◑	●	2.5
Multiplex	◐	●	◐	●	◐	◑	◑	○	●	-
Rubber conductive	●	◑	◐	●	◐	●	◐	●	●	2.0
Melamine conductive	◐	◐	◑	◑	◑	◑	◑	●	●	0.2
PE 500 R	◐	●	◑	◑	●	●	◐	○	○	-

● Perfectly suitable

◐ limited suitable

◑ rather not suitable

○ unsuitable




TABLETOPS

part no.	part	colour	Thickness (mm)	Width B (mm)	Depth T (mm)
32.0410/0	Tabletop Melamine	Light grey RAL 7035	22mm	B= (≤2800mm)	T= (≤2100mm)
32.4110/0	Tabletop Melamine	Light grey RAL 7035	22mm	1000mm	700mm
32.4120/0	Tabletop Melamine	Light grey RAL 7035	22mm	1200mm	700mm
32.4140/0	Tabletop Melamine	Light grey RAL 7035	22mm	1500mm	700mm
32.4160/0	Tabletop Melamine	Light grey RAL 7035	22mm	2000mm	700mm
32.4200/0	Tabletop Laminate	Light grey RAL 7035	20mm	B= (≤2800mm)	T= (≤2100mm)
32.4210/0	Tabletop Laminate	Light grey RAL 7035	20mm	1000mm	700mm
32.4220/0	Tabletop Laminate	Light grey RAL 7035	20mm	1200mm	700mm
32.4240/0	Tabletop Laminate	Light grey RAL 7035	20mm	1500mm	700mm
32.4260/0	Tabletop Laminate	Light grey RAL 7035	20mm	2000mm	700mm
32.4700/0	Tabletop Laminate	Light grey RAL 7035	40mm	B= (≤2800mm)	T= (≤2100mm)
32.4710/0	Tabletop Laminate	Light grey RAL 7035	40mm	1000mm	700mm
32.4720/0	Tabletop Laminate	Light grey RAL 7035	40mm	1200mm	700mm
32.4740/0	Tabletop Laminate	Light grey RAL 7035	40mm	1500mm	700mm
32.4760/0	Tabletop Laminate	Light grey RAL 7035	40mm	2000mm	700mm
32.6200/0	Tabletop HPL	Light grey RAL 7035	31mm	B= (≤2800mm)	T= (≤2100mm)
32.6210/0	Tabletop HPL	Light grey RAL 7035	31mm	1000mm	700mm
32.6220/0	Tabletop HPL	Light grey RAL 7035	31mm	1200mm	700mm
32.6240/0	Tabletop HPL	Light grey RAL 7035	31mm	1500mm	700mm
32.6260/0	Tabletop HPL	Light grey RAL 7035	31mm	2000mm	700mm
32.0430/0	Tabletop Linoleum	Light grey RAL 7035	22mm	B= (≤3000mm)	T= (≤1450mm)
32.4310/0	Tabletop Linoleum	Light grey RAL 7035	22mm	1000mm	700mm
32.4320/0	Tabletop Linoleum	Light grey RAL 7035	22mm	1200mm	700mm
32.4340/0	Tabletop Linoleum	Light grey RAL 7035	22mm	1500mm	700mm

TABLETOPS

part no.	part	colour	Dicke (mm)	Width B (mm)	Depth T (mm)
32.4360/0	Tabletop Linoleum	Light grey RAL 7035	22mm	2000mm	700mm
32.0480/0	Tabletop Linoleum	Light grey RAL 7035	40mm	B= (≤3000mm)	T= (≤1450mm)
32.4810/0	Tabletop Linoleum	Light grey RAL 7035	40mm	1000mm	700mm
32.4820/0	Tabletop Linoleum	Light grey RAL 7035	40mm	1200mm	700mm
32.4840/0	Tabletop Linoleum	Light grey RAL 7035	40mm	1500mm	700mm
32.4860/0	Tabletop Linoleum	Light grey RAL 7035	40mm	2000mm	700mm
32.0440/0	Tabletop Multiplex Beech	Sanded, natural	20mm	B= (≤2500mm)	T= (≤1250mm)
32.4410/0	Tabletop Multiplex Beech	Sanded, natural	20mm	1000mm	700mm
32.4420/0	Tabletop Multiplex Beech	Sanded, natural	20mm	1200mm	700mm
32.4440/0	Tabletop Multiplex Beech	Sanded, natural	20mm	1500mm	700mm
32.4460/0	Tabletop Multiplex Beech	Sanded, natural	20mm	2000mm	700mm
32.0490/0	Tabletop Multiplex Beech	Sanded, natural	40mm	B= (≤2500mm)	T= (≤1250mm)
32.4910/0	Tabletop Multiplex Beech	Sanded, natural	40mm	1000mm	700mm
32.4920/0	Tabletop Multiplex Beech	Sanded, natural	40mm	1200mm	700mm
32.4940/0	Tabletop Multiplex Beech	Sanded, natural	40mm	1500mm	700mm
32.4960/0	Tabletop Multiplex Beech	Sanded, natural	40mm	2000mm	700mm
Clear finishing or oiling on request.					
32.0450/0	ESD-Tabletop Natural rubber 	Platinum grey RAL 7036	22mm	B= (≤3000mm)	T= (≤1450mm)
32.4510/0	ESD-Tabletop Natural rubber 	Platinum grey RAL 7036	22mm	1000mm	700mm
32.4520/0	ESD-Tabletop Natural rubber 	Platinum grey RAL 7036	22mm	1200mm	700mm
32.4540/0	ESD-Tabletop Natural rubber 	Platinum grey RAL 7036	22mm	1500mm	700mm
32.4560/0	ESD-Tabletop Natural rubber 	Platinum grey RAL 7036	22mm	2000mm	700mm
32.0460/0	ESD-Tabletop Melamine 	Light grey RAL 7035	25mm	B= (≤2800mm)	T= (≤2100mm)
32.4610/0	ESD-Tabletop Melamine 	Light grey RAL 7035	25mm	1000mm	700mm

TABLETOPS

part no.	part	colour	Dicke (mm)	Width B (mm)	Depth T (mm)
32.4620/0	ESD-Tabletop Melamine 	Light grey RAL 7035	25mm	1200mm	700mm
32.4640/0	ESD-Tabletop Melamine 	Light grey RAL 7035	25mm	1500mm	700mm
32.4660/0	ESD-Tabletop Melamine 	Light grey RAL 7035	25mm	2000mm	700mm
32.6100/0	Tabletop PE 500 R	Black-coloured	25mm	B= (≤2000mm)	T= (≤1000mm)
32.6110/0	Tabletop PE 500 R	Black-coloured	25mm	1000mm	700mm
32.6120/0	Tabletop PE 500 R	Black-coloured	25mm	1200mm	700mm
32.6140/0	Tabletop PE 500 R	Black-coloured	25mm	1500mm	700mm
32.6160/0	Tabletop PE 500 R	Black-coloured	25mm	2000mm	700mm
The colour allocation may vary depending on the shipment.					
32.6000/0	Tabletop PE 500 R	Black dyed	25mm	B= (≤2000mm)	T= (≤1000mm)
32.6010/0	Tabletop PE 500 R	Black dyed	25mm	1000mm	700mm
32.6020/0	Tabletop PE 500 R	Black dyed	25mm	1200mm	700mm
32.6040/0	Tabletop PE 500 R	Black dyed	25mm	1500mm	700mm
32.6060/0	Tabletop PE 500 R	Black dyed	25mm	2000mm	700mm
Plates made of aluminum, PVC, stainless steel or other materials on demand					

Fastening angle for tabletop

part no. 32.0401/0

**Technical Data:**

- Angle 25, chipboard screw with washer, hex socket cap screw with square nut
- For tabletops from 22mm thickness
- For ESD use **part no. 32.0401/6**
- Weight 0,058 kg

Application:

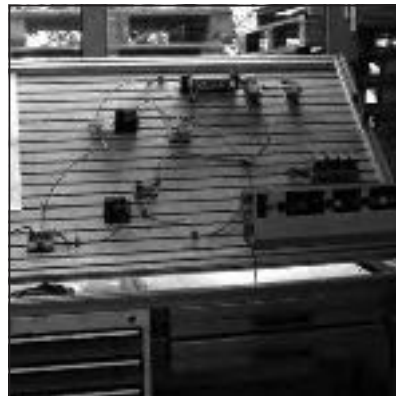
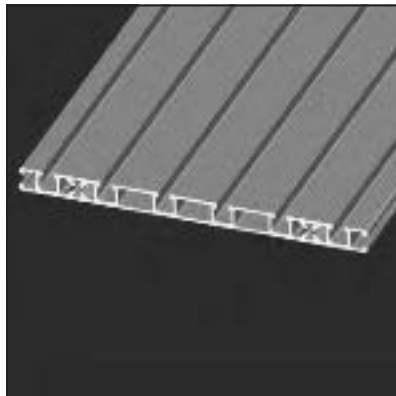
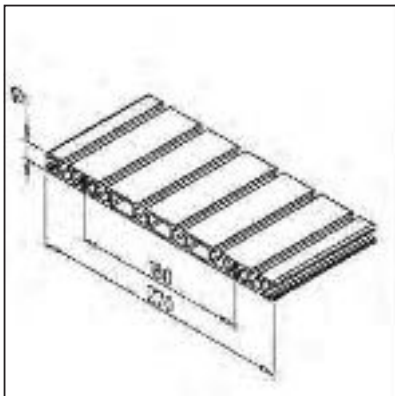
- Fastening of tabletops from 22mm thickness on profile frame

Assembly:

- Fastening on t-slot with attached fastening kit
- For subsequent assembly on vertical t-slots, we recommend square nut M8 with position fixing (part no. 21.1351/2)
- Screw

PROFILE 270 X 19

part no. 20.1077/0



TECHN. DATA / ITEMS SUPPLIED

- lx =	10,348 cm ⁴
- ly =	1352,197 cm ⁴
- wx =	10,167 cm ³
- wy =	100,162 cm ³
- Weight	5,612 kg/m
- Length	6 m
- Packing unit	18 m

APPLICATIONS

- Table tops
- Workstations
- Can be used for breadboard constructions in schooling and training projects - i.e. pneumatic, electronics, automatic-control with universal clamping socket, **part no. P20060/0**
- Demonstration units

ASSEMBLY

- MiniTec power-lock fastener
- Screw connection
- Bolt-fastener 15, **part no. 21.1024/0**

UNDER COUNTER CABINET WITH DRAWERS

Under counter cabinets with drawers take care of perfect order at work. There are suitable heights, compartments or inserts for any requirement. All under counter cabinets are available for left or right installation at choice.

Housing:

- Sheet steel construction
- Max. load: up to 200 kg
- Standard with center locking, individual drawer locking and cylinder lock with 2 keys
- Paint: Light grey RAL 7035
- Easy to mount

Drawers:

- Max load of individual drawers is up to 35 kg, can be pulled out up to 80%, perforated bottom
- Standard with large labeled handle bar
- Standard paint:
 - Frame: light grey RAL 7035
 - Drawer: brilliant blue RAL 5007

■ Paint on request*:

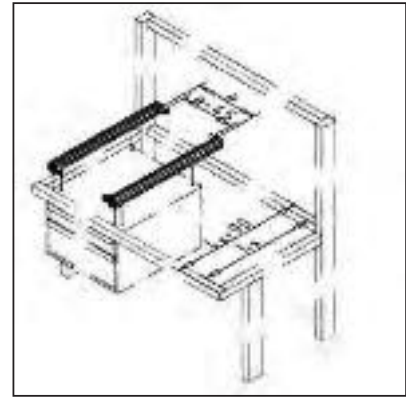
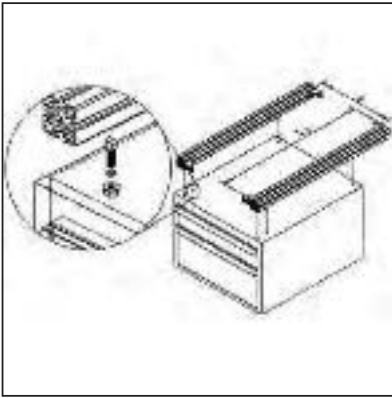
grey-green HF 0001	anthrazit RAL 7016
mignonette RAL 6011	red-orange RAL 2001
light grey RAL 7035	aluminium-silver RAL 9006
light blue RAL 5012	ruby RAL 3003
water blue RAL 5021	

*no extra charge applicable



FASTENING KIT COUNTER CABINET

part no. 32.0802/0



TECHN. DATA / ITEMS SUPPLIED

- 2 aluminum profiles 45x45 UL, anodized E6/EV1
- 4 mounting angles 45 GD with mounting material
- 4 hammer head screws with nuts M8
- Weight 3,309 kg
- Suitable for ESD-designs

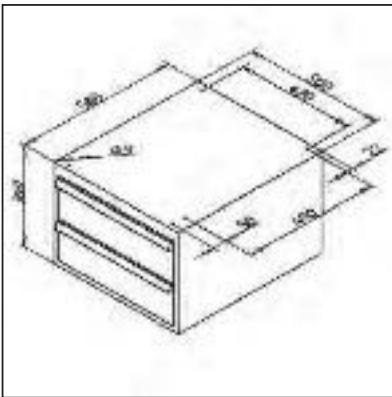
ASSEMBLY

- Mount onto baseframe at distance "a"
- Remove drawers from counter cabinet
- Preassemble hammer head screw to counter cabinet
- Counter cabinet with Hammer head screws into profile groove and tighten nuts
- With mounting set to strut profiles

ASSEMBLY

UNDER COUNTER CABINET WITH DRAWERS, DRAWER 150/150

part no. 32.0810/0



TECHN. DATA / ITEMS SUPPLIED

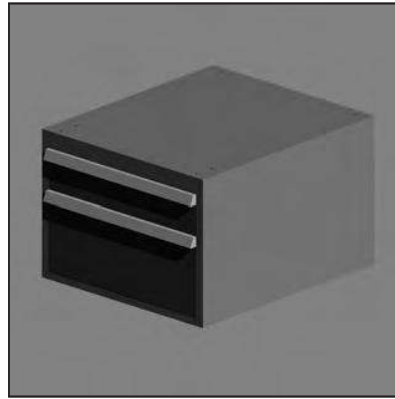
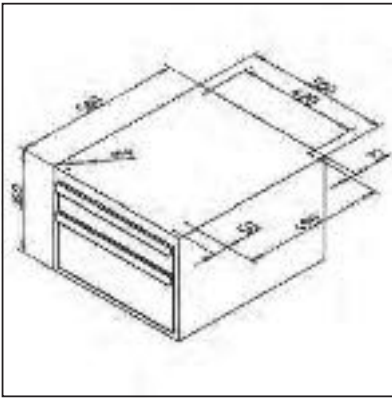
- 2 drawers , H = 150 mm
- With perforated bottom, front: blue
- Large handle bar with label adapter
- Can be pulled out up to 80 %
- Individual drawer locking
- Weight 22,57 kg

TECHN. DATA / ITEMS SUPPLIED

- Drawer B= 425 mm T= 550 mm inside
- Max. load per drawer: 35 kg
- Housing steel, light grey
- W x D x H= 500 x 580 x 360 mm
- Max. load per cabinet: 200 kg
- Cylinder lock with 2 keys, center locking for all drawers

ASSEMBLY

- Onto base frame with fastening kit **part no. 32.0802/0**
- Also in ESD-designs **part no. 32.0810/6**
- Optional: In different colours **part no. 32.0810/2**

UNDER COUNTER CABINET WITH DRAWERS, DRAWER 100/200 part no. 32.0811/0**TECHN. DATA / ITEMS SUPPLIED**

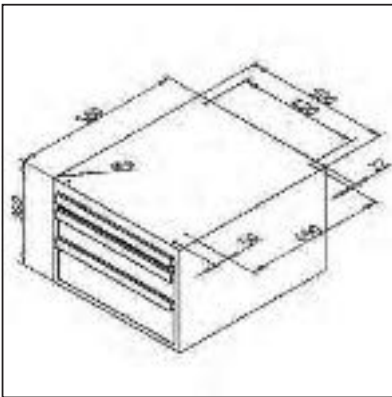
- 1 drawer H= 100 mm, 1 drawer H= 200 mm
- With perforated bottom, front: blue
- Large handle bar with label adapter
- Can be pulled out up to 80 %
- Individual drawer locking
- Weight 22,57 kg

TECHN. DATA / ITEMS SUPPLIED

- Max. load per drawer: 35 kg
- Housing steel, light grey
- W x D x H= 500 x 580 x 360 mm
- Drawer inside dimension: B=425mm, T=550mm
- Max. load per cabinet: 200 kg
- Cylinder lock with 2 keys, center locking for all drawers

ASSEMBLY

- Onto base frame with fastening kit **part no. 32.0802/0**
- Also in ESD-designs **part no. 32.0811/6**
- Optional: In different colours **part no. 32.0811/2**

UNDER COUNTER CABINET WITH DRAWERS, DRAWER 50/100/150 part no. 32.0812/0**TECHN. DATA / ITEMS SUPPLIED**

- 1 drawer H= 50 mm, 1 drawer H= 100 mm, 1 drawer H= 150 mm
- With perforated bottom, front: blue
- Large handle bar with label adapter
- Can be pulled out up to 80 %
- Individual drawer locking
- Weight 33,00 kg

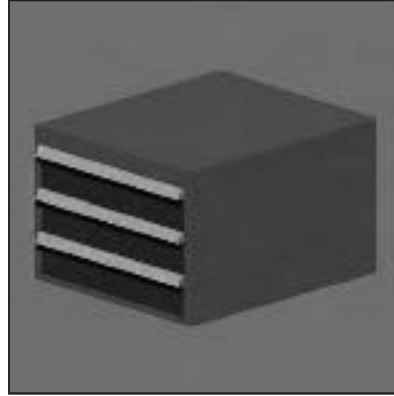
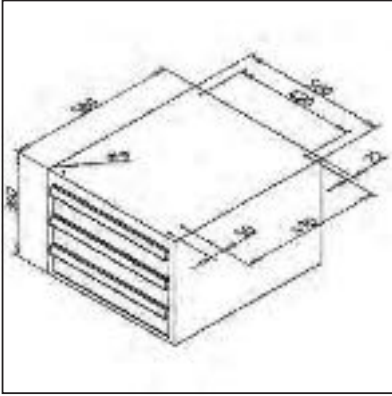
TECHN. DATA / ITEMS SUPPLIED

- Max. load per drawer: 35 kg
- Housing steel, light grey
- W x D x H= 500 x 580 x 360 mm
- Drawer inside dimension
50: B=425mm, T=485mm
100/150: B=425, T=550
- Max. load per cabinet: 200 kg
- Cylinder lock with 2 keys, center locking for all drawers

ASSEMBLY

- Onto base frame with fastening kit **part no. 32.0802/0**
- Also in ESD-designs **part no. 32.0812/6**
- Optional: In different colours **part no. 32.0812/2**

UNDER COUNTER CABINET WITH DRAWERS, DRAWER 100/100/100 part no. 32.0813/0



TECHN. DATA / ITEMS SUPPLIED

- 3 drawers H= 100 mm
- With perforated bottom, front: blue
- Large handle bar with label adapter
- Can be pulled out up to 80 %
- Individual drawer locking
- Weight 28,43 kg

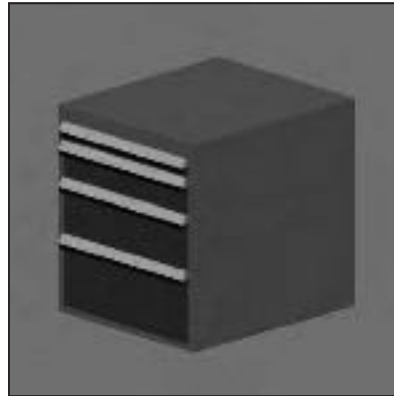
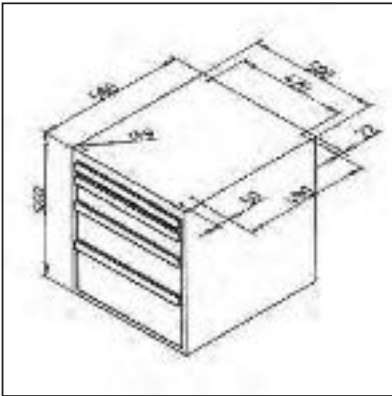
TECHN. DATA / ITEMS SUPPLIED

- Max. load per drawer: 35 kg
- Housing steel, light grey
- W x D x H= 500 x 580 x 360 mm
- Drawer inside dimension: B=425mm, T=550mm
- Max. load per cabinet: 200 kg
- Cylinder lock with 2 keys, center locking for all drawers

ASSEMBLY

- Onto base frame with fastening kit **part no. 32.0802/0**
- Also in ESD-designs **part no. 32.0813/6**
- Optional: In different colours **part no. 32.0813/2**

UNDER COUNTER CABINET WITH DRAWERS, SHELF 50/100/150/200 part no. 32.0814/0



TECHN. DATA / ITEMS SUPPLIED

- 1 drawer H= 50 mm, 1 drawer H= 100 mm, 1 drawer H= 150 mm, 1 drawer H= 200 mm
- With perforated bottom, front: blue
- Large handle bar with label adapter
- Can be pulled out up to 80 %
- Individual drawer locking
- Weight 40 kg

TECHN. DATA / ITEMS SUPPLIED

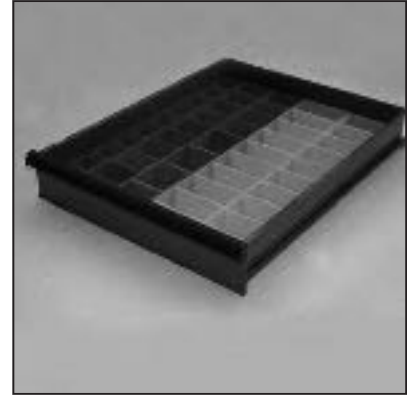
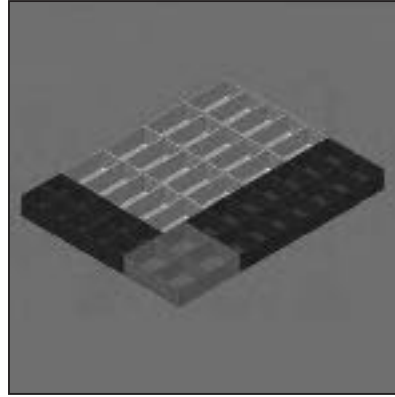
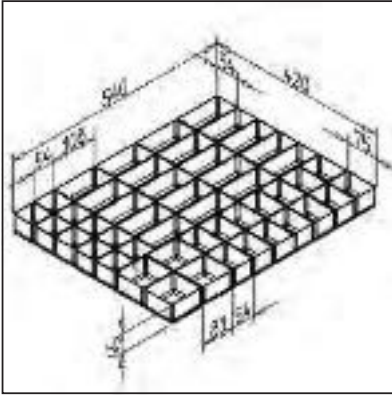
- Max. load per drawer: 35 kg
- Housing steel, light grey
- W x D x H= 500 x 580 x 560 mm
- Drawer inside dimension
50: B=425mm, T=485mm
100/150/200: B=425mm, T=550mm
- Max. load per cabinet: 200 kg
- Cylinder lock with 2 keys, center locking for all drawers

ASSEMBLY

- Onto base frame with fastening kit **part no. 32.0802/0**
- Also in ESD-designs **part no. 32.0814/6**
- Optional: In different colours **part no. 32.0814/0**

DRAWER CONTAINER SET 1

part no. 32.0807/0

**TECHN. DATA / ITEMS SUPPLIED**

- B x T 425 x 550 mm
- For panel height 100-300 mm

- 10 x case 54 x 54 x 45 mm
- 20 x case 54 x 108 x 45 mm
- 14 x case 54 x 75 x 45 mm
- 4 x case 75 x 81 x 45 mm

- Other arrangements on request

- Impact polystyrene

- Weight 1,06 kg

APPLICATIONS

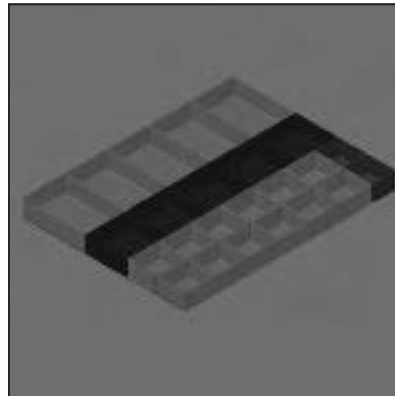
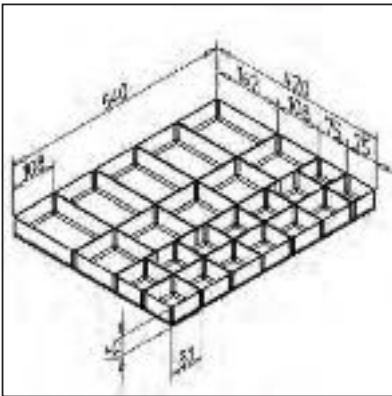
- For the transparent arrangement of small parts

ASSEMBLY

- Easy to remove and reinstall

DRAWER CONTAINER SET 2

part no. 32.0808/0

**TECHN. DATA / ITEMS SUPPLIED**

- B x T 425 x 550 mm
- For panel height 100-300 mm

- 5 x case 108 x 108 x 45 mm
- 5 x case 108 x 162 x 45 mm
- 2 x case 54 x 75 x 45 mm
- 12 x case 75 x 81 x 45 mm

- Other arrangements on request

- Impact polystyrene

- Weight 0,965 kg

TECHN. DATA

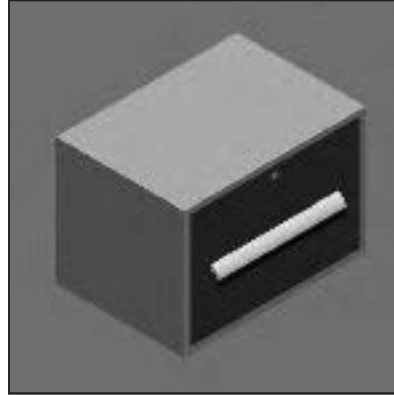
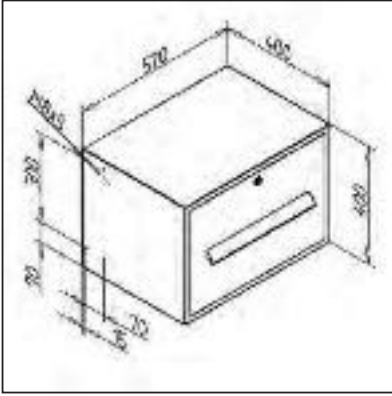
- Housing steel, light grey

ASSEMBLY

- Easy to remove and reinstall

UNDER COUNTER CABINETS WITH DRAWERS FOR HANGING FILES

part no. 32.0817/0



TECHN. DATA / ITEMS SUPPLIED

- B x T x H= 570 x 400 x 400 mm
- Housing steel, light grey
- Panel
- Max. load per drawer: 35 kg
- Cylinder lock with 2 keys
- Weight 17,67 kg
- Drawer deliverable in gentian violet

APPLICATIONS

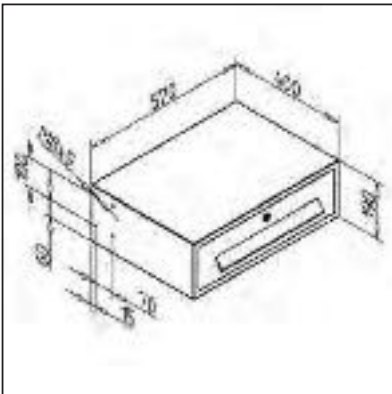
- Can be pulled out up to 80 %
- Large handle with lable holder
- Especially suited for testing stations

ASSEMBLY

- Use side threads or custom bores

UNDER COUNTER CABINET WITH DRAWERS 200

part no. 32.0809/0



TECHN. DATA / ITEMS SUPPLIED

- B x T x H= 570 x 400 x 190 mm
- Housing steel, light grey
- Panel
- Max. load per drawer: 35 kg
- Cylinder lock with 2 keys
- Weight 10,41 kg
- Drawer deliverable in brilliant blue

APPLICATIONS

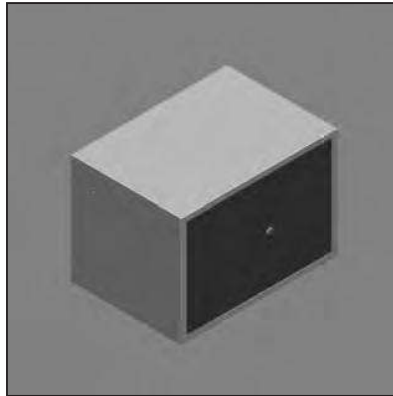
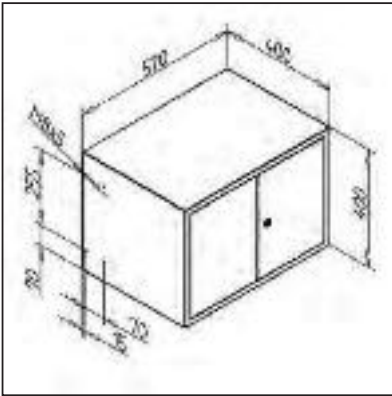
- Can be pulled out up to 80 %
- Large handle with lable holder
- Especially suited for testing stations

ASSEMBLY

- Use side threads or custom bores

FLOOR CABINET WITH DOUBLE DOORS

part no. 32.0818/0

**TECHN. DATA / ITEMS SUPPLIED**

- B x T x H= 570 x 400 x 400 mm
- Max. load per drawer: 35 kg
- Door, blue
- Housing steel, light grey
- Cylinder lock with 2 keys,
- Weight 10,00 kg
- Doors deliverable in gentian violet

APPLICATIONS

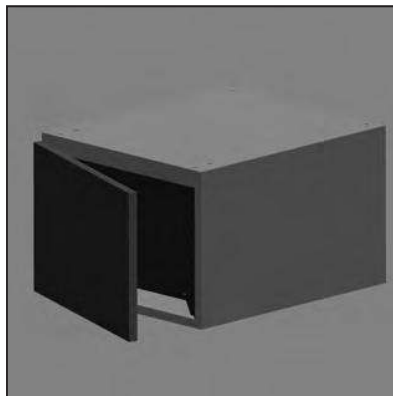
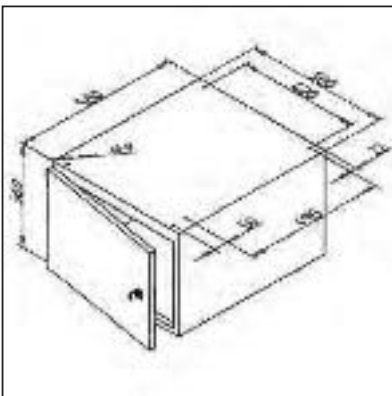
- Suitable for DIN A4 notebooks
- For 5 wide or 8 narrow DIN A4 notebooks
- Especially suited for testing stations

ASSEMBLY

- Use side threads or custom bores

UNDER COUNTER CABINET WITH DOORS, SMALL, LEFT

part no. 32.0815/0

**TECHN. DATA / ITEMS SUPPLIED**

- Housing steel, light grey
- Door: steel, blue
- Weight 34,00 kg

TECHN. DATA / ITEMS SUPPLIED

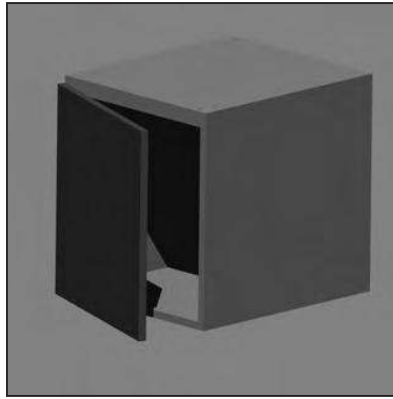
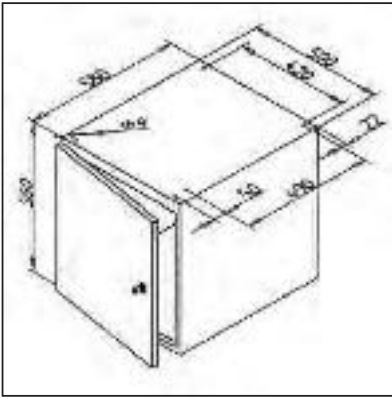
- Max. load per cabinet: 200 kg
- W x D x H= 500 x 580 x 360 mm
- Cylinder lock with 2 keys, 1 shelf for cabinet
- **Version right, part no. 32.0815/1**

ASSEMBLY

- Onto base frame with fastening kit **part no. 32.0802/0**
- Optional in different colours, design left **part no. 32.0815/2**, design right **part no. 32.0815/3**

UNDER COUNTER CABINET WITH DOORS, LARGE, LEFT

part no. 32.0816/0



TECHN. DATA / ITEMS SUPPLIED

- Housing steel, light grey
- Door: steel, blue
- Weight 43,50 kg

TECHN. DATA / ITEMS SUPPLIED

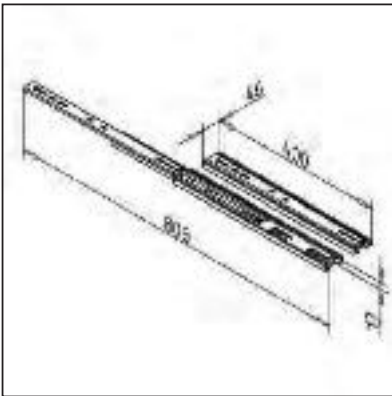
- Max. load per cabinet: 200 kg
- W x D x H= 500 x 580 x 560 mm
- Cylinder lock with 2 keys, 1 shelf for cabinet
- Under counter right, **part no. 32.0816/1**

ASSEMBLY

- Onto base frame with fastening kit **part no. 32.0802/0**
- Optional in different colours, design left **part no. 32.0816/2**, design right **part no.32.0816/3**

TELESCOPIC GUIDE FULLY EXTENDABLE 400

part no. 32.0801/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- with self-closing
- Max. load per drawer: 35 kg
- Assembly length 400 mm, extended length 406 mm
- Other lengths on request
- Items supplied: 2 pieces
- Weight 1,225 kg

APPLICATIONS

- Extension of drawer using ball guide
- Extension of workpiece carriers

ASSEMBLY

- Attach on the side of drawers and frame

LIGHTING

Selection of correct lighting is of paramount importance for optimal workplace design. Lighting has influence on performance and tiredness as well as quality and safety at work.

Illuminance

Illuminance on useful plane for demanding assembly and test work should be about 1100 lx. A rated illuminance of 1500 lx is recommended for very high requirements on eye sight such as optical work, assembly of electronic components, color control, etc.

Luminance distribution

In the field of view, reflecting or self-luminous areas may cause great differences in luminous density (contrasts). Eye sensitivity correspondingly adapts itself according to luminous density within radius of action. Frequent change between very light and very dark areas will stress the eye by continuous change of sensitivity. Therefore, luminous density difference at work should not be more than 3:1.

Glare

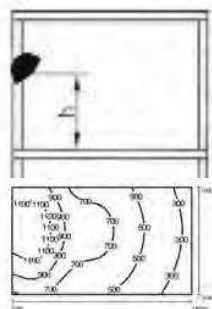
Glare sensation depends on luminous density, size of lighted surfaces and incident angle of light. Dazzling can be limited using reflectors, spill shields or built-in components. At the same time, sufficient shadow effect should be given for discriminating bodies and surfaces safely. All efforts should aim at shadows with soft edges and the light should be obliquely incident from above as natural light does.

Illuminant color

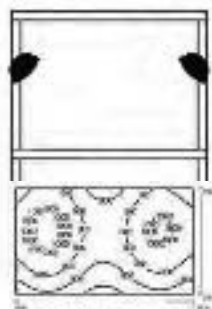
Illuminant color has great influence on psychic sensation. Normally neutral-white light (4000 k) is appreciated as relaxing and agreeable. Daylight-white lighting should only be provided for color test or quality control at high rated Illuminance.

Illuminance depending on level h of luminaire against working surface

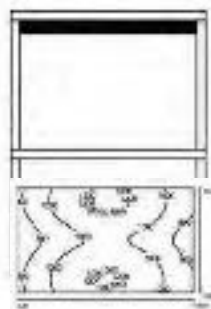
h	Side luminaire 36		2 x Side luminaire 36			Center luminaire 78		Luminaire 78,2 x Luminaire 36				Center luminaire 16	
	E/max [lx]	E/medium [lx]	°	E/max [lx]	E/medium [lx]	E/max [lx]	E/medium [lx]	X [m]	°	E/max [lx]	E/medium [lx]	E/max [lx]	E/medium [lx]
0,75	1260	670				2045	1564						
1,00	638	497	20	1043	894	1237	1003	0,25	20	2698	2354	3315	2471
								0,50	20	3849	3099		
1,25	402	329	15	704	626	808	672	0,25	15	1736	1568	2258	1789
1,50	276	232	15	510	457	567	497					1684	1402
Working surface 1000 x 600												2000 x 800	



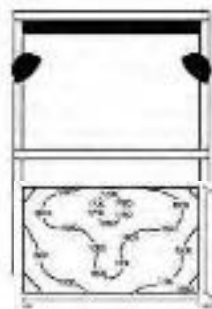
h = 750 mm



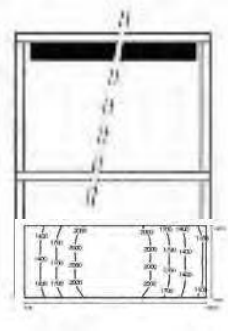
h = 1000 mm



h = 1000 mm



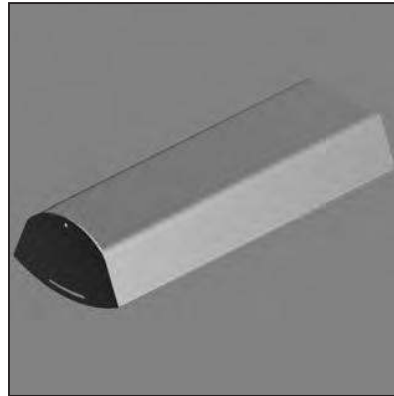
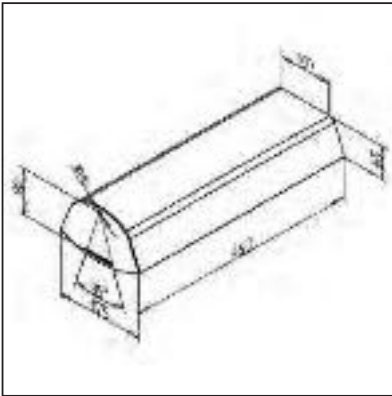
h = 1250 mm



h = 1250 mm

SIDE LUMINAIRE 36

part no. 33.0600/0



TECHN. DATA / ITEMS SUPPLIED

- Length	463 mm
- Rating	36 W
- Component parts 1x TC-L	36 W
- Electronic series reactor	
- Cpl. with power cord L = 3 m and connector	
- Switch in lamp housing	
- Housing: aluminum, light grey	
- Mounting set	
- Weight	2,1 kg

TECHN. DATA / ITEMS SUPPLIED

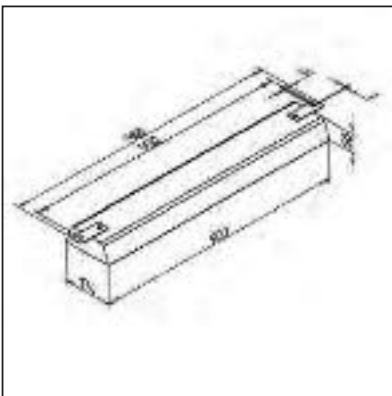
- Medium illuminance on working area at 1 m distance 533 lx
- Current consumption: 0.16 A
- Operating frequency: > 40 kHz
- Nominal voltage: 250 V - 50 Hz
- Lamp burning life: 12000 h
- Color of light 840 coolwhite (4000 k)

ASSEMBLY

- Fix into the profile groove with enclosed fastening kit

CENTER LUMINAIRE 78

part no. 33.0605/0



TECHN. DATA / ITEMS SUPPLIED

- Length	895 mm
- Rating	78 W
- Component parts 2x TS	39 W
- Electronic series reactor	
- Cpl. with power cord L = 3 m and connector	
- Switch in lamp housing	
- Housing: aluminum, light grey	
- Mounting set	
- Weight	4,2 kg

TECHN. DATA / ITEMS SUPPLIED

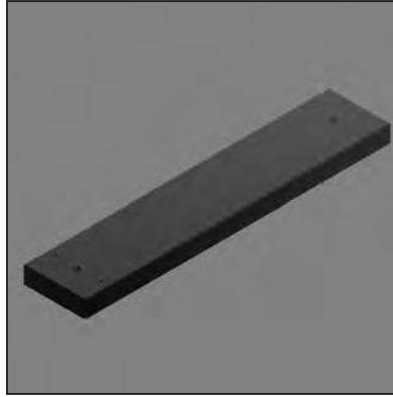
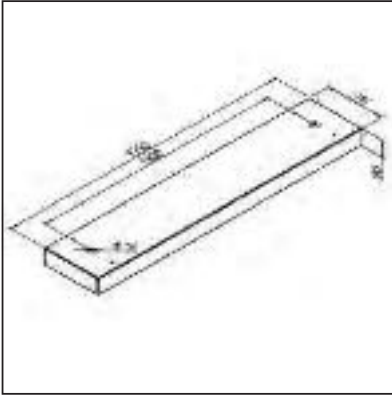
- Medium illuminance on useful plane at 1 m distance 1056 lx
- Current consumption: 0.38 A
- Operating frequency: > 40 kHz
- Nominal voltage: 250 V - 50 Hz
- Lamp burning life: 16000 h
- Color of light 840 coolwhite (4000 k), others on request
- Lamps with shatter protection on request

ASSEMBLY

- Fasten into the profile groove with enclosed fastening kit

CENTER LUMINAIRE 116

part no. 33.0610/0

**TECHN. DATA / ITEMS SUPPLIED**

- Length	1550 mm
- Rating	116 W
- Component parts 2x T26	58 W
- Electronic series reactor	
- Housing: Steel, industrial white	
- Without power cord and connector, connection by skilled person	
- Weight	7,6 kg

TECHN. DATA / ITEMS SUPPLIED

- Medium illuminance on useful plane at 1.5 m distance 1402 lx
- Current consumption: 0.49 A
- Operating frequency: > 40 kHz
- Nominal voltage: 250 V - 50 Hz
- Lamp burning life: 16000 h
- Color of light 840 coolwhite (4000 k)

ASSEMBLY

- Fasten into the profile groove with enclosed fastening kit

WORKPLACE LIGHT 10 W LED | 20 W LED | 30 W LED LIGHT-ENGINE

SAL 10 LED: part no. 32.1120/1

SAL 20 LED: part no. 32.1121/1

SAL 30 LED: part no. 32.1123/1

PRODUCT DESCRIPTION

- Compact and robust light housing from self-supporting and anodized aluminium profile
- Integrated mounting groove (8 mm)
- Mains connection via built-in sockets WINSTA Midi (1 x IN, 1 x OUT) – alternatively 3 m input lead with Schuko plug
- Integrated ON/OFF switch
- Very good glare protection through micro-prismatic lens and additional diffuser film. By turning the film, the reflected glare on high-gloss surfaces can be reduced significantly.
- Profile end caps made of gray sheet steel, RAL 7012.
- Absolutely flicker-free because LEDs are DC operated; extremely low-loss through integrated electronic LED converter.
- Complete with 1 x LED light-engine a 10 W neutral white (840), latest generation.
- High luminous efficacy by high-gloss anodized reflectors.

PRODUCT BENEFITS

- Long-lasting, virtually maintenance-free lamp: LED lifespan up to 50.000 hours.
- High energy efficiency (112 lm/W): about 25 percent more light at half the energy consumption.
- Smooth, easy-to-clean, closed-back design
- Ready for connection to mains voltage, no separate power supply required.

TECHNICAL DATA LED

SAL 10 LED

- Dimensions: 300 x 60 x 79 mm
- Protection: IP 20
- Protection category: I
- Connection voltage: 220-240V, 0/50...60 Hz
- Rated input current at 230 V: 0,06 A
- Illuminant: 1 x LED light-engine à 10 W
- Total flux: 1100 lm
- Luminous colour: neutral white 4000 K (840)
- Colour rendering index (CRI): 1B (Ra >80)
- Illumination level at 750 mm Abstand: 900 Lux

SAL 20 LED

- Dimensions: 585 x 60 x 79 mm
- Protection: IP 20
- Protection category: I
- Connection voltage: 220-240 V, 0/50...60 Hz
- Rated input current at 230 V: 0,1 A
- Illuminant: 2 x LED light-engine à 10 W, 1 W
- Total flux: 2480 lm
- Luminous colour: neutral white 4000 K (840)
- Colour rendering index (CRI): 1B (Ra >80)
- Illumination level at 1000mm distance: 1100 Lux

SAL 30 LED

- Dimensions: 870 x 60 x 79 mm
- Protection: IP 20
- Protection category: I
- Connection voltage: 220-240 V, 0/50...60 Hz
- Rated input current at 230 V: 0,15 A
- Illuminant: 3 x LED light-engine à 10 W, 1 W
- Total flux: 3720 lm
- Luminous colour: neutral white 4000 K (840)
- Colour rendering index (CRI): 1B (Ra >80)
- Illumination level at 1000 mm distance: 1500 Lux

STANDARDS AND GUIDELINES

The product complies with the European standards for electrical lighting, DIN EN 60598 (VDE 0711), the European standards for electromagnetic compatibility standards EN 55015, EN 61547, EN 61000-3-2, the EU Low Voltage and the EU EMC Directive.

INSTALLATION AND OPERATING INSTRUCTIONS

A maximum of 65 luminaires can be operated on a circuit breaker C13.



Workplace light available in different lengths

WORKPLACE LIGHT 24 W LED | 36 W LED LIGHT-ENGINE - DIMMABLE

SAL 24 LED: part no. 32.1122/1

SAL 36 LED: part no. 32.1124/1

PRODUCT BENEFITS

- Long-lasting, virtually maintenance-free lamp: LED lifespan up to 50.000 hours.
- High energy efficiency ((119lm/W)
- Smooth, easy-to-clean, closed-back design
- Ready for connection to mains voltage, no separate power supply required.
- SwitchDIM-function: stepless dimmable via integrated buttons; dimming progress adapted to the eyes sensitivity
- Memory-function: After restart luminaire lights at the last dimmer setting

INSTALLATION AND OPERATING INSTRUCTIONS

- A maximum of 20 luminaires can be operated on a circuit breaker C13 (B13/max. 10).
- The luminaire is dimmable.

TECHNICAL DATA LED DIMMABLE

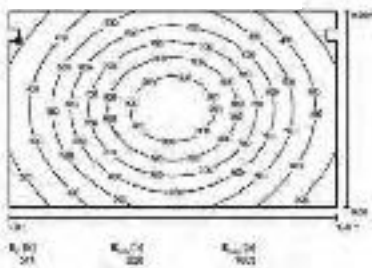
Workplace light 24 dimmable

- Dimensions: 585 x 60 x 79 mm
- Protection: IP 20
- Protection category: I
- Connection voltage: 220-240 V, 0/50...60 Hz
- Rated input current at 230 V: ca. 0,12 A
- Illuminant: 2 x LED light-engine à 11,8 W
- Total flux: 2820 lm
- Luminous colour: neutral white 4000 K (840)
- Colour rendering index (CRI): 1B (Ra >80)
- Dimming range: 3 – 100%
- Illumination level at 1000 mm distance: 1200 Lux

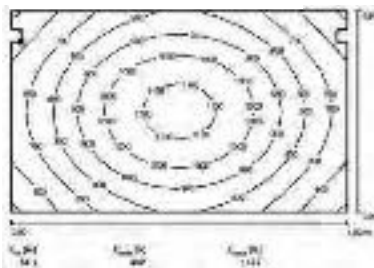
Workplace light 36 dimmable

- Dimensions: 870 x 60 x 79 mm
- Protection: IP 20
- Protection category: I
- Connection voltage: 220-240 V, 0/50...60 Hz
- Rated input current at 230 V: ca. 0,17 A
- Illuminant: 3 x LED light-engine à 11,8 W
- Total flux: 4230 lm
- Luminous colour: neutral white 4000 K (840)
- Colour rendering index (CRI): 1B (Ra >80)
- Dimming range: 3 – 100%
- Illumination level at 1000 mm distance: 1700 Lux

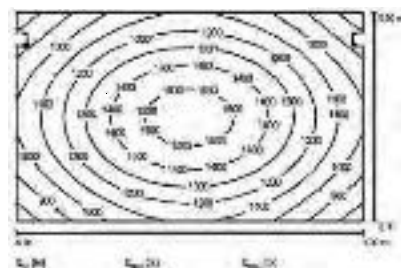
LED-SAL 10 - Test distance 75 cm / Isoline (E)
Value in Lux



LED-SAL 20 - Test distance 100 cm / Isoline (E)
Value in Lux



LED-SAL 30 - Test distance 100 cm / Isoline (E)
Value in Lux



FASTENING KITS



Fastening kit
Workplace light PA
part no. 32.1130/0



Fastening kit
Workplace light angle adjustable
part no. 32.1131/0



Fastening kit
Workplace light stainless steel
part no. 32.1132/0

LUMINAIRE LUCIDUS

Luminaire 24 W, part no. 32.1140/0

Luminaire 36 W, part no. 32.1141/0

Luminaire 56 W, part no. 32.1142/0



Recessed light on profile

DESCRIPTION

The Luminaire Lucidus illuminates the workspace in an optimal way. At the workbench, on machines, at home, in the office and in many other places.

- Size of the light suitable for MiniTec profile 45x45
- Can be integrated into MiniTec frame structures
- Resilient according to MiniTec profile
- Standard lengths 446 mm, 646 mm and 1016 mm - special lengths available
- High luminosity
- Low voltage operation (24 V), therefore completely harmless
- Lighting installation possible without expert
- IP68 (waterproof) design possible
- Colored RGB-LEDs available
- Suitable for manual workstations, exhibition stands, machinery, Milling machines, turning centres, designer lamps, illuminated advertising, exhibition equipment
- Easy to clean

SPECIFICATIONS

EN55015:2006, EN61000 und EN61547:2009

SCOPE OF DELIVERY

- Lights in respective length, power supply and LED sensor dimmer part no. 32.1147/0

ADVANTAGES

- Can be used directly as a profile
- Attachment possible with all fasteners from the MiniTec profile system
- Long-lasting, virtually maintenance-free lamp: LED lifetime up to 50000 hours
- High energy efficiency
- Can be operated via an existing 24 V power supply
- Easily dimmable
- Special lengths available



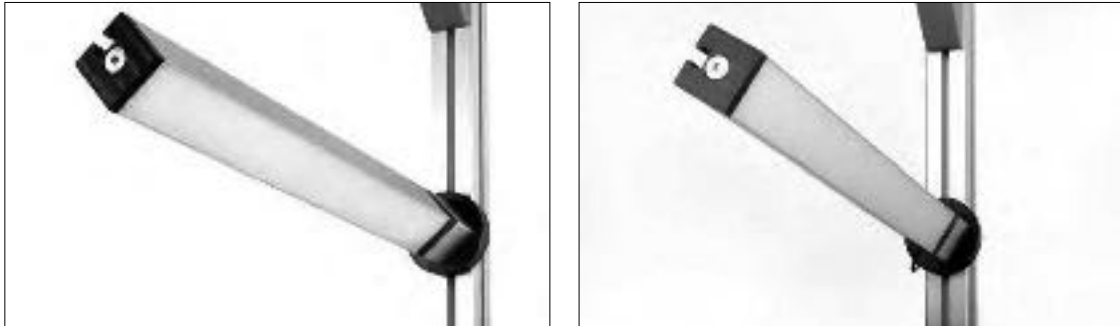
Optimal adjustment of the illumination by a dimmer

LUMINAIRE LUCIDUS

Fixation plate for luminaire Lucidus, part no. 32.1148/0

Attachment possible with all fasteners from the MiniTec profile system

MOUNTING OPTIONS



Side bracket
adjustable / rotatable



Upper Bracket
adjustable / rotatable

TECHNICAL DATA

TYPE	Lucidus 24 part no. 32.1140/0	Lucidus 36 part no. 32.1141/0	Lucidus 56 part no. 32.1142/0
Total length	446 mm	646 mm	1016 mm
Lighted length	430 mm	630 mm	1000 mm
Lighted width	40 mm	40 mm	40 mm
Luminaire profile width	45 mm	45 mm	45 mm
Luminaire profile height	45 mm	45 mm	45 mm
Mounting groove (backside)	8 mm	8 mm	8 mm
Bulbs	SMD LED	SMD LED	SMD LED
Supply voltage	24 V	24 V	24 V
Power	24 W	36 W	56 W
Luminance (in 1000 mm distance)	684 lx	922 lx	1284 lx
Colour temperature SMD LED	approx. 5800 K (daylight white)	approx. 5800 K (daylight white)	approx. 5800 K (daylight white)
Expected life in hours	> 50000	> 50000	> 50000

ENERGY SUPPLY



The MiniTec energy supply ducting system for electrics and compressed air in a three-chamber system for individually built-in energy supply components arrangement:

Cable channels equipped and completely wired exactly as you desired simplify installation of your workplace considerably. Our experienced experts will gladly take on component insertion for you. The cable channel is equipped with 4 m supply line with safety plug or CEE connector for immediate connection. This will save installation carried out by your approved in-house electricians.

You will receive a meaningful test certificate along with the cable channel equipped and installed by us. Both cable channel and cover are made of aluminum, naturally anodized. Only branded high-quality products are employed as built-in components.

Following table is to simplify definition of component insertion requested by you. Subsequent installation of further components by approved electrician is possible at any time.

CONDUIT 130 AL

part no. 32.0715/0

Accommodation of sockets, switches, telecommunication terminals, safety switches, etc.

COVER FOR CONDUIT 130

part no. 32.0716/0

Press cover onto profile

END PANEL FOR CONDUIT 130

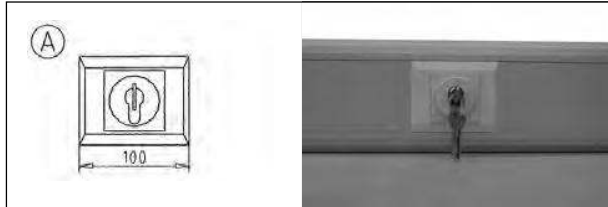
part no. 32.0717//0

molded plastic article
lacquered in aluminum color

ENERGY SUPPLY DUCTING SYSTEM COMPONENT INSERTION

KEY-OPERATED SWITCH

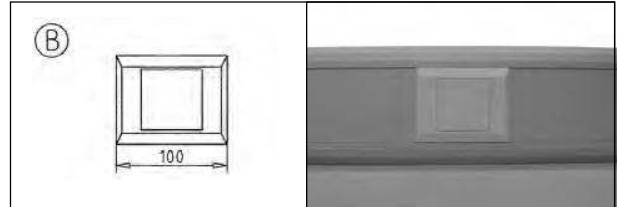
PART NO. 32.0720/0



- 16 A, two-pole

TWO-WAY SWITCH

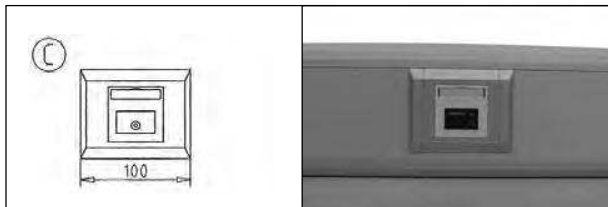
PART NO. 32.0725/0



- 16 A, single-pole

OVERVOLTAGE PROTECTION

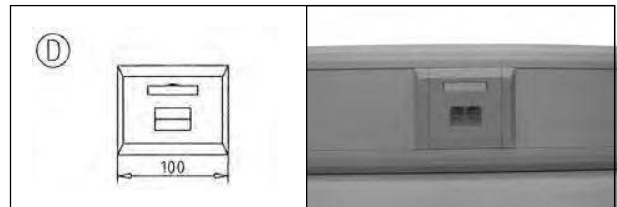
PART NO. 32.0721/0



- UN = 230V AC

DATA CONNECTION BOX CAT6

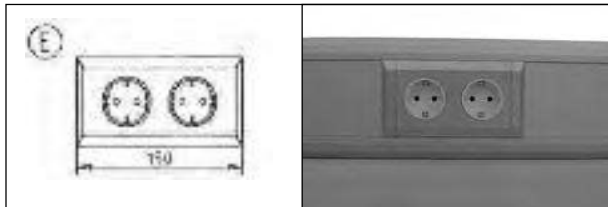
PART NO. 32.0722/0



- RJ 45, 2-fold Link E, up to 250 MHz
- cpl. with faceplate horizontal

CHANNEL SOCKET

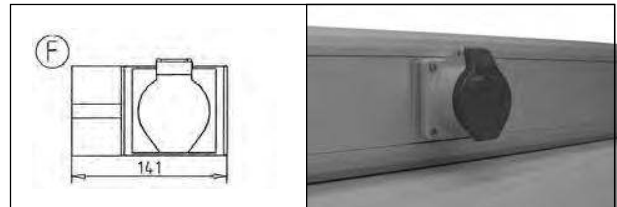
PART NO. 32.0723/0



- with protective contact according to DIN

SOCKET CEE 16A

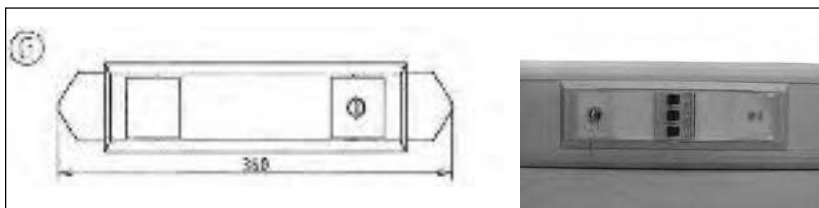
PART NO. 32.0724/0



- for plugs DIN, five-pole

FLUSH-MOUNTING DISTRIBUTION BOARD

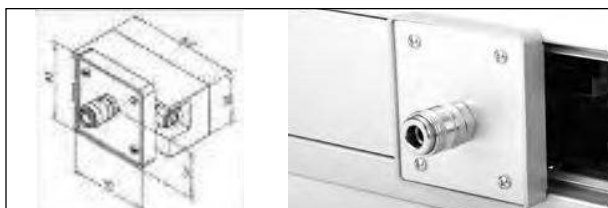
PART NO. 32.0730/0



- three-phase
- Cpl. with built-in faceplate, lock
- Can be equipped with automatic circuit breaker B10, automatic circuit breaker B16, fault-current circuit breaker single-pole 16 A/30 mA.

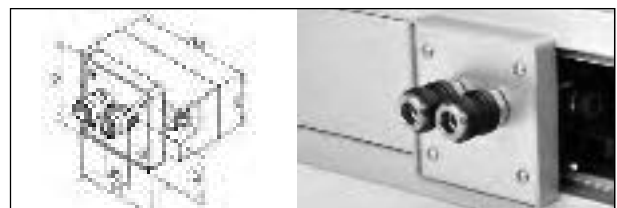
PNEUMATIC SINGLE

PART NO. 32.0740/0



PNEUMATIC DOUBLE

PART NO. 32.0741/0



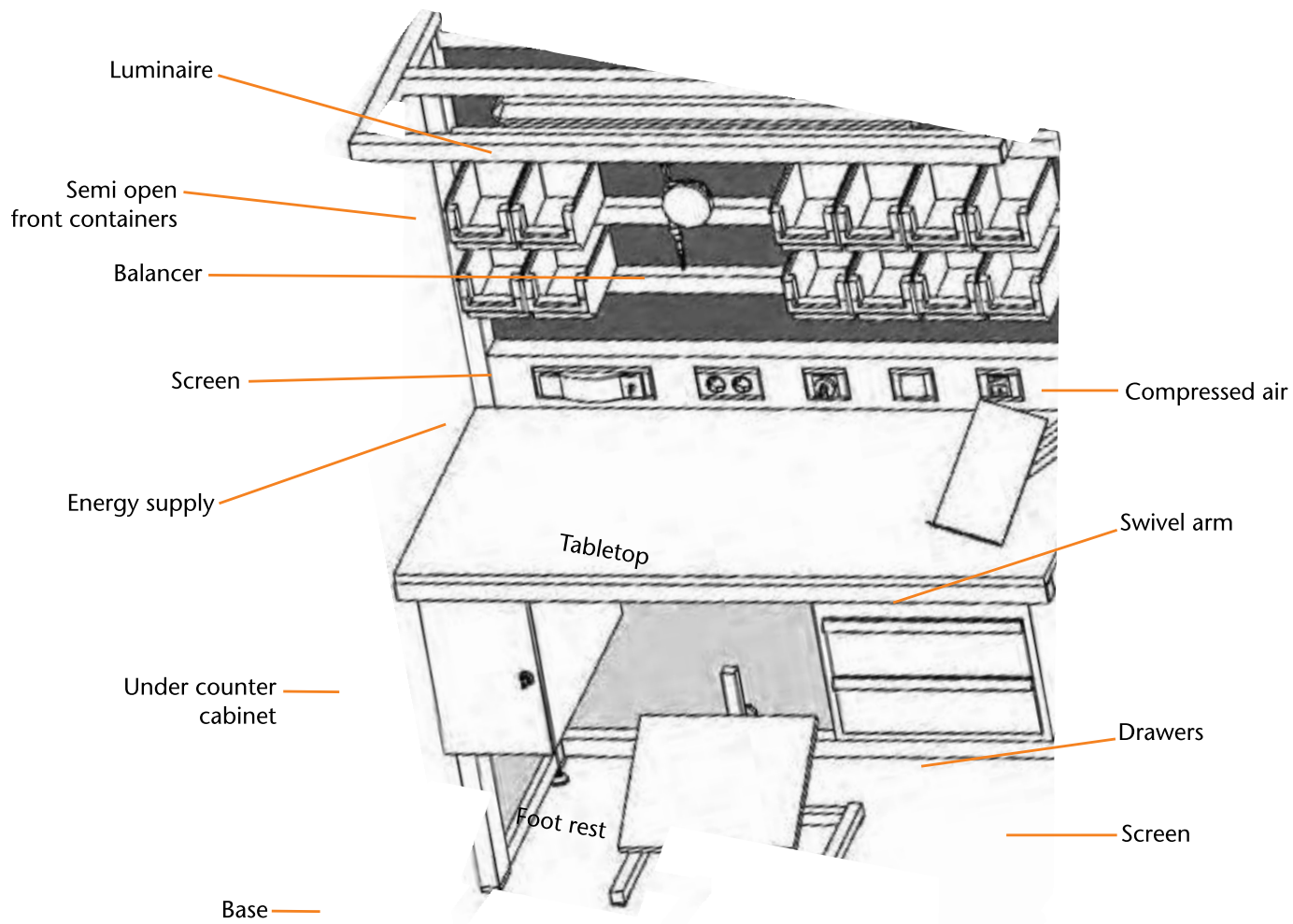
ACCESSORIES

It is just small things that often count: handy accessories is necessary addition to perfect design of an optimal workplace. Everything must be on its proper place and instructions or information should be attached properly and clearly visible.

Auxiliary equipment which helps to avoid loads and to keep the workplace clear, noticeably improve efficiency at reduced employees' stress.

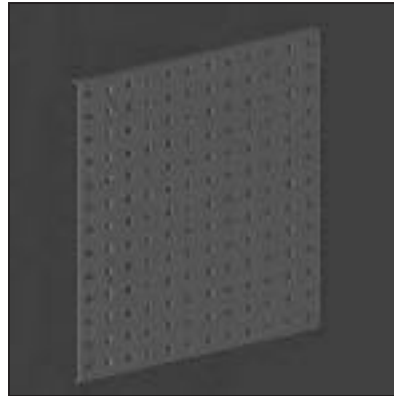
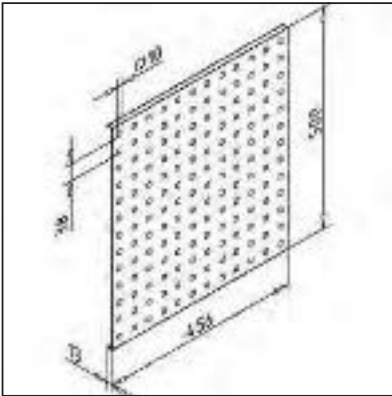
COMPONENTS FOR WORKPLACE SYSTEMS

Gantry construction



TOOL HOLDER PLATE

part no. 32.0635/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, anthracite gray, 1.25 mm thick powder-coated
- Square hole perforation 10 x 10 mm at 38 mm grid pattern
- Height 456 mm
- Width 500mm

OTHER VERSIONS

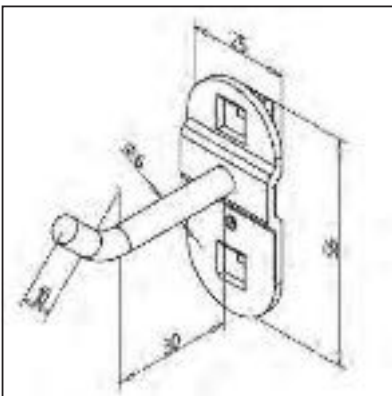
- Width B 1000 mm, **part no. 32.0636/0**
- Width B 1200 mm, **part no. 32.0637/0**
- Width B 1500 mm, **part no. 32.0638/0**
- Width B 2000 mm, **part no. 32.0639/0**

ASSEMBLY

- Fasten onto portal structure

TOOL HOLDER WITH SLANTED HOOK ENDS

part no. 32.0527/0



TECHN. DATA / ITEMS SUPPLIED

- Lacquered in aluminum colour
- Impact and scratch resistant plastic coating
- Individually packaged incl. clamp screw
- Weight 0,033 kg

APPLICATIONS

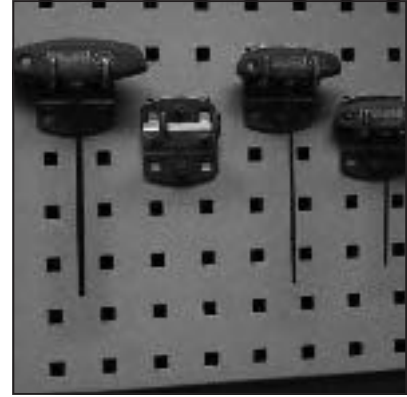
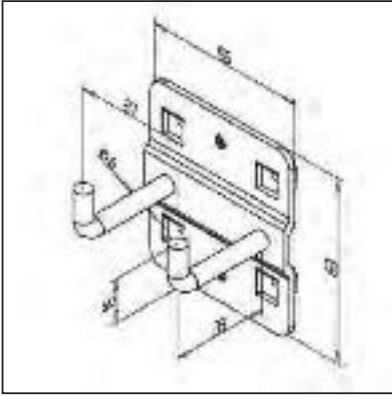
- Provision of tools at workplace

ASSEMBLY

- Hook onto mounting plate and secure with included screws

TOOL HOLDER WITH VERTICAL HOOK ENDS

part no. 32.0508/0



TECHN. DATA / ITEMS SUPPLIED

- Lacquered in aluminum colour
- Impact and scratch resistant plastic coating
- Individually packaged incl. clamp screw
- Weight 0,080 kg

APPLICATIONS

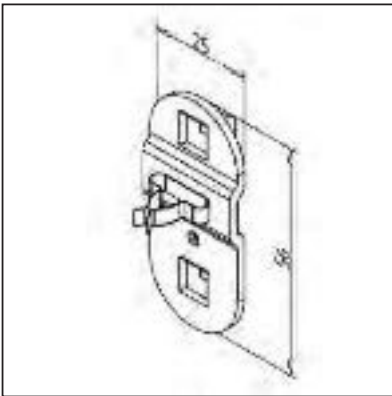
- Provision of tools at workplace

ASSEMBLY

- Hook onto mounting plate and secure with included screws

SINGLE TOOL CLAMP, SMALL BASE PLATE

part no. 32.0529/0



TECHN. DATA / ITEMS SUPPLIED

- Lacquered in aluminum colour
- Impact and scratch resistant plastic coating
- Individually packaged incl. screws
- Weight 0,023 kg

APPLICATIONS

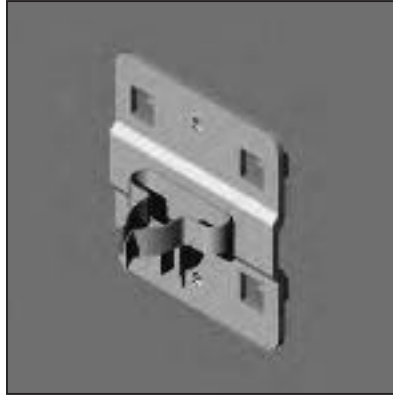
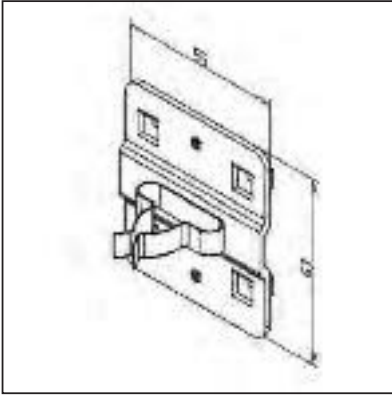
- For tools and cylindrical parts of approx. \varnothing 10 mm

ASSEMBLY

- Hook onto mounting plate and secure with included screws

SINGLE TOOL CLAMP, LARGE BASE PLATE

part no. 32.0528/0



TECHN. DATA / ITEMS SUPPLIED

- Lacquered in aluminum colour
- Impact and scratch resistant plastic coating
- Individually packaged incl. screws
- Weight 0,063 kg

APPLICATIONS

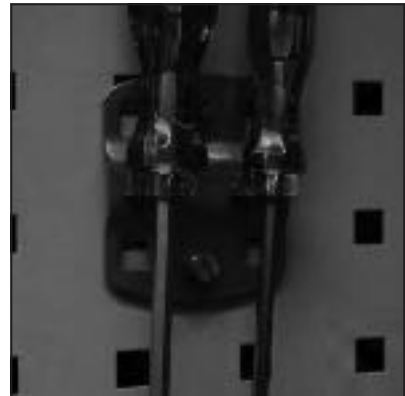
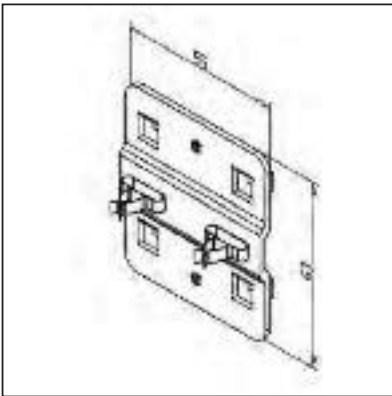
- For tools and cylindrical parts of approx. \varnothing 25 mm

ASSEMBLY

- Hook onto mounting plate and secure with included screws

DOUBLE TOOL CLAMP

part no. 32.0506/0



TECHN. DATA / ITEMS SUPPLIED

- Lacquered in aluminum colour
- Impact and scratch resistant plastic coating
- Individually packaged incl. screws
- Weight 0,060 kg

APPLICATIONS

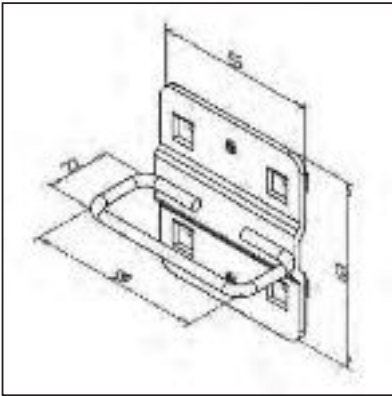
- For tools and cylindrical parts of approx. \varnothing 10 mm

ASSEMBLY

- Hook onto mounting plate and secure with included screws

PLIERS HOLDER

part no. 32.0531/0

**TECHN. DATA / ITEMS SUPPLIED**

- Lacquered in aluminum colour
- Plastic coated
- Individually packaged incl. clamp screw
- Weight 0,07 kg

APPLICATIONS

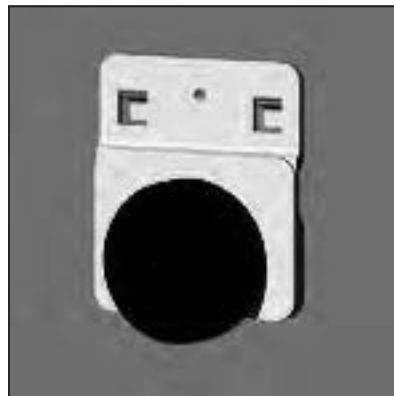
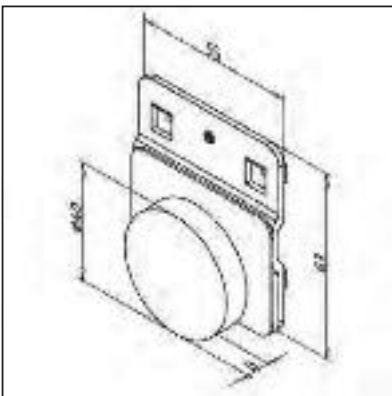
- Provision of tools at workplace

ASSEMBLY

- Hook onto mounting plate and secure with included screws

MAGNETIC HOLDER

part no. 32.0515/0

**TECHN. DATA / ITEMS SUPPLIED**

- Lacquered in aluminum colour
- Plastic coated
- Individually packaged incl. clamp screw
- Weight 0,157 kg

APPLICATIONS

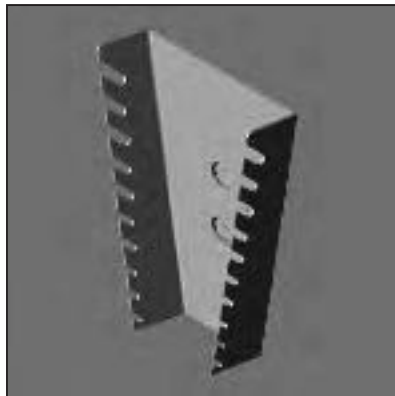
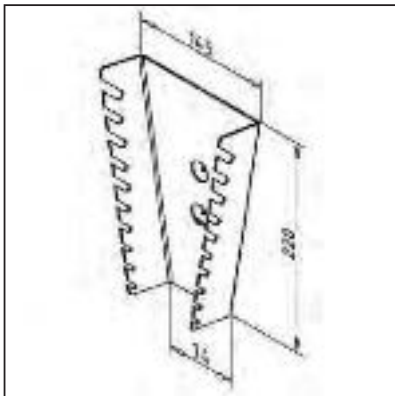
- For provision of steel tools

ASSEMBLY

- Hook onto mounting plate and secure with included screws

VERTICAL SPANNER HOLDER

part no. 32.0521/0



TECHN. DATA / ITEMS SUPPLIED

- Lacquered in aluminum color
- Plastic coated
- Individually packaged incl. clamp screw
- Weight 0,725 kg

APPLICATIONS

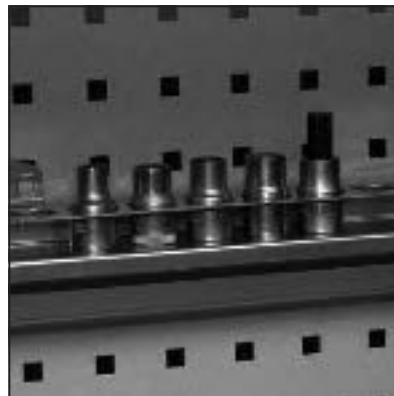
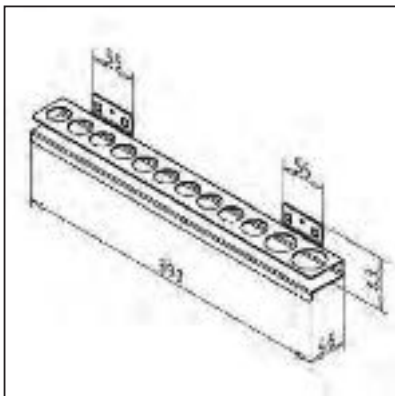
- Holder for open-ended or ring spanners

ASSEMBLY

- Hook onto mounting plate and secure with included screws

SOCKET HOLDER

part no. 32.0519/0



TECHN. DATA / ITEMS SUPPLIED

- Lacquered in aluminum color
- Plastic coated
- Individually packaged incl. clamp screw
- Weight 0,736 kg

APPLICATIONS

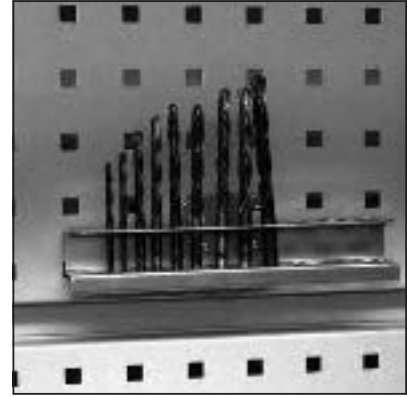
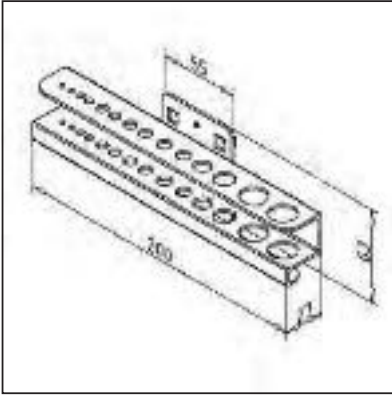
- Holder for sockets for socket wrench, 9x d=25, 1x d=27, 1x d=32, 1x d=35

ASSEMBLY

- Hook onto mounting plate and secure with included screws

DRILL AND ALLEN KEY HOLDER

part no. 32.0504/0

**TECHN. DATA / ITEMS SUPPLIED**

- Lacquered in aluminum colour
- Plastic coated
- Individually packaged incl. clamp screw
- Weight 0,34 kg

APPLICATIONS

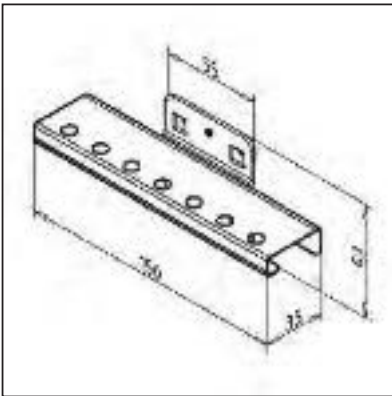
- Drill holder for 14 parts

ASSEMBLY

- Hook onto mounting plate and secure with included screws

BIT HOLDER

part no. 32.0503/0

**TECHN. DATA / ITEMS SUPPLIED**

- Lacquered in aluminum colour
- Plastic coated
- Individually packaged incl. clamp screw
- Weight 0,14 kg

APPLICATIONS

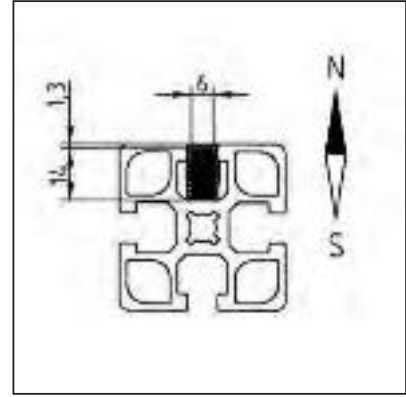
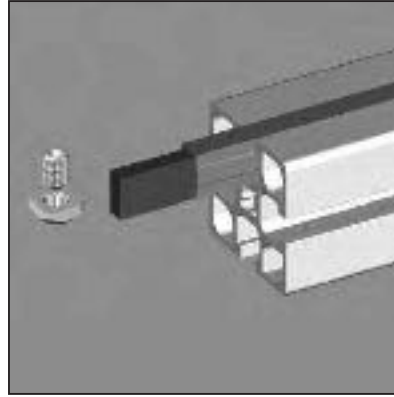
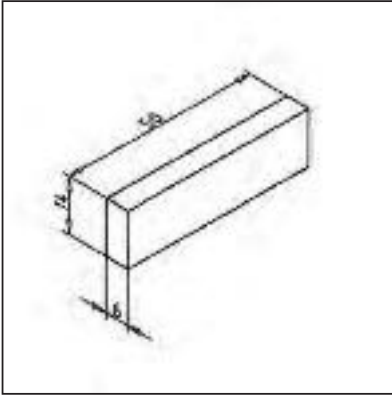
- Bit holder for 7 bits

ASSEMBLY

- Hook onto mounting plate and secure with included screws

MAGNET 6 X 14 X 50

part no. 21.0032/0



TECHN. DATA / ITEMS SUPPLIED

- 1 magnet, zinc-plated
- Energy density $BH_{max} = 263 \text{ kJ/m}^3$
- Magnetic remanence, $B_r = 1170 \text{ mT}$
- Coercive force, $JH_c = 955 \text{ kA/m}$
- max. service temperature $+120 \text{ }^\circ\text{C}$
- Without fastening kit
- Weight $0,033 \text{ kg}$
- Attention: Electric- and memory devices can be faulted by the magnet

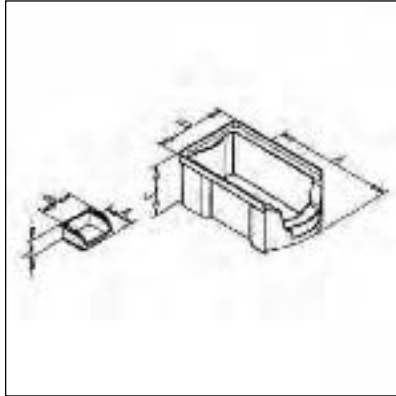
APPLICATIONS

- Adhesive magnet for tools
- Below conveyors as guide, for magnetic transported material or higher conveyor speeds

ASSEMBLY

- Snap or slip the cover profile into profile groove
- Insert magnet into t-slot
- For fastening: (mightily recommended) Use end cap AL, set screw with square nut or t-slot bar

SEMI-OPEN FRONT CONTAINERS

**TECHNICAL DATA**

- Optimum overview and easy access to the contents
- Large handles on the front and rear for practical handling
- Very dimensionally stable
- Resistant to most acids and oils
- Temperature resistance (-20° to +80°C)

APPLICATION

- Provision of small parts, screws, bolts, nuts, etc. on assembly workplaces
- Ergonomic workplace systems

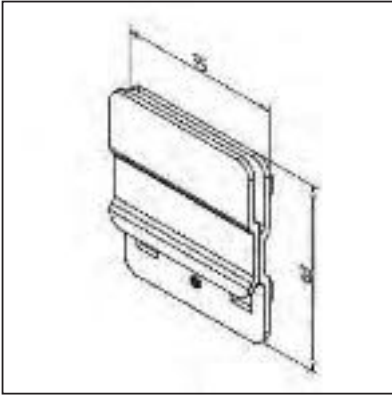
ASSEMBLY

- Attach semi-open front containers with holder, single, part no. 32.0509/0 or with holder, multiple part no. 32.0532/0 to the tool holder plate or carrier

part no.	Dimension A	Dimension B	Dimension C	colour
32.0540/0	360	210	145	blue
32.0540/5	360	210	145	black ESD
32.0541/0	235	147	125	blue
32.0541/5	235	147	125	black ESD
32.0542/0	168	103	75	blue
32.0542/5	168	103	75	black ESD
32.0543/0	85	100	50	blue
32.0543/5	85	100	50	black ESD

SEMI-OPEN FRONT CONTAINER HOLDER, SINGLE

part no. 32.0509/0



TECHN. DATA / ITEMS SUPPLIED

- Lacquered in aluminum color

- Plastic coated

- Individually packaged incl. clamp screw

- Weight 0,103 kg

APPLICATIONS

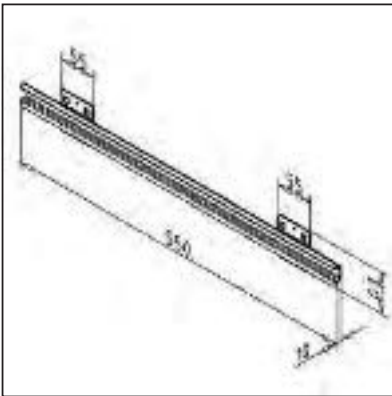
- Holder for open front containers

ASSEMBLY

- Hook onto mounting plate and secure with included screws

SEMI-OPEN FRONT CONTAINER HOLDER, MULTIPLE

part no. 32.0532/0



TECHN. DATA / ITEMS SUPPLIED

- Lacquered in aluminum color

- Plastic coated

- Individually packaged incl. clamp screw

- Weight 0,568 kg

APPLICATIONS

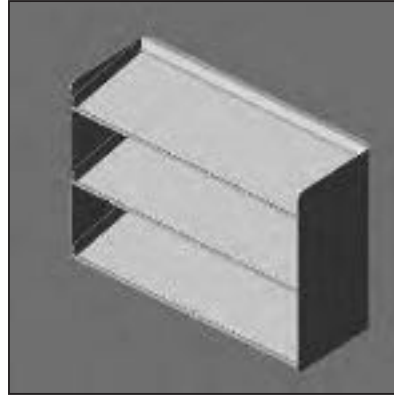
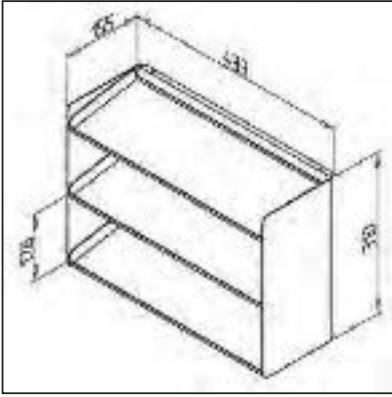
- Holder for open front containers Size 8

ASSEMBLY

- Hook onto mounting plate and secure with included screws

SEMI OPEN FRONT CONTAINER RACK

part no. 32.0514/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, powder coated grey
- 3 levels
- Weight 3,8 kg

APPLICATIONS

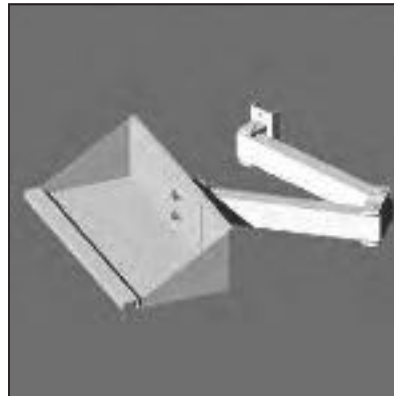
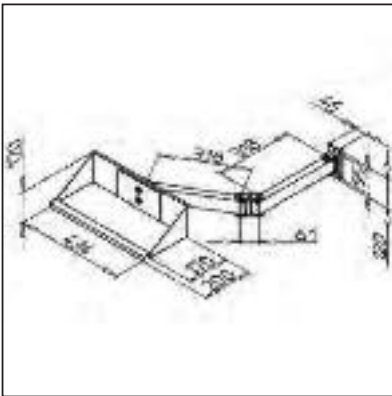
- For semi open front containers and small hardware
- For max. 12 semi open front containers, L= 165 mm, W= 105 mm, H= 75 mm

ASSEMBLY

- Fasten onto portal structure
- Free-standing or pivoting in connection with holder **part no. 32.0516/0**
- Optional: in ESD-design **part no. 32.0514/6**

HOLDER, SEMI OPEN FRONT CONTAINER

part no. 32.0516/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, lacquered, light grey
- Mounting material
- Front handle bar
- With double-hinged arm 700 mm long
- Load, max. 150 N
- Weight 4,30 kg

APPLICATIONS

- As storage area for semi open front containers and semi open front container racks

ASSEMBLY

- Assembly on vertical strut of portal construction
- Optional: in ESD-design **part no. 32.0516/6**

KANTAINER

The new developed **KanTainer** provides an ideal method to implement the principles of lean-production using kanban-control.



In combination with the mounting solutions and the ergonomic designed working places of MiniTec, a complete, safe and economic all-round-package for your manual production is ensured.

The **KanTainer** is optimized for maximum stock utilisation, helping to keep the working place operational and productive.

The **KanTainer** offers you a solution to simplify storage and control production demands. With our extensive MiniTec modular profile system and compatible system components, we can solve many of your problems within manual assembly and production processes.

FUNCTIONS

- For integrated Kanban-system:
 - No decanting – removes potential refilling errors
- The retractable pull-out-grip cavity ensures total use of storage rack
- Easy access to parts via the ergonomic grip cavity
- Transparent cover protects against dirt and mixing of parts
- Security against accidental opening of the grip cavity or losses with cover fitted
- Easy content control
- The transparent metering disc makes it easy to check the remaining quantity
- The metering disc avoids uncontrolled trickling of small parts
- Safe stacking of KanTainer with holding pins
- Labelling on front and rear to avoid misidentification
- Holding device on back side of container
- Bottom-side guide rails for longitudinal and transverse transport

TECHNICAL DATA

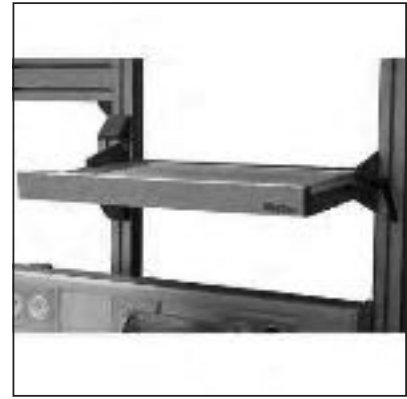
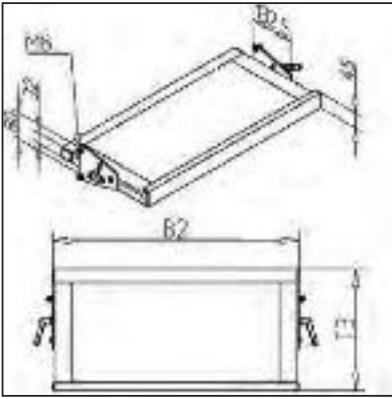
Dimensions:	175x126x88 [mm]
Load capacity:	50 kg
Content capacity:	5 kg
Temperature resistance:	-20°C up to +90°C
Material:	Polypropylen, Polystyrol
Colour:	Basalt grey (RAL 7012) [part no.: 32.0870/0] Orange (RAL 2004) [part no.: 32.0870/1] Black ESD-conductive [part no.: 32.0870/5]

NEW The ESD conductive KanTainer is the optimal and logical complement to our ESD workstation systems.



DEPOSITING CONSOLE

part no. 32.0501/0



TECHN. DATA / ITEMS SUPPLIED

- Stable frame made of aluminum profiles, anodized E6/EV1
- Shelf for cabinet, chipboard, light grey
- Front edge 13 mm, set on edge
- Load max. 400 N
- ESD on request
- Please state table width **B2** and depth **T3**

APPLICATIONS

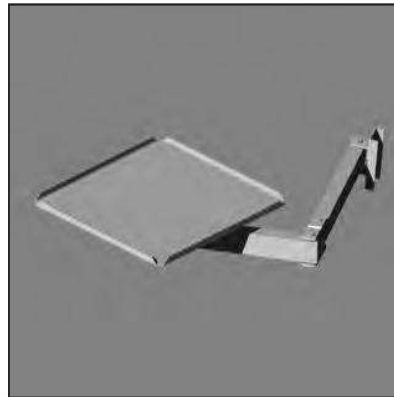
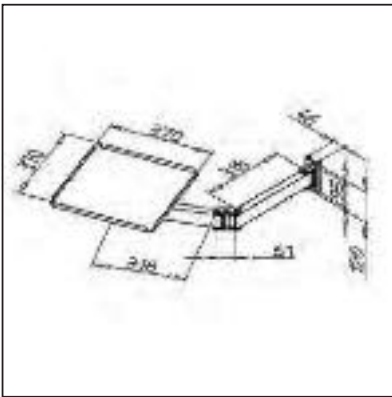
- Continuously inclinable from -30° to +30°
- Rack is adjustable

ASSEMBLY

- Attachment to portal construction with 2 swivel panels
- without clamp lever **part no. 32.0501/1**

DEPOSITING BOARD/MONITOR SUPPORT ROTATABLE

part no. 32.0512/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, powder coated, light grey
- Double-hinged version, length 430 mm
- Monitor and keyboard panel rotatable
- Monitor panel: 370 x 370 mm
- Load max. 150 N
- Weight 4,20 kg

APPLICATIONS

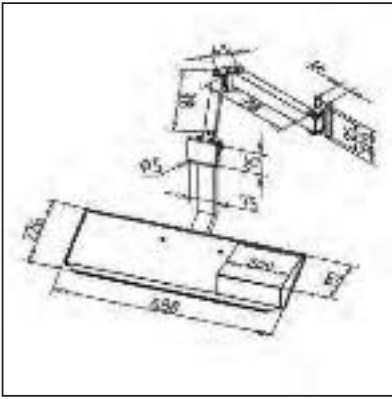
- Provision of IT data, guidelines, Internet connection

ASSEMBLY

- Screw tight to portal construction
- Monitor support with keyboard panel: 485 x 190 mm **part no. 32.0513/0**
- Optional: in ESD-design **part no. 32.0512/6**

MONITOR CARRIER WITH KEYBOARD STORAGE TFT

part no. 32.0517/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel light grey, powder coated
- Monitor and keyboard carrier with mouse rack
- With double-joint swivelling arm
- Load capacity max. 150 N
- Delivered ready to assemble
- ESD on request
- Weight 7,40 kg

APPLICATIONS

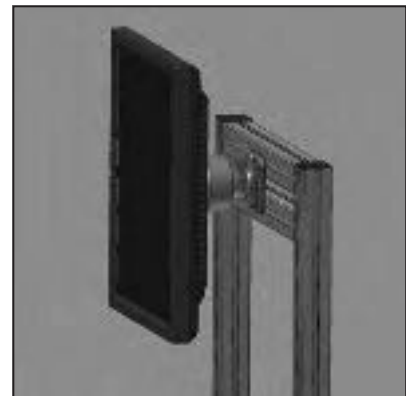
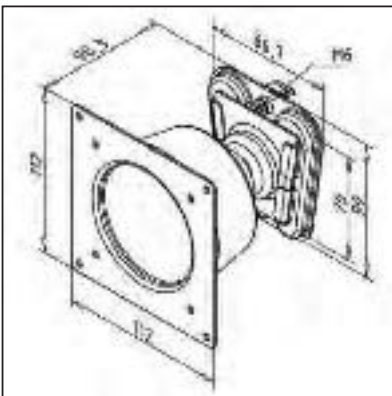
- The mouse rack is shiftable and therefore suitable for right and left-handers

OTHER VERSIONS

- Monitor Carrier with keyboard storage TFT, VESA connection adapter 75 mm, **part no. 32.0517/0**
- Monitor Carrier with keyboard storage TFT, VESA connection adapter 100 mm, **part no. 32.0517/1**
- Monitor Carrier without keyboard storage TFT, VESA connection adapter 75 mm, **part no. 32.0525/0**
- Monitor Carrier without keyboard storage TFT, VESA connection adapter 100 mm, **part no. 32.0526/0**

MONITOR CARRIER V 100

part no. 32.0053/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, powder coated black
- Fastening kit
- Load capacity max. 150 N
- Weight 0,568 kg

APPLICATIONS

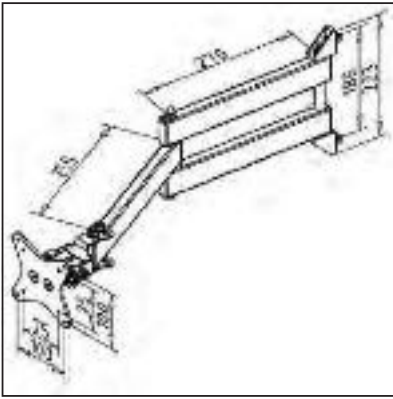
- Swivable with ball joint
- Monitor can be rotated through 180°
- For VESA standard 75 x 75 mm / 100 x 100 mm

ASSEMBLY

- Fasten into profile groove with fastening kit enclosed

MONITOR CARRIER WITH HINGED BRACKET

part no. 32.0620/0



TECHN. DATA / ITEMS SUPPLIED

- Hinged bracket: aluminium anodized
- Fixing plate: steel, powder coated grey
- With double-joint winged cantilever
- Load capacity max. 120 N
- Weight 1,6 kg

APPLICATIONS

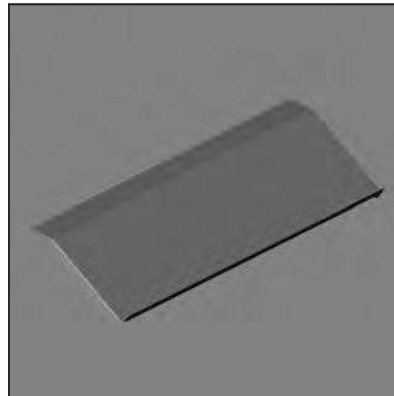
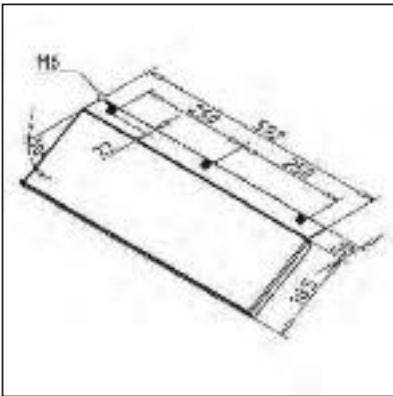
- Working place ergonomics
- Laterally swiveling of operating range
- Large swivel range
- For VESA standard 75 x 75 mm / 100 x 100 mm

ASSEMBLY

- Fasten into profile groove with fastening kit enclosed

KEYBOARD STORAGE

part no. 32.0518/0



TECHN. DATA / ITEMS SUPPLIED

- Stainless steel 2mm, grounded
- Rustproof
- Load max. 150 N
- For standard keyboards
- With slide nuts M6Z, ESD-capable
- Weight 2,477 kg
- With fastening kit

APPLICATIONS

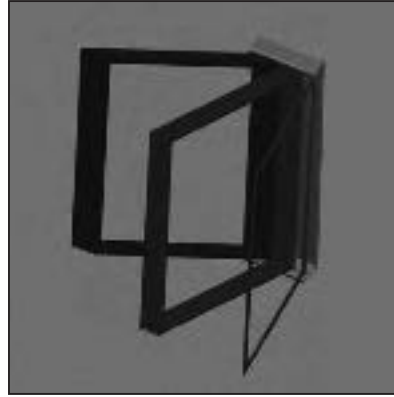
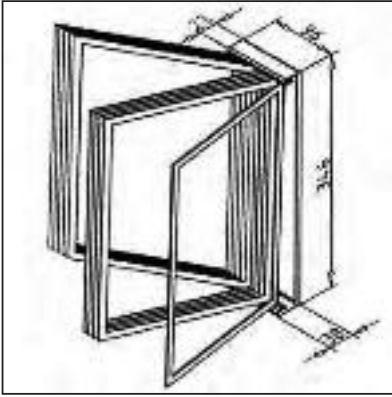
- For setting the keyboard on the workplace

ASSEMBLY

- Use fastening kit

DOCUMENT SUPPORT

part no. 32.0605/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, powder coated, light grey
- 10 DIN A4 boards, transparent
- Border, 5 each in blue, red
- 5 Slip-on tabs
- Weight 1,24 kg

APPLICATIONS

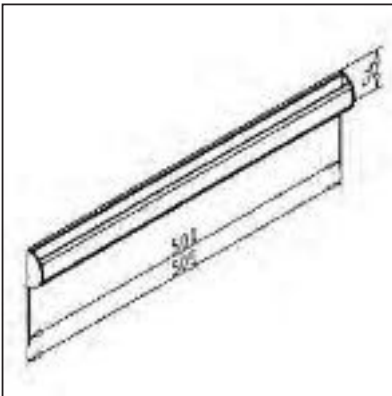
- Provision of job instructions, maintenance notes
- Control boards, general information
- Screw tight onto portal construction

ASSEMBLY

- Fastening with 2 hex socket cap screws M 06 x 16, 2 square nut M6 into profile groove
- Screw tight onto portal construction
- ESD-design **part no. 32.0605/6**

DOCUMENT BAR

part no. 32.0610/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminum, anodized
- With special glass clamping balls
- Length 505 mm
- Other dimensions upon request
- Weight 0,30 kg

APPLICATIONS

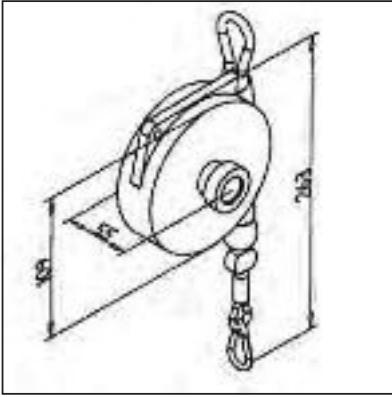
- Safe attachment of large drawings, instructions, plans
- Simply slip-in papers from below
- Attach to portal construction by screwing or gluing with double-faced adhesive tape

ASSEMBLY

- Use the screws of fastening kit or fasten with adhesive tape on the back

BALANCER

part no. 29.0111/0



TECHN. DATA / ITEMS SUPPLIED

- For tool weights 2-3 kg
- Higher weights upon inquiry
- Weight 0,75 kg

APPLICATIONS

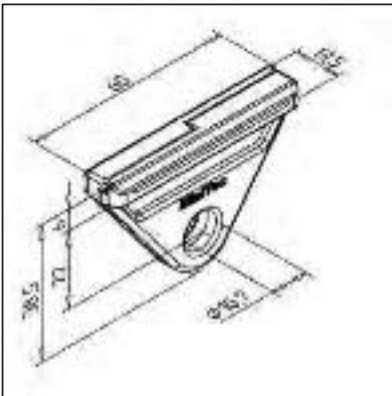
- Grab-supportive tool suspensions

ASSEMBLY

- With tool hanger **part no. 21.1769/0**

TOOL HANGER H

part no. 22.1213/0



TECHN. DATA / ITEMS SUPPLIED

- ABS, grey
- for all profiles
- Weight 0,010 kg
- load capacity up to 600 N

APPLICATIONS

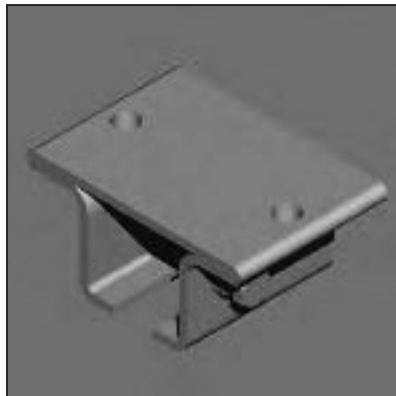
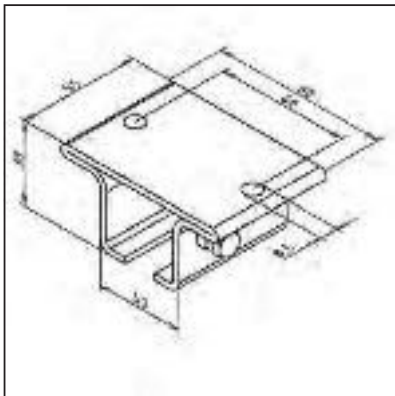
- Tool suspensions

ASSEMBLY

- insert both halves in profile groove and press together
- also suitable for subsequent assembly
- optional: snap-hook 60x6 **part no. 21.1699/0**

RAIL HOLDER

part no. 32.0222/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated

- Weight 0,25 kg

- ESD on request, conductive with 1 slide nut

APPLICATIONS

- Fastening the C-section rail onto the portal structure

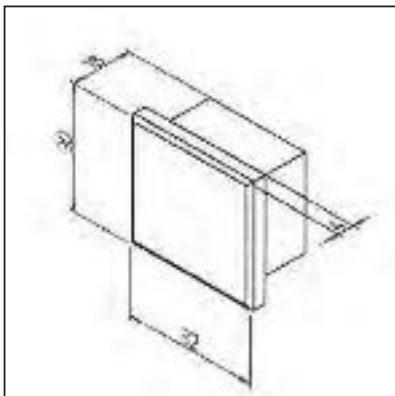
- Mounting for C-section rail 30
part no. 32.0220/0

ASSEMBLY

- Screw tight onto portal construction using mounting material from scope of supplies

CAP FOR C-PROFILE RAIL

part no. 32.0223/0



TECHN. DATA / ITEMS SUPPLIED

- Plastic, black

- Weight 0,006 kg

APPLICATIONS

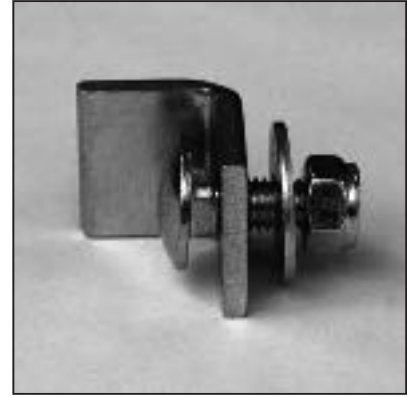
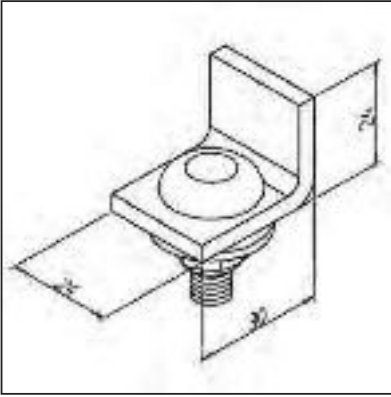
- Closing of both rail ends

ASSEMBLY

- Press onto C-profile rail

LIMIT STOP FOR CABLE TROLLEY

part no. 32.0226/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- Mounting material
- Weight 0,2 kg
- ESD-capable

APPLICATIONS

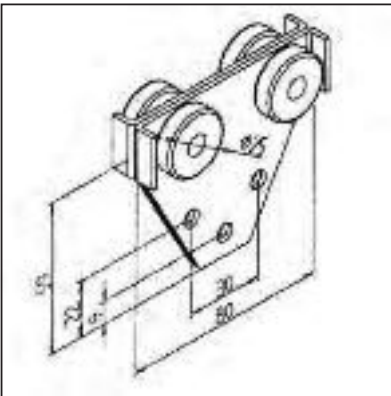
- Securing cable trolleys
part no. 32.0225/0 and tool trolleys
part no. 32.0224/0 at end of rail

ASSEMBLY

- Screw into end of C-section rail

TOOL TROLLEY

part no. 32.0224/0



TECHN. DATA / ITEMS SUPPLIED

- Sheet steel
- 4 rollers, zinc plated, ball bearings sealed on both sides
- Weight 0,21 kg
- ESD-capable

APPLICATIONS

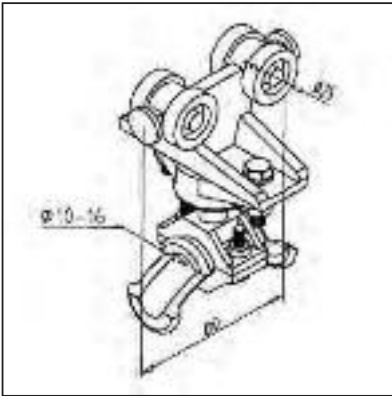
- Suspension of tools in the workroom

ASSEMBLY

- Push into C-section rail, secure ends with limit stop

CABLE TROLLEYS FOR CIRCULAR LINES

part no. 32.0225/0



TECHN. DATA / ITEMS SUPPLIED

- Supporting body: plastic, yellow
- 4 plastic rollers
- Ultimate load 100 N
- Weight 0,127 kg

APPLICATIONS

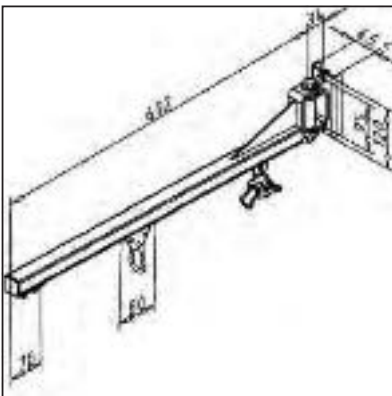
- Smooth running guidance of lines
- Suspension of hoses and lines

ASSEMBLY

- Push into C-section rail, secure ends with limit stop

HINGED CANTILEVER C-RAIL 30

part no. 32.0230/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, powder coated, light grey
- 180° swiveling
- Mounting material
- Length 692 mm
- Load, max. 200 N
- Weight 2,31 kg

APPLICATIONS

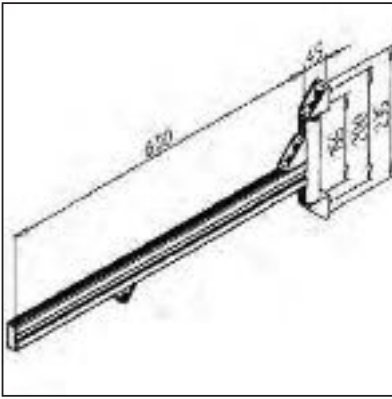
- For compressed air and power tools

ASSEMBLY

- Slight backward inclination for making unused tools to slide back automatically
- Screw tight to portal construction using mounting material from scope of supplies
- optional: in ESD-design **part no. 32.0230/6**

HINGED CANTILEVER ECO

part no. 32.0201/0

**TECHN. DATA / ITEMS SUPPLIED**

- 200° swiveling	
- Mounting material	
- Plain bearings	
- Length	600 mm
- Load, max.	100 N
- Weight	1,10 kg

APPLICATIONS

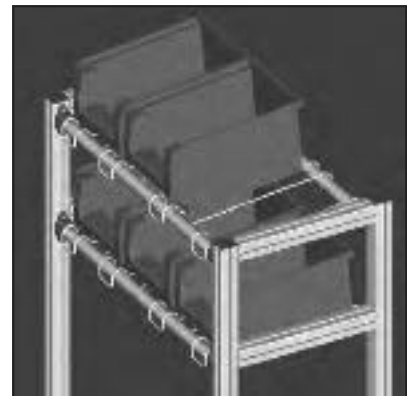
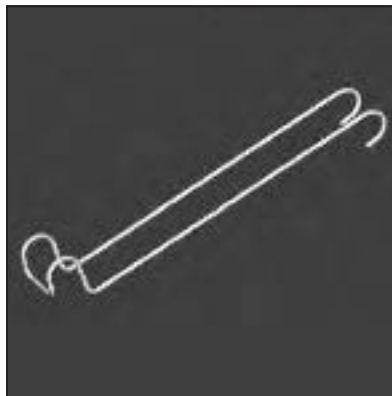
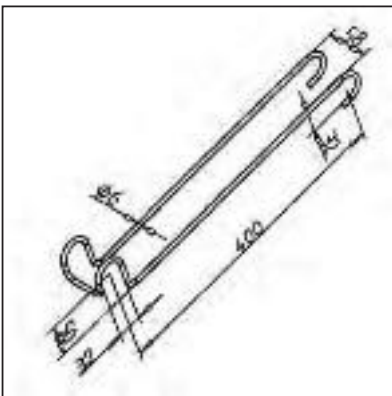
- For compressed air and power tools

ASSEMBLY

- Fastened onto portal with bracket
 - Screw tight onto portal construction using mounting material applied

CONTAINER HOLDER 32-400

part no. 32.0306/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel zinc plated	
- Without fastening kit	
- Weight	0,269 kg

APPLICATIONS

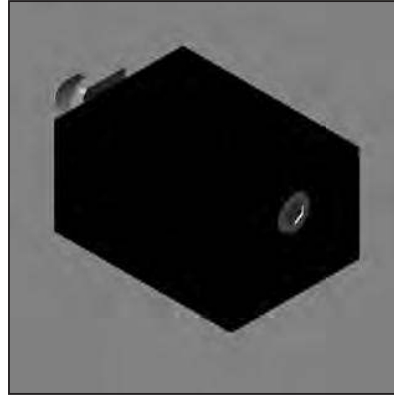
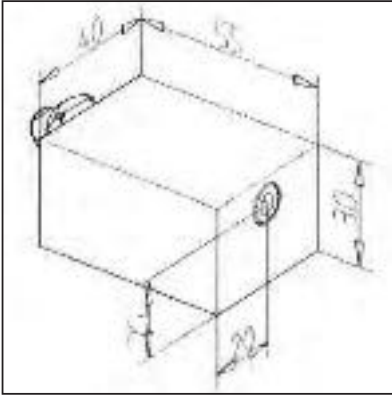
- as depositing rack for semi-open front containers and storage containers

ASSEMBLY

- simply hooked into handle profile 32 from both sides
 - Recommend:
 use snap bolt 25 for lateral adjustment if necessary **part no. 21.1758/0**

MOUNTING BLOCK

part no. 32.0539/0



TECHN. DATA / ITEMS SUPPLIED

- PE-UHMW conductive
- Color: black
- With fastening kit
- Weight 0,078 kg
- Square nut Z, ESD capable

APPLICATIONS

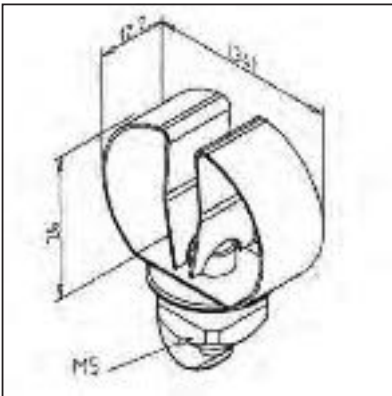
- For custom drilling of individual holes
- For provision of tools etc.

ASSEMBLY

- Fasten into profile groove with fastening kit

ATTACHMENT CLIP 8

part no. 32.0537/0



TECHN. DATA / ITEMS SUPPLIED

- Stainless steel 1.4319
- Attachment clip with fastening kit
- Square nut Z, ESD capable
- Weight 0,017 kg

APPLICATIONS

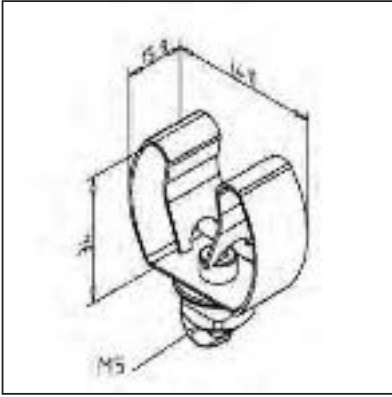
- Holder for miscellaneous tools with \varnothing 8 - 12 mm

ASSEMBLY

- Swivel into profile groove and tighten the fastening screw using fastening kit

ATTACHMENT CLIP 16

part no. 32.0538/0

**TECHN. DATA / ITEMS SUPPLIED**

- Stainless steel 1.4319
- Attachment clip with fastening kit
- Square nut Z, ESD capable
- Weight 0,028 kg

APPLICATIONS

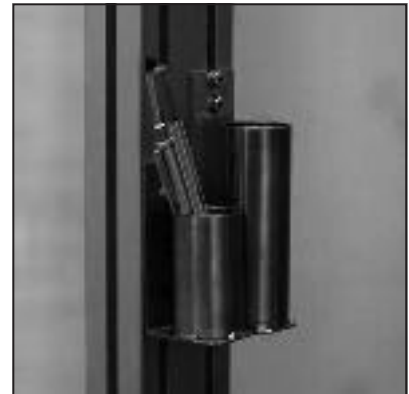
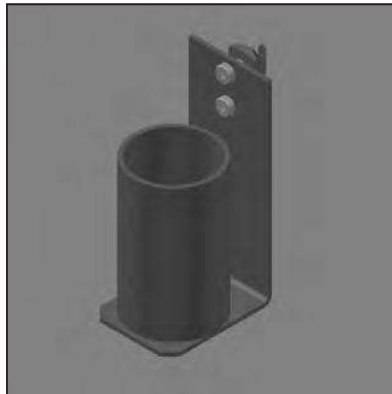
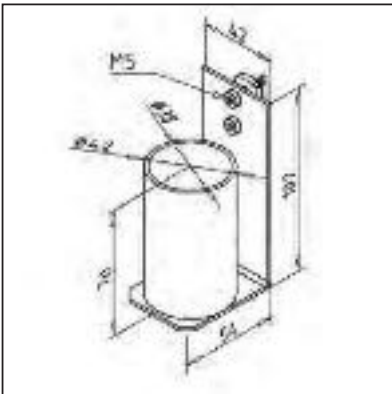
- Holder for miscellaneous tools with \varnothing 16 - 25 mm

ASSEMBLY

- Swivel into profile groove and tighten the fastening screw using fastening kit

ROUND TOOL HOLDER 38-70

part no. 32.0535/0

**TECHN. DATA / ITEMS SUPPLIED**

- Material V2A, polished
- With fastening kit
- Square nut Z, ESD capable
- Weight 0,263 kg

APPLICATIONS

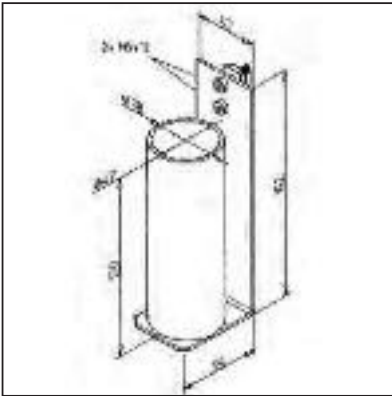
- Tool holder for storage of tools (files, marking tools, sharpening stones, etc.)
- Adjustable angle

ASSEMBLY

- Fasten with the profile by using fastening kit

ROUND TOOL HOLDER 38 - 120

part no. 32.0536/0



TECHN. DATA / ITEMS SUPPLIED

- Material V2A, polished
- With fastening kit
- Square nut Z, ESD capable
- Weight 0,402 kg

APPLICATIONS

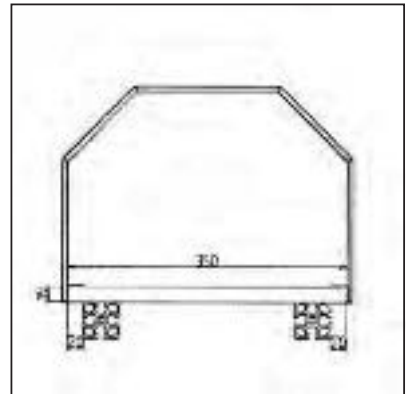
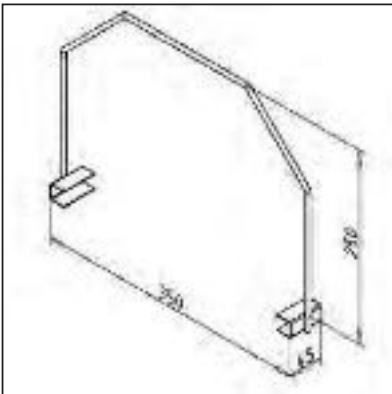
- Tool holder for storage of tools, pins, etc.
- Adjustable angle

ASSEMBLY

- Fasten with the profile by using fastening kit

STEEL BRACKET 250

part no. 32.0533/0



TECHN. DATA / ITEMS SUPPLIED

- Anthracite coloured, powder-coated steel bracket
- With welded-on clamps for setting on a 19 mm chipboard, for example
- Clamped using pretensioning and can be secured additionally with wood screws
- Weight 0,214 kg

APPLICATIONS

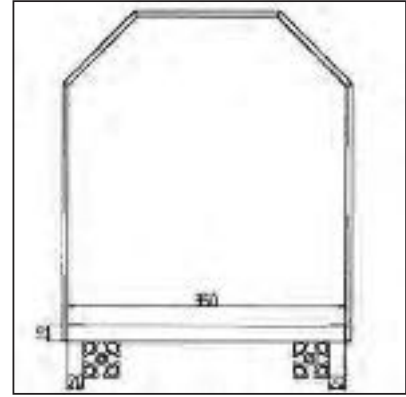
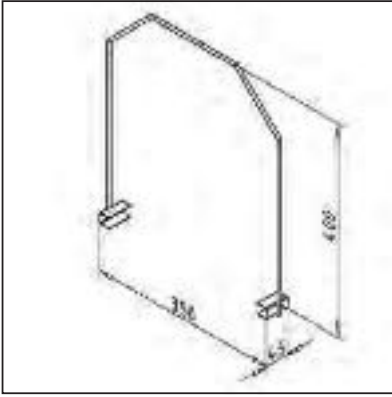
- As separating web for cartons
- Magazine for flat parts

ASSEMBLY

- Pull apart gently, stick on at the correct position and secure with suitable screw

STEEL BRACKET 400

part no. 32.0534/0

**TECHN. DATA / ITEMS SUPPLIED**

- Light-grey, powder-coated steel
- With welded-on clamps for setting on a 19 mm chipboard, for example
- Clamped using pretensioning and can be secured additionally with wood screws
- Weight 0,278 kg

APPLICATIONS

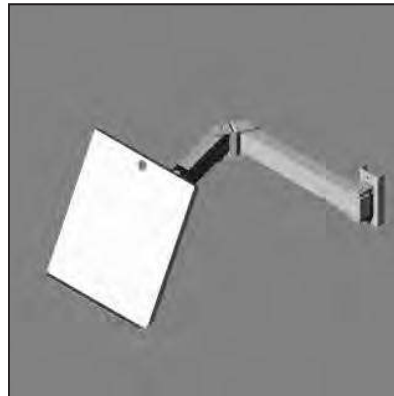
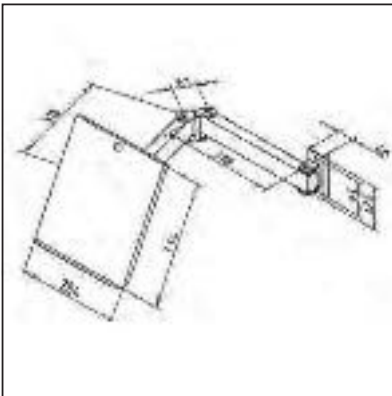
- As separating web for cartons
- Magazine for flat parts

ASSEMBLY

- Pull apart gently, stick on at the correct position and secure with suitable screw

DRAWING HOLDER

part no. 32.0608/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel light grey, powder coated
- With double-joint swivelling arm
- For DIN A4 format
- Load max. 150 N
- Delivered ready to assemble
- ESD on request
- Weight 4,00 kg

APPLICATIONS

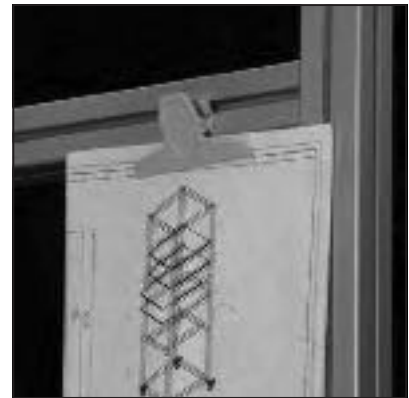
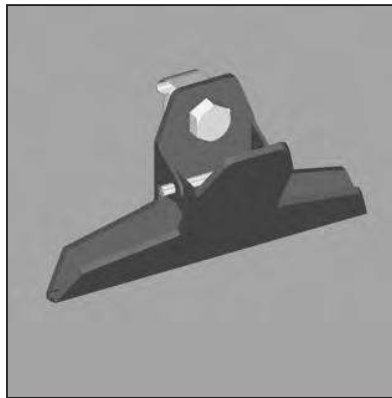
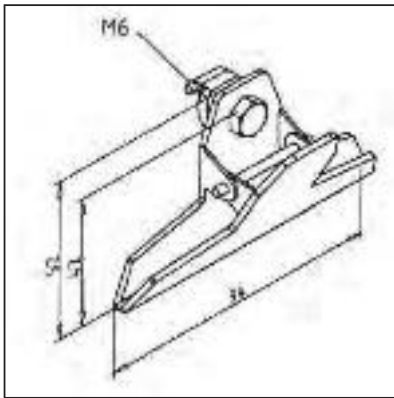
- For documents, control charts and drawings

ASSEMBLY

- Fasten onto portal structure

DOCUMENT CLIP

part no. 32.0609/0



TECHN. DATA / ITEMS SUPPLIED

- Steel light grey, powder coated
- With fastening bore \varnothing 6mm
- Width x height 94 x 52 mm
- Weight 0,048 kg

APPLICATIONS

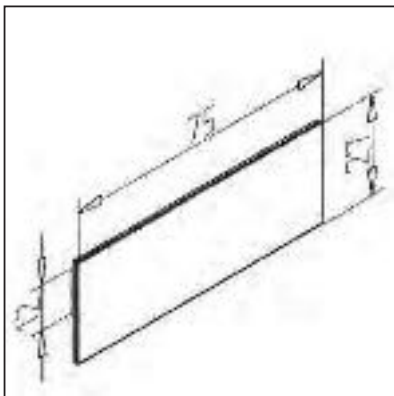
- To fastening work instructions, work plans or the like to workbenches or other profile constructions

ASSEMBLY

- Insert square nut M6 into profile groove and fasten with the screw

QUICK LABEL 27 X 75

part no. 32.0601/0



TECHN. DATA / ITEMS SUPPLIED

- Front, transparent
- Back, self-adhesive
- Open at the sides and on top
- Weight 0,003 kg

APPLICATIONS

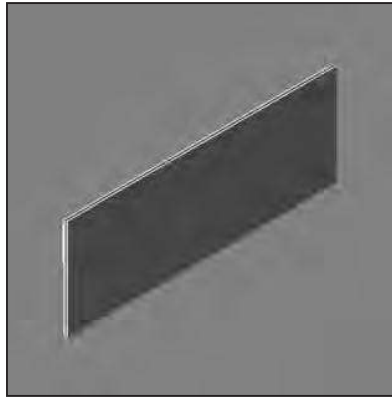
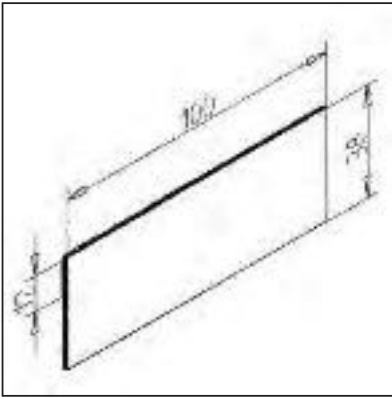
- Storage compartment identification
- Error-free barcode scanning
- For profile width 32

ASSEMBLY

- Attach with self-adhesive back
- Push in carton insert
- Carton insert not included, please order a sheet with 20 pieces separately **part no. 32.0601/1**

QUICK LABEL 38 X 100

part no. 32.0602/0

**TECHN. DATA / ITEMS SUPPLIED**

- Front, transparent
- Back, self-adhesive
- Open at the sides and on top
- Weight 0,007 kg

APPLICATIONS

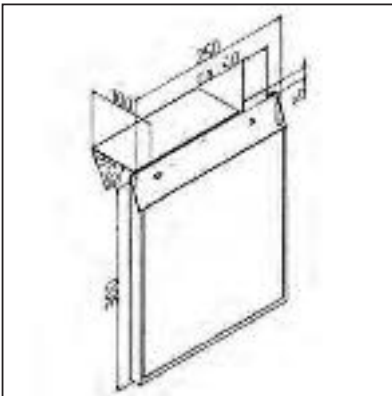
- Storage compartment identification
- Error-free barcode scanning
- For profile width 45

ASSEMBLY

- Attach with self-adhesive back
- Push in carton insert
- Carton insert not included, please order a sheet with 14 pieces separately **part no. 32.0602/1**

SEMI-OPEN COMPARTMENT BASE ELEMENT

part no. 32.0615/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel light grey, powder coated
- With fastening bores $\varnothing 9$, spacing 160 mm
- Optical edge 45 mm for optimum overview
- Filling capacity = 15 mm, sufficient for approx. 120 sheets of paper
- With grey closing plate
- clear semi-open compartment (front plate)
- Weight 0,634 kg

APPLICATIONS

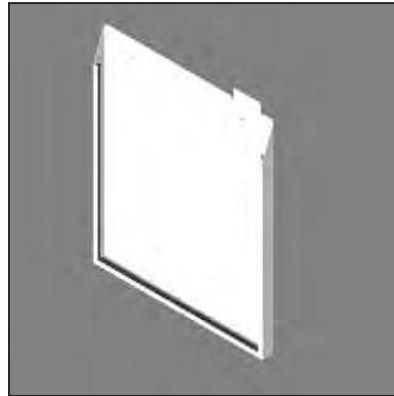
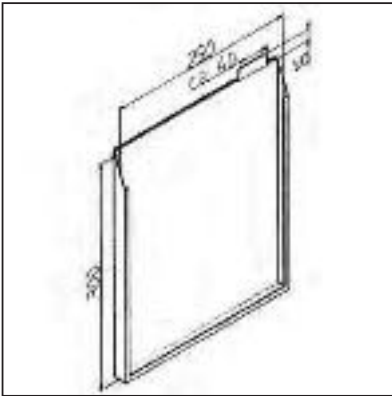
- For size DIN A4 documents

ASSEMBLY

- Fasten onto portal structure
- Expandable at any time with **part no. 32.0616/0**
- To expand, remove front plate and add the last expansion element

SEMI-OPEN COMPARTMENT EXPANSION ELEMENT

part no. 32.0616/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, powder coated, light grey

- Filling capacity = 15 mm

- Weight 0,392 kg

APPLICATIONS

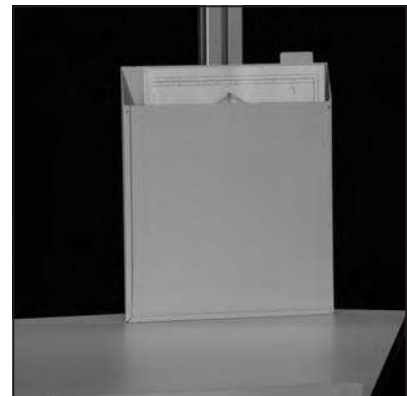
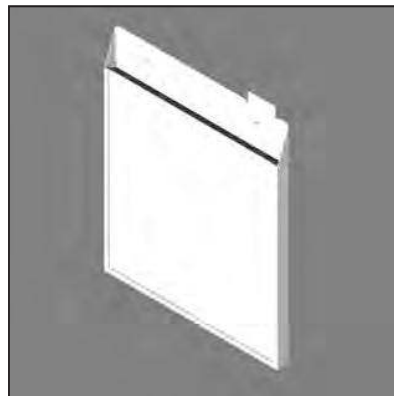
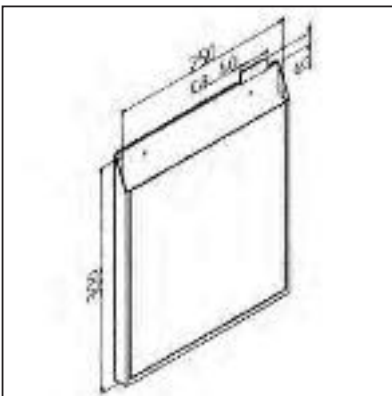
- For DIN A4 portrait format

ASSEMBLY

- Mount on semi-open compartment base element **part no. 32.0615/0**

SEMI-OPEN COMPARTMENT, SINGLE

part no. 32.0617/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, powder coated, light grey

- With fastening bores \varnothing 4 mm, spacing approx. 16 mm

- With grey closing plate

- Weight 0,50 kg

APPLICATIONS

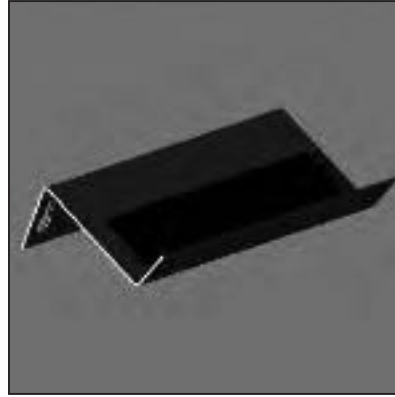
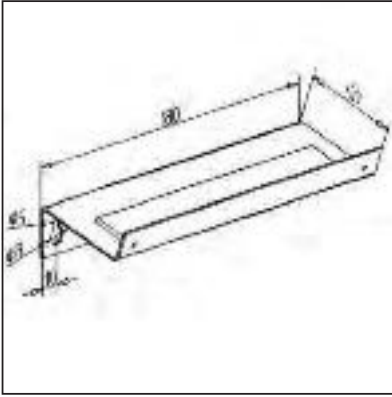
- For DIN A4 portrait format

- Optional:
Semi-open compartment, single A4 portrait format with transparent cover plate **part no. 32.0619/0**

ASSEMBLY

- Fasten on portal structure or use as expansion element for the base element

ADDITIONAL ANGLE FOR SEMI-OPEN COMPARTMENT part no. 32.0618/0



TECHN. DATA / ITEMS SUPPLIED

- Steel light grey, powder coated
- With magnet strips
- Weight 0,123 kg

APPLICATIONS

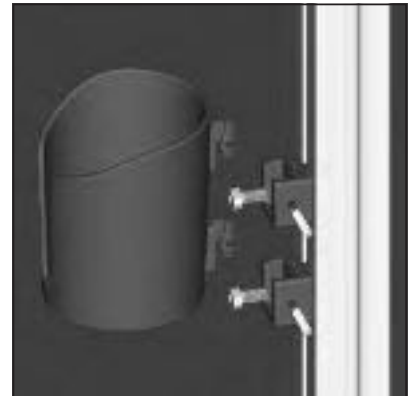
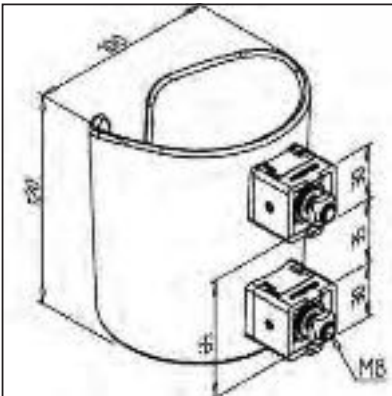
- For additional stabilisation on the bottom edge of the semi-open compartments

ASSEMBLY

- Fasten onto portal structure

CUP HOLDER

part no. 32.0547/0



TECHN. DATA / ITEMS SUPPLIED

- Cup holder polyamide, grey
- Cup with MiniTec company logo
- With fastening kit
- Weight 0,387 kg

APPLICATIONS

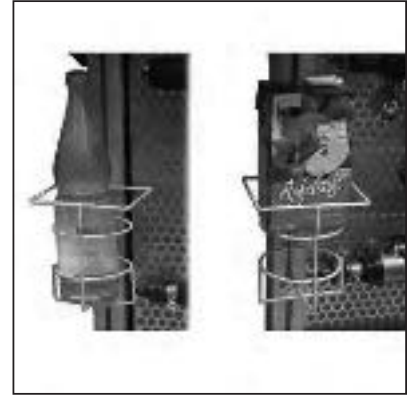
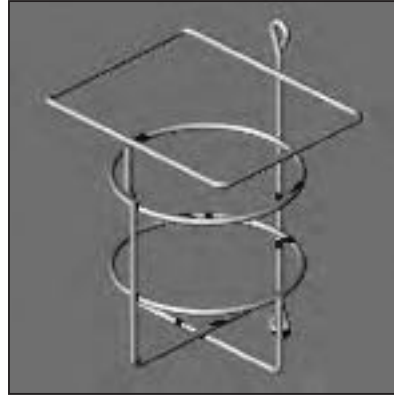
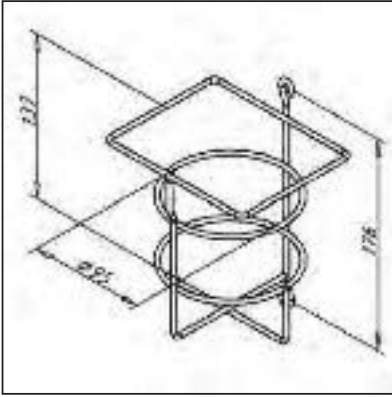
- Cup or bottle holder for workplace systems
- With cut-out for cup handle

ASSEMBLY

- Use block-shaped connectors with fastening kit to screw on profile construction at intervals of 35 mm
- Insert cup holder in t-slot
- Use stud screw M5 for lateral adjustment

BOTTLE/BEVERAGE BAG HOLDER

part no. 32.0507/0



TECHN. DATA / ITEMS SUPPLIED

- Steel wire, coated light grey
- Inside Ø 95 mm
- 2 bolts M6 x 16
- 2 square nuts M6 with spring plate

APPLICATIONS

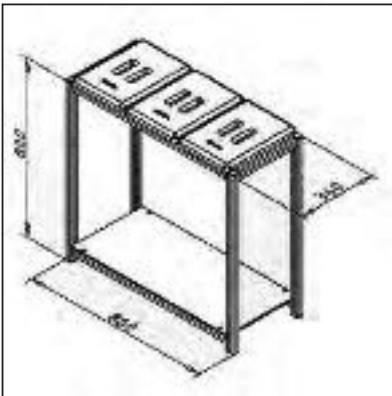
- Commercially available beerage bottles and beerage bags

ASSEMBLY

- Screw on with fastening kit

RECYCLABLE MATERIAL COLLECTOR

part no. 29.0022/0



TECHN. DATA / ITEMS SUPPLIED

- Rugged frame made of profile 30 x 30, anodized E6/EV1
- With floor carpet
- 3 covers ABS, grey
- Mounted ready-for-use
- Weight 3,4 kg

APPLICATIONS

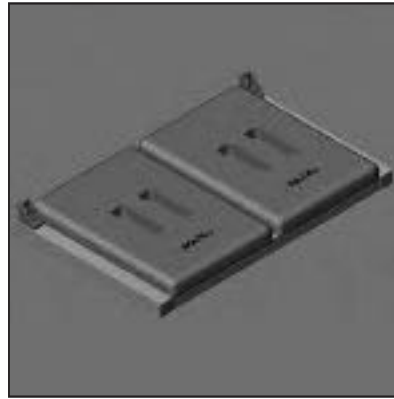
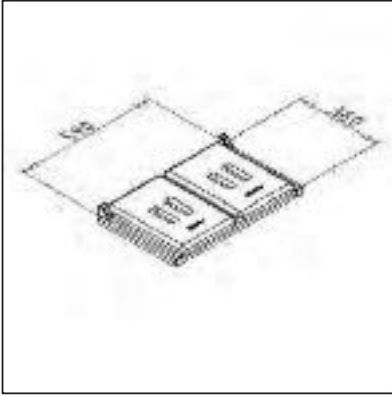
- For separate collection of 3 kinds of recyclable materials
- Just put plastic bags over the screw heads
- Also suitable for outdoor deployment

ASSEMBLY

- According to enclosed installation instructions

RECYCLABLE MATERIAL COLLECTOR FOR ATTACHMENT

part no. 32.0024/0

**TECHN. DATA / ITEMS SUPPLIED**

- Frame made of profile 30 x 30, anodized E6 / EV1
- 2 covers ABS, grey
- 2 mounting angles 25
- Weight 1,915 kg

APPLICATIONS

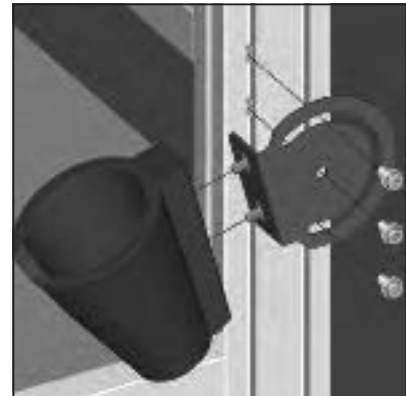
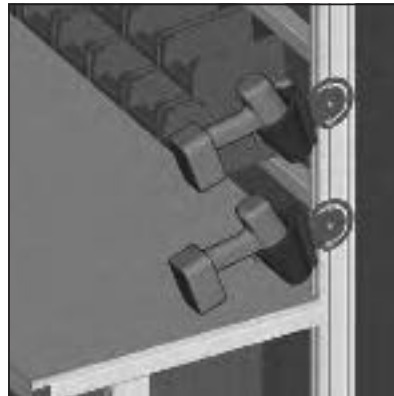
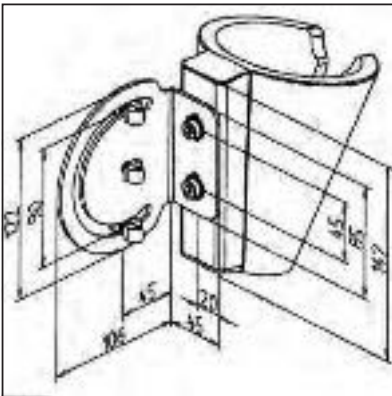
- For separate collection of 2 kinds of recyclable materials
- Just put plastic bags over the screw heads

ASSEMBLY

- Attach to profile frame with fastening materials included

TOOL CASE S AS SET

part no. 26.3001/0

**TECHN. DATA / ITEMS SUPPLIED**

- Tool case
- Swiveling holder
- Fastening kit
- Colour: black / grey
- Weight 0,83 kg

APPLICATIONS

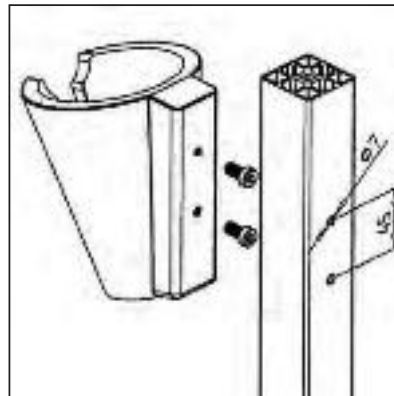
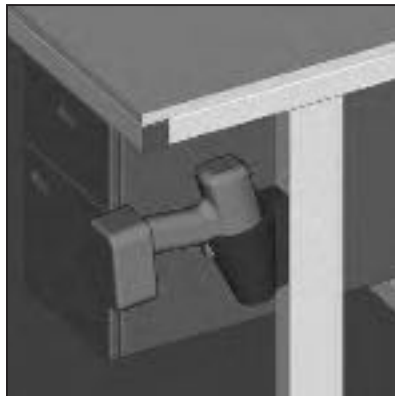
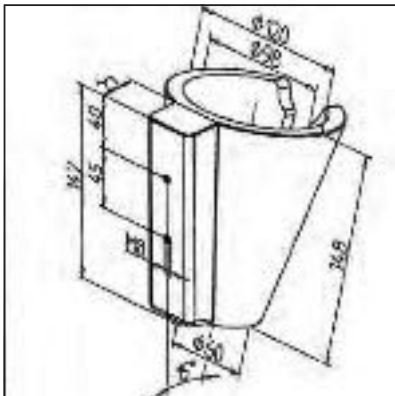
- For secure storage of drills, battery-operated screwdrivers and other tools
- Adjustable angle bracket

ASSEMBLY

- Attached to the brace profile with supplied fastening kit

TOOL CASE S

part no. 26.3001/1



TECHN. DATA / ITEMS SUPPLIED

- Rubber, black
- Weight 0,49 kg

APPLICATIONS

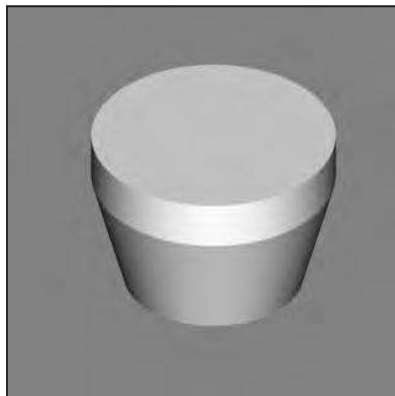
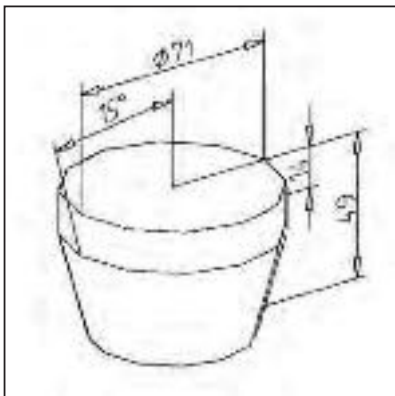
- For secure storage of drills, battery-operated screwdrivers and other tools

ASSEMBLY

- Make 2 through holes, \varnothing 7mm, spacing 45 in the profile
- Fasten with M8 x 16 bolts

ADAPTER FOR TOOL QUIVER

part no. 26.3002/0



TECHN. DATA / ITEMS SUPPLIED

- Moulded part made of natural polyamide
- Please quote diameter of the tool

APPLICATIONS

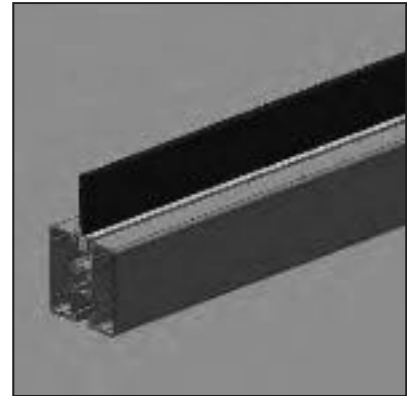
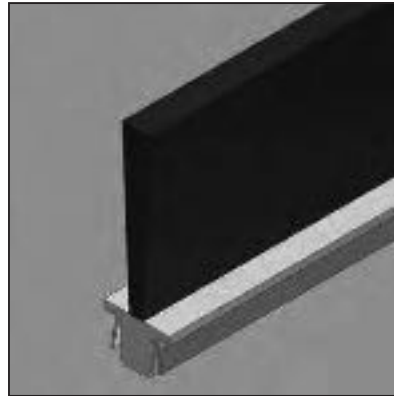
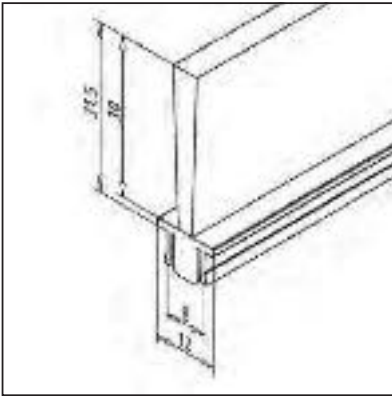
- Adapter for motorised screwdriver, special screwdriver, compressed air screwdriver

ASSEMBLY

- Press into tool quiver

STRIP BRUSH 30

part no. 22.1150/0



TECHN. DATA / ITEMS SUPPLIED

- P.V.C. strip with brush

- Weight 0,130 kg/m

- Manufacturing length 1000 mm

APPLICATIONS

- Sealing of doors, lids

- Static cleaning of belts

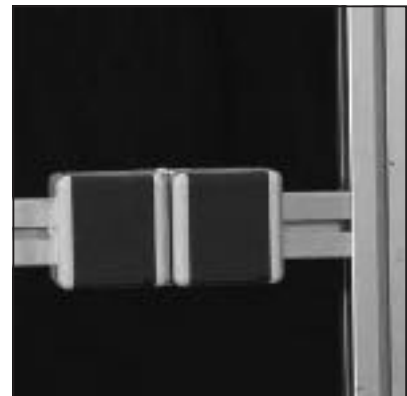
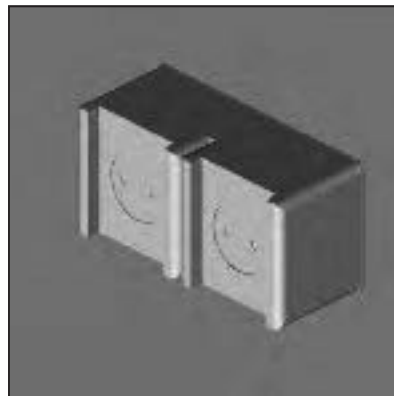
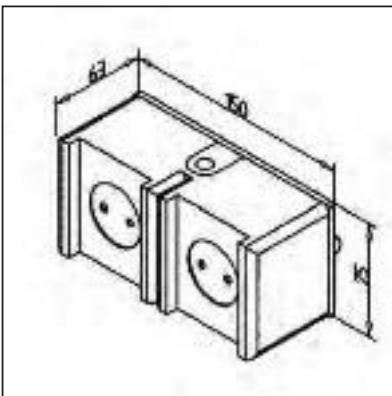
- Guiding and supporting in conveyance

ASSEMBLY

- Insert or clip into profile groove

HORIZONTAL DOUBLE OUTLET

part no. 32.0774/0



TECHN. DATA / ITEMS SUPPLIED

- Schuko outlet 10/16 A 250 V

- IP 44 shatter-proof

- Housing 75 x 151 x 58 mm

- Fastening material

- With adapter plates and screws

- Weight 0,389 kg

APPLICATIONS

- For power supply at the workplace

ASSEMBLY

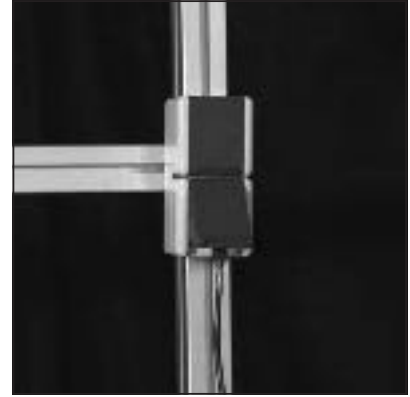
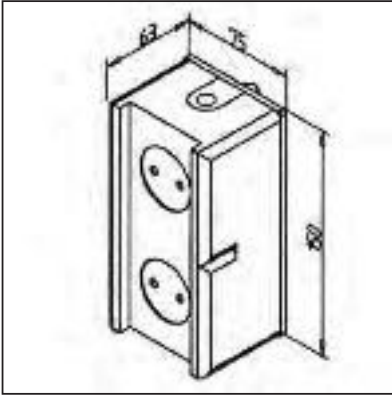
- Fasten adapter plate onto profile

- Fasten double outlet to the adapter plate

- Electrical connections for clamping

VERTICAL DOUBLE OUTLET

part no. 32.0773/0



TECHN. DATA / ITEMS SUPPLIED

- Schuko outlet 10/16 A 205V
- IP 44 shatter-proof
- Housing 75 x 151 x 58 mm
- Fastening kit
- With adapter plates and screws
- Weight 0,389 kg

APPLICATIONS

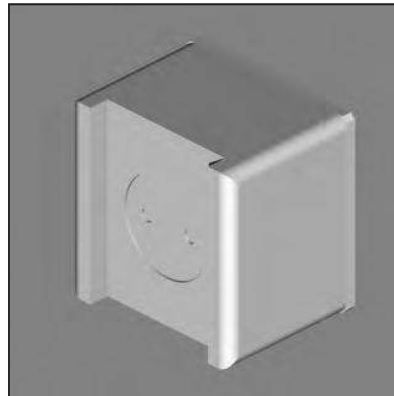
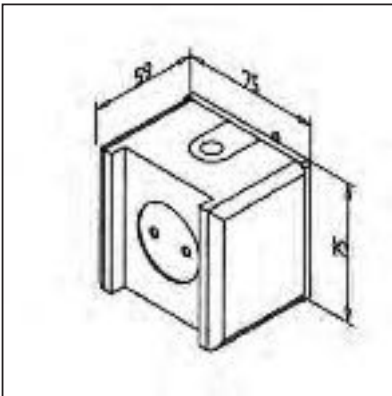
- For power supply at the workplace

ASSEMBLY

- Fasten adapter plate onto the profile
- Fasten double outlet on the adapter plate

OUTLET

part no. 32.0771/0



TECHN. DATA / ITEMS SUPPLIED

- Schuko 10/16 A 250 V
- IP 44 shatter-proof
- Housing 75 x 75 x 58 mm
- With adapter plates and screws
- Weight 0,211 kg

APPLICATIONS

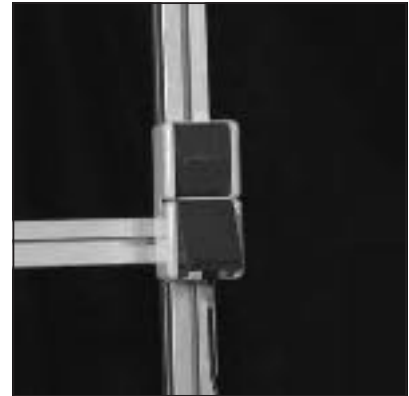
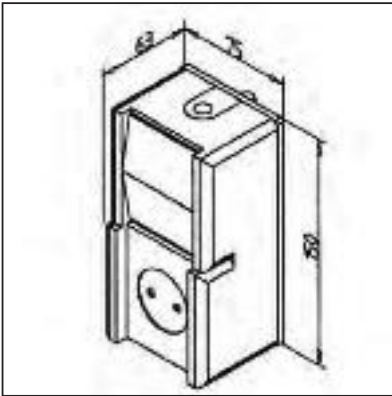
- For power supply at the workplace

ASSEMBLY

- Fix adapter plate to the profile
- Fasten double outlet to the adapter plate

TWO-WAY SWITCH/OUTLET

part no. 32.0772/0



TECHN. DATA / ITEMS SUPPLIED

- ON/OFF/two-way switch, 10A x 250V
- Schuko 10 / 16 A 250 V, IP 44 shatter-proofed
- Housing 75 x 151 x 58 mm
- Fastening material
- With adapter plates
- Weight 0,389 kg

APPLICATIONS

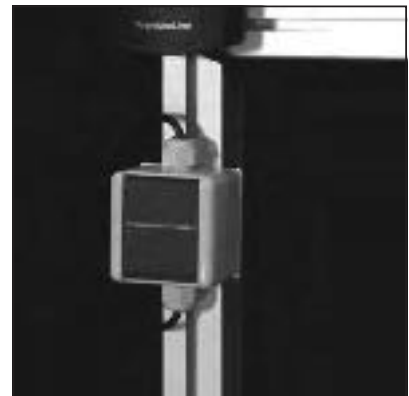
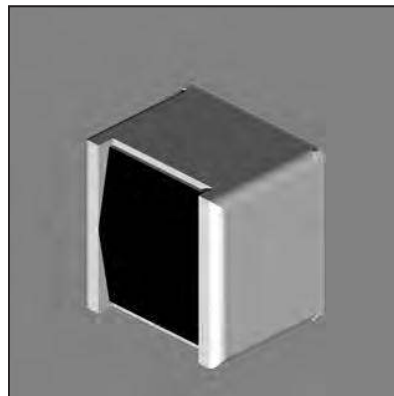
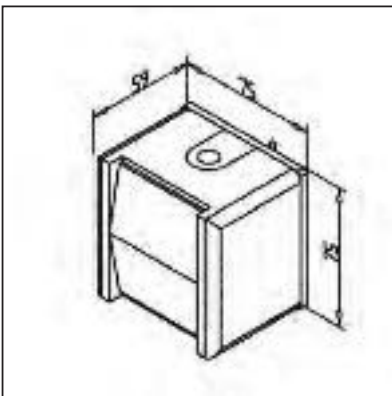
- To switch-on and switch-off lamps

ASSEMBLY

- Fix the adapter plate on profile
- Fix the two-way switch on the adapter plate

TWO-WAY SWITCH

part no. 32.0770/0



TECHN. DATA / ITEMS SUPPLIED

- ON/OFF/two-way switch
- 10A x 250V
- Housing 75 x 75 x 58 mm
- Fastening material
- With adapter plates
- Weight 0,211 kg

APPLICATIONS

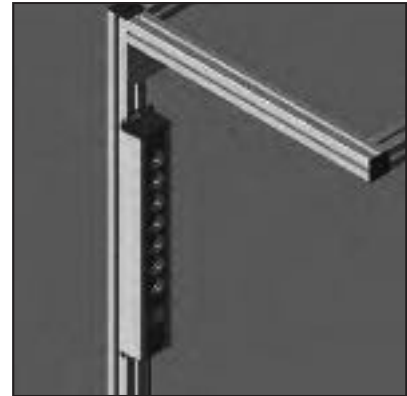
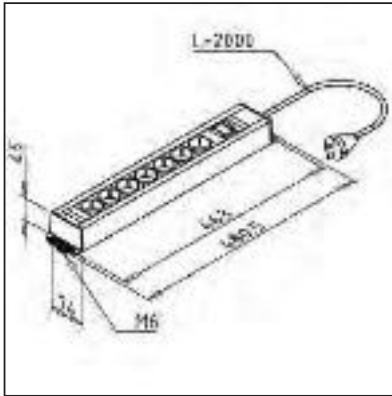
- To switch-on and switch-off lamps

ASSEMBLY

- Fasten adapter plate onto profile
- Fix the two-way switch on the adapter plate

PROFESSIONAL MULTIPLE-SOCKET OUTLET, 7-FOLD

part no. 32.0703/0

**TECHN. DATA / ITEMS SUPPLIED**

- 7-fold with additional switch
- Rocker switch, illuminated
- Cable length 2 m
- Max. 3500W / 16A / 230V
- Weight 0,858 kg

APPLICATIONS

- Oblique socket arrangement

ASSEMBLY

- Use fastening kit

FOOT RESTS

- Foot rests help especially small persons find an ergonomic seating position on not adjustable in height tables.
- In any case they must meet certain requirements, such as the size of the footprint.
- Height adjustable work tables are better.
- Some experts don't approve of foot rests, while others say they have advantages. Attention must be paid to their proper adjustment.

FOOT RESTS ARE A TEMPORARY SOLUTION

Recently even experts have argued on the advantages and disadvantages of foot rests. Some even advise against them. They criticize that the necessary elbow-room and therefore dynamic seating is restricted, because they prescribe a certain leg and foot position. This can lead to tiredness, affect blood circulation and cause circulation problems. Rather, they advocate height adjustable work tables, which make extra equipment for the feet unnecessary.

FOOT RESTS HAVE ADVANTAGES

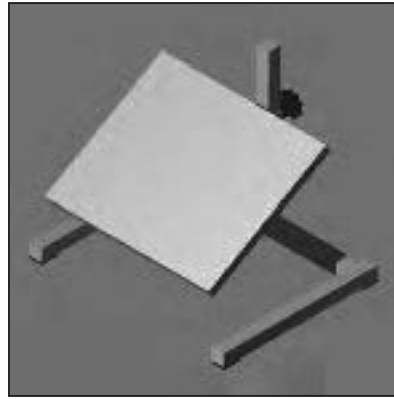
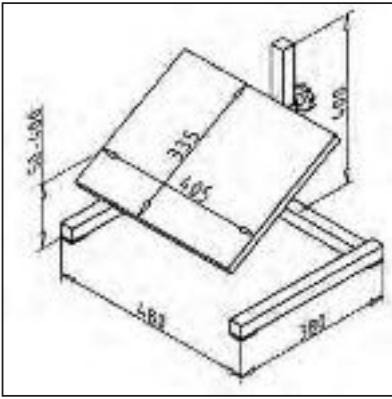
On the other hand, experts mention the special advantages of straight foot rests. Since the feet are in a slightly inclined position on the floor, the legs are relaxed and prevent circulation problems, etc.

Generally, companies are recommended to invest into an "ergonomic fundus", which also includes footrests, so that the employees can try out individually what they prefer.



FOOT REST ECO

part no. 32.0155/0

**TECHN. DATA / ITEMS SUPPLIED**

- Rugged tubular steel frame made from 30 mm rectangular tube with abrasion-proof floor gliders
- Completely assembled
- Foot rest: Grooved anti skid rubber
- W x D x H= 400 x 330 x 410 mm
- ESD on request
- Weight 5,70 kg

TECHN. DATA / ITEMS SUPPLIED

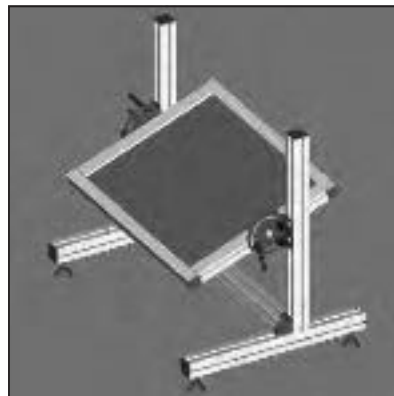
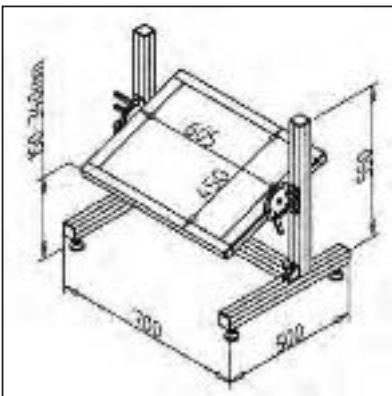
- Height-adjustable and inclinable
- Inclination adjustable by foot
- Free-standing

APPLICATIONS

- Facilitates correct seating on table

FOOT REST STANDARD

part no. 32.0160/0

**TECHN. DATA / ITEMS SUPPLIED**

- Base construction profile 45x45 under tables, workstations
- Completely assembled
- Foot rest: Chipboard, coated, oil-resistant
- ESD on request
- Weight 4,7 kg

TECHN. DATA / ITEMS SUPPLIED

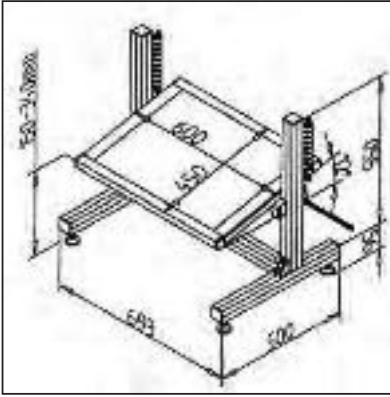
- Height and inclination manually adjustable
- Free-standing

APPLICATIONS

- Facilitates correct seating on table

FOOT REST COMFORT

part no. 32.0165/0



TECHN. DATA / ITEMS SUPPLIED

- Base construction profile 45x45 under tables, workstations
- Completely assembled
- Foot rest: Chipboard, coated, oil-resistant
- ESD on request
- Weight 10,20 kg

TECHN. DATA / ITEMS SUPPLIED

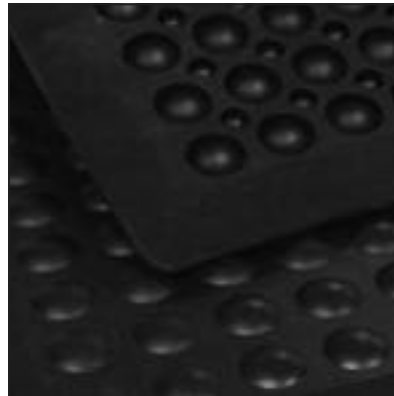
- Spring-tensioned height adjustment, height adjustable from seating position
- Free-standing

APPLICATIONS

- Facilitates correct seating on table

WORK MATS OFF RUBBER

part no. 32.0920/0



TECHN. DATA / ITEMS SUPPLIED

- Material: SBR
- Size: 1350 x 1000 x 16 mm
- Weight: 19 kg / m²
- Hardness: 55 ± 4°Shore A
- Upperside flat structure, non-skid
- Underside: depressant hemisphere
- 20° bevelled outer edge
- Heatresistant -35 to +95 °C
- Colour: Black

APPLICATIONS

- Workplaces at workbench, band-conveyor, installation table, metal-cutting machine, committee place, tool store, every walk- and standing workplaces
- Muscle activation through intuitive movement
- The shock-absorbing effect will reduce the joint- and backproblems
- Protection against down falling objects

ASSEMBLY

- Optional designs on request
- Multifunctional mat
- Oil and fat resistant design
- flame-retarding design
- drivable design
- Work mat Ergo ESD **part no. 32.0920/6**
- conductive, surface resistance ≤ 10⁵ Ω remaining techn. Data like standard design

PNEUMATIC SYSTEM

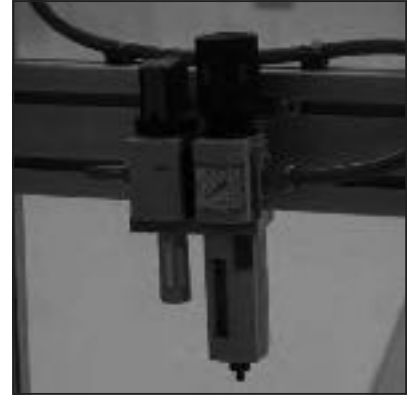
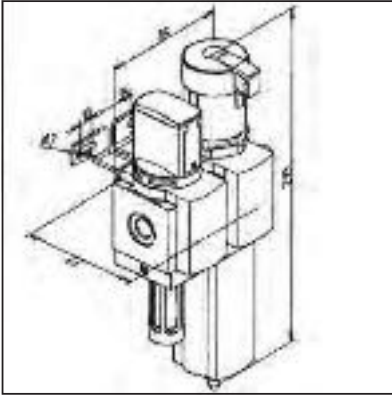
Compressed air is frequently used in workplace systems for the operation of pneumatic cylinders in assembly auxiliary equipment or to drive compressed air tools.

We provide the basic equipment for a workplace. To minimize contamination at the workplace and to keep the risks to the health of the employees as low as possible, one should principally try to work with clean, purified and dry compressed air.



FILTER REGULATOR AND MANUAL START-UP VALVE

part no. 32.0580/0



TECHN. DATA / ITEMS SUPPLIED

- The compressed air service module consists of: Manual start-up valve with ventilation via filter, filter regulator, rotary knob with integrated lock and manometer
- Filter mesh 40 µm
- Condensate drain
- Pressure control range: 1-12 bar
- Connection inlet 1/4" thread
- Connection outlet connector system hose D=10 mm
- Standard nominal flow 800 - 1,400 l/min
- Weight 0,575 kg

APPLICATIONS

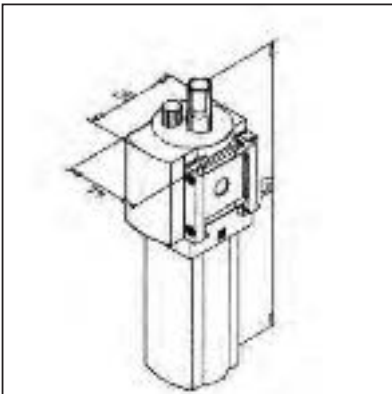
- Compressed air provision on the work table

ASSEMBLY

- 2x hex. socket cap screws M6x12 **part no. 21.1143/0**
- 2x square nuts M6x13 with spring plate **part no. 21.1330/2**

LUBRICATOR

part no. 32.0581/0



TECHN. DATA / ITEMS SUPPLIED

- Proportional lubricator with precise oil dosing
- Easy and fast to refill
- Weight 0,225 kg

APPLICATIONS

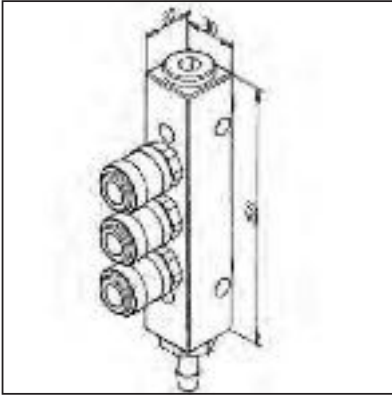
- Micro-mister lubricator for compressed air

ASSEMBLY

- Fasten onto filter regulator with included coupling package

PNEUMATIC 3-WAY DISTRIBUTOR

part no. 32.0901/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium housing
- 1x connection hose nozzle for hose NW 9
- 3x quick-connect NW 7
- Operating range 0-10 bar
- Temperature range -10 to +70°C
- Connection with push-on fitting on request

APPLICATIONS

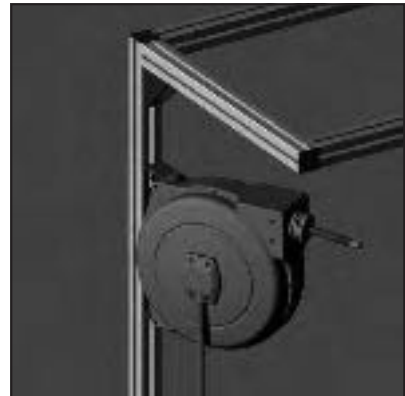
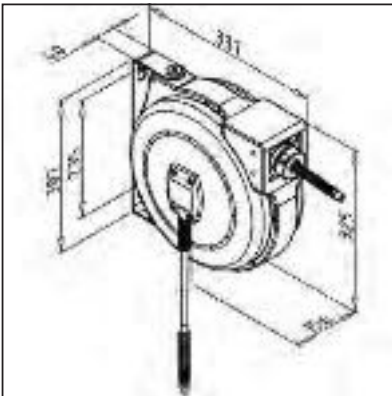
- Compressed air distribution at the workplace
- Fast connection and disconnection of pressurized compressed air lines
- Plug nipple rotatable in the coupling

ASSEMBLY

- Attach to profile with accessories of scope of supply
- Push on hose and secure with suitable hose clamp

AUTOM. HOSE RECOILER

part no. 320583/0



TECHN. DATA / ITEMS SUPPLIED

- Dimensions (L x B x H) 325 x 275 x 185 mm
- Weight 3,4 kg
- Tube length 8 m
- Connection in-/output 1/4 a
- Max. pressure 10 bar

APPLICATIONS

- Automatic hose recoiler plastic
- Multiple arrester per turn
- Latching detachable

ITEMS SUPPLIED

- 1x hose recoiler with PU-hose and stopper incl. 1m connecting hose

KANBAN-SYSTEM

Low inventory and loss prevention are continual challenges of series production. These goals can be reached by simple means using consumption-controlled material handling methods according to the Kanban principle. In this, the parts required in production by the consumptive positions in the production cycle are requested by a simple Kanban card from the upstream step. Normally the card is located at the material and triggers a production order when reaching the minimum inventory. To ensure the consumption-controlled production and therefore the minimisation of inventory, no order can be started without this Kanban card.

Provision of the products is done directly at the point of consumption in so-called Kanban shelves. These shelves are equipped with inclined small roller conveyors, which transport the containers or products to the receiving station by gravity. Shelf stocking is done from the rear. The size of the shelves is depending on the supply at the workplace determined according to Kanban rules.

So that the containers can be transported securely and protected into the shelving, the incline of the roller conveyor can be simply adjusted. Brake blades are available to prevent impact damage and are easy to install. The use of these brake blades is especially necessary for heavy weights..

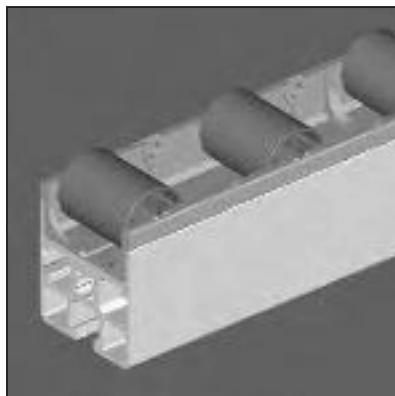
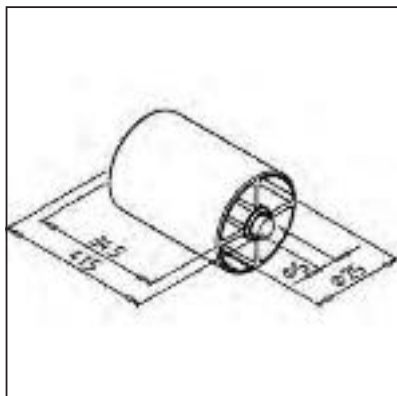
We supply all required components for the construction of custom-built Kanban shelves.

Our KanTainer (part no. 32.0870 / 0) is particularly suitable for the management of small parts according to the Kanban principle.



PULLEY D 25

part no. 21.1701/0



TECHN. DATA / ITEMS SUPPLIED

- ABS, blue	
- Axe Ø 5, stainless steel	
- Weight	0,01 kg
- Load max/roller	20 N
- For higher loads use Pulley D 25 compact part no. 21.1703/0	

APPLICATIONS

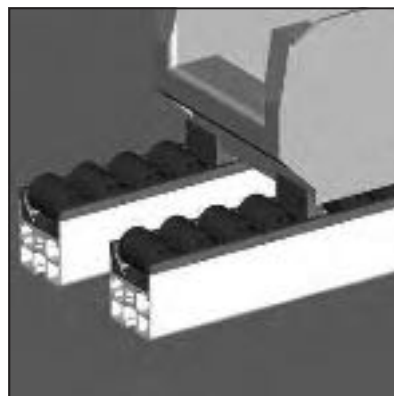
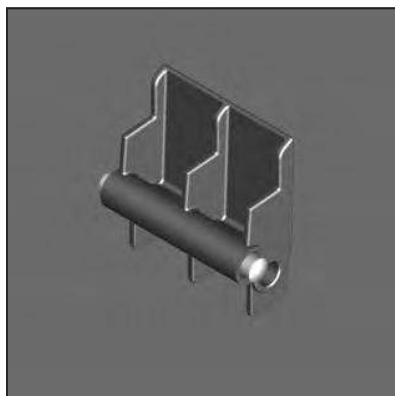
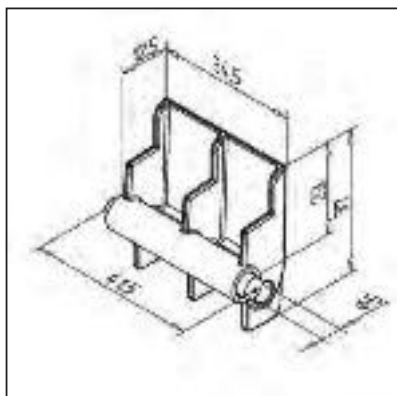
- Assembly of small roller conveyors in connection with profile 45 x 45 R
part no. 20.1046/0

ASSEMBLY

- Clip pulleys into pulley carrier

RETURN STOP

part no. 32.0586/0



TECHN. DATA / ITEMS SUPPLIED

- ABS, grey	
- Weight	0,015 kg

APPLICATIONS

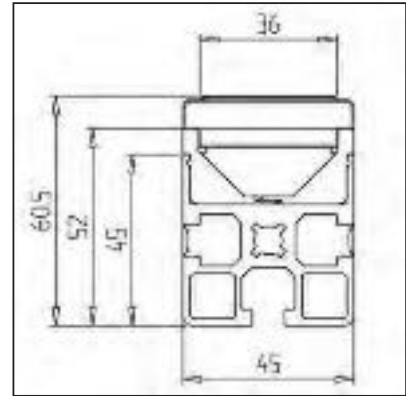
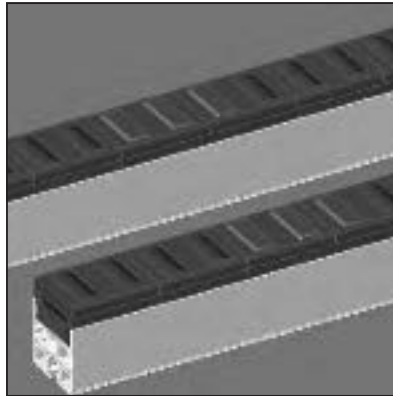
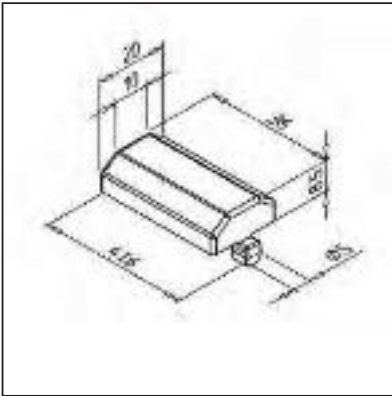
- used for decline-roller conveyors to prevent transported material from running back
- in combination with pulley carrier 45x45R

ASSEMBLY

- clip into roller instead of pulley carrier

SLIDING INSERT FOR ROLLER CARRIER

part no. 21.0940/0



TECHN. DATA / ITEMS SUPPLIED

- POM, grey RAL 7012
- Suitable for roller carrier
- Weight 0,04 kg

APPLICATIONS

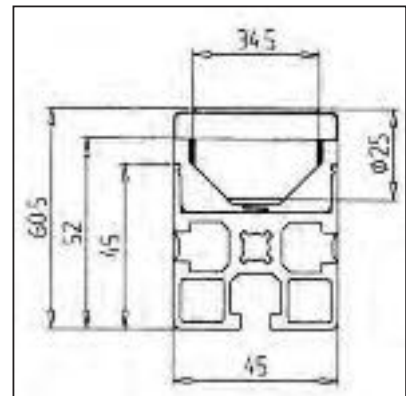
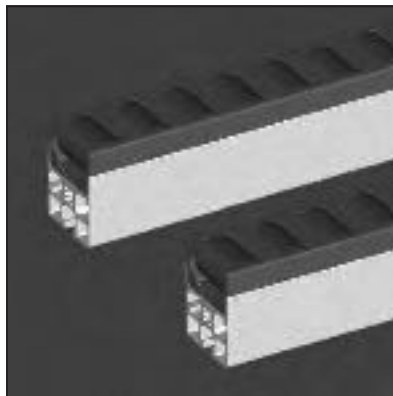
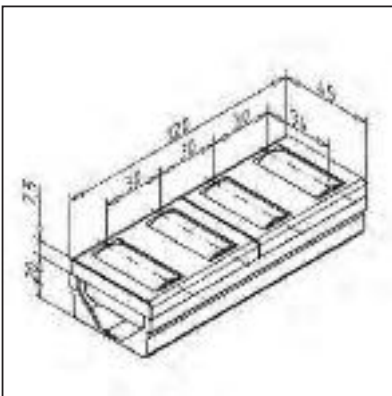
- For insertion in roller carriers instead of pulley D 25, for slowdown of transported material
- To prevent a roll away on the installation site

ASSEMBLY

- Clip into roller carrier instead of pulley

ROLLER CARRIER 45 X 45 R WITH CAP

part no. 22.1151/0



TECHN. DATA / ITEMS SUPPLIED

- 2x roller carrier basic component POM-RAL 7012, **part no. 22.1126/0**
- 1x cap POM-RAL 7012 - part no. 22.1127/0
- 4x carrier roller ABS blue, **part no. 21.1701/0**
- Weight 0,076 kg
- Length 120 mm

APPLICATIONS

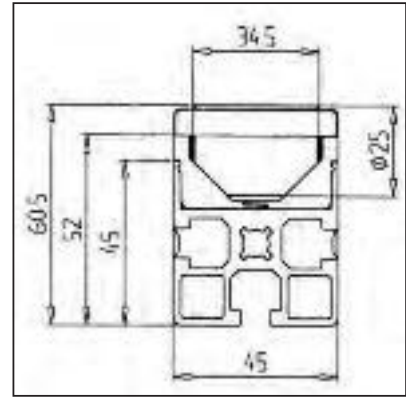
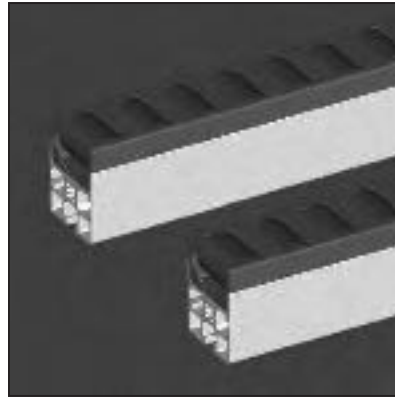
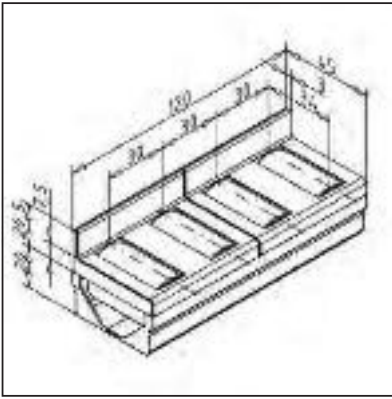
- Production of shortrollrails in connection with profile 45 x 45 R, **part no. 20.1046/0**

ASSEMBLY

- Insert roller carrier in profile
- Insert carrier roller in profile
- Clipoff cap

ROLLER CARRIER 45 X 45 R WITH SF CAP

part no. 22.1152/0

**TECHN. DATA / ITEMS SUPPLIED**

- 2x roller carrier basic component POM-RAL 7012, **part no. 22.1126/0**
- 1x cap POM-RAL 7012 - part no. 22.1128/0
- 4x carrier roller ABS blue, **part no. 21.1701/0**
- Weight 0,083 kg
- Length 120 mm

APPLICATIONS

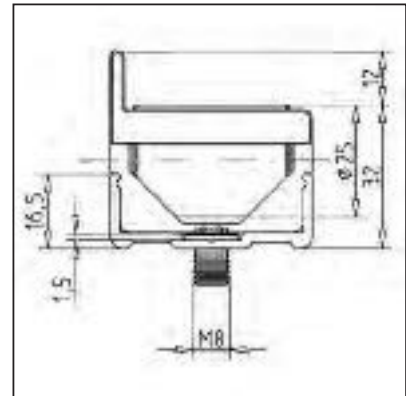
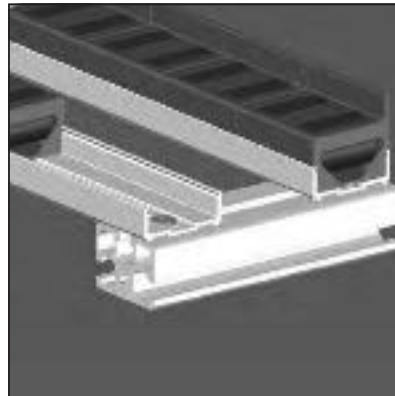
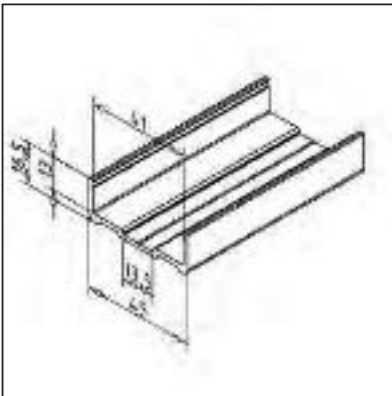
- Production of shortrollrail in connection with profile 45 x 45 R, **part no. 20.1046/0**

ASSEMBLY

- Insert roller carrier in profile
- Insert carrier roller in profile
- Clipoff cap

CARRIER SECTION 45 R

part no. 20.1133/0

**TECHN. DATA / ITEMS SUPPLIED**

- I_x = 0,289 cm⁴
- I_y = 0,428 cm⁴
- W_x = 0,128 cm³
- W_y = 0,966 cm³
- Weight 0,414 kg/m
- Length 6 m

APPLICATIONS

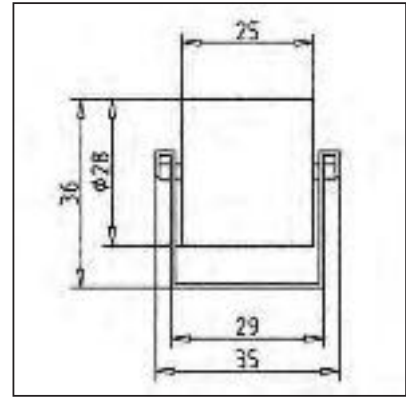
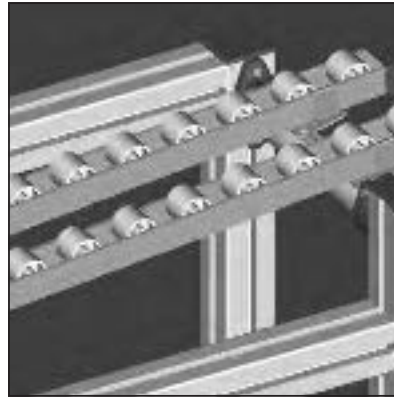
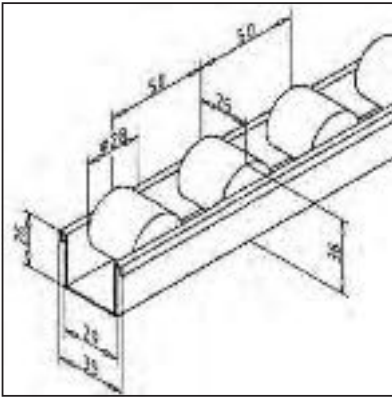
- For Production of shortrollrails
- For use of the follow roller carrier **part no. 21.1700/0** roller carrier 45 x 45 **part no. 22.1151/0** roller carrier 45 x 45R with cap **part no. 22.1152/0** roller carrier 45 x 45R with SF cap

ASSEMBLY

- Bore Ø 8,5 bring in desired positions
- With flat headed screw **part no. 21.1666/0** and slide nut M08 with spring steel sheet **part no. 21.1351/2**
- Put in desired roller carrier

ROLLER STRIP WITH CYLINDRICAL ROLLERS

part no. 32.0550/0



TECHN. DATA / ITEMS SUPPLIED

- Length according to costumers specification	
- Max. length	6000 mm
- Division	50 mm
- Supporting profile: Steel, zinc plated	
- Roller colour: yellow	
- Weight	0,595 kg/m

APPLICATIONS

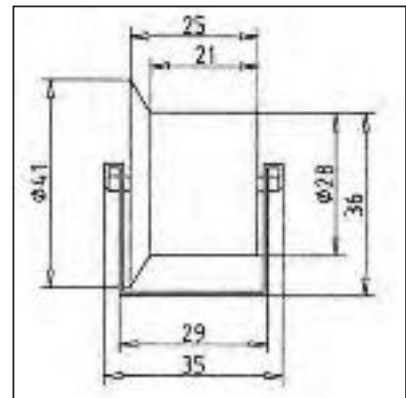
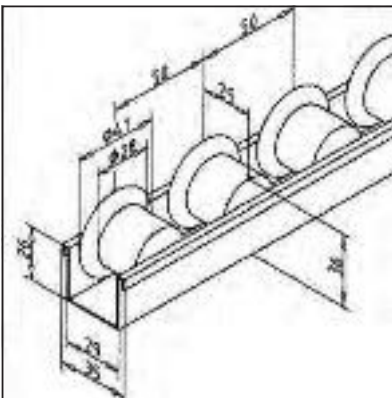
- The rollers can be used over a temperature range from -30°C up to +100°C
- **part no. 32.0555/0** highly conductive roller to avoid electrostatic charge. Roller colour: black

ASSEMBLY

- Fasten with fastening **part no. 32.0574/0** and end stop **part no. 32.0569/0** onto profile
- Directly on carrier profile

ROLLER STRIP WITH FLANGED ROLLERS

part no. 32.0560/0



TECHN. DATA / ITEMS SUPPLIED

- Length acc. to customer specification	
- Max. length	6000 mm
- Division	50 mm
- Supporting profile: Steel, zinc plated	
- Roller colour: yellow	
- Weight	0,615 kg/m

APPLICATIONS

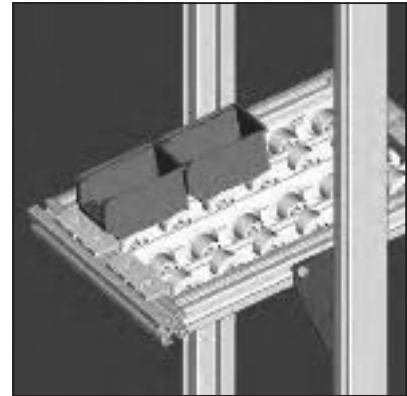
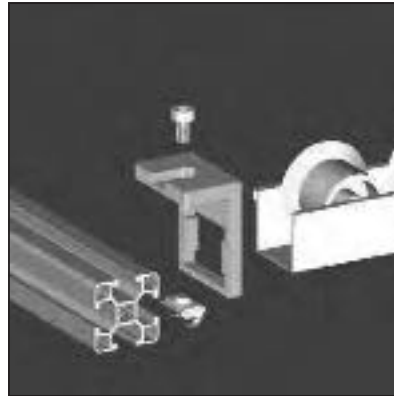
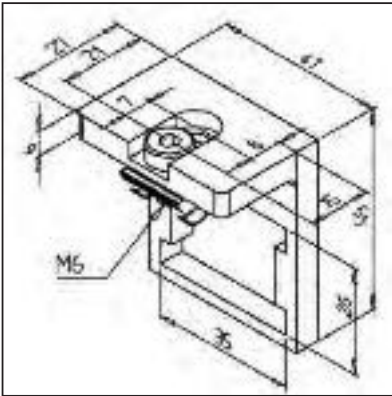
- The rollers can be used over a temperature range from -30°C up to +100°C
- **part no. 32.0565/0** highly conductive roller to avoid electrostatic charge. Roller colour: black

ASSEMBLY

- Fasten with fastening **part no. 32.0574/0** and end stop **part no. 32.0569/0** onto profile
- Directly on carrier profile

ROLLER STRIP BRACKET 30

part no. 32.0575/1

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, zinc plated	
- With fastening kit	
- Thickness	6 mm
- Weight	0,092 kg

APPLICATIONS

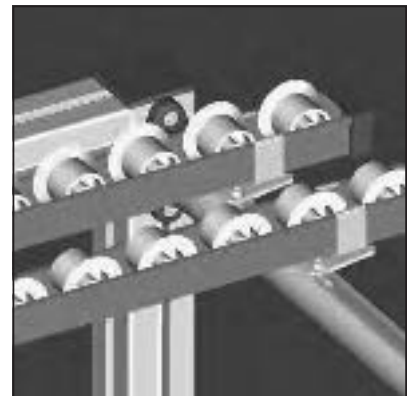
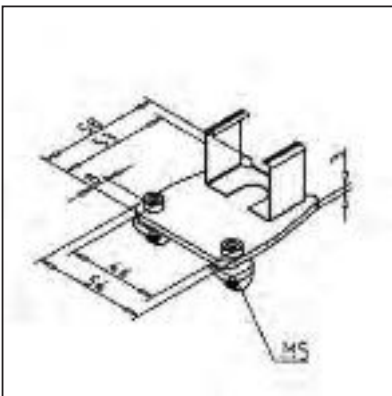
- For fastening of roller strips

ASSEMBLY

- Shorten roller strips
- Clip roller strip bracket onto roller strip and use fastening kit

ROLLER STRIP FASTENING

part no. 32.0574/0

**TECHN. DATA / ITEMS SUPPLIED**

- Fixing plate steel VA	
- Thickness	3 mm
- With the fastening kit and spring clamps for roller strip	
- Weight	0,078 kg/m

APPLICATIONS

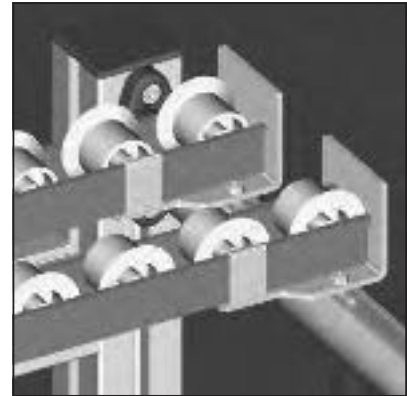
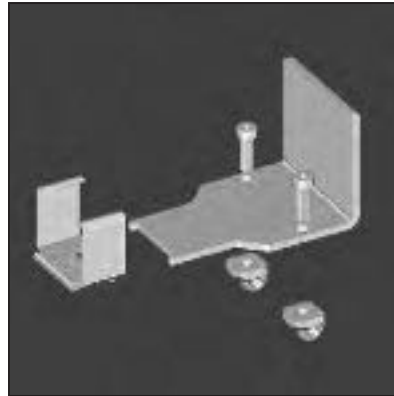
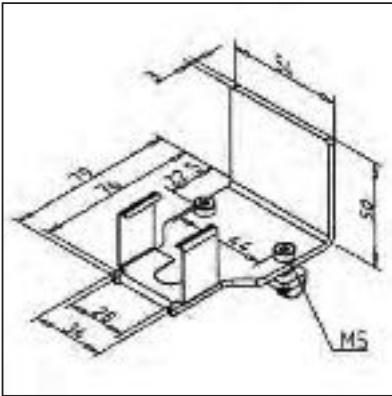
- for fastening roller strip without processing

ASSEMBLY

- For inclining roller tracks, handle profile **part no. 20.1088/0** connected to a flange bearing 32 **part no. 22.1016/0** or use a collar 32 **part no. 22.1022/0**

ROLLER STRIP END STOP

part no. 32.0569/0



TECHN. DATA / ITEMS SUPPLIED

- Stainless steel end stop
- Thickness 3 mm
- with the fastening kit and spring clamps for roller strip
- Weight 0,166 kg/m

APPLICATIONS

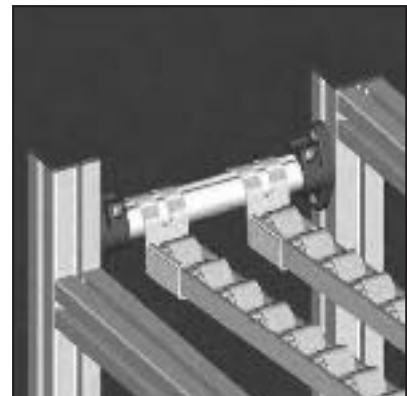
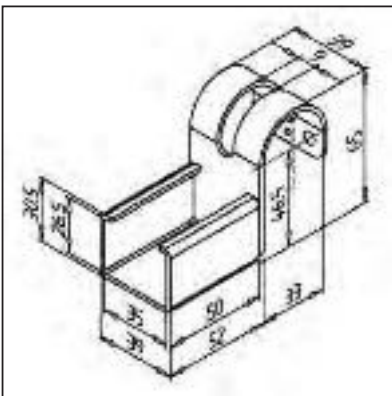
- Use as end stop for roller strip
- Install without drilling

ASSEMBLY

- Use fastening kit
- For inclining roller tracks, handle profile **part no. 20.1088/0** connected to a flange bearing 32 **part no. 22.1016/0** or use a collar 32 **part no. 22.1022/0**

ROLLER STRIP BRACKET H

part no. 32.0553/0



TECHN. DATA / ITEMS SUPPLIED

- steel, zinc-plated
- Thickness 2 mm
- Weight 0,141 kg

APPLICATIONS

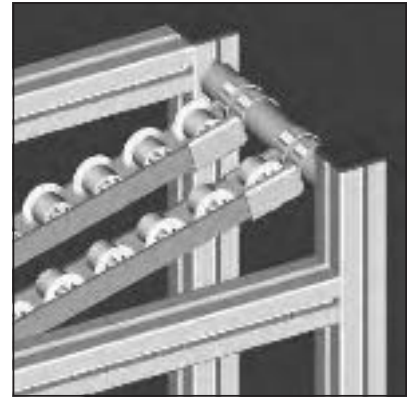
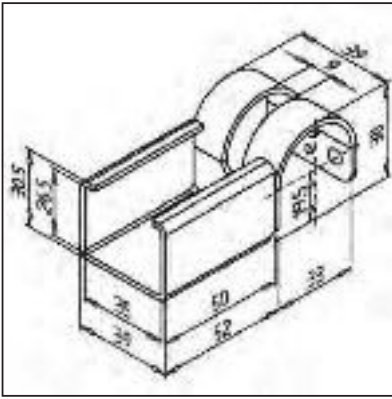
- for fastening roller strips onto handle profile 32
- used as end stop for e.g. containers

ASSEMBLY

- shorten roller strips
- clip roller strip bracket onto roller strip
- hook into handle profile 32
- if necessary secure roller strip bracket with stud screws

ROLLER STRIP BRACKET F

part no. 32.0554/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel zinc plated	
- Thickness	2 mm
- Weight	0,124 kg

APPLICATIONS

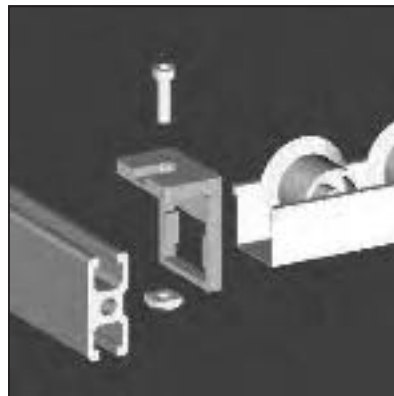
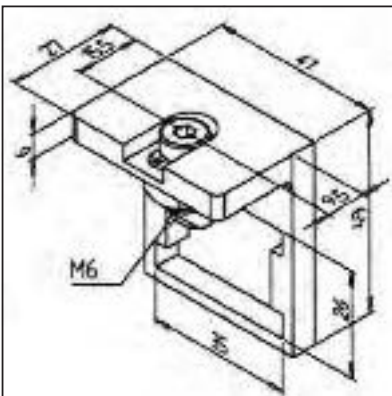
- for fastening roller strips onto handle profile 32
- Height of edges on the bracket corresponds the travelling height of rollers

ASSEMBLY

- shorten roller strips
- clip roller strip bracket onto roller strip
- hook into handle profile 32
- if necessary secure roller strip bracket with stud screws

ROLLER STRIP BRACKET 19

part no. 32.0575/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel zinc plated	
- With fastening kit	
- Thickness	6 mm
- Weight	0,096 kg

APPLICATIONS

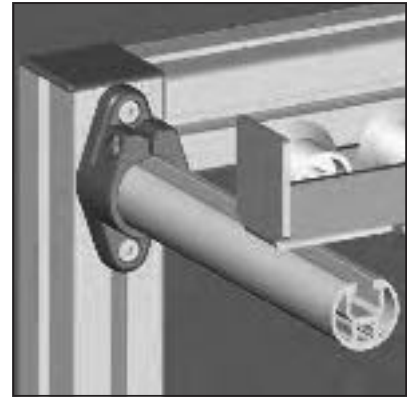
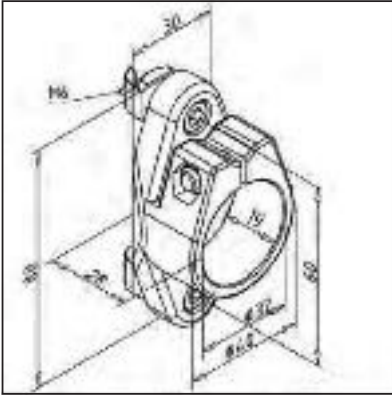
- for fastening roller strips onto profiles series 19 and 32
- Holder also serves as bedstop
- also available for profile 30 serie (see **part no. 32.0575/1**)

ASSEMBLY

- shorten roller strips
- clip roller strip into bracket and use supplied fastening kit to fasten onto profile

FLANGE BEARING 32

part no. 22.1016/0



TECHN. DATA / ITEMS SUPPLIED

- Flange bearing ABS, grey
- With fastening kit
- Weight 0,050 kg

APPLICATIONS

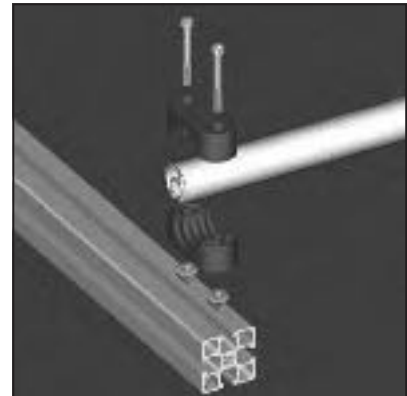
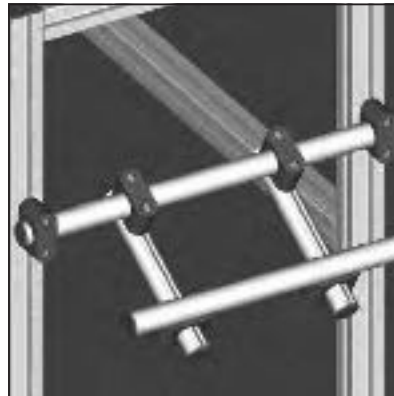
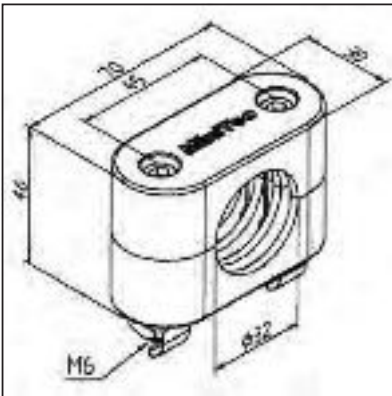
- For angle adjustable installation of handle profile 32 for roller strip

ASSEMBLY

- Use fastening kit to fasten to base frame
- Push in handle profile 32 and clamp using screws
- Assembly without drilling

STRAP HANDLE PROFILE 32

part no. 22.1022/0



TECHN. DATA / ITEMS SUPPLIED

- Material: ABS, grey RAL 7012
- Fastening kit
- Weight 0,02 kg

APPLICATIONS

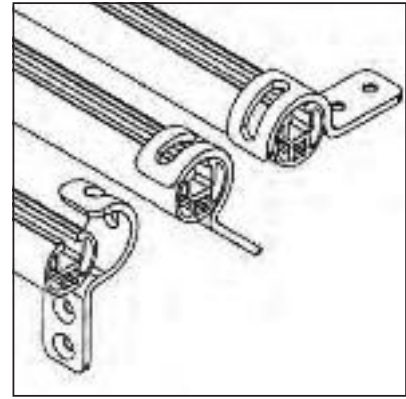
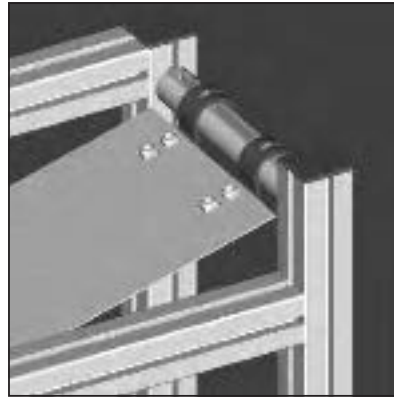
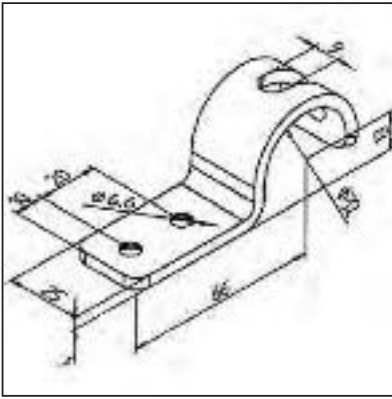
- For handle profile 32
- Handle with adjustable angle
- Simple equipment and frames

ASSEMBLY

- swivel in slide nuts
- Insert handle profile into the 2 half-shells
- Fasten with bolts

CATCH 32 FOR HANDLE PROFILE

part no. 21.0005/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, powder coated grey
- Set screw M6x16
- Square nut M6
- Weight 0,08 kg

APPLICATIONS

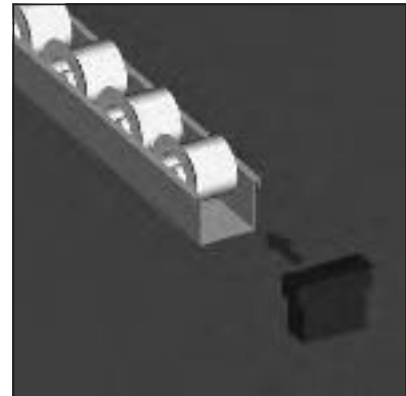
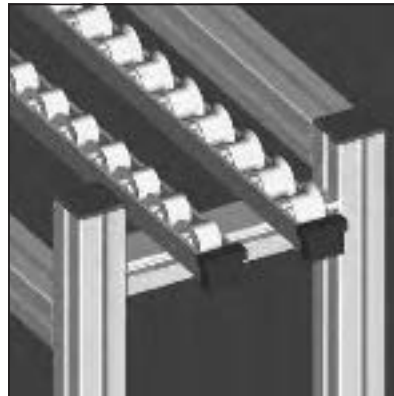
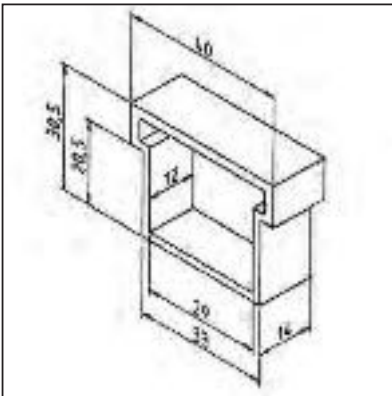
- For flexible installation of handle profile 32 for roller strip

ASSEMBLY

- To connect use countersunk screw M6
- Hook into handle profile 32
- If required, use set screw M8 x 20 and square nut M8 to secure against sliding

EDGE PROTECTION

part no. 32.0572/0



TECHN. DATA / ITEMS SUPPLIED

- Plastic, black
- ESD-capable
- Weight 0,004 kg

APPLICATIONS

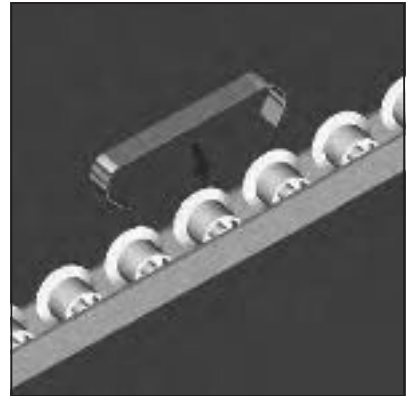
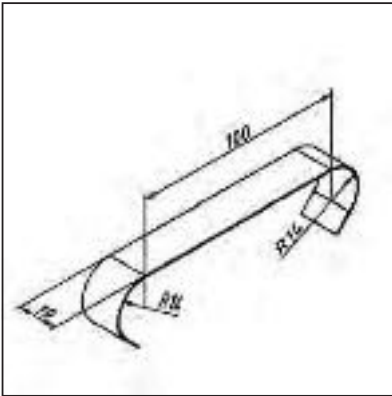
- Protection against injury

ASSEMBLY

- slip on roller strip

BRAKE PLATE

part no. 32.0571/0



TECHN. DATA / ITEMS SUPPLIED

- Brake plate on spring steel for 50 mm division

- ESD capable combined with conductive rollers

- Weight 0,017 kg

APPLICATIONS

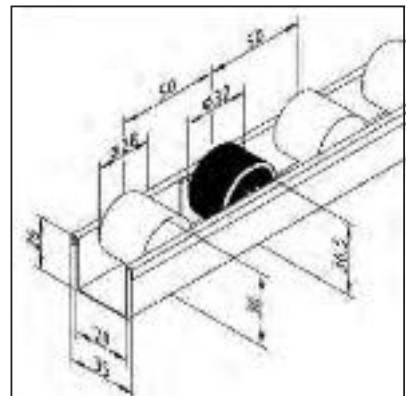
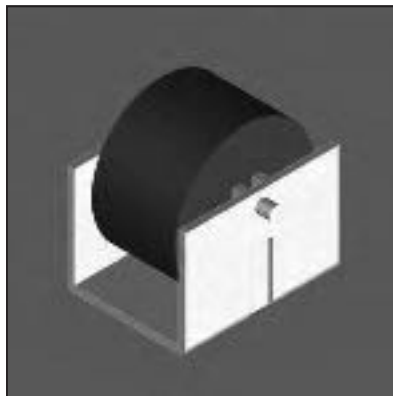
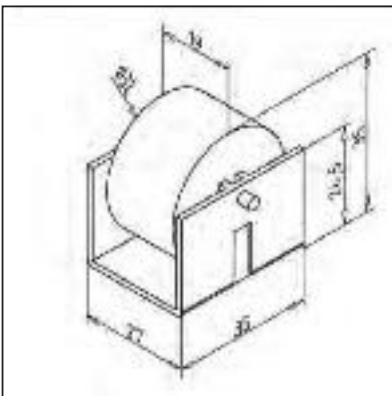
- The brake plate can be fastened at any desired location

ASSEMBLY

- Slip on roller strip

BRAKE-ROLLER

part no. 32.0562/0



TECHN. DATA / ITEMS SUPPLIED

- Roller plastic, black

- support plastic black

- Weight 0,022 kg

APPLICATIONS

- used for roller strips with decline, to decelerate transported material

ASSEMBLY

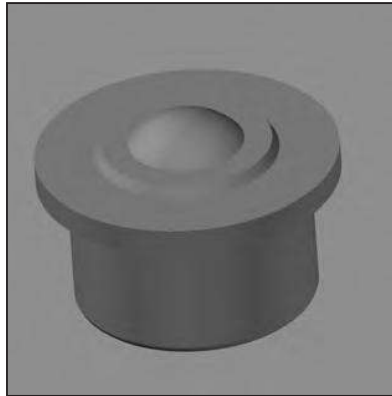
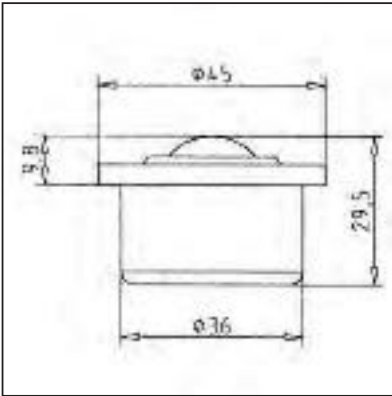
- remove existing roller from roller strip

- insert support at the same place and clip brake-roller in

- pay attention to rolling direction of support and roller when mounting

BALL CASTER

part no. 35.0041/0



TECHN. DATA / ITEMS SUPPLIED

- Slide units made of steel sheet, galvanized, steel balls	
- DW	22,2 mm
- Basic load rating C:	1200 N
- Weight	0,13 kg

APPLICATIONS

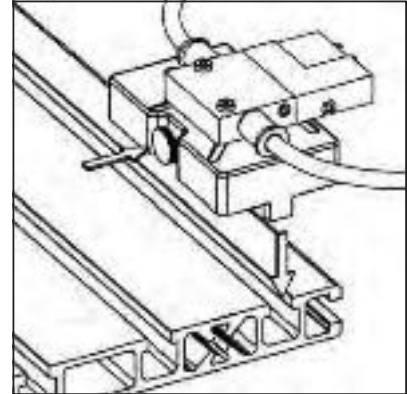
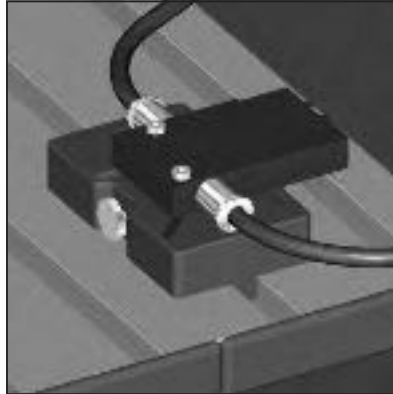
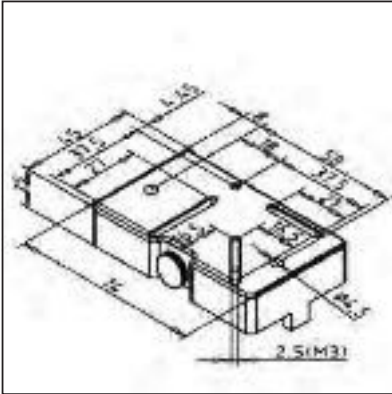
- Ball casters for conveyors and automation systems
- Enable a simultaneous longitudinal and transverse movement
- Assembly into work tables or roller conveyors
- Ball casters also as running gear for crates, equipment, furniture and machines

ASSEMBLY

- Insert into prepared bore
- Or mount with tolerance ring **part no. 35.0001/0**
- Caution: for installation using tolerance ring of other bore diameter ($37.7 + 0.2$ mm)

UNIVERSAL CLAMPING SOCKET

part no. P20.060/0



TECHN. DATA / ITEMS SUPPLIED

- Case PA 6 GF
- Steel button
- Weight 0,037 kg

APPLICATIONS

- For assembly of pneumatic switches for learning and training purposes
- To fasten diverse pneumatic switches
- Fastening of valves including those from different manufacturers

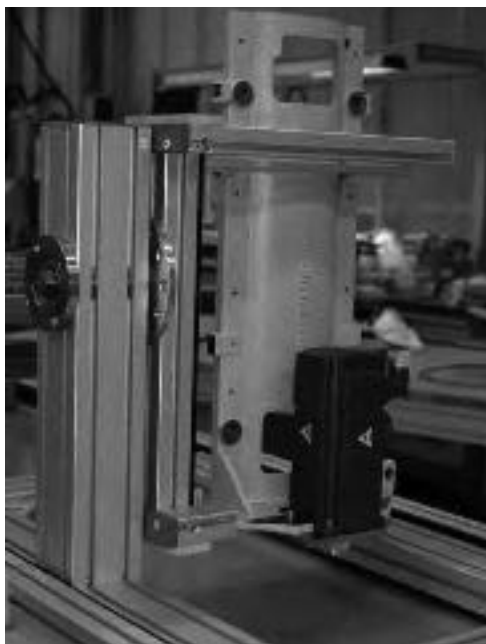
ASSEMBLY

- Simple pneumatic accessories fastened with M3 screws (not in scope of delivery) onto the clamping socket
- By pressing the button, the clamping socket can be fit into the slot
- When released, it is automatically indexed

MOUNTING DEVICES

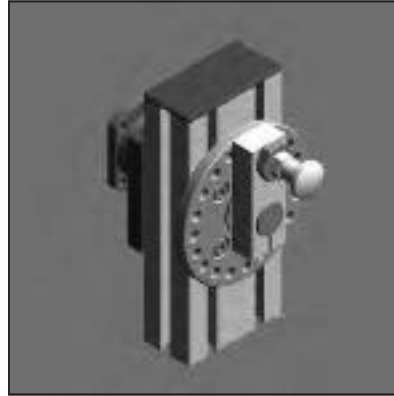
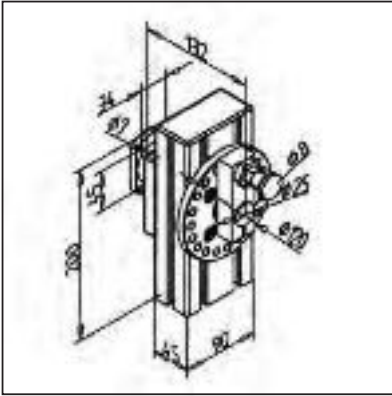
Reusability i.e. flexibility is - besides fast set-up times - an important factor in the development of mounting devices.

In combination with the Minitec profile system, adaptability is always assured in matters of differing workpieces with simultaneously low tooling effort and minimum tooling time.



TURNING DEVICE 45 X 90

part no. 32.2011/0



TECHN. DATA / ITEMS SUPPLIED

- Load max.	1500 N
- M max	150 Nm
- 18° increments	
- Indexing bolt with lock	
- Bearing using 2 slide bushings	
- Weight	3,320 kg

APPLICATIONS

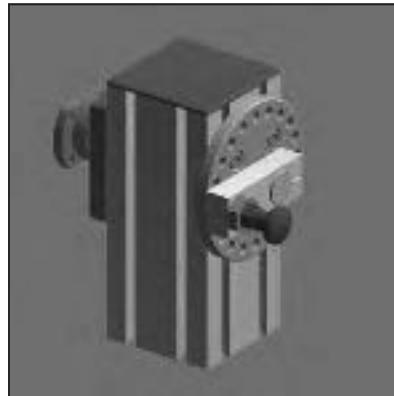
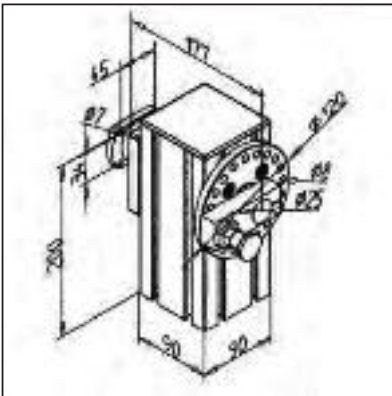
- Positioning of components for installation purposes with repeatable accuracy
- Remote controlled pneumatic locking on request

ASSEMBLY

- Fastening with terminal strip as profile extension or profile connector
- Clearance and turning position adjustable using clamp connection

TURNING DEVICE 90X90

part no. 32.2010/0



TECHN. DATA / ITEMS SUPPLIED

- Load max.	1500 N
- M max	150 Nm
- 18° increments	
- Indexing bolt with lock	
- Bearing using 2 slide bushings	
- 4 T-slot bars for installation on profile construction	
- Weight	4,374 kg

APPLICATIONS

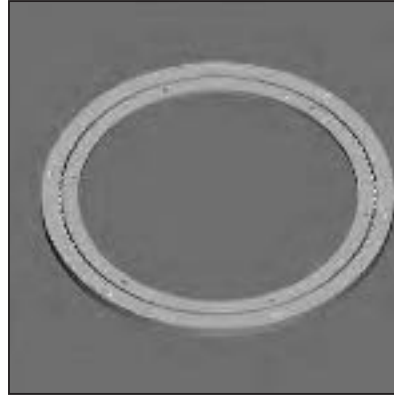
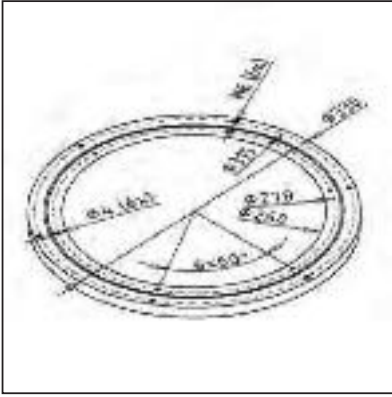
- Positioning of components for installation purposes with repeatable accuracy
- Remote controlled pneumatic locking on request

ASSEMBLY

- Fastening with terminal strip as profile extension or profile connector
- Clearance and turning position adjustable using clamp connection

ROTATING ASSEMBLY

part no. 32.2005/0



TECHN. DATA / ITEMS SUPPLIED

- Rotation assembly of zinc die casting with steel balls
- Axial load up to 300 kg
- ESD capable
- Ø 330 x 13.5 mm
- Low maintenance
- Aluminium circular blanks on request
- Weight 0,575 kg

APPLICATIONS

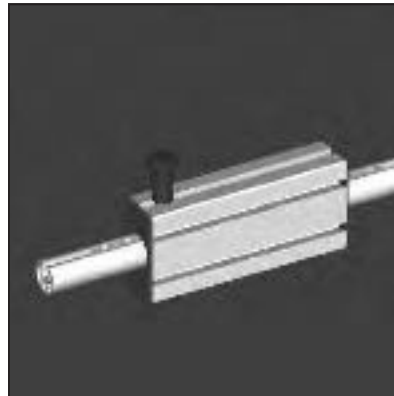
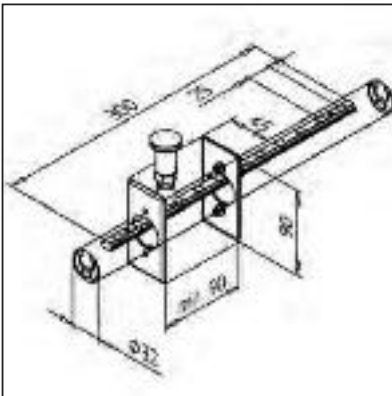
- Industrial application in furniture and display construction, simple turning devices for assembly equipment

ASSEMBLY

- Mount through the holes D=4 mm to the profile frame or the tabletop
- Mount rotary plate or similar to the outside ring

DETENT PIN ADJUSTMENT H

part no. 29.0851/0



TECHN. DATA / ITEMS SUPPLIED

- detent pin with interlock
- perforated t-slot for detent splitting 25 mm, length 300 mm
- end caps
-
- Weight 0,241 kg

APPLICATIONS

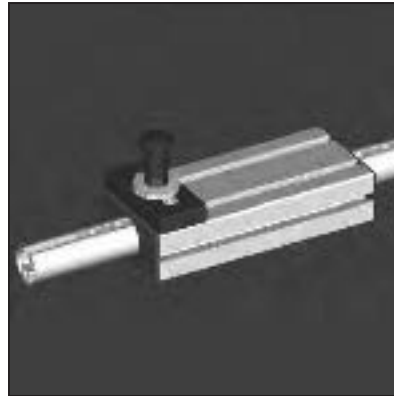
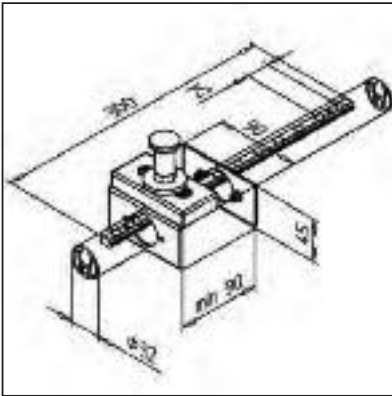
- for height-adjustable tables, conveyors etc.
- for lock in place adjustment of lateral guides
- for adjustable devices and clampings

ASSEMBLY

- fasten perforated t-slot bar onto handle profile 32
- screw detent pin into profile 45x90 S
- please indicate length of handle profile 32 (min. 300 mm) and profile 45x90S (min. 90 mm)!

DETENT PIN ADJUSTMENT F

part no. 29.0852/0



TECHN. DATA / ITEMS SUPPLIED

- detent pin with interlock
- perforated t-slot for detent splitting 25 mm, length 300 mm
- end caps
- base and transport plate for insertion of detent pin
- Profile 45 x 90S processed
part no. 29.0858/0 and handle profile 32
part no. 20.1088/0 not included as supplied items
- Weight 0,459 kg

APPLICATIONS

- for height-adjustable tables, conveyors etc.
- for lock in place adjustment of lateral guides
- for adjustable devices and clampings

ASSEMBLY

- fasten perforated t-slot bar onto handle profile 32
- screw detent pin into base and transport plate and profile 45x90 S
- **please indicate length of handle profile 32 (min. 300 mm) and profile 45x90S (min. 90 mm)!**

ESD-ACCESSORIES

ESD (Electro Static Discharge) is the electrostatic discharge of charged objects or persons caused by direct contact or sparks. The reasons for ESD are electric charges that are generated by charge shifting or electrostatic induction in electric fields.

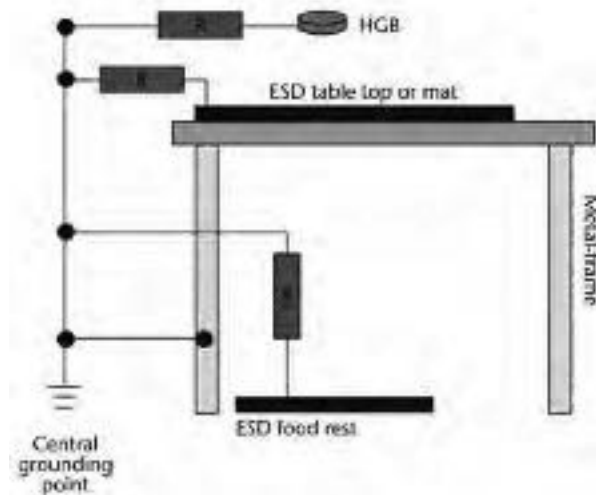
Reasons for this charging are for example:

- persons and their clothing
- workplaces including floors
- packaging constructions and tools



EGB - electrostatic endangered components, particularly semi-conductor components

ESDS - safety measures for electrostatic endangered components

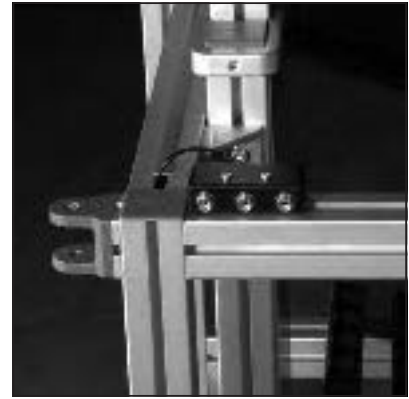
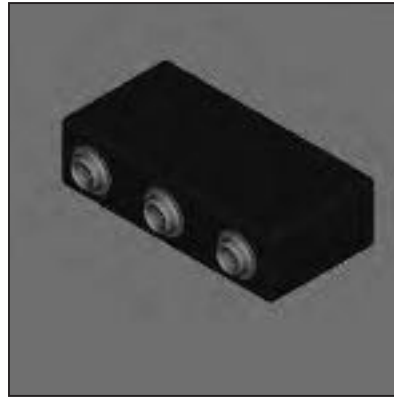
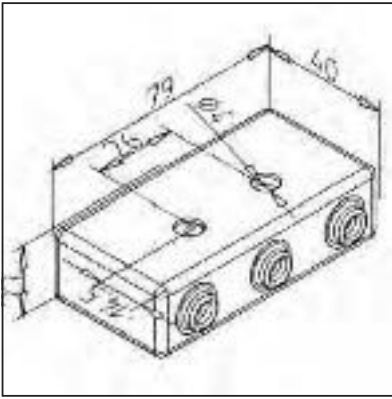


To guarantee a safe protection of electrostatic endangered components and devices all components have to be conductively connected and the whole construction has to be grounded.

Demonstration of the single components using the example of a MiniTec-System workplace.

ESD EARTHING BOX

part no. 32.1002/0



TECHN. DATA / ITEMS SUPPLIED

- As earth connection point for personnel earthing
- Earthing wire 2m length
- Connection type: 4mm eye
- Per connection 1 MOhm fuse
- 3x 10 mm push button connection

APPLICATIONS

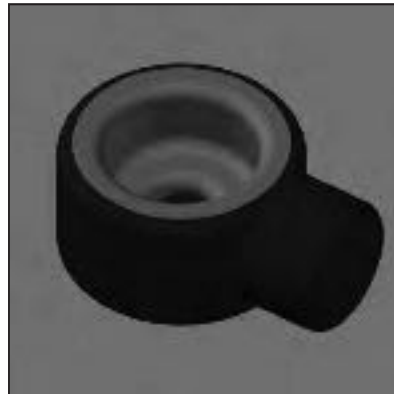
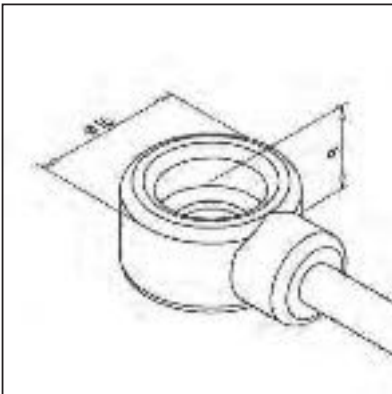
- Earth connection point EBP for personnel grounding

ASSEMBLY

- Fasten with chipboard screws \varnothing 4x30 to tabletop
- Fasten with cyl. screw M4x30 **part no. 21.1285/0** and 2x slide nuts M4 **part no. 21.1310/2** to the profile

EARTH LEAD ESD

part no. 32.1004/0



TECHN. DATA / ITEMS SUPPLIED

- 1 MOhm fuse
- 10 mm push button / 4 mm eye
- Length: 3 m

APPLICATIONS

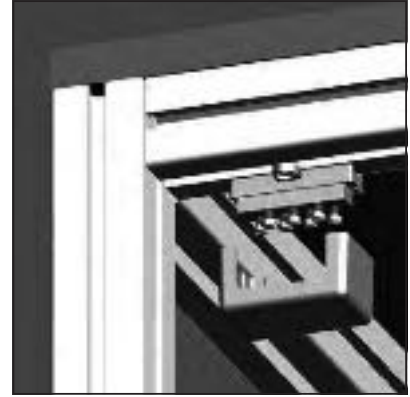
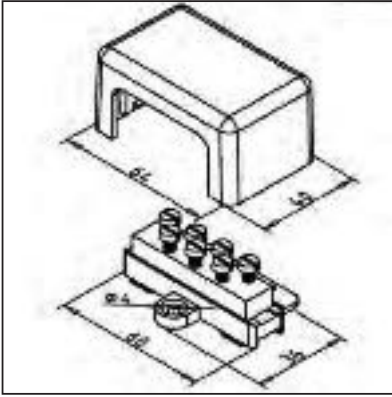
- For table and floor coverings

ASSEMBLY

- Connect to central grounding strip **part no. 32.1003/0**
- Clip onto table pad

CENTRAL EARTHING BOX ESD

part no. 32.1003/0



TECHN. DATA / ITEMS SUPPLIED

- Terminal strip for connection of max. 7 grounding wires
- With screw connections for lugs with 4 mm eye

APPLICATIONS

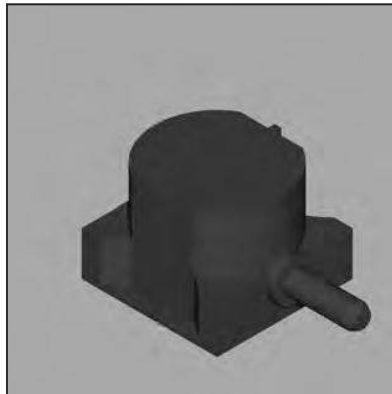
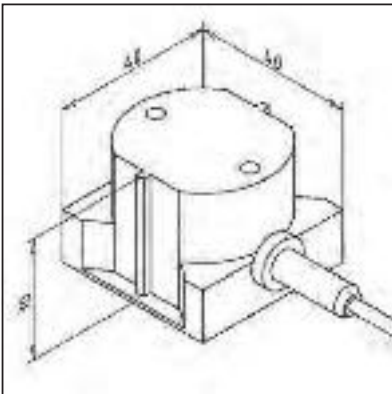
- Suitable for connecting grounding wires to ESD or protective earth

ASSEMBLY

- Attach to the tabletop with accessories from scope of supply

DUMMY PLUG WITHOUT RESISTOR

part no. 32.1001/0



TECHN. DATA / ITEMS SUPPLIED

- Dummy plug for Schuko outlet
- With 2m smooth cable
- Connection type: 4 mm eye, without resistor

APPLICATIONS

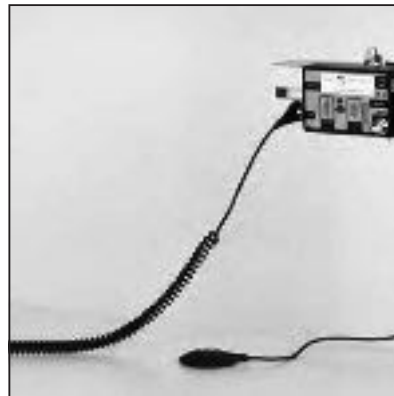
- For direct grounding from tabletop and floor coverings or the central earthing strip

ASSEMBLY

- Connect to central grounding strip **part no. 32.1003/0**
- Plug into suitable Schuko outlet

SPIRAL CABLE HIGHELASTIC

part no. 32.1017/0



TECHN. DATA / ITEMS SUPPLIED

- Spiral cable highelastic, black
- 10mm/ 10mm push button
- 1 MOhm fuse
- Length 1,80 m

APPLICATIONS

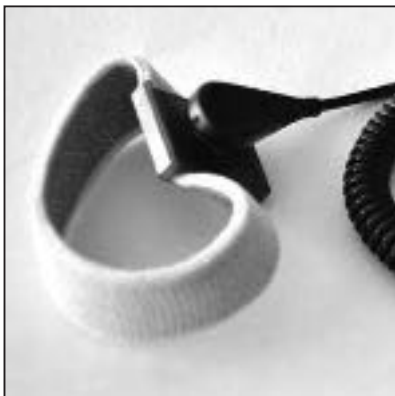
- For connecting wristlets onto earthing box

ASSEMBLY

- Fasten spircal cable with push button onto earthing box and wristlet

WRISLET ELASTIC

part no. 32.1018/0



TECHN. DATA / ITEMS SUPPLIED

- Wristlet blue
- Push button 10 mm

APPLICATIONS

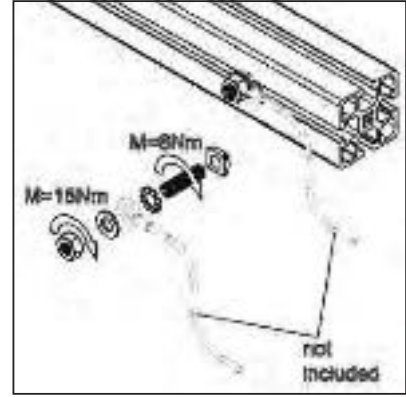
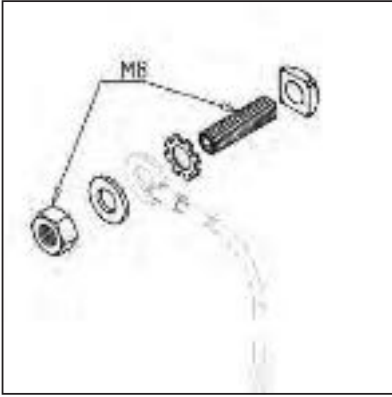
- Earthing of employees

ASSEMBLY

- Mount on wrist and connect with spiral cable with earthing box

GROUNDING POINT

part no. 32.0769/0



TECHN. DATA/ITEMS SUPPLIED

- grub screw M8x30
- slide nut-Z M8
- toothed washer
- washer
- hexagon nut

APPLICATIONS

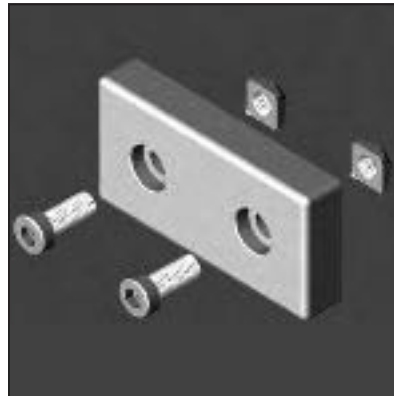
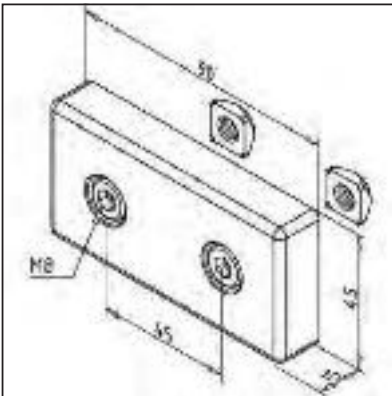
- For Earthing of worktables and constructions

ASSEMBLY

- Fasten with attached assembly drawing

CONNECTING PLATE 45 X 90 CONDUCTIBLE

part no. 21.1472/6



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- With fastening kit
- Weight 0,189 kg

APPLICATIONS

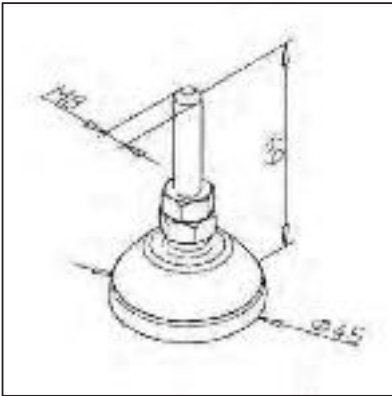
- Seamless connecting of protection device
- For hardening of safety fence
- Connection of pre-staged module

ASSEMBLY

- Use fastening kit

HINGED FOOT D45 CONDUCTIVE

part no. 32.1011/0



TECHN. DATA / ITEMS SUPPLIED

- Plate PA, black
- Anti-slip insert
- Spindle, steel, zinc plated
- Counter nut, steel, zinc plated
- All spindles fit all plates
- Conductive
- Hinged foot ESD D=45 m with spindle M10 **part no. 32.1012/0**

APPLICATIONS

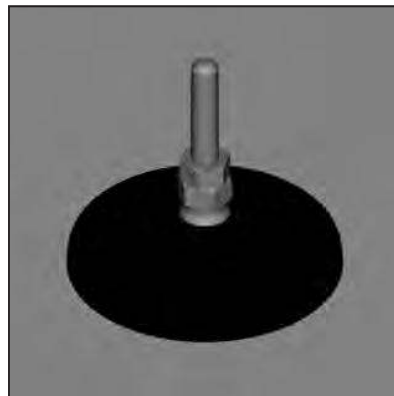
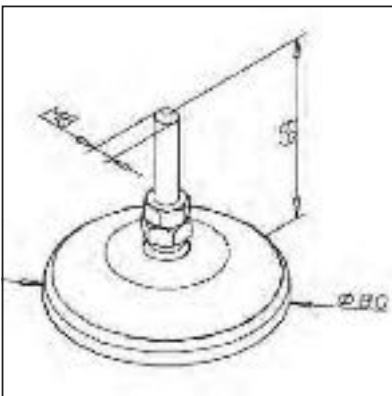
- Height-adjustable constructions of every type
- Guards, tables, show cases, Conveying systems, workstations

ASSEMBLY

- Insert into central hole of the profile (can be drilled up to thread M12)
- Larger threads in connection with connection plate

HINGED FOOT D80 CONDUCTIVE

part no. 32.1021/0



TECHN. DATA / ITEMS SUPPLIED

- Plate PA, black
- Anti-slip insert
- Spindle, steel, zinc plated M8
- Counter nut, steel, zinc plated
- All spindle fit all plates
- Conductive
- Hinged foot ESD D=80 m with spindle M10 **part no. 32.1022/0**

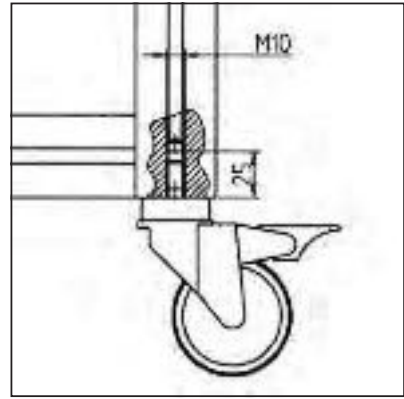
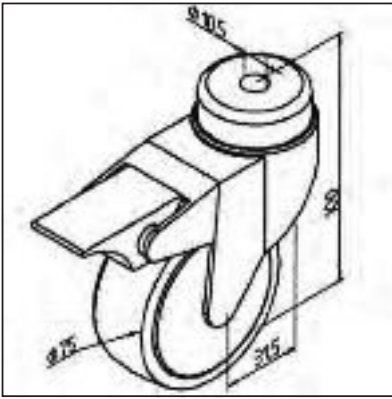
APPLICATIONS

- Height-adjustable constructions of every type
- Guards, tables, show cases, Conveying systems, workstations

ASSEMBLY

- Direct in central hole of the profile (can be drilled up to thread M12)
- Larger threads in the connection with connection plate

GUIDE ROLLER WITH LOCKING DEVICE D75X100, CONDUCTIVE part no. 32.1030/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated	
- Conductive	
- Roller, solid rubber, grey	
- With fastening kit	
- Weight	0,250 kg
- Load max.	50 kg
- Further versions on request	

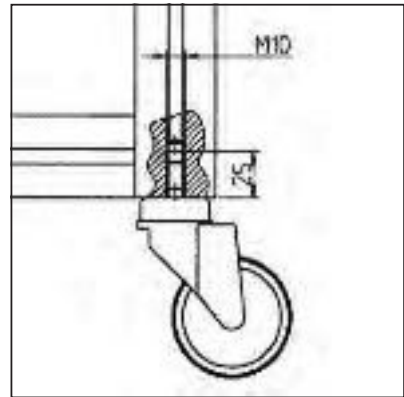
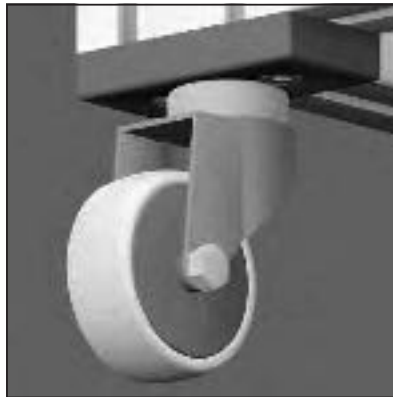
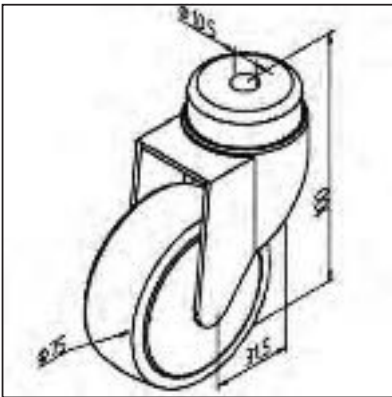
APPLICATIONS

- Movable tables
- Material racks
- Show cases etc.

ASSEMBLY

- Mount directly onto the central hole of the vertical profile with fastening kit, then drill and tap thread M10 x 25.
- If the roller should be centrally positioned in profile 45 x 4 5 or bigger, a connection plate is necessary

GUIDE ROLLER WITHOUT LOCKING DEVICE D75 X 100, CONDUCTIVE part no. 32.1031/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated	
- Conductive	
- Roller, solid rubber, grey	
- With fastening kit	
- Weight	0,372 kg
- Load max.	50 kg
- Further constructions on demand	

APPLICATIONS

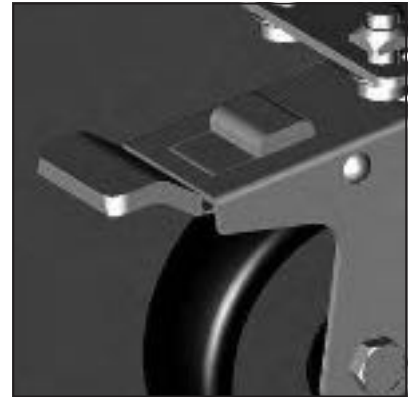
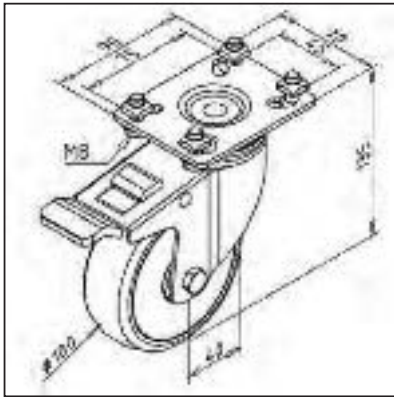
- Movable tables
- Material racks
- Show cases etc.

ASSEMBLY

- Mount directly onto the core bore of the vertical profile with fastening kit, then drill and tap thread M10 x 25.
- If the roller should be centrally positioned in profile 45 x 45 or bigger, a connection plate is necessary

GUIDE ROLLER 100 / 135 WITH ADJUSTER, CONDUCTIVE

part no. 32.1034/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated	
- Conductive	
- Roller, solid rubber, grey	
- With fastening kit	
- Weight	0,243 kg
- Load max.	90 kg

APPLICATIONS

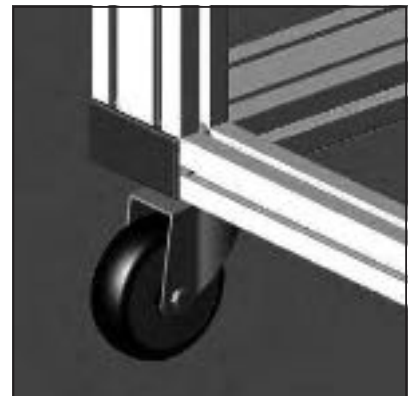
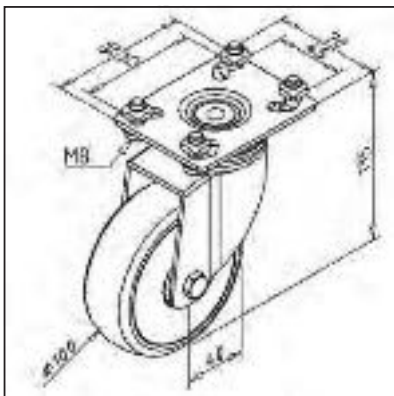
- Movable tables
- Material racks
- Show cases etc.

ASSEMBLY

- Mount directly onto the central hole of the vertical profile with fastening kit, then drill and tap thread M10 x 25.

GUIDE ROLLER 100 / 135 WITHOUT ADJUSTER, CONDUCTIVE

part no. 32.1035/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated	
- Conductive	
- Roller, solid rubber, grey	
- With fastening kit	
- Weight	0,225 kg
- Load max.	90 kg

APPLICATIONS

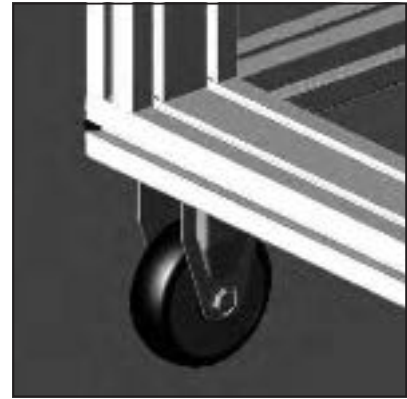
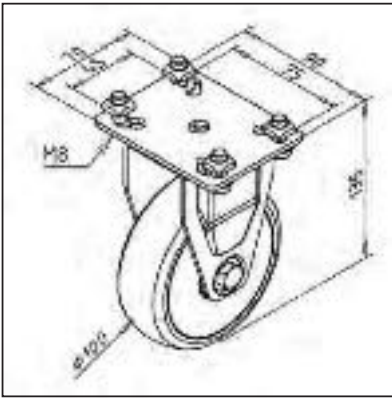
- Movable tables
- Material racks
- Show cases etc.

ASSEMBLY

- Mount directly onto the central hole of the vertical profile with fastening kit, then drill and tap thread M10 x 25.

FIXED CASTOR FOR HEAVY LOADS 100 / 135, CONDUCTIVE

part no. 32.1036/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- Conductive
- Roller, solid rubber, grey
- With fastening kit
- Weight 0,163 kg
- Load max. 90 kg

APPLICATIONS

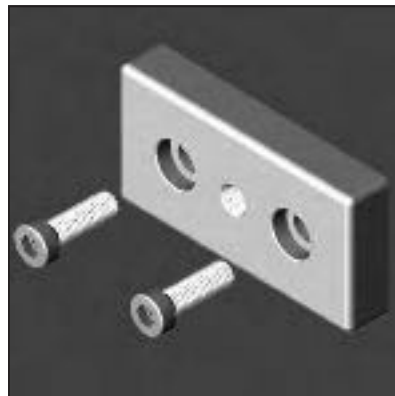
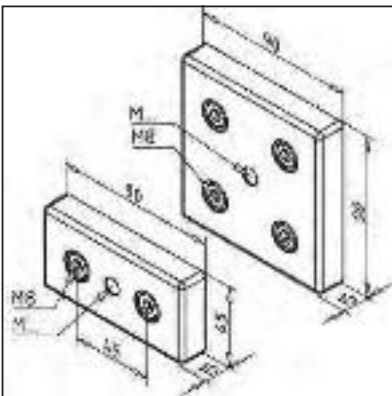
- Movable tables
- Material racks
- Show cases etc.

ASSEMBLY

- Mount directly onto the central hole of the vertical profile with fastening kit, then drill and tap thread M10 x 25.

MOUNTING PALTE, CONDUCTIVE

part no. diverse



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD
- With fastening kit
- Different types:
 Mounting plate 45 x 90 M10 conductive
part no. 21.1038/6
 Mounting plate 45 x 90 M12 conductive
part no. 21.1039/6
 Mounting plate 90 x 90 M10 conductive
part no. 21.1041/6
 Mounting plate 45 x 90 M12 conductive
part no. 21.1041/6

APPLICATIONS

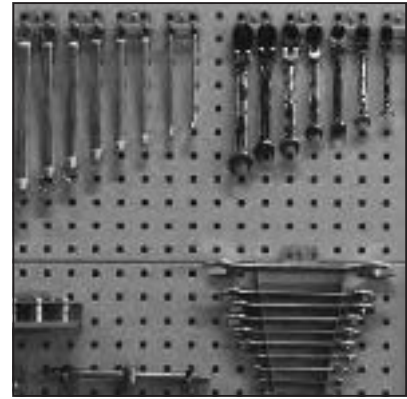
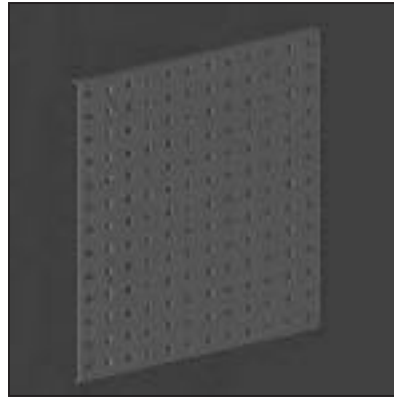
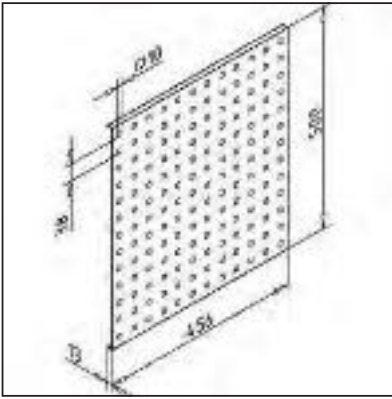
- Centric fastening at profile 45 x 90
- Fastening of guide rollers

ASSEMBLY

- Use fastening kit

TOOL HOLDER PLATE

part no. 32.0635/6



TECHN. DATA / ITEMS SUPPLIED

- Steel, light grey, 1.25 mm powder-coated
- Square hole perforation 10 x 10 mm at 38 mm grid pattern
- Height 456 mm
- Width 500 mm

OTHER VERSIONS

- Width B 1000 mm, **part no. 32.0636/6**
- Width B 1200 mm, **part no. 32.0637/6**
- Width B 1500 mm, **part no. 32.0638/6**
- Width B 2000 mm, **part no. 32.0639/6**

ASSEMBLY

- Fasten onto portal structure

WORKPLACE SYSTEMS

REQUEST WORKTABLE

Container table Desk table height adjustable with portal without portal ESD-Version

Basic dimension

Working height H2 mm

Depth T1 mm

Table dimensions

Width B mm

Working height H mm

Depth T mm

Ground clearance H1 mm

Foot rest Depth F mm

PREFERRED DIMENSIONS OF TABLES

B = 1000/1200/1500/2000 mm T = 700 mm

Worktable (sitting) H = 700-740 mm

Worktable (standing) H = 900-1000 mm

Height adjustment

manually hydraulic electric hydraulic

electrically mechanically

Visual protection

yes no

Material

Tabletops

Width B mm

Depth T mm

Material

part no.

PREFERRED DIMENSIONS OF TABLETOPS

B = 1000/1200/1500/2000 mm T = 700 mm

Foot rest

ECO Standard Comfort

part no.

Under counter cabinet

left right none

left/part no.

right/part no.

colour

Energy supply

yes (see separate request) no

Others

Lighting

Side luminaire 36

2x side luminaire 36

Zentralleuchte 78

Luminaire 78 & 2x Luminaire 36

Center luminaire 116

SAL- LED 10W 20W 30W dimmable

Lucidus 24W 36W 56W

Others

WORKPLACE SYSTEMS

REQUEST WORKTABLE

Options

	part no.	Quantity		Position for Assembly
<input type="checkbox"/> Document support	32.0605/0	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> Document bar	32.0610/0	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> Tool case S	26.3001/1	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> Balancer	29.0111/0	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> Tool support	32.0510/0	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> Tool holder plate	32.0635/0	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> Tool holder set	32.0530/0	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> C-Section rail 30	32.0220/0	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> Holder C-Section rail 30	32.0222/0	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> Cap for C-Profile rail	32.0223/0	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> Cable trolley	32.0225/0	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> Limit stop	32.0226/0	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> Monitor carrier with keyboard storage	32.0517/0	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> Drawing holder	32.0608/0	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> Dokument clip	32.0609/0	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> Tool hanger	21.1769/0	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> Tool trolley	32.0224/0	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> Depositing console	32.0501/0	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> Holder, semi open front container	32.0516/0	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> Semi open front container rack	32.0514/0	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> Hinged extension arm	32.0201/0S	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> Depositing board / Monitor support	32.0512/0	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> Bottle holder	32.0547/0	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> Beverage bag holder	32.0507/0	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> Professional multiple-socket outlet 7-fach	32.0703/0	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> Recyclable material collector	29.0022/0	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> Recyclable material collector attachment	32.0024/0	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> Double outlet WR	32.0779/0	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> Double outlet SR	32.0779/0	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> Two-way switch	32.0725/0	<input type="checkbox"/>	mounted	<input type="checkbox"/>
<input type="checkbox"/> Two-way switch / Outlet	32.0752/0	<input type="checkbox"/>	mounted	<input type="checkbox"/>

Contact details

Company	<input type="text"/>	<input type="checkbox"/> Please call me back
Contact person	<input type="text"/>	<input type="checkbox"/> Please send me an offer
Phone no.	<input type="text"/>	
Fax no.	<input type="text"/>	
E-Mail	<input type="text"/>	

WORKPLACE SYSTEMS

REQUEST KANBAN-SYSTEM

Base frame

- Depth T mm
- Width B mm
- Slope W° Standard 4° optional
- Number of levels pcs.
- Number of tracks per level pcs.
- Return layer yes no



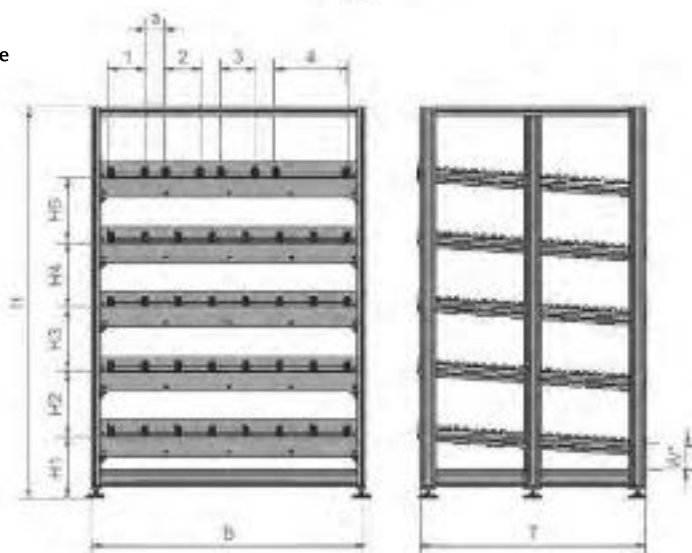
Goods to be transported

- Length L mm
- Width B mm
- Height H mm
- max. load with box kg
- Transport direction box longitudinal transverse

Rollen

- Flange rollers ESD-version yes no
- Cylindrical rollers ESD-version yes no

Level	Level height mm	Track width mm			
		1	2	3	4
H1					
H2					
H3					
H4					
H5					



For different transport goods, floors and tracks we will prepare an individually tailored offer to your needs.

Dimension a: Longitudinal transport: 30 mm, Transverse transport: 100 mm

Dimension a is the distance between the boxes. In the transverse transport this distance increases due to the grip distance when mounting and removing boxes.

Contact details

- Company
 - Contact person
 - Phone no.
 - Fax no.
 - E-Mail
- Please call me back
 Please send me an offer

4



478 4.1 BELT CONVEYORS



487 4.2 ROLLER CONVEYORS



492 4.3 TIMING BELT CONVEYORS



495 4.4 CLEAN ROOM CONVEYORS



497 4.5 CONVEYOR 48



501 4.6 COMPONENTS



528 4.7 TRANSFER SYSTEM TSG



545 4.8 SEGMENTED CHAIN CONVEYOR GKF



549 4.9 FLEXIBLE ASSEMBLY LINES FMS

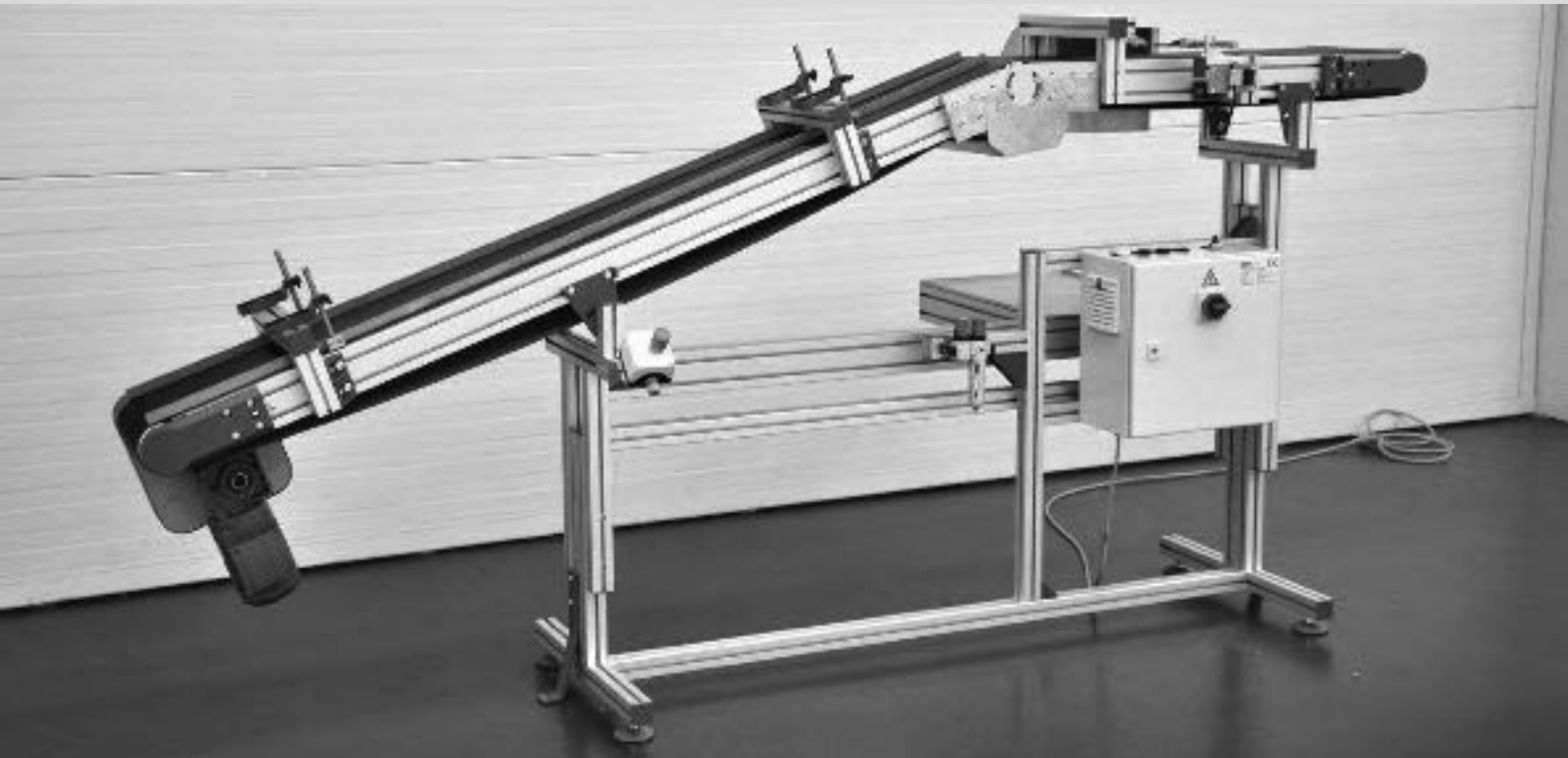


552 4.10 ROLLER CONVEYORS RMS

CONVEYORS

BELT CONVEYORS

EXAMPLES



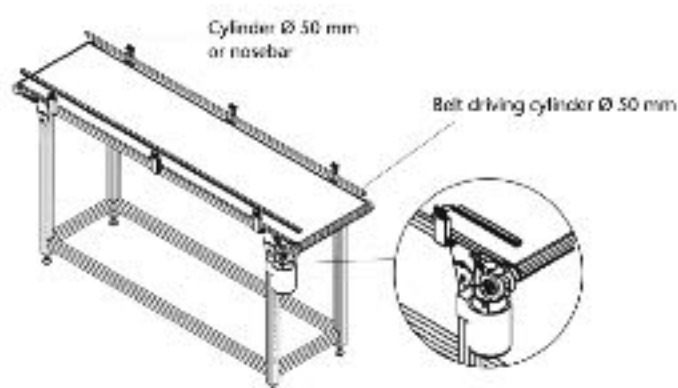
BELT CONVEYORS

SERIES 45

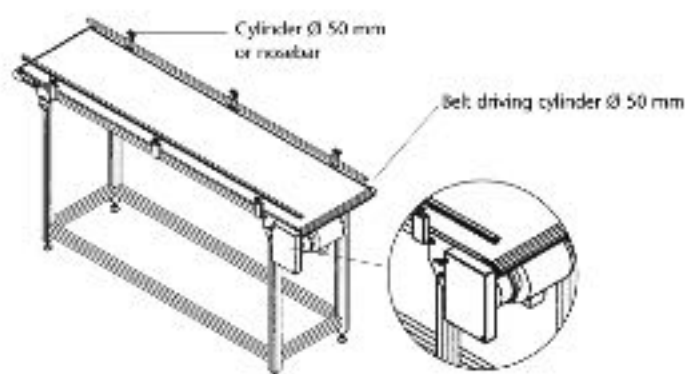
The belt conveyor module in our MiniTec ICADassembler construction software designs your belt conveyor automatically based on your requirements. Furthermore it calculates the deflection, suggests the number of supports and generates the parts list, all within a few minutes. Assembly can be completed quickly and easily as a result of our proven components.

Motor arrangement

Plug-on motor

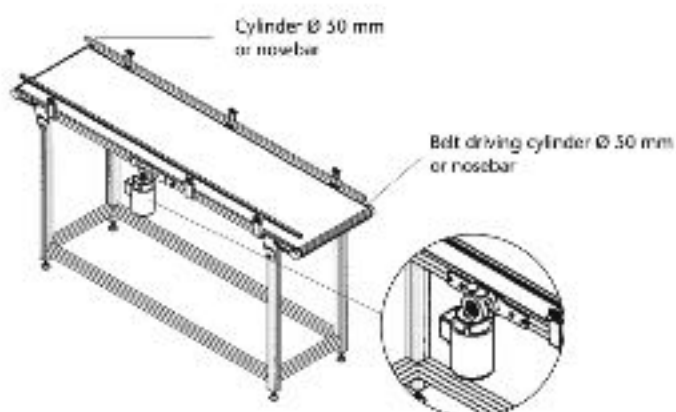


Covered flanged motor



Center drive (Direct drive)

- Belt width max. 300 mm with nosebar
- Belt width max. 800 mm with cylinder Ø 50

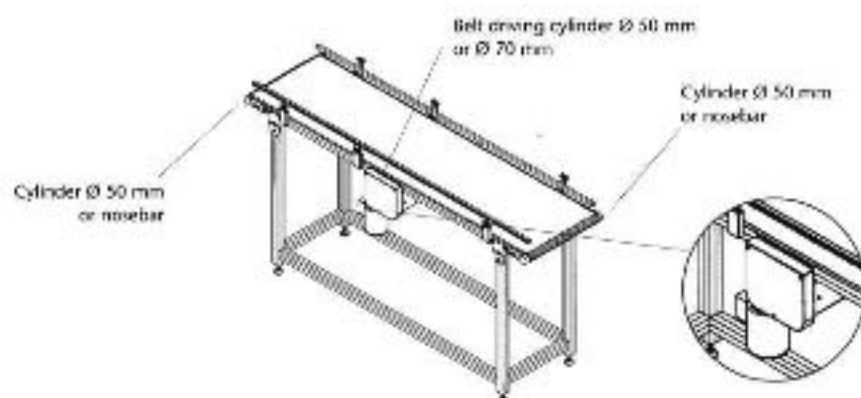


BELT CONVEYORS

SERIES 45

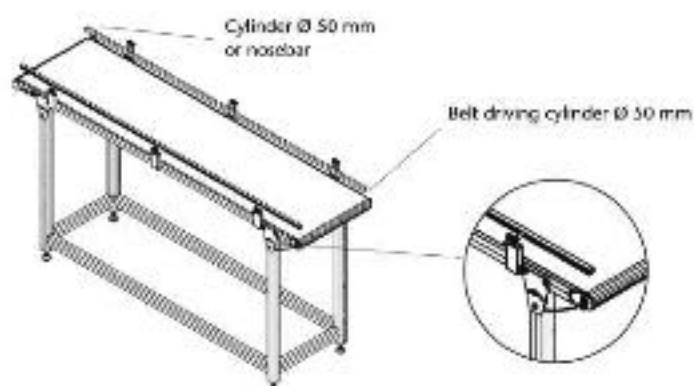
Center drive (Direct drive)

- Belt width max. 800 mm



Cylinder motor

- Belt width min. 260 mm
- Belt width max. 500 mm
- max. length 2000 mm
- max. load 20 kg



Subconstructions



Height adjustable



Standard



one foot

BELT CONVEYORS

REQUEST STANDARD BELT CONVEYOR 45

Standard dimensions

Axial distance mmBelt width L mm

Operating conditions

Goods to be conveyed Unit weight kgTotal belt load kgTemperature of goods °C

Subconstruction

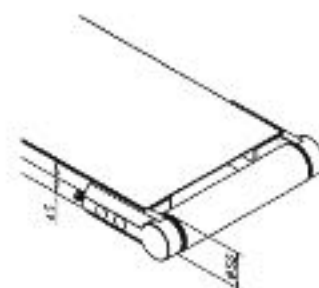
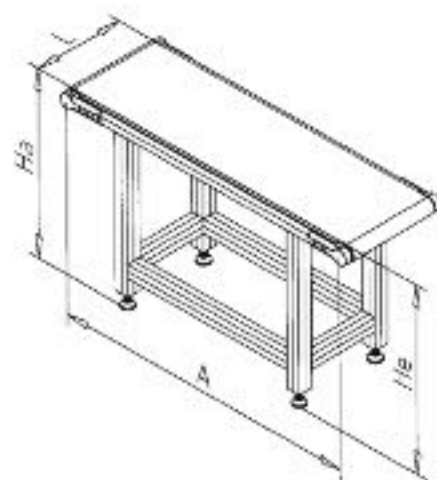
Inlet height H_e mmDischarge height H_a mmNumber of supports Pcs.Supports height adjustable from mm to mmLateral guide one side two sides short longAngle bracket for floor fastening part no. 21.1112/0Floor anchor 12 part no. 21.1115/0Wheels part no. Feet part no.

Options

Belt part no. Supporting sheet Aluminium Inox

Drive

Motor arrangement Plug-on motor Flanged motor
 Cylinder motor Centerd drive (Direct drive)
 Center drive 3-Wheels-System

Speed m/min.Speed adjustable from m/min. to m/min.

Contact details

Company Please call me backContact person Please send me an offerPhone no. Fax no. E-Mail

BELT CONVEYORS

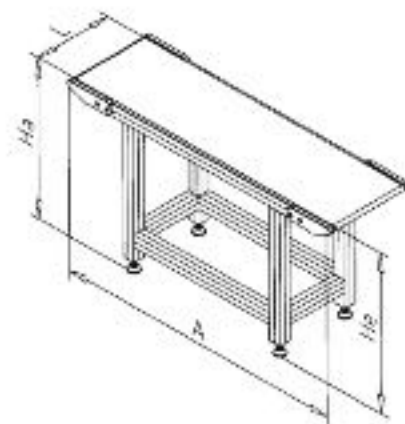
REQUEST NOSEBAR CONVEYOR

Standard dimensions

Axial distance mm
 Belt width L mm (max. 300 mm)

Type with nosebar

Goods to be conveyed
 Unit weight kg
 Total belt load kg
 Temperature of goods °C



Subconstruction

Inlet height H_g mm
 Discharge height H_a mm
 Number of supports Pcs.
 Supports height adjustable from mm to mm
 Lateral guide one side both sides short long
 Angle bracket for floor fastening part no. 21.1112/0
 Floor anchor 12 part no. 21.1115/0
 Wheels part no.
 Feet part no.

Options

Belt Part no.
 Supporting sheet Aluminium Inox

Drive

	NOSEBAR (ONE SIDE)	NOSEBAR (TWO SIDES)
Motor arrangement	<input type="checkbox"/> Plug-on motor <input type="checkbox"/> Cylinder motor <input type="checkbox"/> Center drive (Direct drive)	<input type="checkbox"/> Flanged motor <input type="checkbox"/> Center drive 3-Wheels-System
Speed	<input type="text"/> m/min.	
Speed adjustable from	<input type="text"/> m/min. to <input type="text"/> m/min.	

Contact details

Company Please call me back
 Contact person Please send me an offer
 Phone no.
 Fax no.
 E-Mail

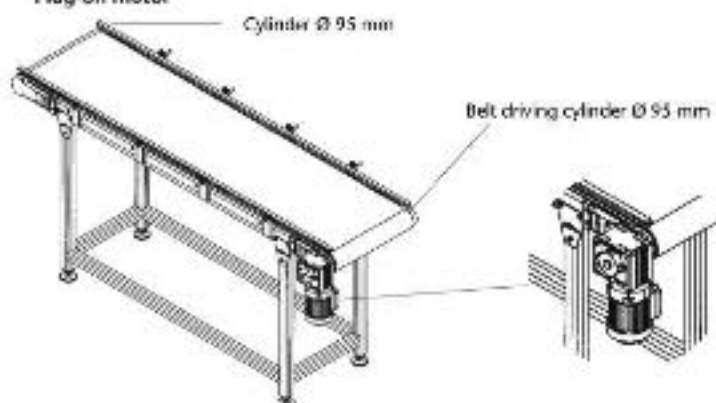
BELT CONVEYORS

BELT CONVEYOR – SERIES 90

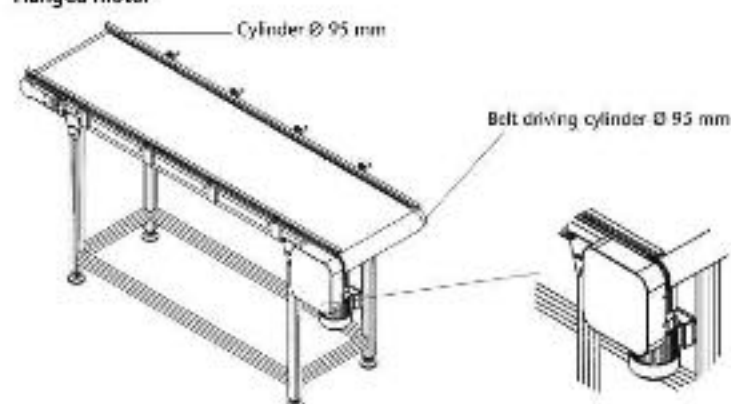
The belt conveyor module in our MiniTec ICAD assembler construction software designs your belt conveyor automatically based on your requirements. Furthermore it calculates the deflection, suggests the number of supports and generates the parts list, all within a few minutes. Assembly can be completed quickly and easily as a result of our proven components.

Motor arrangement

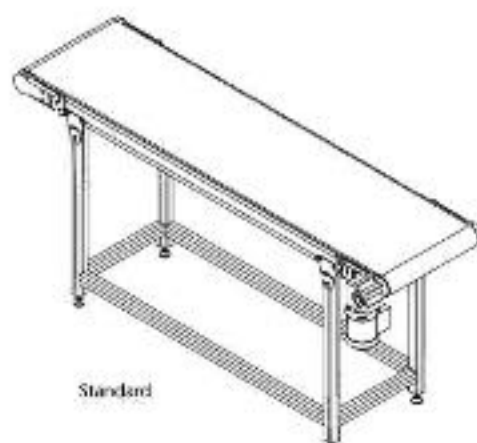
Plug-on motor



Flanged motor



Subconstruction



BELT CONVEYORS

REQUEST STANDARD BELT CONVEYOR 90

Standard dimensions

Axial distance mmBelt width L mm

Operating conditions

Goods to be conveyed Unit weight kgTotal belt load kgTemperature Goods °C

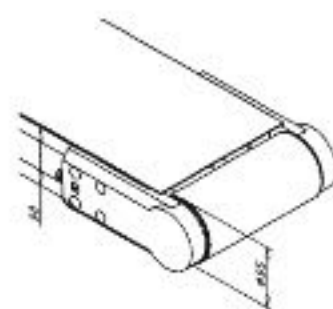
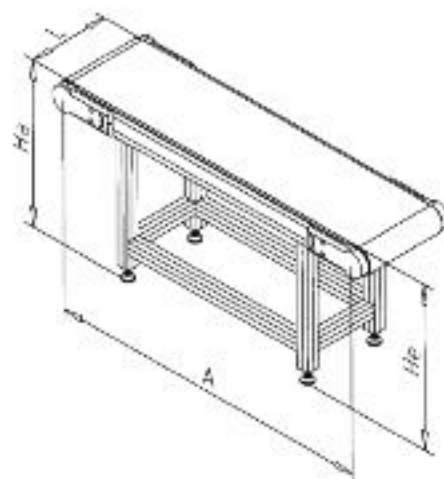
Subconstruction

Inlet height H_e mmDischarge height H_d mmNumber of supports Pcs.Supports height adjustable from mm to mmLateral guide one side two sides short longAngle bracket for floor fastening Part no. 21.1112/0Floor anchor 12 Part no. 21.1115/0Wheels Part no. Feet Part no.

Options

Belt Part no. Supporting sheet Aluminium Inox

Drive

Motor arrangement Plug-on motor Flanged motorSpeed m/min.Speed adjustable from m/min. to m/min.

Contact details

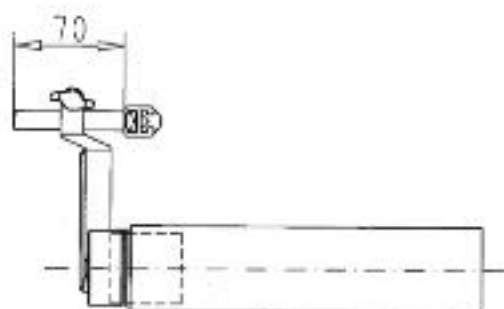
Company Please call me backContact person Please send me an offerPhone no. Fax no. E-Mail

BELT CONVEYORS

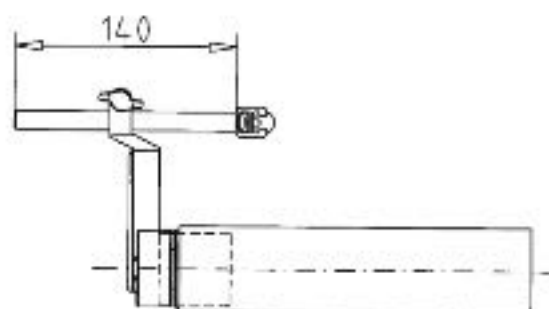
LATERAL GUIDE

CONVEYOR 45 AND 90

SHORT



LONG



ROLLER CONVEYOR WITHOUT DRIVE

LOW



HIGH



BELT CONVEYORS

BELTS

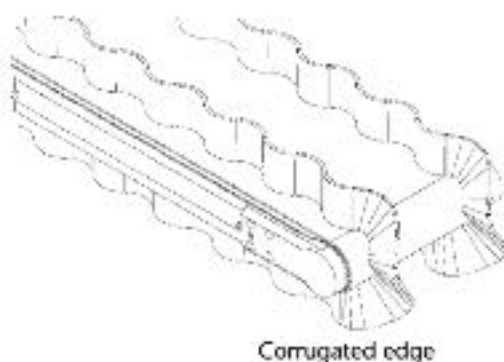
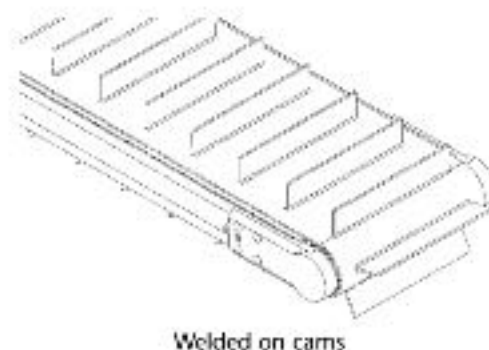
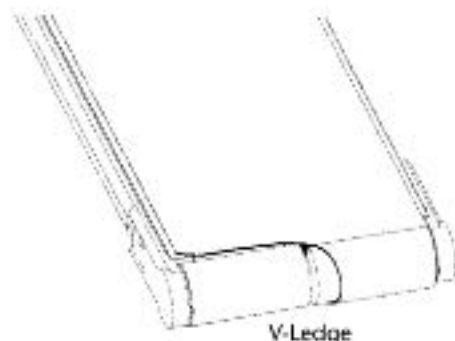
BELTS

BELT	PART NO.
PVC, black, smooth, antistatic	29.5019/1
PVC, green, grip, antistatic	29.5019/2
PVC, green, checks, adhesive, antistatic	29.5019/3
PVC, green, smooth, antistatic	29.5019/4
PU, blue, smooth	29.5019/5
PU, white, smooth, antistatic	29.5019/6
PVC, white, smooth, antistatic	29.5019/7
PU, green, smooth, antistatic	29.5019/8
Mesh, white, antistatic	29.5019/9
Special belts on request	29.5019/0

Calculation of endless length EL

For cylinder 45: $EL = 2 \times A + 165 \text{ mm}$ For cylinder 90: $EL = 2 \times A + 305 \text{ mm}$

EXAMPLES FOR SPECIAL BELTS



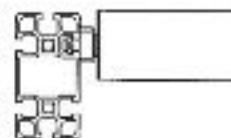
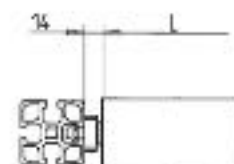
ROLLER CONVEYOR

ROLLER CONVEYOR WITHOUT DRIVE

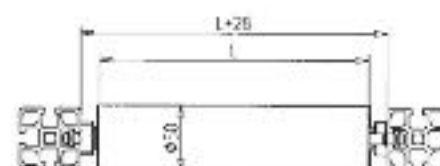
Transport roller with slide bearing

Transport roller S with roller bearing

Profile



Transport roller



Bearing



Tube length

max. Tube length L	PVC tube	600 mm
	AL tube	1000 mm
	Steel tube	1000 mm

ROLLER CONVEYOR

ROLLER CONVEYOR WITHOUT DRIVE



Subconstruction



Height adjustable



Standard

ROLLER CONVEYOR

REQUEST ROLLER CONVEYOR WITHOUT DRIVE







Standard dimensions

Axial distance A mm
 Roller distance mm
 Roller width L mm
 Profile 45 x 45 45 x 90

Operating conditions

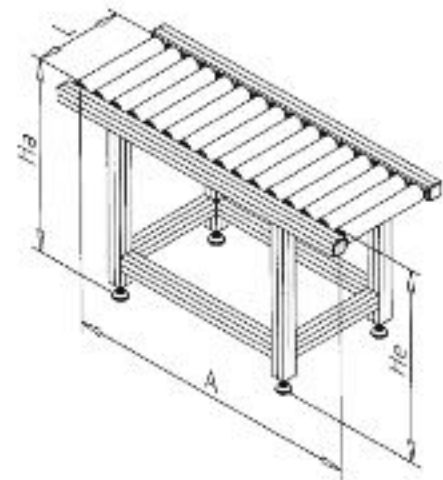
Goods to be conveyed
 Unit weight kg
 Total load kg
 Temperature goods °C

Subconstruction

Inlet height H_e mm
 Discharge height H_a mm
 Distance A mm
 Number of supports Pcs.
 Supports height adjustable from mm to mm
 Lateral guide one side both sides
 Lateral guide 45 x 45 without low variable



 Lateral guide 45 x 90 without high variable



 Angle bracket for floor fastening part no. 21.1112/0
 Floor anchor 12 part no. 21.1115/0
 Wheels part no.
 Feet part no.

Options

Roller material PVC AL Steel
 Bearing Slide bearing Roller bearing



Contact details

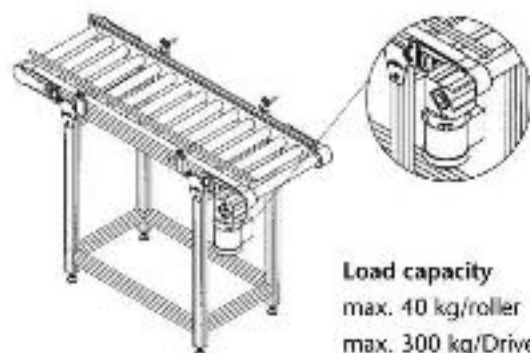
Company Please call me back
 Contact person Please send me an offer
 Phone no.
 Fax no.
 E-Mail

ROLLER CONVEYOR

ROLLER CONVEYOR WITH DRIVE

Motor arrangement

Plug-on motor



Load capacity
max. 40 kg/roller
max. 300 kg/Drive

Motor inside



Motor outside, chain tensioner



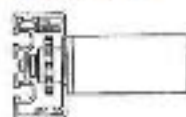
Tube length

max. Tube length L	PVC-Tube	600 mm
	AL-Tube	1000 mm
	Steel-Tube	1000 mm

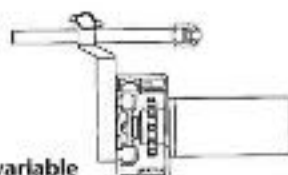
Available roller types

fixed drive
friction drive
friction drive, adjustable

Lateral guide



without



variable

Subconstruction



Height adjustable



Standard

ROLLER CONVEYOR

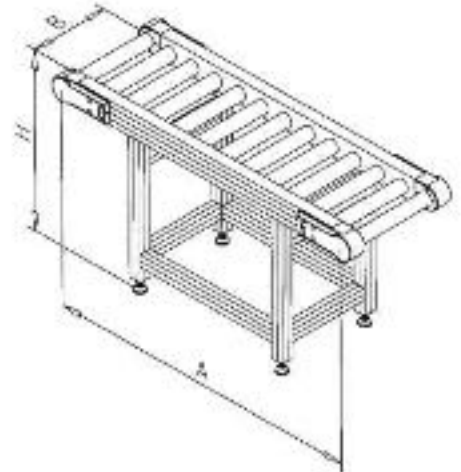
REQUEST ROLLER CONVEYOR WITH DRIVE

Standard dimensions

Axial distance A mmRoller distance mmRoller width L mm

Profile one side  both sides 

Operating conditions

Goods to be conveyed Unit weight kgTotal load kgTemperature (Goods) °C

Subconstruction

Height H mmDistance A mmNumber of supports Pcs.Supports height adjustable from mm to mmLateral guide one side both sides langAngle bracket for floor fastening Part no. 21.1112/0Floor anchor 12 Part no. 21.1115/0Wheels Part no. Feet Part no.

Drive

Motor arrangement Plug-on motor with chain tensioner
 inside outside

Speed m/min.Speed adjustable from m/min. to m/min.

Options

Roller material PVC, blue AL Steel VA Accumulating rollers Fixed drive

(Rollers with fixed drive and accumulation can be mixed)

Contact details

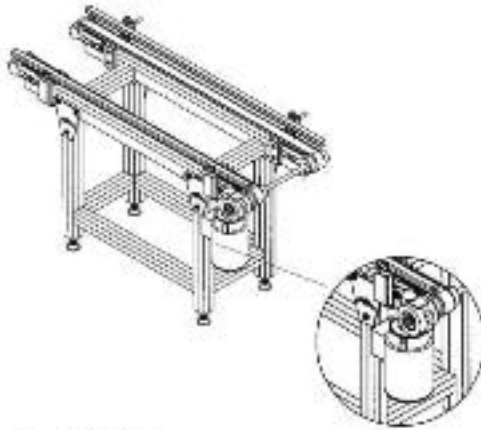
Company Please call me backContact person Please send me an offerPhone no. Fax no. E-Mail

TIMING BELT CONVEYOR

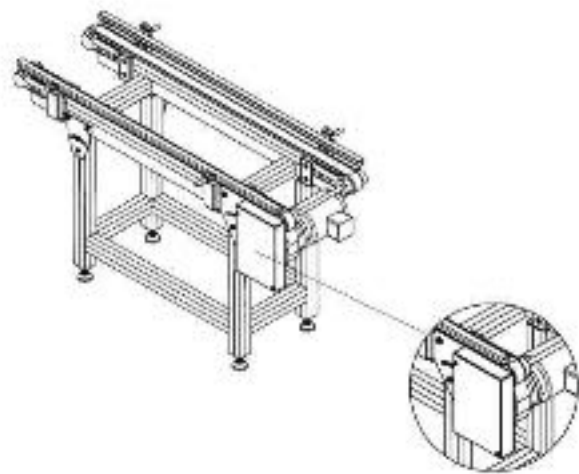
TIMING BELT CONVEYOR 32

Motor arrangement

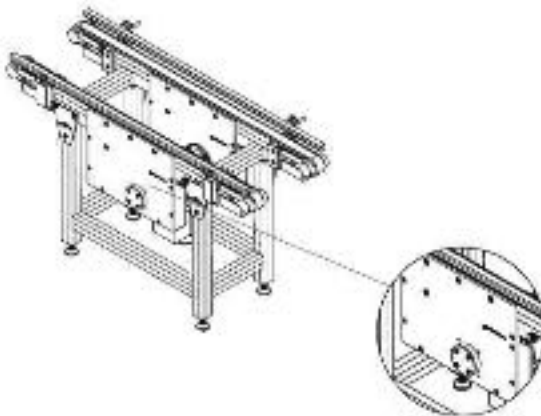
Plug-on motor



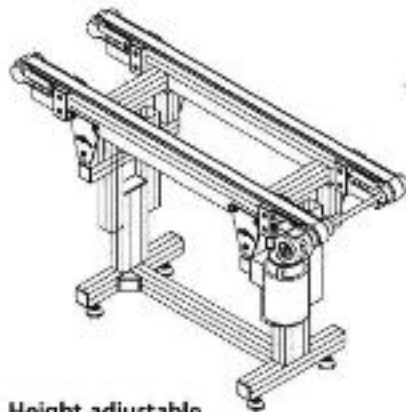
Flanged motor



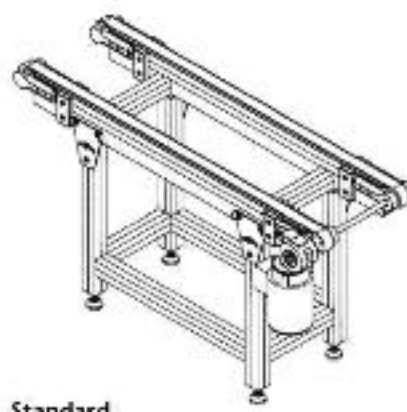
Central drive



Subconstruction



Height adjustable

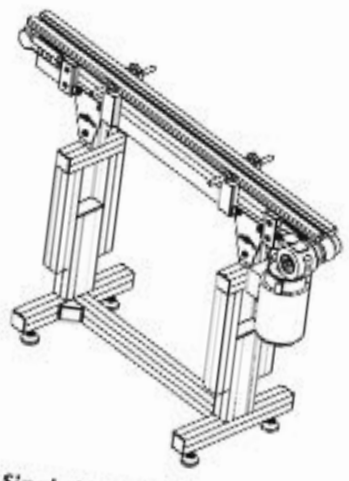


Standard

TIMING BELT CONVEYOR
TIMING BELT CONVEYOR 32



EXAMPLES FOR TIMING BELT CONVEYORS



Single lane with variable strut



Four lanes with standard strut

TIMING BELT CONVEYOR

REQUEST TIMING BELT CONVEYOR 32

Standard dimensions

Axial distance A mm
 External distance timing belt L mm
 single lane multi-track

Operating conditions

Goods to be conveyed
 Unit weight kg
 Total belt load kg
 Temperature of goods °C

Subconstruction

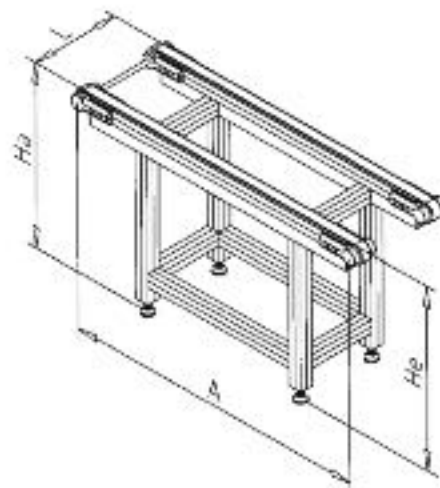
Inlet height H_e mm
 Discharge height H_a mm
 Distance A mm
 Number of supports Pcs.
 Supports height adjustable from mm to mm
 Lateral guide one side both sides long
 Angle bracket for floor fastening part no. 21.1112/0
 Floor anchor 12 part no. 21.1115/0
 Wheels part no.
 Feet part no.

Drive

Motor arrangement Plug-on motor Flanged motor Central drive
 Speed m/min.
 Speed adjustable from m/min. to m/min.

Options

Special coatings for timing belt



Contact details

Company Please call me back
 Contact person Please send me an offer
 Phone no.
 Fax no.
 E-Mail

CLEAN ROOM CONVEYORS

MINITEC CLEAN ROOM CONVEYORS FOR PHOTOVOLTAICS



The versatile MiniTec conveyor technology program has been proven for many years, supplying matched solutions across all industry sectors. Building on these solutions, we have developed a clean room timing belt conveyor and had it tested by Fraunhofer IPA.

With our consistent approach to value and design, our standard timing belt conveyor technology can be used in clean rooms with DIN EN ISO 14644-1 air cleanliness classifications up to 6 with some simple changes. With recognised quality and great value, the conveyor assemblies maintain their versatility through the MiniTec modular range of profiles and components.

Technical Data

- Basic structure of profile 45 or 45 x 90 and 90 x 90
- Width of timing belt 32 mm or 60 mm
- Timing belt with 2 mm polyurethane coating for the transport of glass
- Clean room motor with Spiroplan gears
- Frequency converter to set the belt speed
- Axis offsets and belt width arbitrary
- Compensation for floor unevenness

Options

- Base frame of closed profiles
- Timing belt coating available in yellow or grey

CLEAN ROOM CONVEYORS

REQUEST TIMING BELT CONVEYOR CLEAN ROOM

Standard dimension

- Axial distance A mm
- External distance timing belt L mm
- Number of lanes piece
- 32 mm (baseament of profile 45)
- 60 mm (baseament of profile 45x90 & 90x90)

Operating conditions

- Goods to be conveyed
- Unit weight kg
- Total belt load kg

Subconstruction

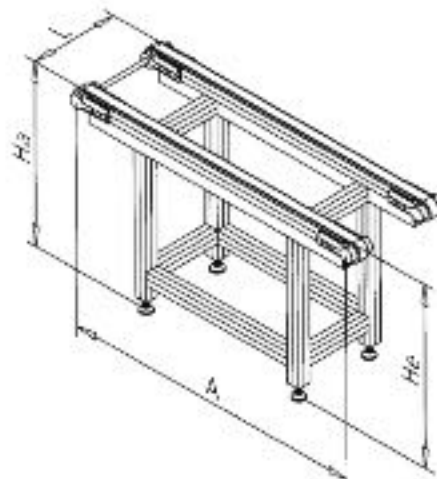
- Inlet height He mm
- Discharge height Ha mm
- Number of supports Pcs.
- Angle bracket for floor fastening part no. 21.1112/0
- Floor anchor 12 part no. 21.1115/0
- Feet part no.

Options

- Colour timing belt coating yellow grey
- Profile closed t-slots yes no

Drive

- Motor arrangement cleanroom motor sproplan
- Speed m/min.
- Frequency transformer yes no
- Speed adjustable from m/min. to m/min.



Contact details

- Company Please call me back
- Contact person Please send me an offer
- Phone no.
- Fax no.
- E-Mail

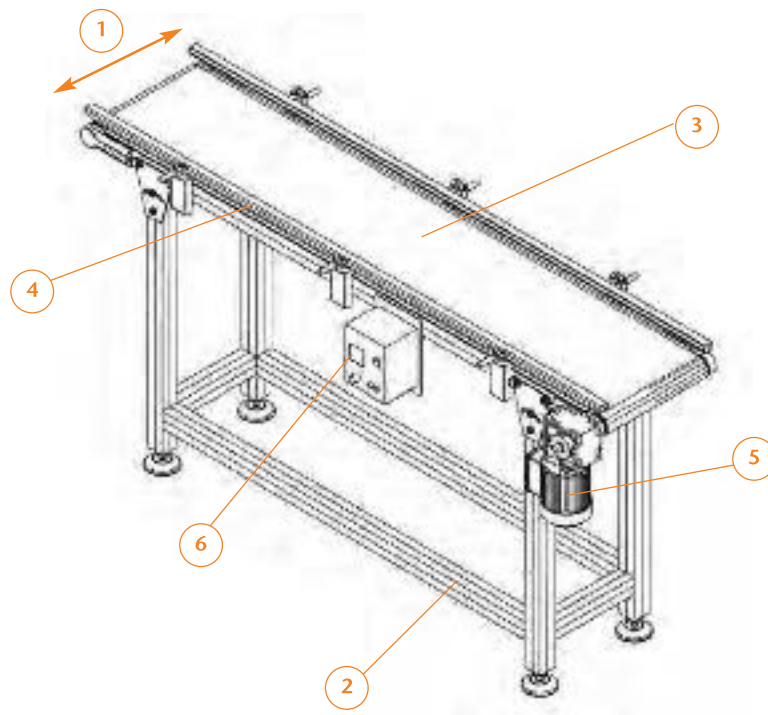
CONVEYOR 48

THE 48 HOURS PROGRAM

The versatile MiniTec conveyor technology program has been successfully proven for many years, supplying numerous solutions across all industry sectors. Many jobs can be solved very economically and quickly with standard conveyors.

We can deliver selected types of standard conveyors within 48 hours.

A standard design and strict production schedule provides the best value and quality of conveyors available.



Technical Data

- Basic construction made of profile 45x45 F
- Cylinder ø 50 mm, steel, zinc plated
- Supporting Sheet: Aluminium, anodized, 2 mm
- Plug in motors with spiropfan gearbox can be configured in various gear reductions
- Underframes in standard design or height adjustable available

Options

- Lateral guides with adjustable holders
- Frequency converter to set the belt speed

CONVEYOR 48

OPTIONS

1. Basic construction

- Standard dimensions: 150 / 200 / 300 / 400 mm
- Axial distance selectable from 500 to 6000 mm



2. Subconstruction

Without subconstruction or with standard or height-adjustable (± 100 mm).

- Number of bearings: up to axial distance 2 m – 2 piece
from axial distance 2 m – 3 piece
per 1 m extension + 1 piece



Without



Standard



Height adjustable

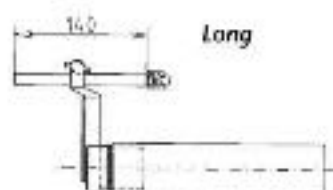
3. Belts

GOODS TO BE CONVEYED	TEMPERATURE	PART NO.
PVC, black, smooth, antistatic	-10° to +90°	29.5019/1
PU, white, smooth, antistatic (Suitable for food products)	-20° to +110°	29.5019/6
PU, green, smooth, antistatic	-20° to +110°	29.5019/8
Mesh, white, antistatic	-20° to +60°	29.5019/9

4. Lateral guides



Short



Long

CONVEYOR 48

OPTIONS

5. Motor arrangement

- Spiro planetary gear motor

Motor selection table

TYPE	PART NO.	POWER [W]	OUTPUT SPEED	OUTPUT TORQUE	CONVEYING SPEED
WA10 DT56 M4 - 17	33.0015/0	90	17 Rpm	20 Nm	2,6 m/min
WA10 DT56 M4 - 22	33.0016/0	90	22 Rpm	18 Nm	3,4 m/min
WA10 DT56 M4 - 33	33.0017/0	90	33 Rpm	15 Nm	5,1 m/min
WA10 DT56 L4 - 67	33.0018/0	120	67 Rpm	13 Nm	10,5 m/min
WA10 DT56 L4 - 79	33.0019/0	120	79 Rpm	11 Nm	12,4 m/min
WA10 DT56 L4 - 127	33.0020/0	120	127 Rpm	7,7 Nm	19,9 m/min
WA10 DT56 L4 - 159	33.0021/0	120	159 Rpm	6,3 Nm	24,9 m/min

6. Frequency transformer FU 370 PP (Part no. 33.0126/0)

Technical Data

- Built-in on / off switch
- Mode 1Q (without brake - Chopper)
- Powernet overvoltage and undervoltage monitoring
- motor load monitoring
- Short-circuit monitoring phase / phase, phase / earth
- Adjustable acceleration and deceleration ramp
- Adjustable voltage boost at low output frequency
- Power cord with safety plug 230 V and motor cable, ELPUR, 5m long orange safety plug, color
- EMC filter, Class B
- IP 66 / NEMA 4X enclosure
- Equipped with a control unit, which allows operating the drives without additional devices by default.
- Output power motor side max. Motor power 0.37 kW
- Rated output current max. 2.3 A
- Output voltage 3 x 0...230 V
- 150% overload for 60 seconds
- Input voltage powergrid side rated voltage 230V
- Input current 6.7 A
- Frequency 50 - 60 Hz
- General data Ambient temperature -10° C to + 40° C
- Heat loss at rated power 11 W
- Dimensions H / W / D: 232 x 161 x 179 mm



CONVEYOR 48

REQUEST CONVEYOR 48

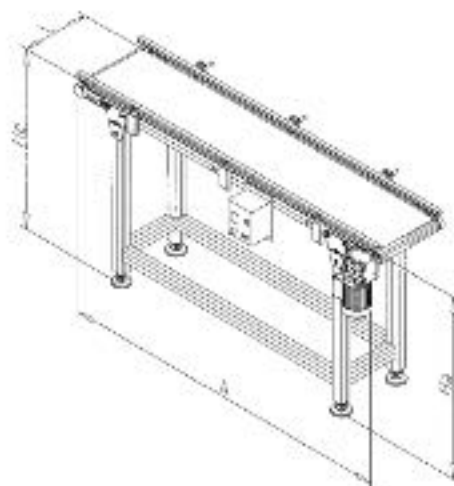
Standard dimensions

Axial distance mmBelt width L 150 mm 200 mm
 300 mm 400 mm

Operating conditions

Goods to be conveyed Unit weight kgTotal belt load kgTemperature Goods °C

Subconstruction

Inlet height He mmDischarge height Ha mmType Without Standard Height adjustableLateral guide one side both sides short longNumber of supports per side Pcs.

Belt

Type PVC, black PU, greenLateral guide PU, white, suitable for food products Mesh, white

Drive

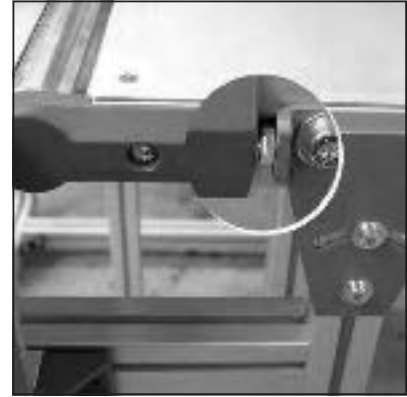
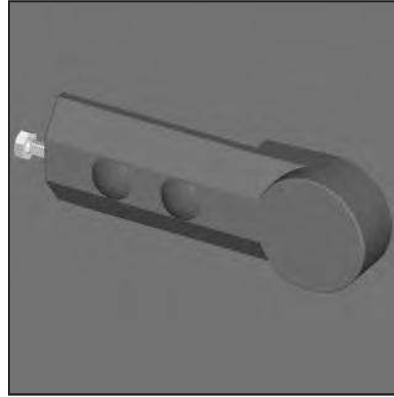
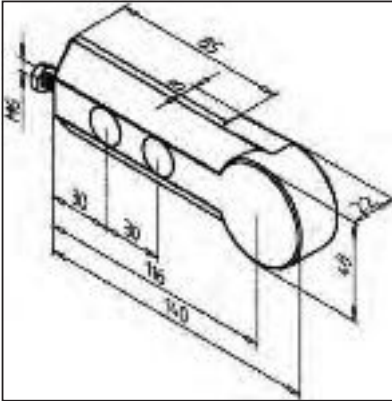
Motor arrangement (Plug-on motor) right leftConveyor speed 2,6 m/min 3,4 m/min 5,1 m/min
 10,5 m/min 12,4 m/min 19,9 m/min
 24,9 m/minFrequency transformer yes no

Contact details

Company Please call me backContact person Please send me an offerPhone no. Fax no. E-Mail

CONVEYOR BEARING 45

part no. 21.0993/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Self-aligning ball bearing with \varnothing 17 mm, both sides sealed
- Weight 0,275 kg
- Version in aluminium GD, with stainless bearing and fastening kit, conveyor bearing 45 H, **part no. 21.0993/5**
- **Stainless version, conveyor bearing 45 VA, part no. 21.0979/0**

APPLICATIONS

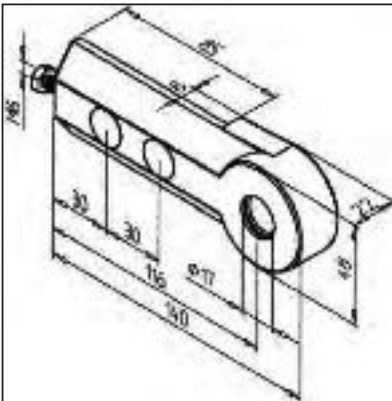
- Bearing for belt-tensioning cylinders

ASSEMBLY

- Pretighten at the profile groove
- If swivel plates **part no. 29.5001/0** for support fastening are used, they serve as counter bearing for tightening purpose; if not, use multiblock or angles
- Tighten the conveyor belt by unscrewing the set screw, if necessary reset the tool
- Firmly tighten the conveyor bearing (Recommended locking torque: 25 Nm)

CONVEYOR BEARING 45 WITH BORE

part no. 21.0993/1



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- With bore for drive spigot
- Self-aligning ball bearing with \varnothing 17 mm, both sides sealed
- Weight 0,268 kg
- Version in aluminium GD, with stainless bearing and fastening kit, conveyor bearing 45 H, **part no. 21.0993/6**
- **Stainless version, conveyor bearing 45 VA with bore, part no. 21.0980/0**
- Weight 0,681 kg

APPLICATIONS

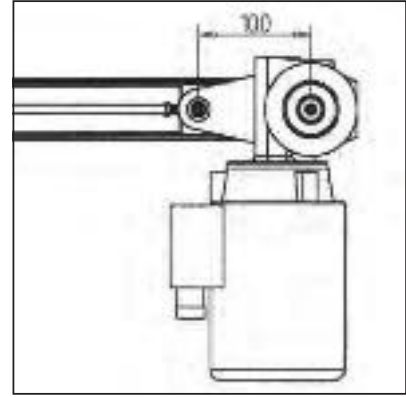
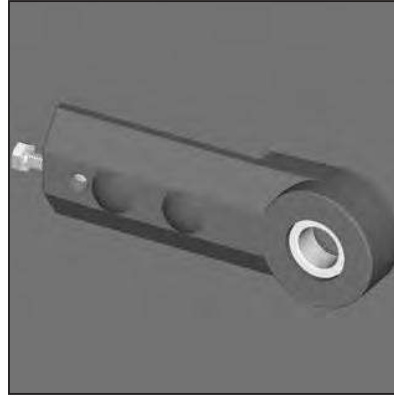
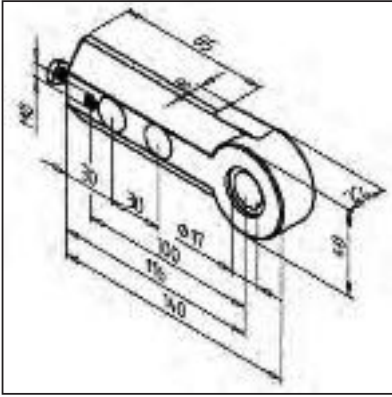
- Bearing for belt-tensioning cylinders
- Attachment of plug-on motors or chain wheels on shaft; max. \varnothing 17 mm

ASSEMBLY

- Pretighten at the profile groove
- If swivel plates **part no. 29.5001/0** for support fastening are used, they serve as counter bearing for tightening purpose; if not, use multiblock or angles
- Tighten the conveyor belt by unscrewing the set screw, if necessary reset the tool
- Firmly tighten the conveyor bearing (Recommended locking torque: 25 Nm)

CONVEYOR BEARING 45 FOR PLUG ON MOTOR

part no. 29.5029/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Self-aligning ball bearing with \varnothing 17 mm, both sides sealed
- With thread M8 for torque support
- Fastening kit
- Weight 0,269 kg

APPLICATIONS

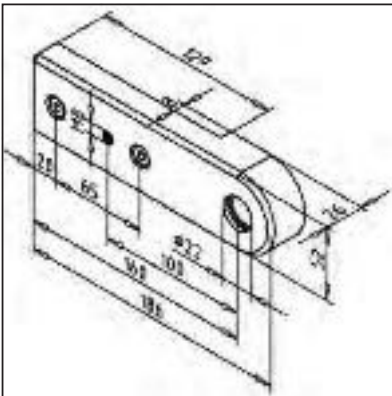
- MiniTec belt-conveyors with plug on motor (hollow shaft)

ASSEMBLY

- Fasten the torque support on thread M8
- Preassemble conveyor bearing at profile end
- If swivel plates **part no. 29.5001/0** for floor fastening are used, they serve as counter bearing for tightening purpose; if not, use multiblock or angles
- Tighten the conveyor belt by unscrewing the set screw, if necessary reset the tool
- Firmly tighten the conveyor bearing (Recommended locking torque: 25 Nm)

CONVEYOR BEARING 45 - 20

part no. 21.0917/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, powder coated, grey
- Self-aligning bearing with bore diameter 20 mm, sealed on both sides
- Fastening kit
- Weight 0,574 kg

APPLICATIONS

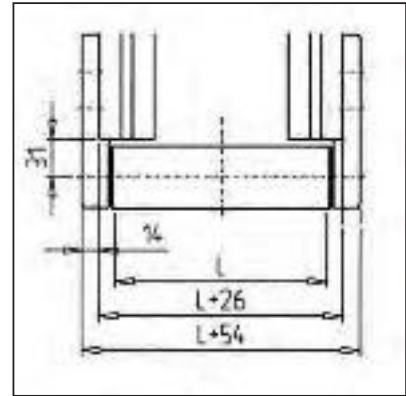
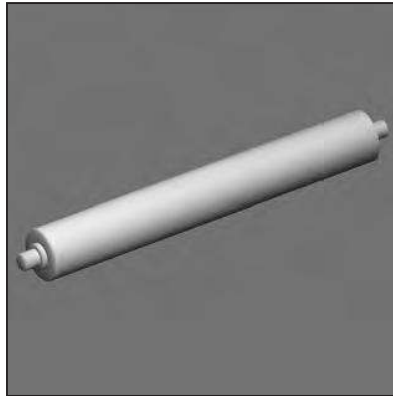
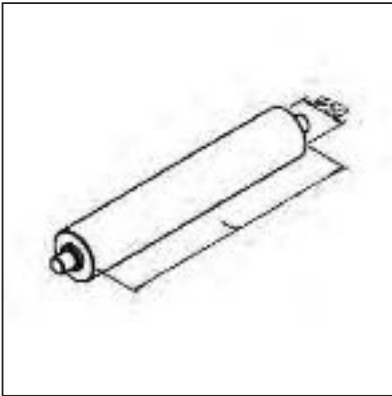
- MiniTec belt conveyor for push-on motors with hollow shafts diameter 20 in connection with torque support **part no. 29.0536/0 or 29.0537/0** and cylinder **part no. 29.0524/0**

ASSEMBLY

- First mount the conveyor bearing on the end of the profile
- Tighten the conveyor bearing (recommended torque: 25 Nm)

BELT TENSIONING CYLINDER 45 ST

part no. 21.0994/1

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, zinc plated
- Turned spherically
- Weight 14,8 kg/m
- **Please specify dimension L (belt width)**
- **Attention: L is not the outer diameter of the conveyor Ø50**

APPLICATIONS

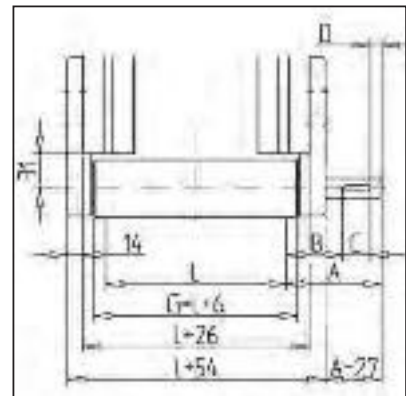
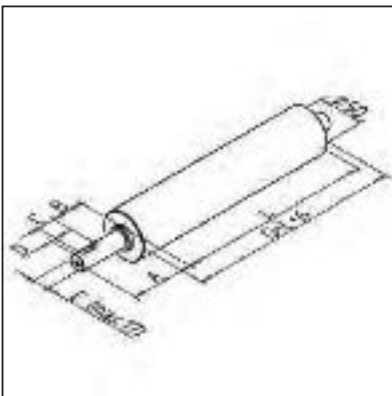
- MiniTec belt conveyor system
- Use suitable conveyor bearing **part no. 21.0993/0**
- On demand we can deliver the conveyor with mounted ball-bearing. The ball-bearings are gentle and warm pressed on. Please order **part no. 21.0901/0**

ASSEMBLY

- Insert the axle in the conveyor bearing assembly bore
- The cylinder is fixed axially by the self-aligning ball bearings
- The self-aligning ball bearings compensate light misalignments

BELT DRIVING CYLINDER 45

part no. 21.0995/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, zinc plated
- Turned spherically
- Journal max. Ø 17
- Weight 15,3 kg/m
- **Please indicate belt width L and dimensions A, B, C, D and E (if > Ø 17 mm)**
- **Attention: L is not the outer diameter of the conveyor Ø50**

APPLICATIONS

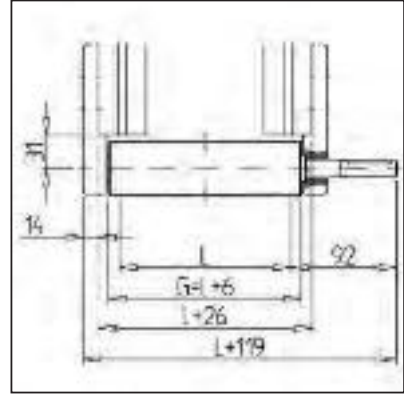
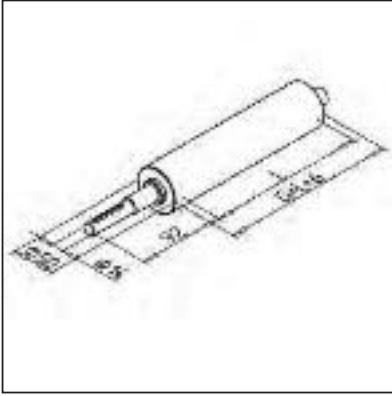
- MiniTec belt conveyor system
- Use suitable conveyor bearing **part no. 21.0993/0**
- On demand we can deliver the conveyor with mounted ball-bearing. The ball-bearings are gentle and warm pressed on. Please order **part no. 21.0900/0**

ASSEMBLY

- Insert belt driving cylinder in conveyor bearing with bore **part no. 21.0993/1**
- Mount the conveyor bearing **part no. 21.0993/0** on the opposite side
- The self-aligning ball bearings compensate light misalignments

BELT DRIVING CYLINDER 45 ST FOR PLUG-ON MOTOR D14

part no.
29.5023/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- Turned spherically
- Axle Ø 14, driving side suitable for fastening the plug-on motor
- Weight 15,3 kg/m
- Please specify dimension L (belt width)
- Attention: L is not the outer diameter of the conveyor Ø50

APPLICATIONS

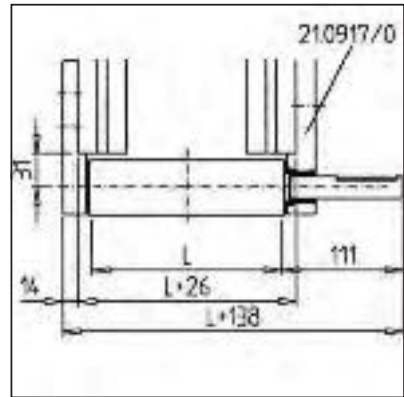
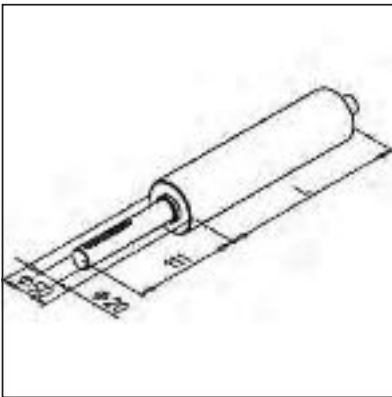
- MiniTec belt conveyor systems DSGM with torque support
- Suitable for MiniTec plug-on motor with torque support
- On demand we can deliver the conveyor with mounted ball-bearing. The ball-bearings are gentle and warm pressed on. Please order part no. 21.0900/0

ASSEMBLY

- Insert the belt driving cylinder in the conveyor bearing for plug-on motor part no. 21.0993/0
- Mount the conveyor bearing part no. 21.0993/0 on the opposite side

BELT DRIVING CYLINDER 45 FOR PLUG-ON MOTOR D20

part no.
29.5042/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- Turned spherically
- Axle Ø 20 mm, driving side suitable for fastening the plug-on motor
- Weight 15,3 kg/m
- Please specify dimension L (belt width)
- Attention: L is not the outer diameter of the conveyor Ø50

APPLICATIONS

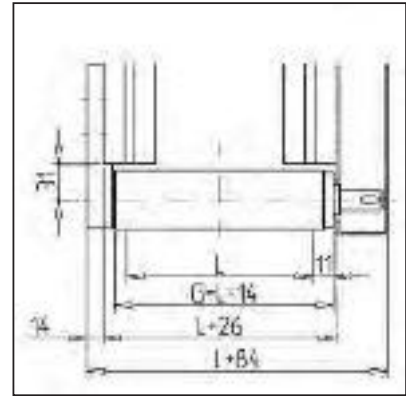
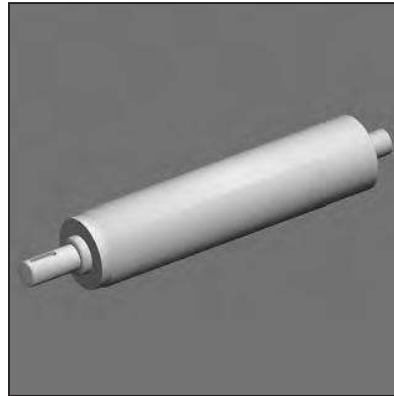
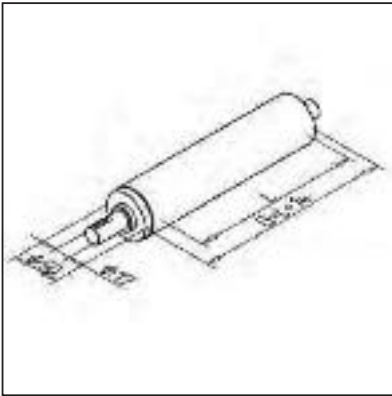
- MiniTec belt conveyor systems DSGM with torque support Wa 20 and WA 30
- Suitable for MiniTec plug-on motor with torque support type 90
- On demand we can deliver the conveyor with mounted ball-bearing. The ball-bearings are gentle and warm pressed on. Please order part no. 21.0900/0

ASSEMBLY

- Insert the belt driving cylinder in the conveyor bearing for plug-on motor 45-20 part-N° 21.0917/0
- Mount the conveyor bearing part no. 21.0993/0 on the opposite side

BELT DRIVING CYLINDER 45 ST FOR MOTOR KIT

part no. 29.5022/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, zinc plated
- Turned spherically
- Axle \varnothing 17 mm, driving side suitable for fastening the chain wheel of motor fastening kit
- Weight 15,3 kg/m
- Please specify dimension L (belt width)
- Attention: L is not the outer diameter of the conveyor \varnothing 50

APPLICATIONS

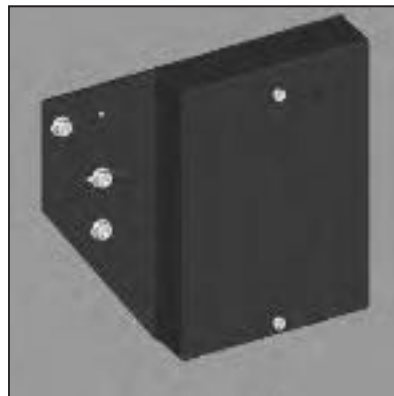
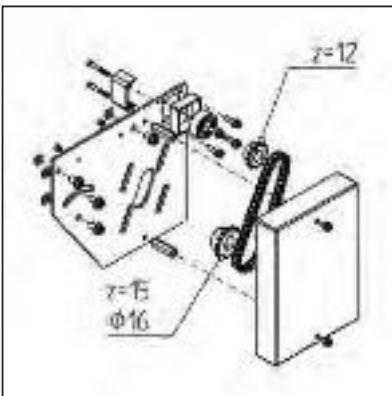
- Can only be used with the MiniTec belt conveyor kit 45
- On demand we can deliver the conveyor with mounted ball-bearing. The ball-bearings are gentle and warm pressed on. Please order **part no. 21.0900/0**

ASSEMBLY

- Insert the belt driving cylinder in the bearing housing on the motor side
- Mount the conveyor bearing **part no. 21.0993/0** on the opposite side
- The self-aligning ball bearings compensate light misalignments

MOTOR ATTACHMENT KIT 45 \varnothing 16 MM

part no. 29.5030/0

**TECHN. DATA / ITEMS SUPPLIED**

- Motor plate and cover, steel, powder coated, grey
- Housing with self aligning
- Chain wheel bored for motor-shaft \varnothing 16 mm
- 2 chain wheels with driving chain
- Fastening kit
- Weight 3,06 kg

APPLICATIONS

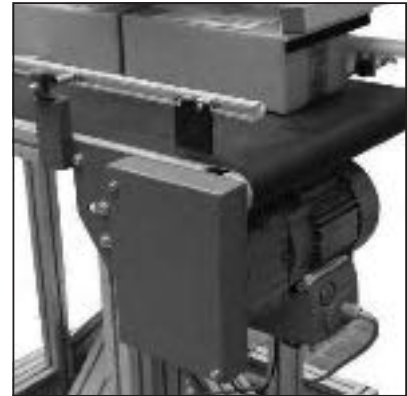
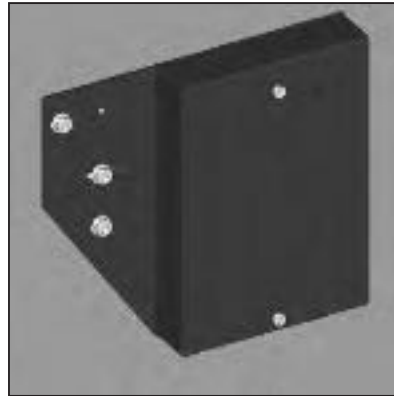
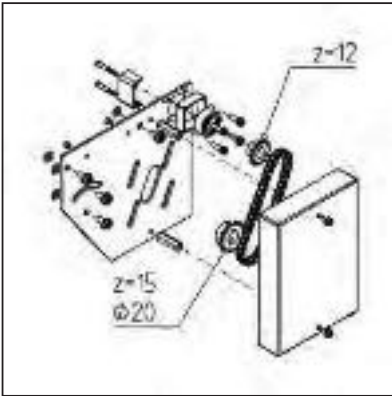
- Belt-conveyors made of MiniTec aluminium profiles
- Suitable for attachment of spur wheel back-geared motors; flange \varnothing 120 mm
- Belt driving cylinder **part no. 29.5022/0** and belt tensioning cylinder **part no. 21.0994/0**

ASSEMBLY

- Screw flange plate on basic frame; mount housing with bearing
- Insert belt driving cylinder; mount conveyor bearing **part no. 21.0993/0** on the opposite side
- Mount motor and chain wheels and tension chain
- Mount cover

MOTOR ATTACHMENT KIT 45 Ø 20 MM

part no. 29.5031/0



TECHN. DATA / ITEMS SUPPLIED

- Motor plate and cover, steel, powder coated, grey
- Housing with self aligning
- Chain wheel bored for motor-shaft Ø 20mm
- 2 chain wheels with driving chain
- Fastening kit
- Weight 3,06 kg

APPLICATIONS

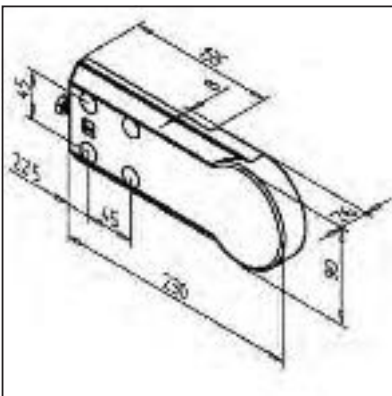
- Belt-conveyors made of MiniTec aluminium profiles
- Suitable for attachment of spur wheel back-geared motors; flange Ø 120 mm
- Belt driving cylinder **part no. 29.5022/0** and belt tensioning cylinder **part no. 21.0994/0**

ASSEMBLY

- Screw flange plate on basic frame; mount housing with bearing
- Insert belt driving cylinder; on the opposite side use conveyor bearing **part no. 21.0993/0**
- Mount motor and chain wheels and tension chain **part no. 21.0993/0**
- Mount cover

CONVEYOR BEARING 90

part no. 21.0985/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Self-aligning ball bearing with Ø 25 mm, both sides sealed
- Weight 0,9 kg

APPLICATIONS

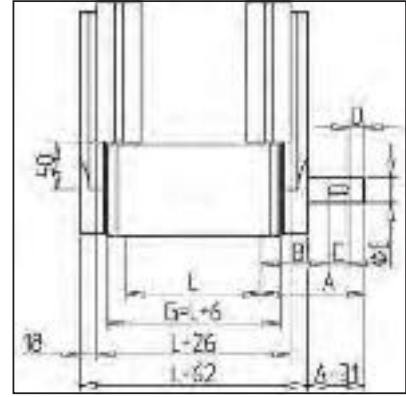
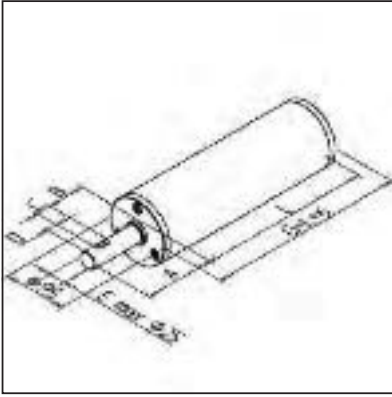
- Storage of bend- and drive pulley by belt conveyors

ASSEMBLY

- Preassemble conveyor bearing at profile end
- As counter bearing for tightening of connection plate 45 x 90
- Tighten the conveyor belt by unscrewing the set screw, if necessary reset the tool as often as needed
- Firmly tighten the conveyor bearing (Recommended locking torque: 25 Nm)

BELT DRIVING CYLINDER 90

part no. 21.0981/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium with shaft made of steel
- Turned spherically
- Axle \varnothing 25 mm
- Weight 16,2 kg/m
- Please specify dimension L (belt width) as well as dimensions A, B, C, D and E (if $> \varnothing$ 25 mm)
- Attention: L is not the outer diameter of the conveyor \varnothing 95

APPLICATIONS

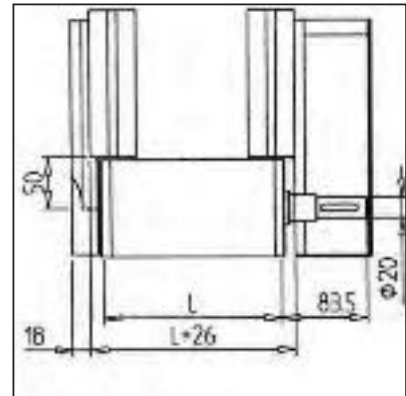
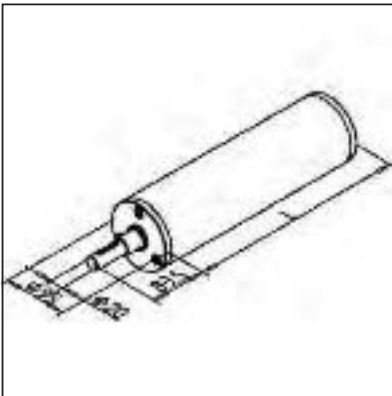
- MiniTec belt conveyor system
- Use suitable conveyor bearing **part no. 21.0985/0** and **part no. 21.0985/1**
- On demand we can deliver the conveyor with mounted ball-bearing. The ball-bearings are gentle and warm pressed on. Please order **part no. 21.0902/0**

ASSEMBLY

- Insert belt driving cylinder in conveyor bearing with bore **part no. 21.0985/1**
- Mount on opposite conveyor bearing **part no. 21.0985/0**
- The self-aligning ball bearings compensate light misalignments

BELT DRIVING CYLINDER 90 FOR MOTOR KIT 90

part no. 29.5069/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- Turned spherically
- Axle \varnothing 20 mm
- Weight 15,3 kg/m
- Please specify dimension L (belt width)
- Attention: L is not the outer diameter of the conveyor \varnothing 95

APPLICATIONS

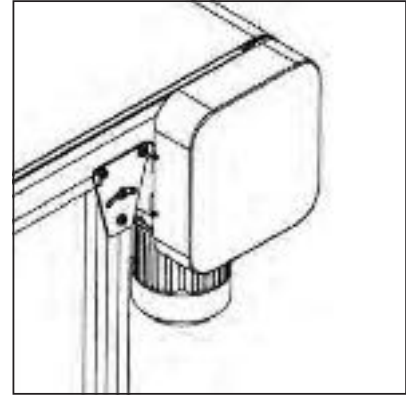
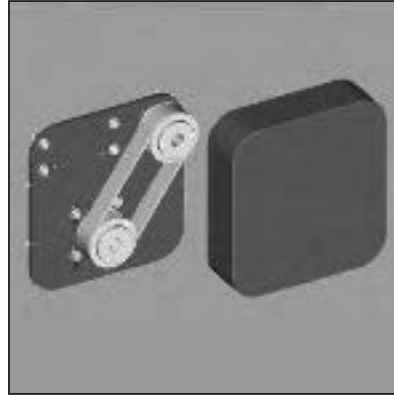
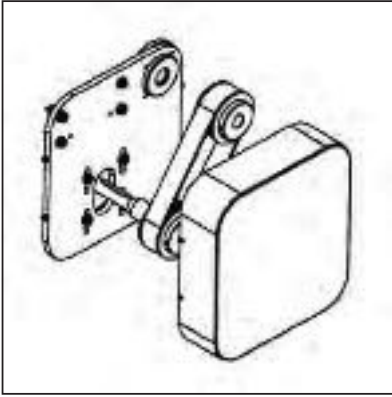
- MiniTec belt conveyor system with motor kit 90 **part no. 29.5031/0** and drum bearing **part no. 21.0985/0**
- On demand we can deliver the conveyor with mounted ball-bearing. The ball-bearings are gentle and warm pressed on. Please order **part no. 21.0902/0**

ASSEMBLY

- Insert the belt driving cylinder in the bearing housing on the motor side
- Mount the conveyor bearing **part no. 21.0985/0** on the opposite side

MOTOR KIT 90

part no. 29.5060/0

**TECHN. DATA / ITEMS SUPPLIED**

- Motor plate and cover, steel, powder coated, grey
- Housing with self aligning
- Belt driving cylinder \varnothing 20 mm
- Timing belt 32 AT 10
- Fastening kit
- Weight 6,3 kg

APPLICATIONS

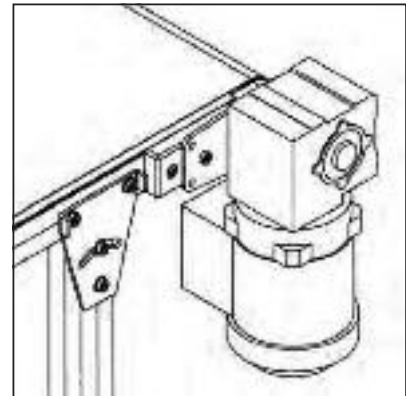
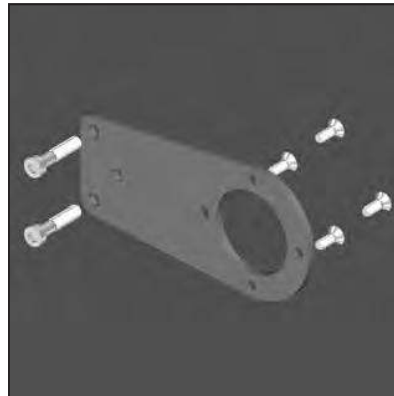
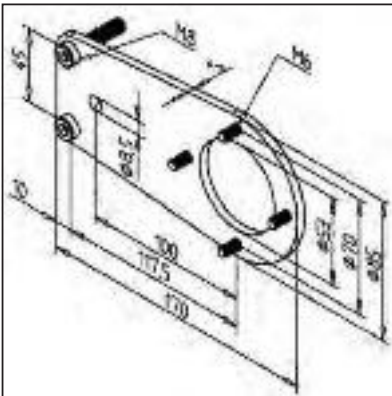
- Belt-conveyors made of MiniTec aluminium profiles 90
- Suitable for attachment of spur wheel back-gearred motors; hollow shaft \varnothing 20 mm flange \varnothing 120 mm

ASSEMBLY

- Screw flange plate on basic frame; mount housing with bearing
- Mount motor and tension timing belt
- Insert belt driving cylinder; mount conveyor bearing **part no. 21.0985/0** on the opposite side
- Mount cover

TORQUE SUPPORT WA 20

part no. 29.5036/0

**TECHN. DATA / ITEMS SUPPLIED**

- Torque support steel, powder coated grey
- Fastening kit for type 90
- Weight 0,432 kg

APPLICATIONS

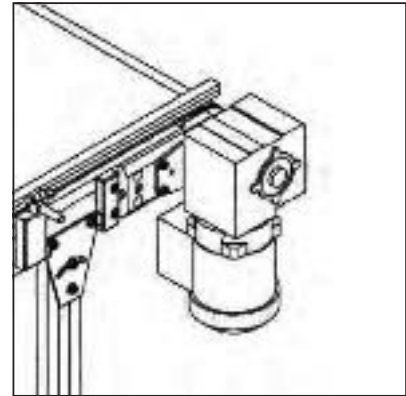
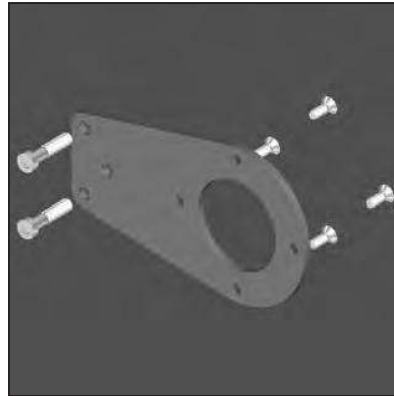
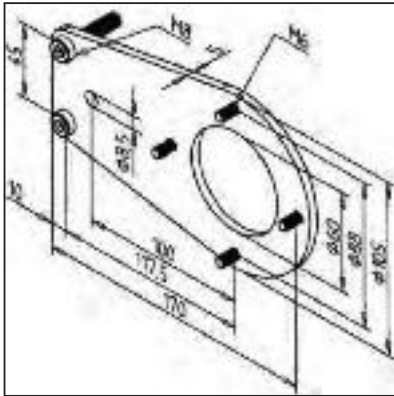
- Minitec belt conveyors
- Attachment of plug-on motor DSGM 180 and DSGM 250 for MiniTec belt conveyors 45 and 90
- Type 90: Use suitable belt driving cylinder **part no. 29.5035/0** and conveyor bearing **part no. 21.0985/1**
- Type 45: Use suitable belt driving cylinder **part no. 29.5042/0** and conveyor bearing **part no. 21.0917/0**

ASSEMBLY

- Fasten torque support onto motor
- Attach motor on belt driving cylinder
- Fasten torque support
- Type 45: use screw M8 x 20 (not in scope of delivery)

TORQUE SUPPORT WA 30

part no. 29.5037/0



TECHN. DATA / ITEMS SUPPLIED

- Torque support steel, powder coated grey
- Fastening kit for type 90
- Weight 0,516 kg

APPLICATIONS

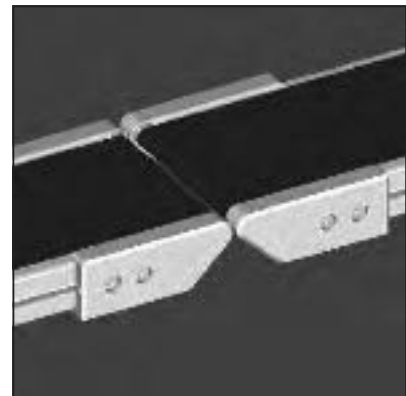
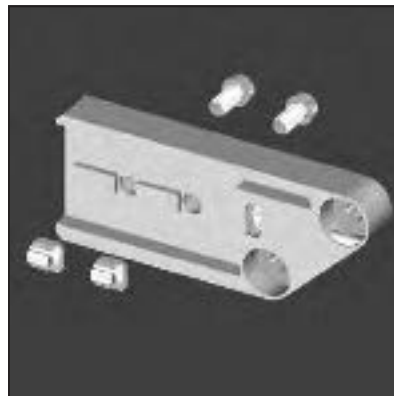
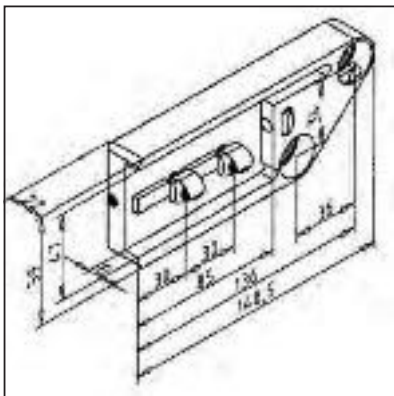
- MiniTec belt conveyors
- Attachment of plug-on motor DSGM 370 and DSGM 550 for MiniTec belt conveyors 90
- Type 90: Use suitable belt driving cylinder **part no. 29.5035/0** and conveyor bearing **part no. 21.0985/1**
- Type 45: Use suitable belt driving cylinder **part no. 29.5042/0** and conveyor bearing **part no. 21.0917/0**

ASSEMBLY

- Fasten torque support onto motor
- Attach motor on belt driving cylinder
- Fasten torque support
- Type 45: use screw M8 x 20 (not in scope of delivery)

DRUM BEARING LEFT KNIFE EDGE

part no. 29.5312/0



TECHN. DATA / ITEMS SUPPLIED

- Applications
- Deep groove ball bearing with \varnothing 8 mm bore
- All transfer systems TSG
- Weight 0,375 kg/m

APPLICATIONS

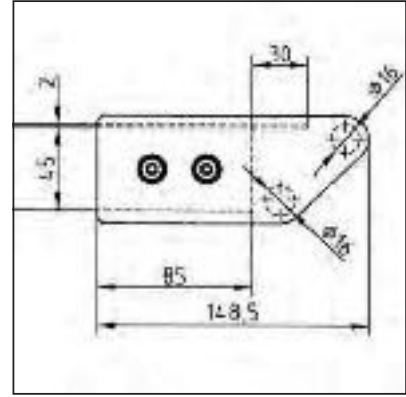
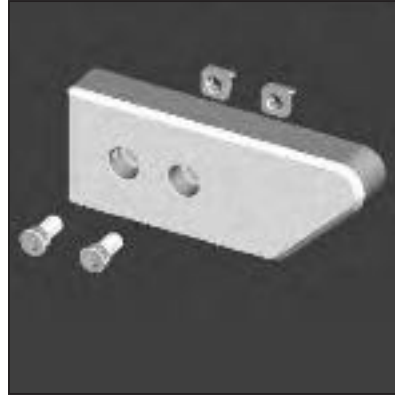
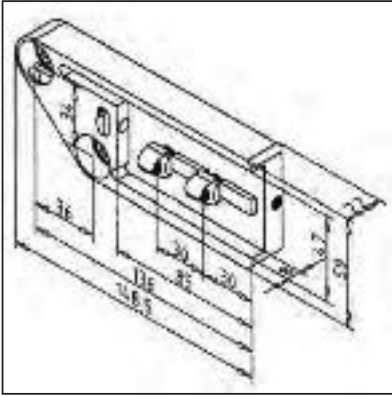
- Knife edge return shaft bearing
- For small transport goods and light loads

ASSEMBLY

- Use fastening kit
- Align shaft exactly with angle to avoid offset for the bearing

DRUM BEARING RIGHT KNIFE EDGE

part no. 29.5311/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural anodized
- Deep groove ball bearing with \varnothing 8 mm bore
- Fastening kit
- Weight 0,375 kg/m

APPLICATIONS

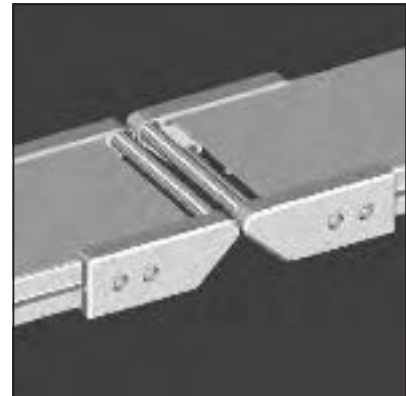
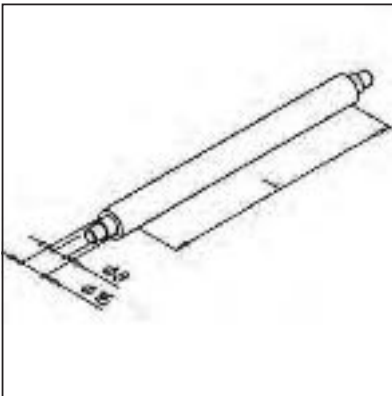
- Knife edge return shaft bearing
- For small transport goods and light loads

ASSEMBLY

- Use fastening kit
- Align shaft exactly with angle to avoid offset for the bearing

RETURN SHAFT 16 KNIFE EDGE

part no. 29.5313/0



TECHN. DATA / ITEMS SUPPLIED

- Steel
- Not spherical
- Shaft journal \varnothing 8 mm
- Weight 1,578 kg/m
- Please specify dimension L (belt width), max. 300 mm

APPLICATIONS

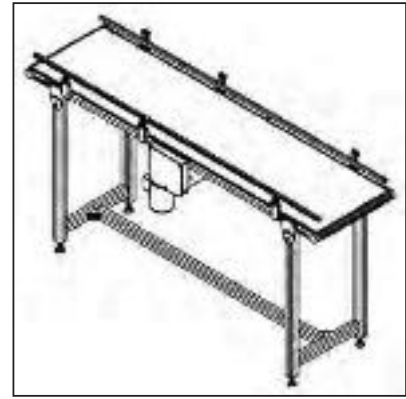
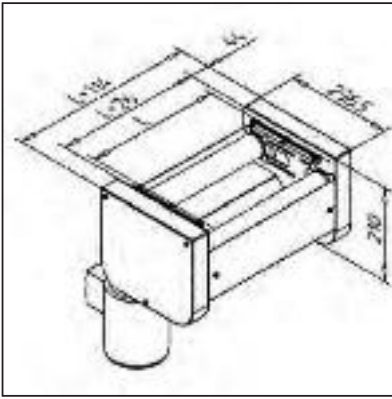
- Return shaft for knife edge belt
- For small transport goods and light loads

ASSEMBLY

- Align shaft exactly with bracket to avoid misalignment for the bearing

CENTER DRIVE - 3 WHEELS SYSTEM

part no. 29.5260/0



TECHN. DATA/ITEMS SUPPLIED

- Weight 0,820 kg/m
- Ball bearings on both sides
- With complete installation material, without motor
- **part no. 29.5260/0 Weight with drive ø 50 mm:** 50,800 kg/m
- **part no. 29.5261/0 Weight with drive ø 70 mm:** 70,566 kg/m

APPLICATIONS

- Space saving drive
- Motor below conveyor
- Suitable for nosebar on both ends

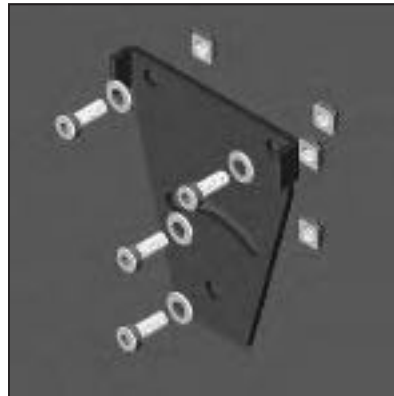
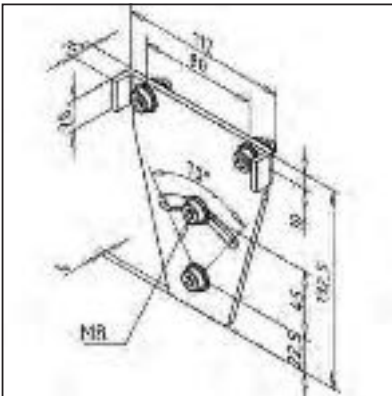
ASSEMBLY

- First install sheets
- Assemble driving drum, tensioning drive and bearing housing
- Assemble sprocked wheel, chain and motor. Adjust belt-tension after that

SWIVEL PLATE

001553

part no. 29.5001/0



TECHN. DATA / ITEMS SUPPLIED

- Steel, powder coated, grey
- Fastening kit
- Weight 0,377 kg
- **Stainless version part no. 29.5012/0**

APPLICATIONS

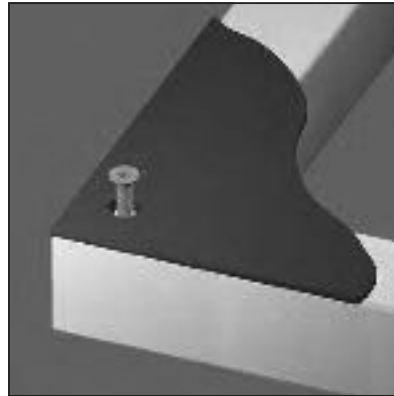
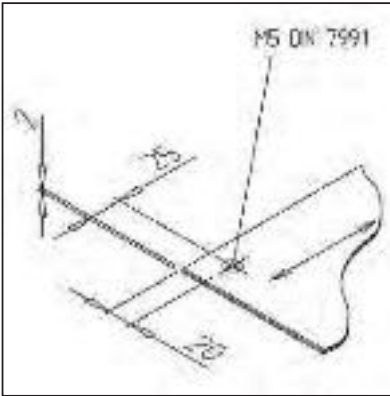
- Attachment of the sub-construction on MiniTec belt conveyor
- Also suitable for inclined belt conveyors
- The swivel plate is also used as a counterbearing to tighten the belt
- Range ± 35°

ASSEMBLY

- Fasten at the conveyor profiles at the subconstruction fastening kit using

SUPPORTING SHEET

part no. 29.5010/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, anodized
- Thickness: 2 mm
- bored, ready for use
- Weight 5,4 kg/m²
- **Stainless version part no. 29.5010/1**

APPLICATIONS

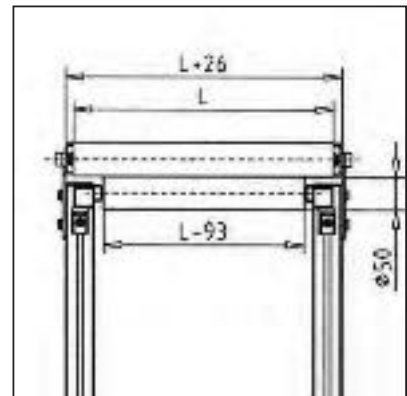
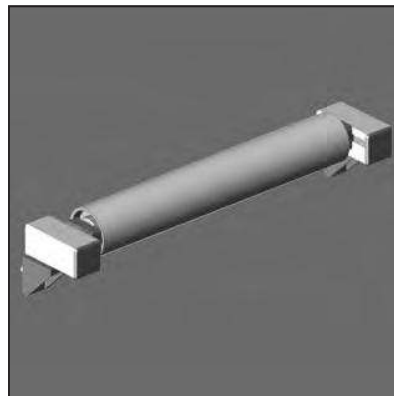
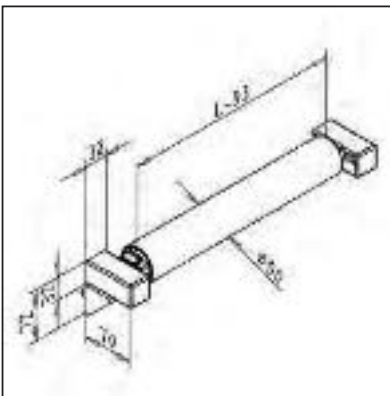
- Support for conveyor belts
- For MiniTec conveyor systems

ASSEMBLY

- Screw with counter sunk screws M5 x 16 and square nut M5 on profile

SUPPORT ROLLER KIT

part no. 29.5002/0



TECHN. DATA / ITEMS SUPPLIED

- Support roller kit, PVC
- Ball bearings on both sides
- Two profile supports
- 2 mounting angles
- Fastening kit
- Weight 0,487 kg
- **Please specify dimension L (belt width)**

APPLICATIONS

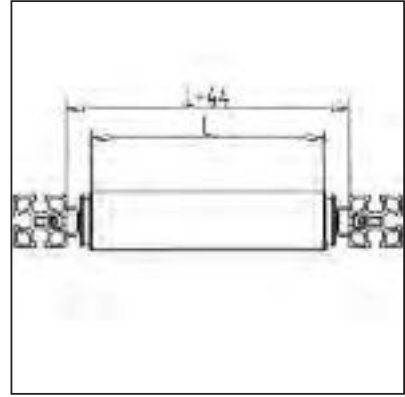
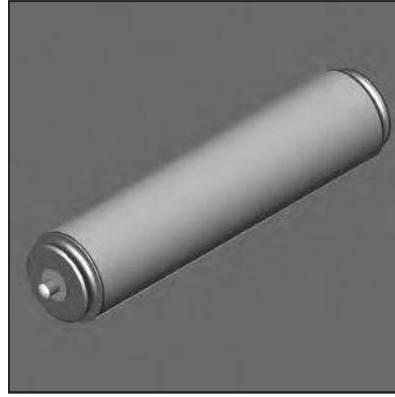
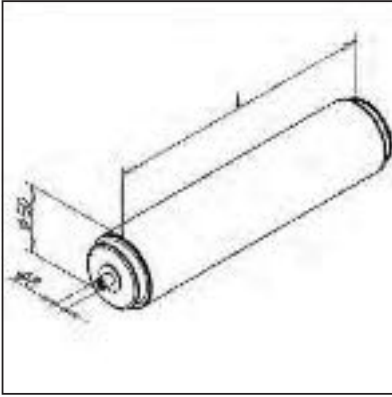
- MiniTec belt conveyor system
- As a support for the lower side of long belt conveyors
- We recommend to install one support roller for each intermediate support on the belt conveyor
- Use this support roller kit only with belt width > 115 mm

ASSEMBLY

- Preassemble the profile roller support on the conveyor supports; use the angles
- Clip the support roller fastening kit
- Slide the roller in appropriate position and tighten the screws

TRANSPORT ROLLER 50-25

part no. diverse



TECHN. DATA / ITEMS SUPPLIED

- Completely mounted transport roller optional PVC-tube or Alu-tube

- Please indicate dimension L

- Transport roller PVC **part no. 21.0890/0**

- Transport roller Al **part no. 21.0892/0**

APPLICATIONS

- Production of roller conveyors with or without drive

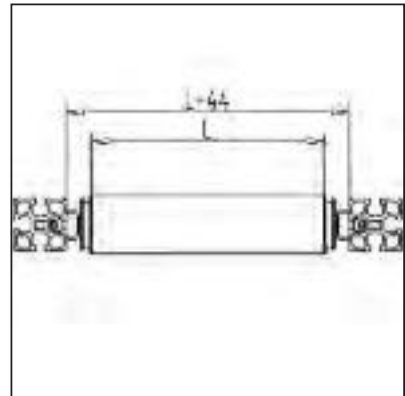
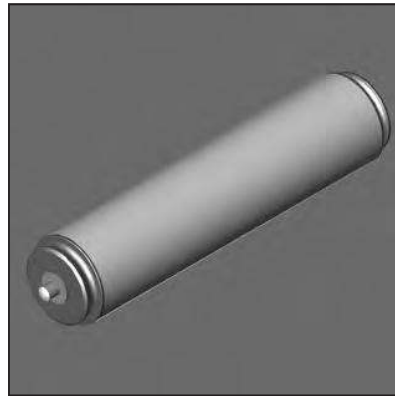
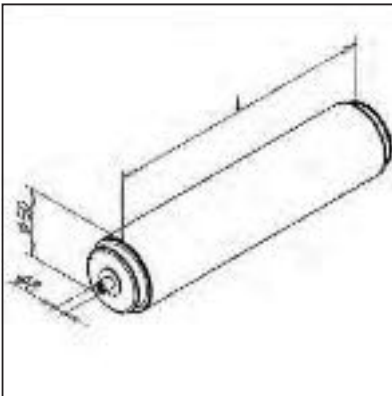
ASSEMBLY

- Clip in roller support

- Use with roller support 25 **part no. 22.1196/0**

TRANSPORT ROLLER 50-36

part no. diverse



TECHN. DATA / ITEMS SUPPLIED

- Completely mounted transport roller optional PVC-tube or Alu-tube

- Load max. (roller) 20 kg

- Please specify dimension L

- Transport roller PVC **part no. 21.1717/0**

- Transport roller Al **part no. 21.1716/0**

APPLICATIONS

- Production of roller conveyors with or without drive

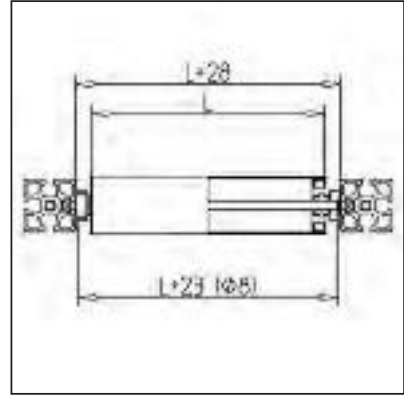
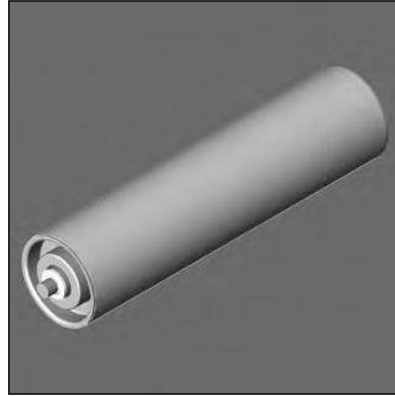
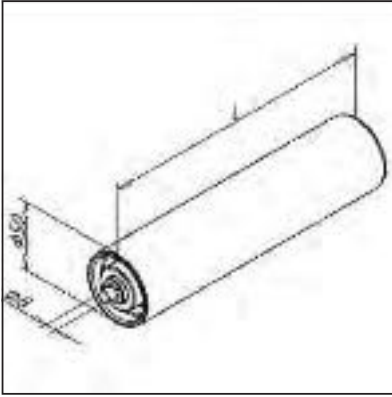
ASSEMBLY

- Clip in roller support

- As roller support we recommend door catch **part no. 21.1190/0**

TRANSPORT ROLLER S 50-25

part no. diverse

**TECHN. DATA / ITEMS SUPPLIED**

- Completely mounted transport roller
optional PVC-tube or Alu-tube

- With ball bearings and shaft

- **Please indicate dimension L**

- Transport roller PVC **part no. 21.0891/0**

- Transport roller Al **part no. 21.0895/0**

APPLICATIONS

- Production of roller conveyors without
drive

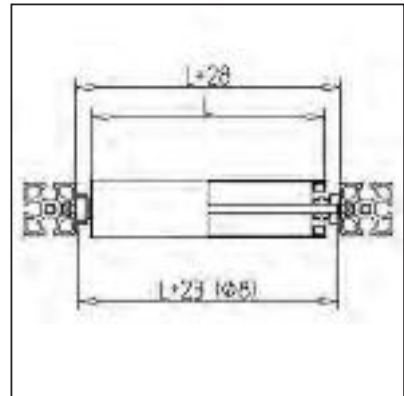
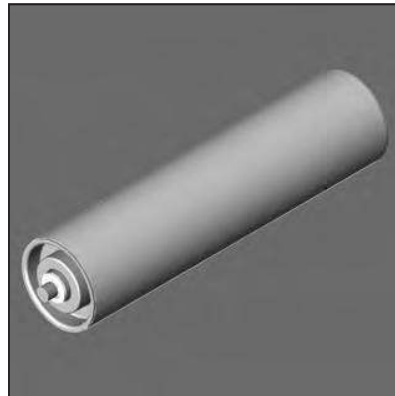
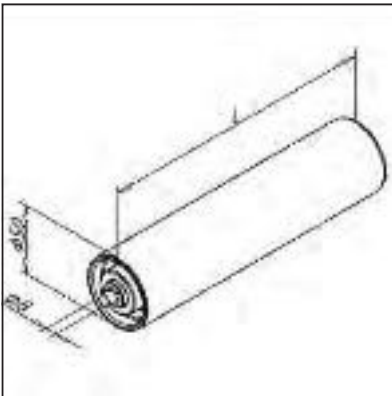
ASSEMBLY

- Clip in roller support

- Use with roller support 25
part no. 21.1196/0

TRANSPORT ROLLER S 50-36

part no. diverse

**TECHN. DATA / ITEMS SUPPLIED**

- Completely mounted transport roller,
PVC-tube

- With ball bearings and shaft

- **Please indicate dimension L**

- Transport roller PVC **part no. 21.1790/0S**

- Transport roller Al **part no. 21.1718/0S**

APPLICATIONS

- Production of roller conveyors without
drive

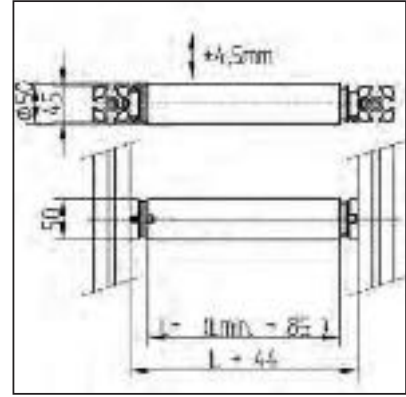
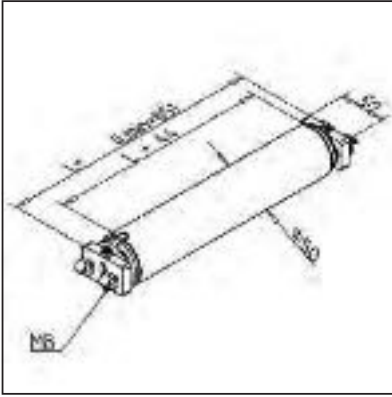
ASSEMBLY

- Clip in roller support

- Use with roller support 36
part no. 22.1190/0

BRAKE-ROLLER PVC 50

part no. 21.2250/0



TECHN. DATA / ITEMS SUPPLIED

- PVC, blue	
- Fastening kit	
- Weight	0,295 kg
- Weight	+ 0,45 kg/m

APPLICATIONS

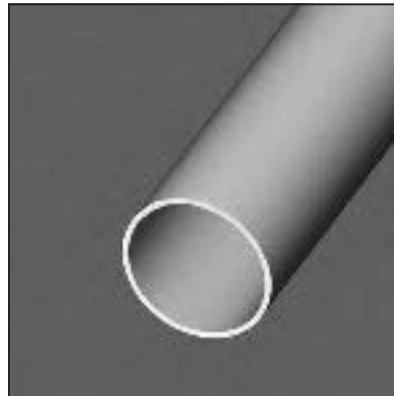
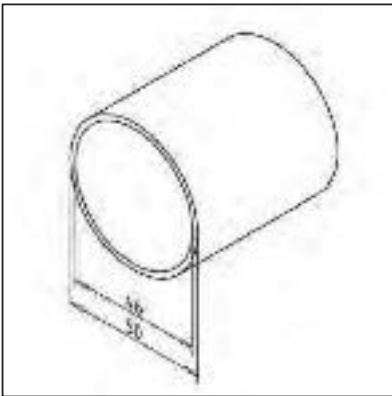
- To decelerate transport boxes on sloped roller conveyors

ASSEMBLY

- Mount lateral support on frame of roller conveyor
- Clip brake-roller and adjust height with stud bolts
- The brake-roller can be adjusted in height +/- 5 mm

TUBE AL 50 X 2

part no. 20.1041/0



TECHN. DATA / ITEMS SUPPLIED

- AlMgSi 0,5 F22, natural	
- Recommended tube length: max. 1000 mm	
- Weight	0,820 kg/m
- Length	6 m
- Please indicate needed tube length	

APPLICATIONS

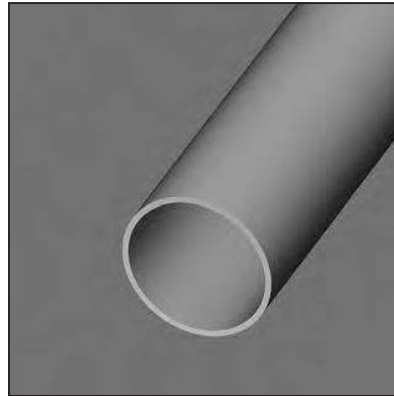
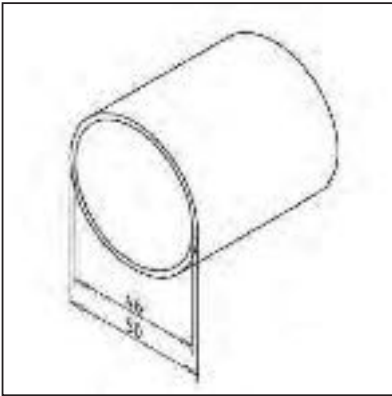
- Transport rollers at any length for driven or non-driven roller conveyors

ALL TRANSFER SYSTEMS TSG

- Use bearing assembly S bearing assembly for transport roller

TUBE PVC 50 X 2

part no. 20.0992/0

**TECHN. DATA / ITEMS SUPPLIED**

- PVC, grey
- Recommended tube length: max. 1000 mm
- Weight 0,420 kg/m
- Length 3 m

- Please indicate needed tube length

APPLICATIONS

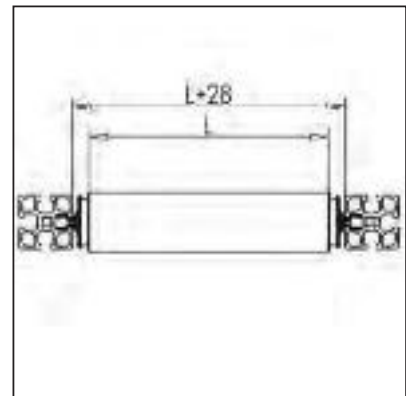
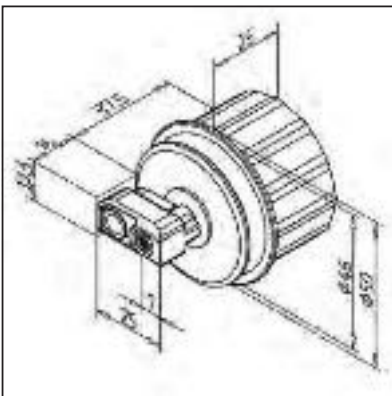
- Transport rollers at any length for driven or non-driven roller conveyors

ASSEMBLY

- Use bearing assembly S or bearing assembly for transport roller

BEARING ASSEMBLY FOR TRANSPORT ROLLERS 25

part no. 21.0894/0

**TECHN. DATA / ITEMS SUPPLIED**

- bearing bush, PA 6
- Axle bolt, steel
- Roller support, PA 6
- Fastening kit
- For transport rollers of 60 - 1000 mm
- Weight 0,42 kg
- Load max. (roller) 20 kg

APPLICATIONS

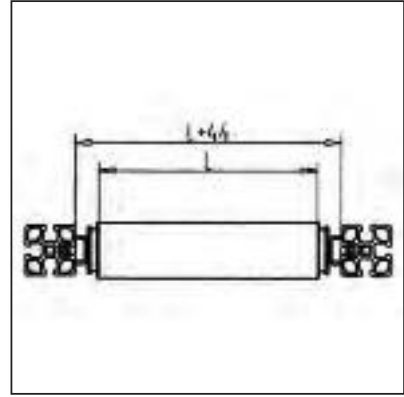
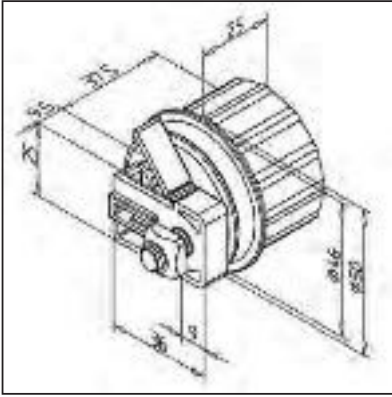
- Roller conveyors at any length
- Drive via round belt \varnothing 5 mm possible
- The rollers can be replaced individually

ASSEMBLY

- Attachment of the roller support on all profiles possible
- Mount roller support
- Press bearing assembly into the tube
- Insert axle bolt

BEARING ASSEMBLY FOR TRANSPORT ROLLERS 36

part no. 21.1056/0



TECHN. DATA / ITEMS SUPPLIED

- housing PA with slide-bearing
- Axle bolt, steel
- Roller support, PA 6
- Fastening kit
- For transport rollers of 60 - 1000 mm
- Weight 0,42 kg
- Load max. (roller) 20 kg

APPLICATIONS

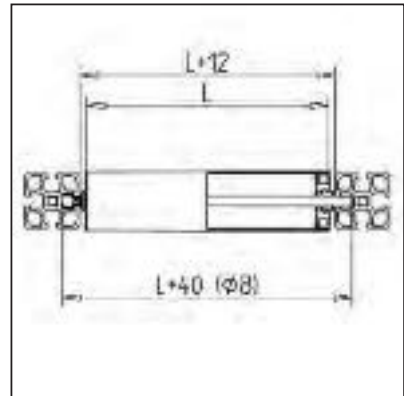
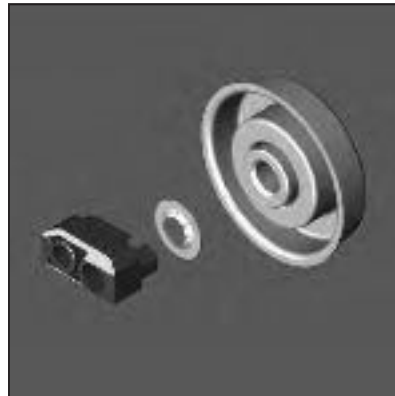
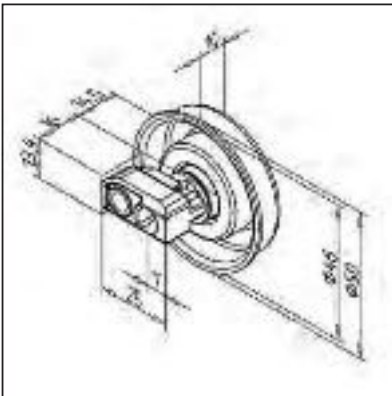
- Roller conveyors at any length
- Drive via round belt \varnothing 5 mm possible
- The rollers can be replaced individually

ASSEMBLY

- Attachment of the roller support on all profiles possible
- Mount roller support
- Press bearing assembly into the tube
- Insert axle bolt

BEARING ASSEMBLY S 25

part no. 21.0893/0



TECHN. DATA / ITEMS SUPPLIED

- Housing steel with ball bearing
- Securing clip, steel
- Roller support, PA 6
- Fastening kit
- For transport rollers of 60 - 1000 mm
- Weight 0,42 kg
- Load max. (roller) max. 33 kg

APPLICATIONS

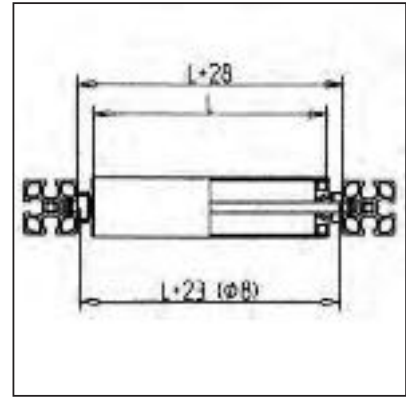
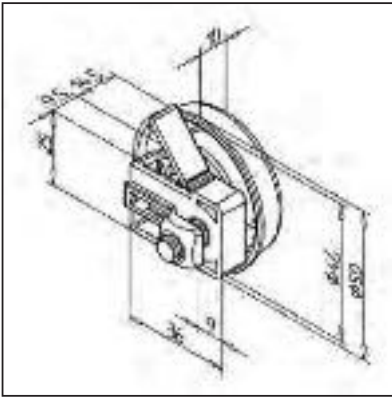
- Roller conveyors at any length
- The rollers can be replaced individually

ASSEMBLY

- Attachment of the roller support on all profiles possible
- Press bearing assembly into the tube
- Conduct spindle \varnothing 8mm and clip on
- Clip in transport roller

BEARING ASSEMBLY S 36

part no. 21.1722/0

**TECHN. DATA / ITEMS SUPPLIED**

- Housing steel with ball bearing
- Securing clip, steel
- Roller support, PA 6
- Fastening kit
- For transport rollers of 60 - 1000 mm
- Weight 0,42 kg
- Load max. (roller) max. 33 kg

APPLICATIONS

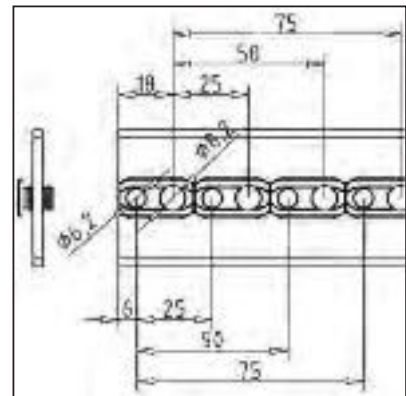
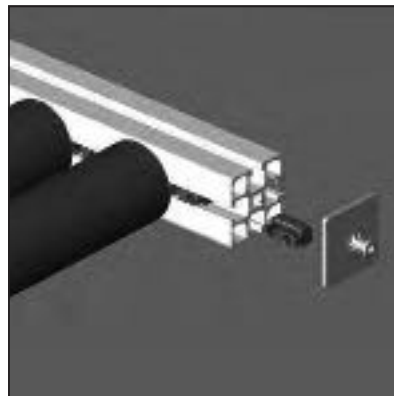
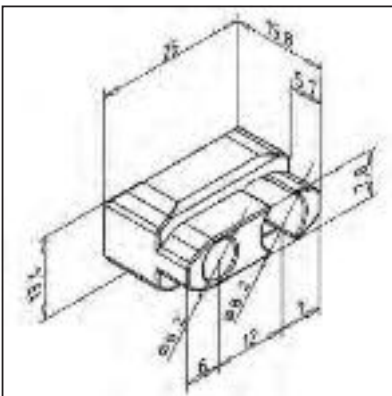
- Roller conveyors at any length
- The rollers can be replaced individually

ASSEMBLY

- Attachment of the roller support on all profiles possible
- Press bearing assembly into the tube
- Conduct spindle \varnothing 8mm and clip on
- Clip in transport roller

PULLEY CARRIER 25

part no. 22.1196/0

**TECHN. DATA / ITEMS SUPPLIED**

- PP, grey
- fastening kit steel , zinc-plated
- Weight 0,018 kg
- Load capacity 15 kg/ Träger

APPLICATIONS

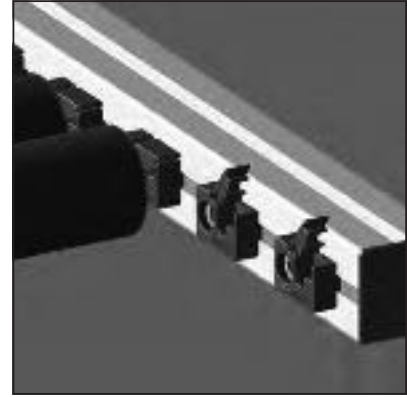
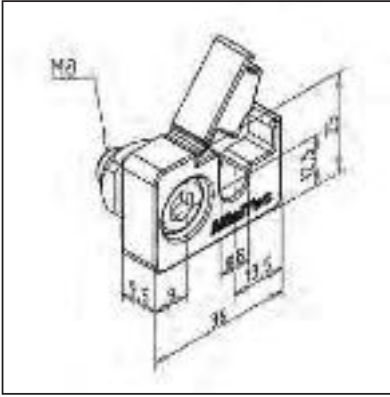
- To assemble roller conveyors with variable spacing of rollers
- smallest possible roller \varnothing 25 mm
- Roller axis \varnothing 8 mm

ASSEMBLY

- mount pulley carrier onto profile at desired distance
- Insert axle of transport roller into pulley carrier
- press locking device for axis shut

PULLEY CARRIER 36

part no. 22.1190/0



TECHN. DATA / ITEMS SUPPLIED

- PP, grey
- fastening kit steel , zinc-plated
- Weight 0,018 kg
- Load capacity 15 kg/Träger

APPLICATIONS

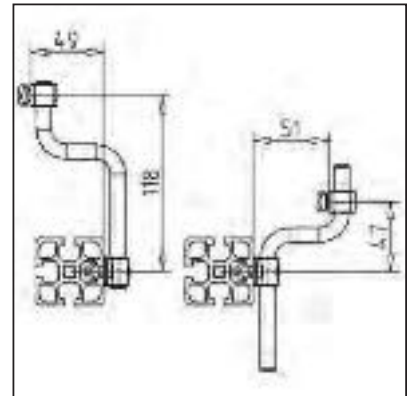
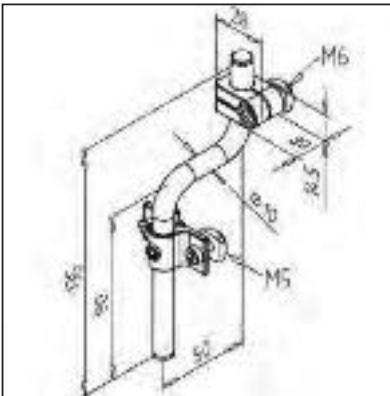
- To assemble roller conveyors with variable spacing of rollers
- smallest possible roller Ø 25 mm
- Roller axis Ø8 mm

ASSEMBLY

- mount pulley carrier onto profile at desired distance
- Insert axle of transport roller into pulley carrier
- press locking device for axis shut

LATERAL GUIDE SUPPORT, SHORT

part no. 29.5046/0



TECHN. DATA / ITEMS SUPPLIED

- abs, grey
- distance bolt, stainless steel
- With fastening material steel, zinc plated
- Weight 0,097 kg

APPLICATIONS

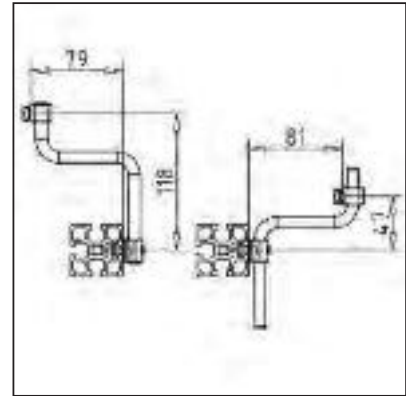
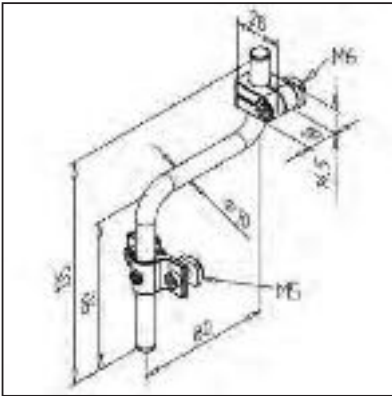
- Adjustable lateral guide for MiniTec roller conveyor, conveyor belt etc.
- we recommend approx. 300 mm distance between the supports

ASSEMBLY

- slide square nut into base frame of conveyor and adjust the support
- adjust height and distance
- mount the lateral guide

LATERAL GUIDE SUPPORT, LONG

part no. 29.5047/0



TECHN. DATA / ITEMS SUPPLIED

- abs, grey
- distance bolt, stainless steel
- With fastening material steel, zinc plated
- Weight 0,104 kg

APPLICATIONS

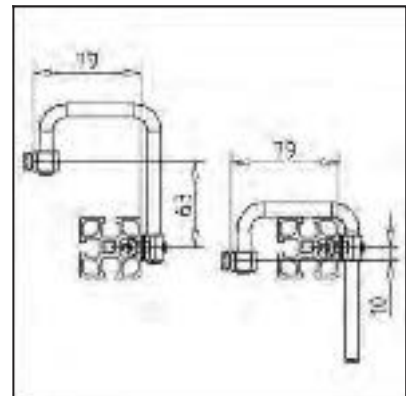
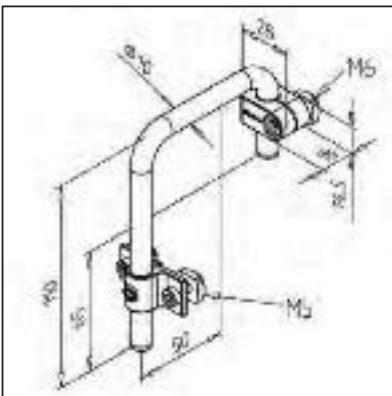
- adjustable lateral guide for MiniTec roller conveyors, belt conveyors etc.
- we recommend approx. 300 mm distance between the supports
- larger adjustment range of lateral support **part no. 29.5047/0**

ASSEMBLY

- slide square nut into base frame of conveyor and adjust the support
- adjust height and distance
- mount the lateral guide

LATERAL GUIDE SUPPORT U-SHAPED

part no. 29.5048/0



TECHN. DATA / ITEMS SUPPLIED

- abs, grey
- distance bolt, stainless steel
- With fastening material steel, zinc plated
- Weight 0,108 kg

APPLICATIONS

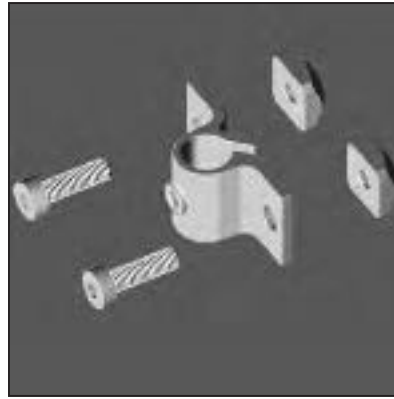
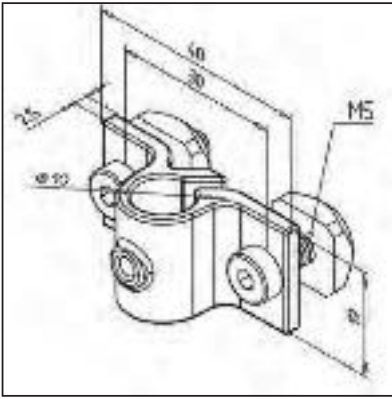
- adjustable lateral guide for MiniTec roller conveyors, belt conveyors etc.
- we recommend approx. 300 mm distance between the supports
- Lateral guide can be completely pushed down onto the roller conveyor or belt conveyor, for flat goods to be conveyed

ASSEMBLY

- Slide square nut into base frame of roller conveyor or belt conveyor and fasten lateral guide
- adjust height and distance
- mount the lateral guide

CLAMP SUPPORT 10

part no. 29.5052/0



TECHN. DATA / ITEMS SUPPLIED

- 1.4301 / steel zinc plated
- Fastening kit
- Weight 0,0431 kg

APPLICATIONS

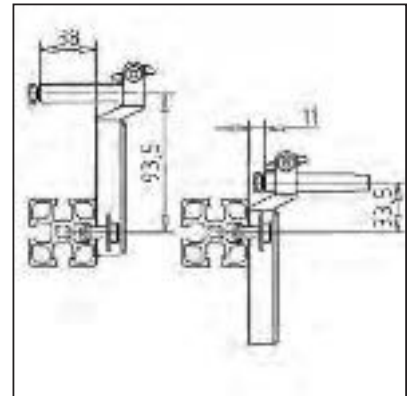
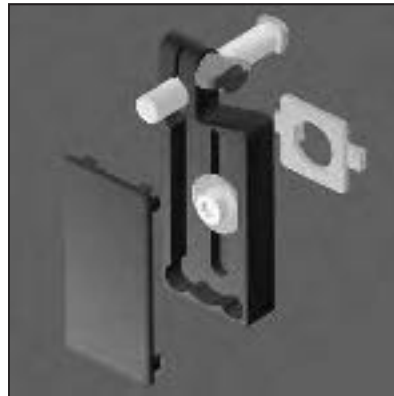
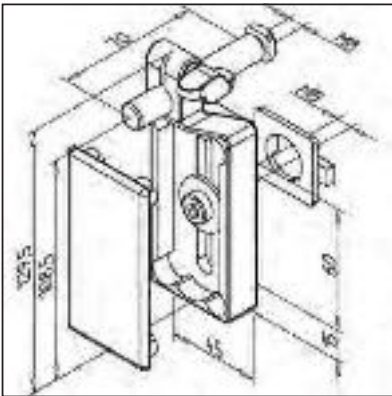
- Adjustable lateral guides for MiniTec belt conveyors
- Recommended distance between the lateral guides approx. 500 mm

ASSEMBLY

- Mount on profile groove

LATERAL GUIDE 70 SUPPORT

part no. 29.5025/0



TECHN. DATA / ITEMS SUPPLIED

- PA, grey
- Distance bolt, stainless steel
- With fastening material steel, zinc plated
- Weight 0,288 kg

APPLICATIONS

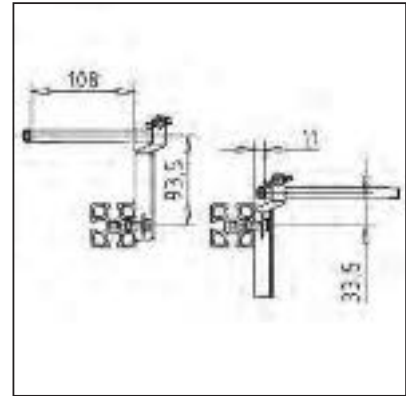
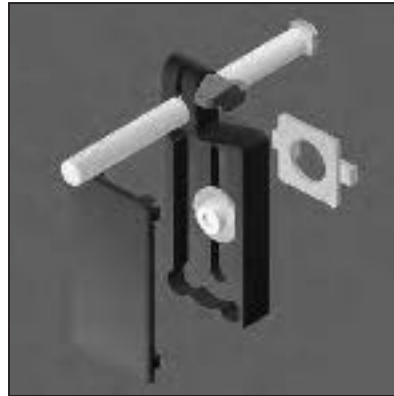
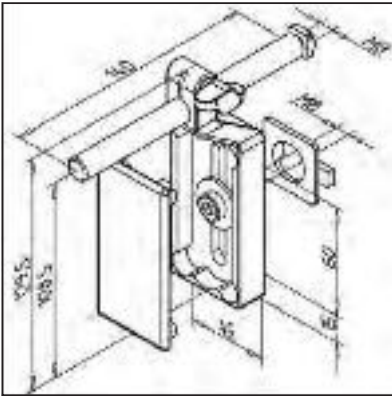
- Adjustable lateral guides for MiniTec belt conveyors
- We recommend: approx. 500 mm distance between the supports

ASSEMBLY

- Set the height and tighten the screws
- Mount the lateral guide
- Adjust lateral distance bolt

LATERAL GUIDE 140 SUPPORT

part no. 29.5028/0



TECHN. DATA / ITEMS SUPPLIED

- PA, grey
- Distance bolt, stainless steel
- With fastening material steel, zinc plated
- Weight 0,350 kg

APPLICATIONS

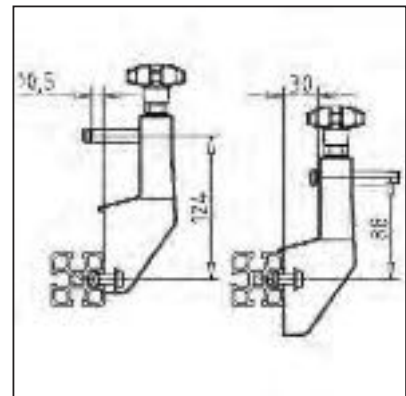
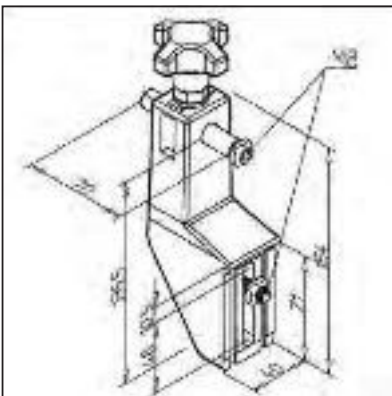
- Adjustable lateral guides for MiniTec belt conveyors
- We recommend: approx. 500 mm distance between the supports

ASSEMBLY

- Set the height and tighten the screws
- Mount the lateral guide
- Adjust lateral distance bolt

LATERAL GUIDE 70 SUPPORT S

part no. 29.5056/0



TECHN. DATA / ITEMS SUPPLIED

- PA, grey
- Distance bolt: stainless steel
- Fastening kit
- Weight 0,2883 kg

APPLICATIONS

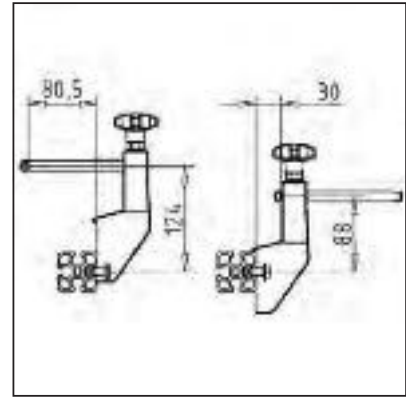
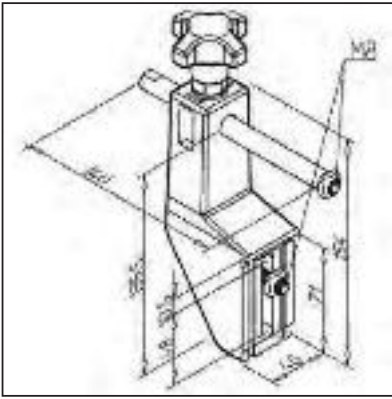
- Adjustable lateral guide for MiniTec belt conveyors
- Recommended distance between the lateral guides approx. 500 mm

ASSEMBLY

- Adjust height and tighten screws
- Mount lateral guide
- Adjust lateral distance bolt

LATERAL GUIDE 140 SUPPORT S

part no. 29.5055/0



TECHN. DATA / ITEMS SUPPLIED

- PA, grey
- Distance bolt: stainless steel
- Fastening kit
- Weight 0,350 kg

APPLICATIONS

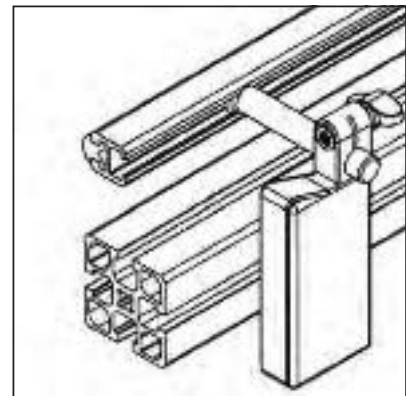
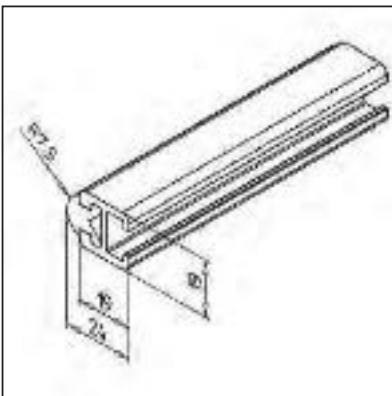
- Adjustable lateral guide for MiniTec belt conveyors
- Recommended distance between the lateral guides approx. 500 mm

ASSEMBLY

- Adjust height and tighten screws
- Mount lateral guide
- Adjust lateral distance bolt

LATERAL GUIDE

part no. 29.5034/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, E6/EV1
- Sliding profile PE
- Weight 0,551 kg/m
- Length 6 m

APPLICATIONS

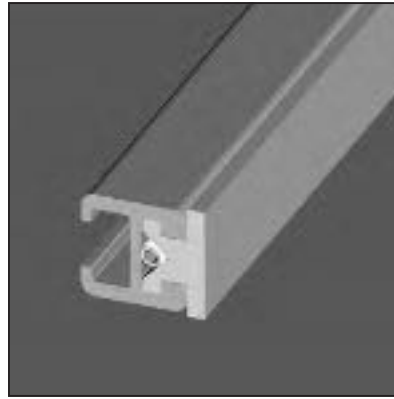
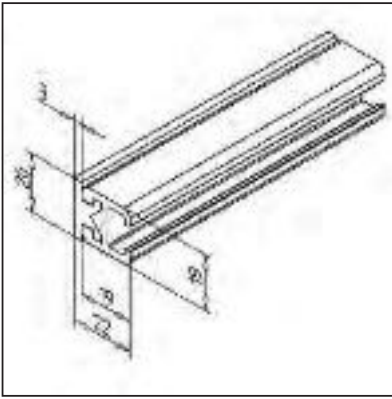
- Adjustable lateral guide for conveyors
- Recommended length: axial distance A + 40 mm

ASSEMBLY

- Slide the M8 square nuts with position fixing into the groove
- Screw the lateral guide on the distance bolt
- suitable end cap **part no. 22.1180/0**

LATERAL GUIDE F

part no. 29.5049/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, E6/EV1	
- slide profile, PE, natural	
- Weight	0,527 kg/m
- Length	6 m

APPLICATIONS

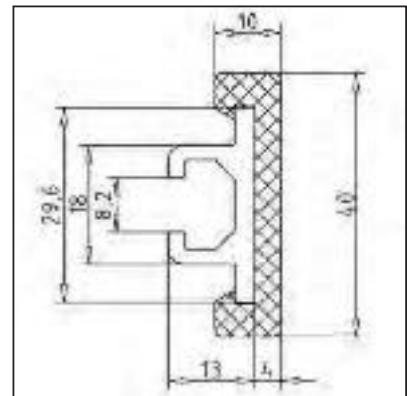
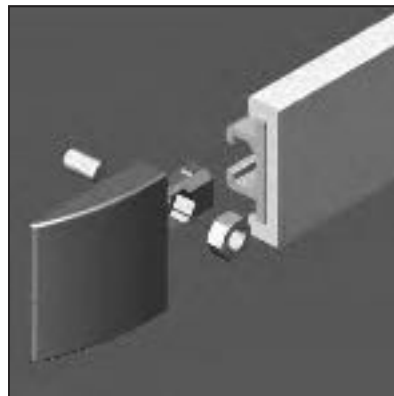
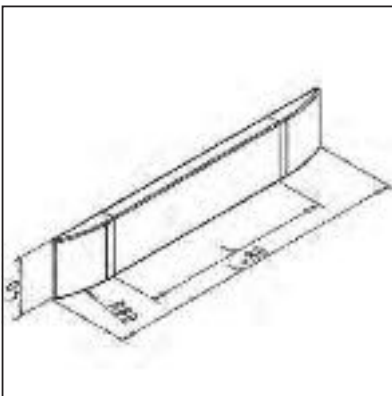
- adjustable lateral guidance for MiniTec chain conveyors, belt conveyors and roller conveyors

ASSEMBLY

- slide square nut M08 (fastening kit) from lateral guide support into groove
 - mount support to lateral guide and adjust it
 - suitable end cap **part no. 22.1180/0**

LATERAL 40 F GUIDE, WHITE

part no. 29.5051/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, E6/EV1	
- slide profile, PE, natural	
- 2 x slide PA, grey	
- Weight	0,645 kg/m
- Length max.	6 m
- Other colours and designs on request, e.g. green, black, grey, black antistatic	

APPLICATIONS

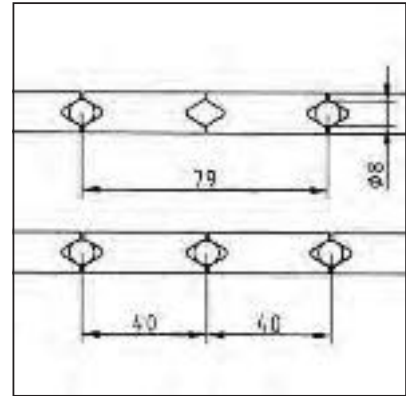
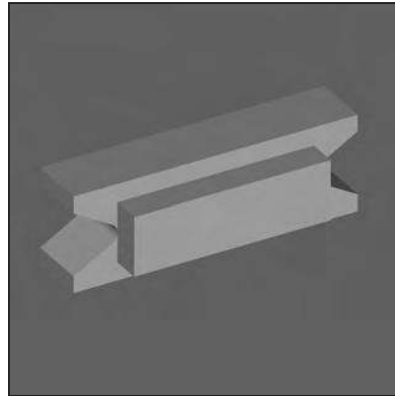
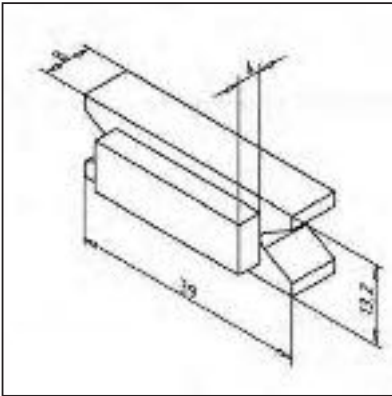
- adjustable lateral guidance for MiniTec chain conveyors, belt conveyors and roller conveyors

ASSEMBLY

- slide square nut M08 (fastening kit) from Lateral guide support into groove
 - mount support to lateral guide and adjust it

SPACER

part no. diverse



TECHN. DATEN / ITEMS SUPPLIED

- Spacer 39, PP black, **part no. 22.1197/0**
- Spacer 44, PP black, **part no. 22.1198/0**
- For shaft \varnothing 8 mm
- Weight 0,002 kg

APPLICATIONS

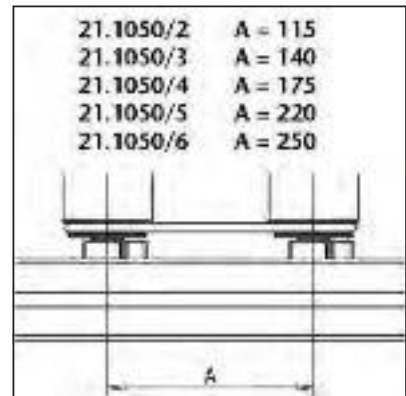
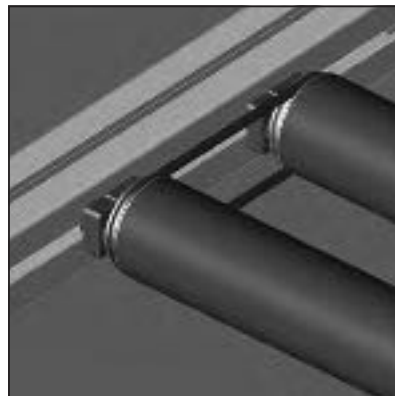
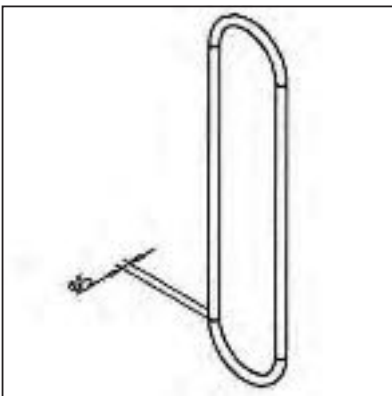
- For manufacturing roller conveyors with equal pitch spacing
- Suitable for all system grooves
- Possible pitch 40 und 79

ASSEMBLY

- Push in groove, alternating spacer and conveyor roller
- Clamp the first and the last spacer

DRIVING BELT NBR

part no. 21.1050/1



TECHN. DATA / ITEMS SUPPLIED

- NBR, black
- \varnothing = 5 mm
- A = 80 mm
- For other lengths see selection table on the right

APPLICATIONS

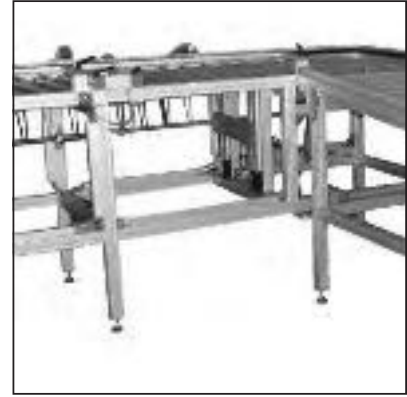
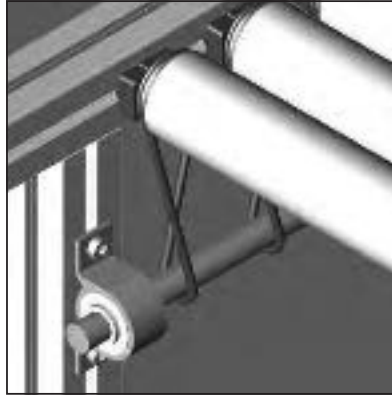
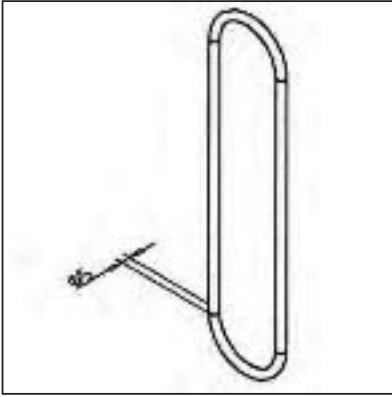
- Attachment of transport rollers at insufficient places via groove in bearing assembly from roller to roller

ASSEMBLY

- Insert belt in groove of the first roller and clip roller in the bearing
- Strip belt over second roller and clip in roller support

DRIVING BELT PU

part no. 21.1050/7

**TECHN. DATA / ITEMS SUPPLIED**

- PU, green	
- Ø = 5 mm	
- Length	550 mm

APPLICATIONS

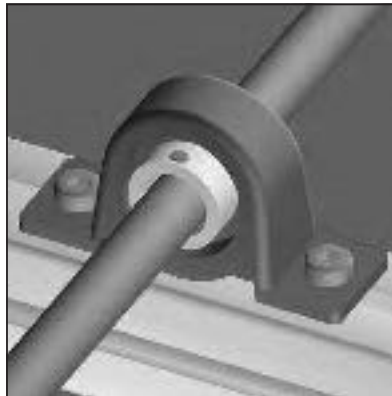
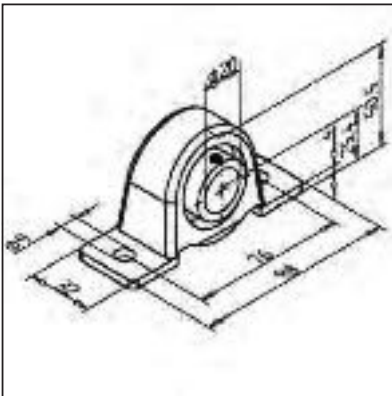
- Drive of transport rollers via groove in bearing assembly

ASSEMBLY

- Strip driving belt over driving shaft
- Lay driving belt in groove of transport
- Bind rollers at insufficient places with driving belt NBR **part no. 21.1050/1** to **part no. 21.1050/6**

SUPPORT BEARING 20

part no. 50.0128/0

**TECHN. DATA / ITEMS SUPPLIED**

- Housing, steel, zinc plated	
- Fastening kit	
- Bore Ø 20 mm	
- stat. Co =	6350 N
- dyn. C =	13000 N
- Weight	0,19 kg

APPLICATIONS

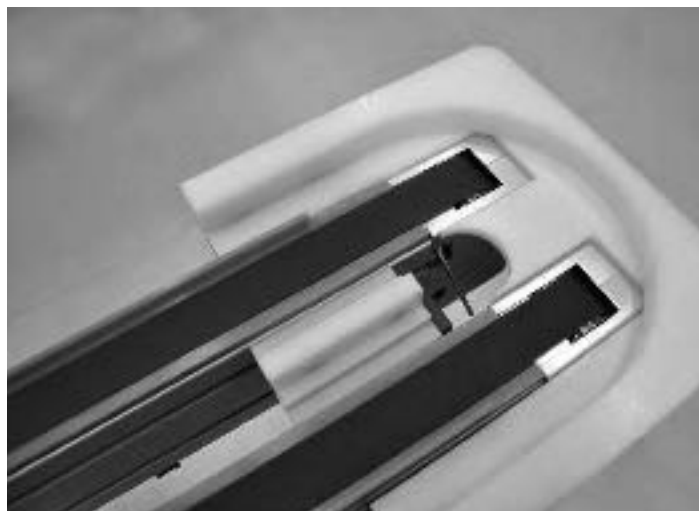
- Driving of roller-conveyors with driving belts

ASSEMBLY

- With fastening kit
- Lead shaft trough bearing and secure with set screw

TRANSFER SYSTEM TSG

MODULAR, ECONOMICAL, STURDY



Flexibility in production is gaining more and more importance. Fast and easy adaptation to product development and changed market demands are a decisive factor for success. The TSG transfer system is in keeping with this trend. All the advantages of our construction kit system for machine construction and the precision of our linear system are used in this system. The TSG is completely compatible with the tried and tested MiniTec profile system with workstations, protective devices, conveyor systems, handling equipment, etc. Manual stations and complex automated processes can be achieved cost-effectively with the TSG transfer system.

The TSG consists of standardized modules that can be combined in any number of ways to create tailor-made systems. Robust 25 T5 timing belts with steel reinforcement allow continuous use without the need for re-tensioning. The TSG transfer systems can be supplied as modules for assembly by the customer or as ready-to-use systems including commissioning. We can also take care of the design and layout of the system in accordance with customer specifications. For simple requirements, the checklists in the appendix to this catalog can be used.

Technical Data

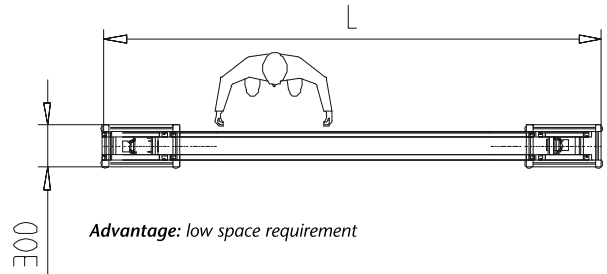
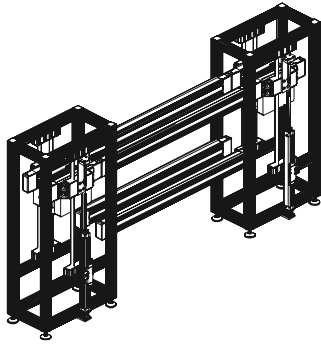
Speed:	11 m/min
Motor nominal power:	120 W
Nominal voltage	
(without Frequency transformer):	400 V/50 Hz
Nominal voltage	
(with Frequency transformer):	230 V/50 Hz
Nominal current:	0,29 A
Drive speed:	64 1/min
Drive torque:	13 Nm
Distributed load:	1710 N
Ambient temperature:	0° bis 50°C

Other speeds are available from 5.5 to 21 m/min. The maximum distributed load is 1710 N. At speeds greater than 11 m/min the maximum distributed load is reduced.

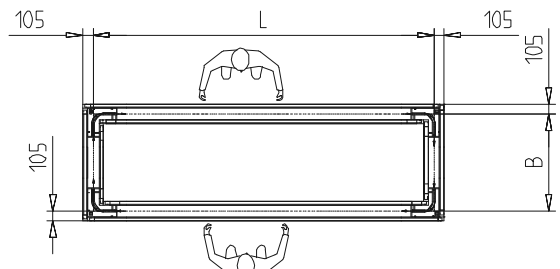
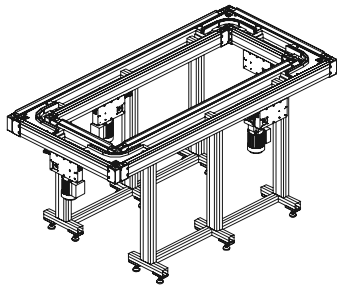
TRANSFERSYSTEM TSG

SYSTEM CONCEPTS

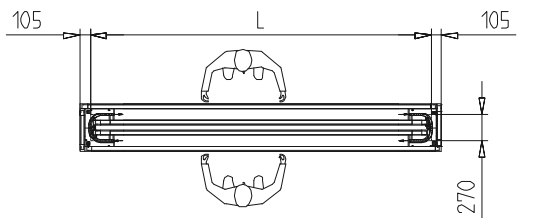
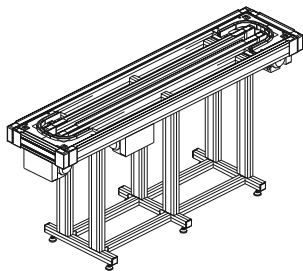
Vertical circuit



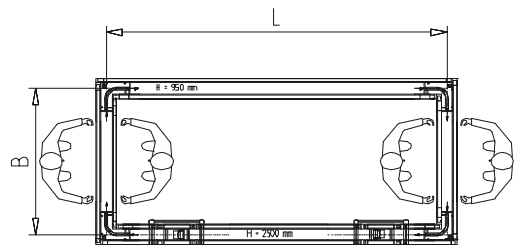
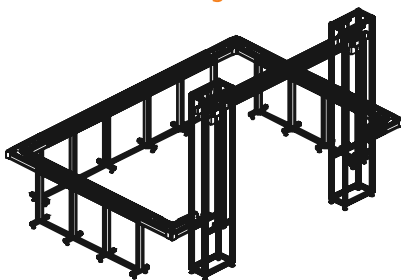
Basic loop 90°



Compact circuit 180°



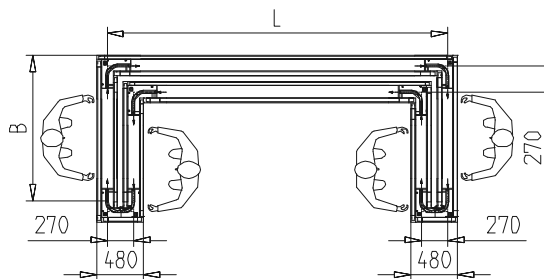
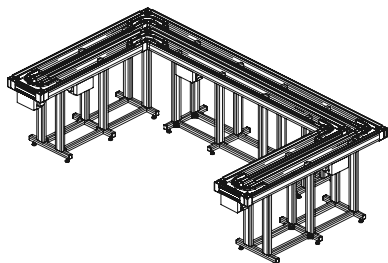
U-circuit with lifting station



TRANSFERSYSTEM TSG

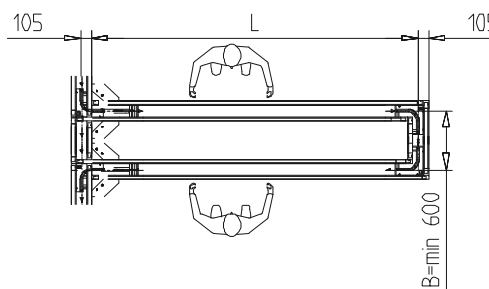
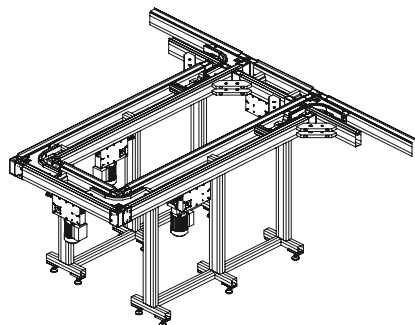
SYSTEM CONCEPTS

Double-U circuit



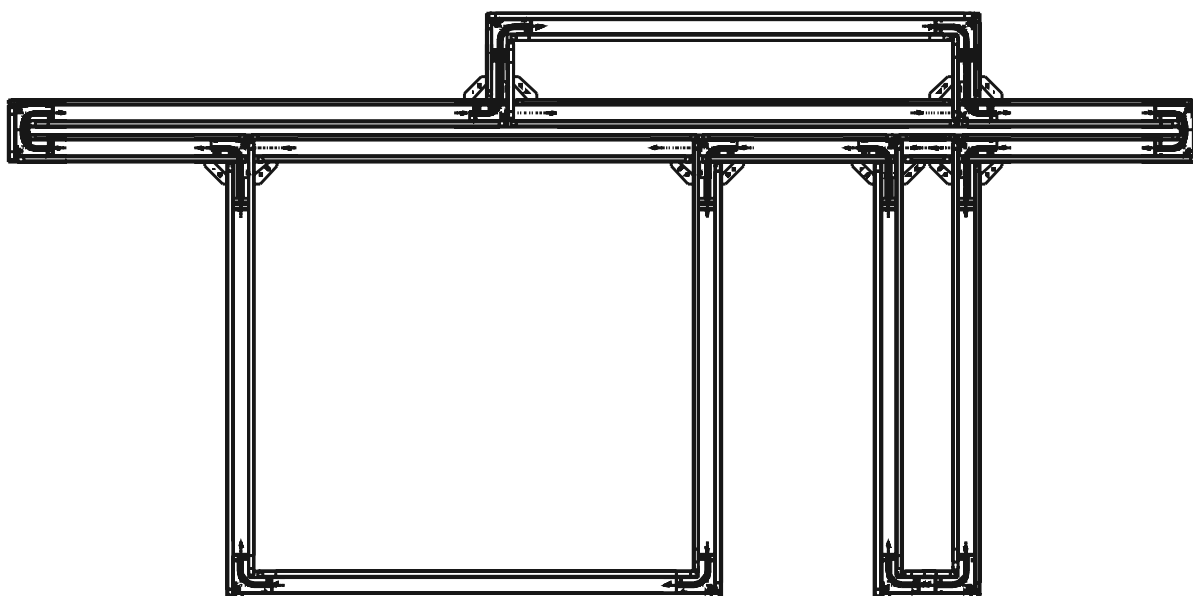
Advantage: optimal use of area, accessibility to entire conveyor line

Shunt



Advantage: Diversion from main cycle, great flexibility for adaptation and capacity

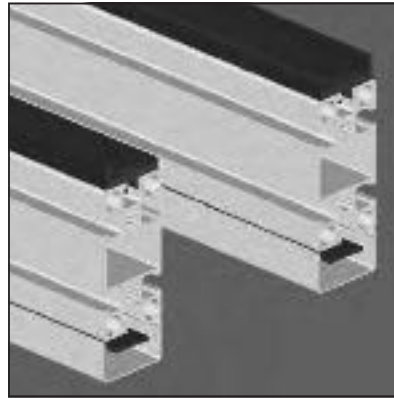
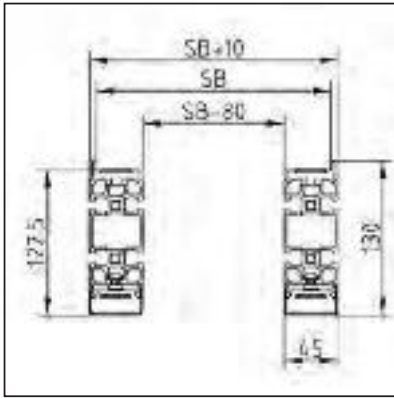
Combination of different variants



Advantage: optimal use of space, accessibility to entire conveyor line

BASIC LINE

part no. 43.0020/0



TECHN. DATA / ITEMS SUPPLIED

- Profile 45 x 90 anodized, E6/EV1 with 4 integrated pneumatic lines
 - Slide strip, PE, black, highly abrasion resistant, Lmax: 2 m
 - Cover profile for belt with clip attachment
 - Track width: 200 mm
 - Line length according to specification
- | | |
|--------------------|-------------------------|
| - Ix = | 112,823 cm ³ |
| - Iy = | 28,526 cm ³ |
| - Weight | 3,667 kg/m |
| - Line length min. | 270 mm |
| - Line length max. | 4000 mm |

APPLICATIONS

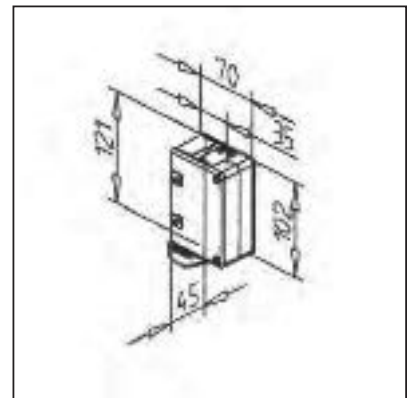
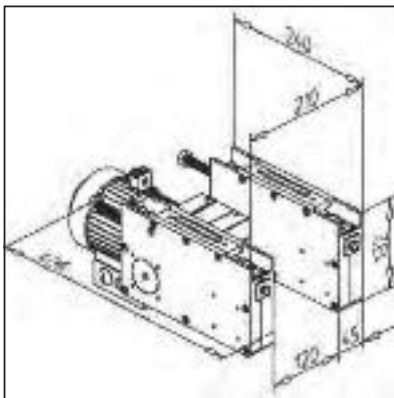
- Use in all TSG transfer systems
- Max. line load depends on drive concept
- When exceeding the total load per section, please divide into several sections

ASSEMBLY

- Bolt basic line with supports
- After attachment of drive unit, diversions and timing belts, clip cover profile onto underside of profile
- Free profile grooves for attaching stoppers, sensors, switches, ect. With standard screws

BASIC MODULE 200

part no. 43.0010/0



TECHN. DATA / ITEMS SUPPLIED

- Drive unit with integrated belt tensioners comprising 2 belt drives with connecting shaft and 1 motor
- 4 timing belt reverse units for 25 T5 timing belt
- Track width 200 mm

APPLICATIONS

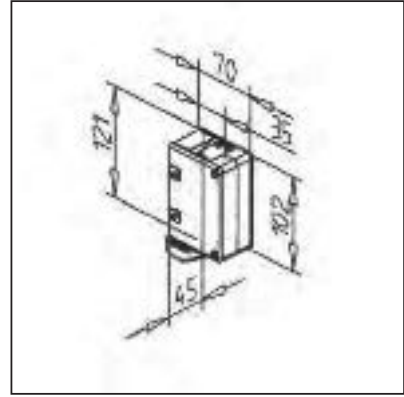
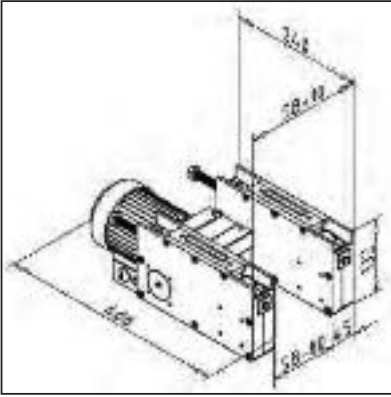
- All TSG transfer systems with 25 T5 timing belt

ASSEMBLY

- Remove drive unit cover
- Screw drive unit securely with attachment set centrally on the bottom of the basic line
- Remove covers from reverse units
- Attach reverse units with profile connectors to ends of the basic line
- Insert timing belt
- Install cover of drive units and reverse units
- Tighten timing belt
- Easy re-tightening of timing belt at drive unit, without prior disassembly, also during operation

BASIC MODULE VARIABLE

part no. 43.0011/0



TECHN. DATA / ITEMS SUPPLIED

- Drive unit with integrated belt tensioners comprising 2 belt drives with connecting shaft and 1 motor
- 4 timing belt reverse units for 25 T5
- **Please specify the desired track width**

APPLICATIONS

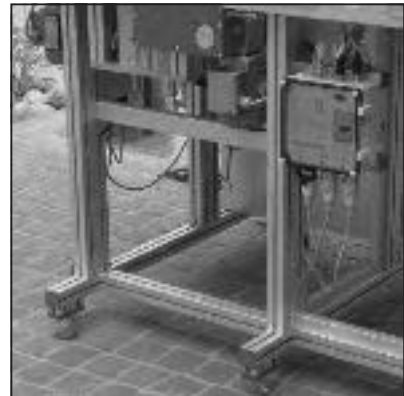
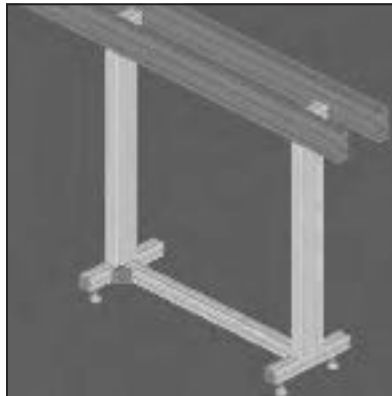
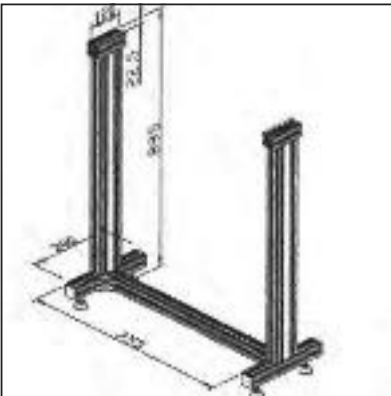
- Transfer systems with deviant track width
- Width according to dimension L of basic line

ASSEMBLY

- Remove drive unit cover
- Screw drive unit securely with attachment set centrally on the bottom of the basic line
- Remove covers from reverse units
- Attach reverse units with profile connectors to ends of the basic line
- Insert timing belt
- Install cover of drive units and reverse units
- Tighten timing belt
- Easy re-tightening of timing belt at drive unit, without prior disassembly, also during operation
- Base frames, 90° units and workpiece tray on request

BASIC BASEFRAME 200

part no. 43.0030/0



TECHN. DATA / ITEMS SUPPLIED

- Profile 45 x 45 F, completely assembled
- With fastening kit for connection with basic line
- 4 height-adjustable feet
- Create longer lines with additional add-on supports
- Height 895 mm for standard working height of 950 mm
- Length 755 mm for line length of 1000 mm

APPLICATIONS

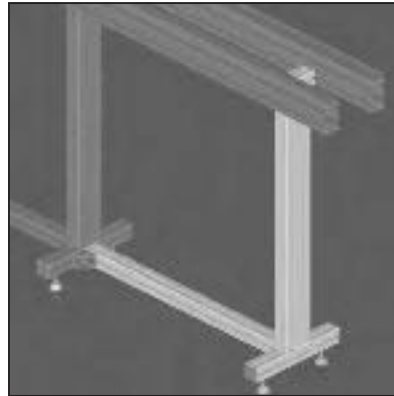
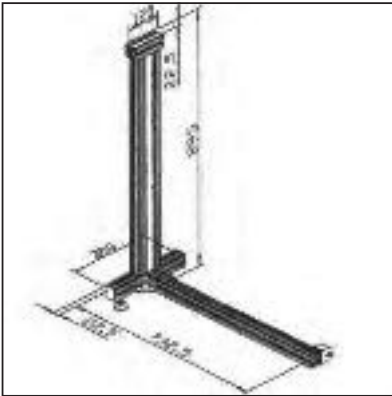
- Substructure for transfer systems with standard working height of 950 mm
- Suitable for track width 200

ASSEMBLY

- Assemble transverse profile with mounting angles at lower profile groove between basic line
- Secure to floor with angles and floor anchors

EXTENSION BASEFRAME 200

part no. 43.0040/0



TECHN. DATA / ITEMS SUPPLIED

- Profile 45 x 45 F, completely assembled
- With fastening kit for connection with basic line and base support
- 2 adjustable feet
- Height 895 mm for standard working height of 950 mm

APPLICATIONS

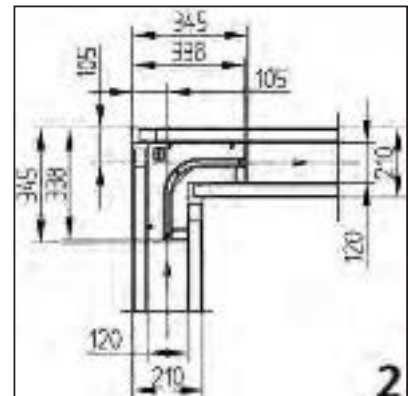
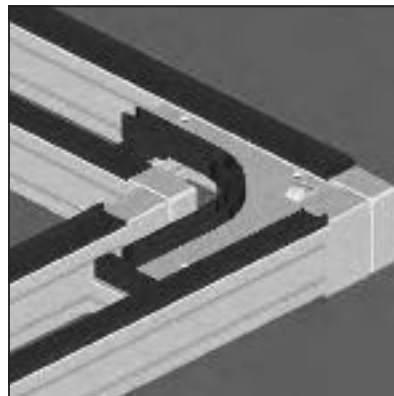
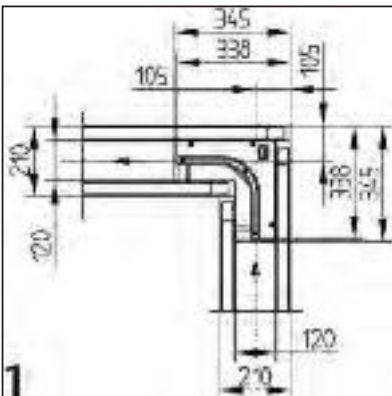
- Substructure for transfer systems with standard working height of 950 mm
- Suitable for track width 200

ASSEMBLY

- Create lengthwise connection with base support
- Assemble transverse profile L= 120 mm with attachment angles at lower profile groove between basic line
- Secure to floor with angles and floor anchors

CURVE 90° 200

part no. 43.0050/0



TECHN. DATA / ITEMS SUPPLIED

- 1 Traverse
- Friction wheel with drive roller
- Curvilinear guide made of PE
- Cover , AL
- Fastening kit

APPLICATIONS

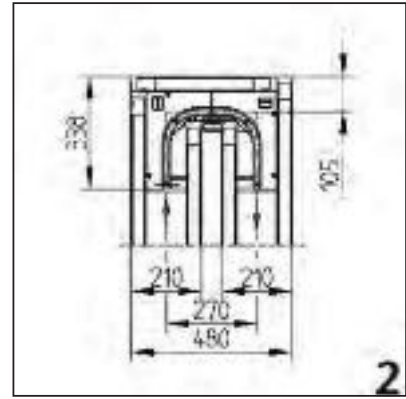
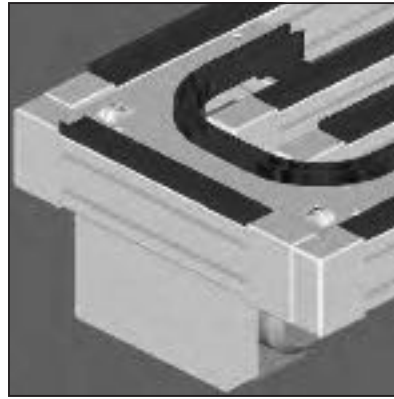
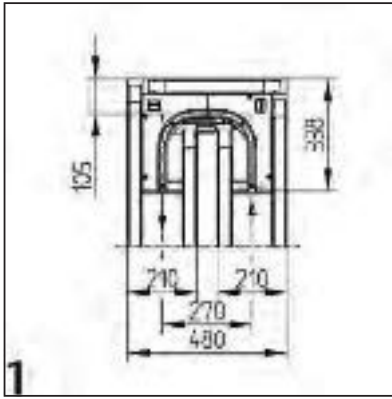
- No separation before the curve required
- Manufacture of compact transfer systems, shunts and combined system concepts
- Suitable for track width 200

ASSEMBLY

- Install friction wheel at timing belt reverse unit (on the feed side in transport direction)
- Assemble corners with curvilinear guide
- Screw on cover
- Through appropriate assembly design 1, alternative design 2 can be produced

CURVE 180° 200

part no. 43.0060/0



TECHN. DATA / ITEMS SUPPLIED

- 1 transverse line with drive module, motor assembled
- Corners 180 with curvilinear guide of PE
- 2-part cover
- Friction wheel drive roller
- Fastening kit

APPLICATIONS

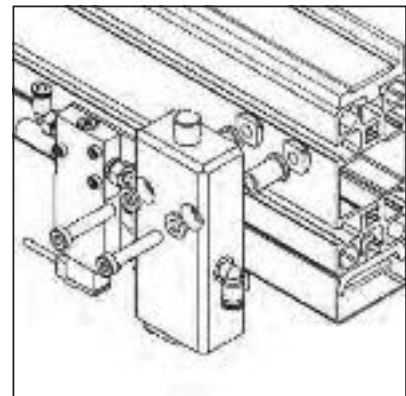
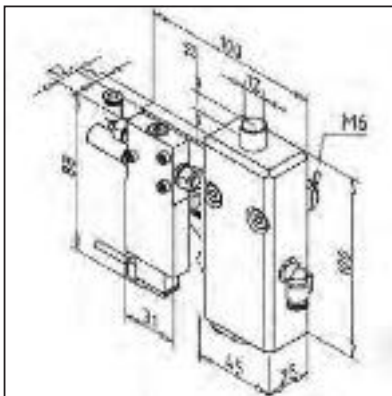
- No separation before the curve required
- Manufacture of compact transfer systems, shunts and combined system concepts
- Suitable for track width 200

ASSEMBLY

- Install friction wheel at timing belt reverse unit (on the feed side in transport direction)
- Assemble corner 180 with curvilinear guide
- Install transverse line with assembled drive module
- Fasten on cover
- Through appropriate assembly design 1, alternative design 2 can be produced

STOPPER

part no. 43.1510/0



TECHN. DATA / ITEMS SUPPLIED

- Pneumatically actuated
- PE housing, black
- Stop pins \varnothing 12 mm of tempered stainless steel
- Cylinder and valves integrated
- Prepared for connection to internal air supply
- Fastening kit

APPLICATIONS

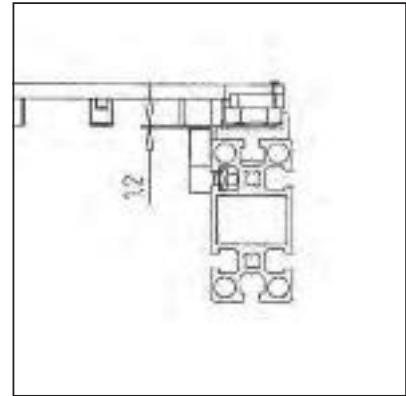
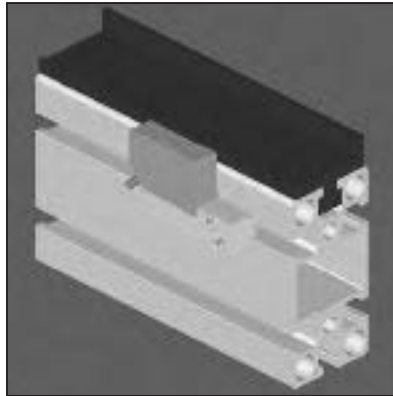
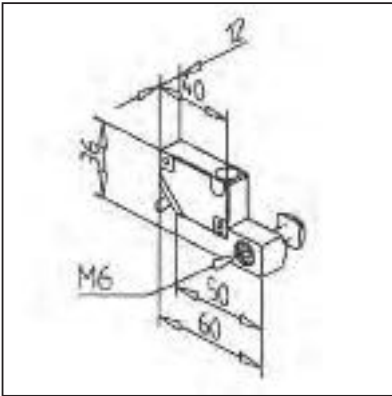
- Separation of workpiece trays before infeed and discharge, lift or lift stations
- Control of priorities in WT flow

ASSEMBLY

- Screw onto inside of transport line at upper profile groove
- Make connection to air supply
- Position can be adjusted horizontally
- Separation of tray's by combination of 2 stoppers

PROXIMITY SWITCH

part no. 43.0090/0



TECHN. DATA / ITEMS SUPPLIED

- inductive proximity switch design PNP "closer"
- Switching distance 4 mm
- Cubic, plastic PBTp
- Operating voltage (V) Okt 36 DC
- Continuous current load 250 mA
- protection degree IP 67
- Fastening kit

APPLICATIONS

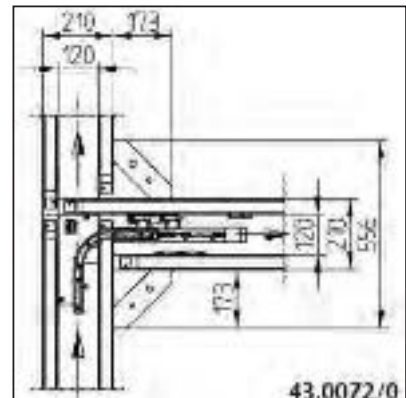
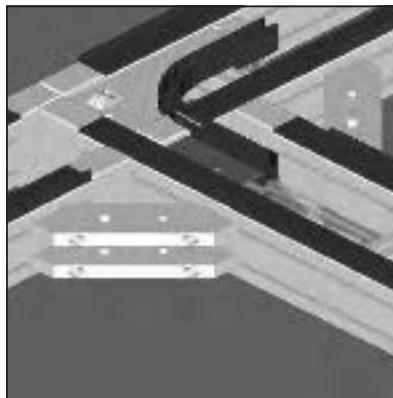
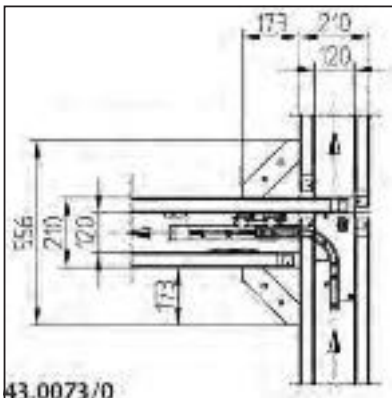
- Switching operations
- Control of system states bevor lift stations and stoppers

ASSEMBLY

- Screw onto inside of transport line at upper profile groove
- Position can be adjusted horizontally

SWITCH UNIT OUT 200

part no. 43.0073/0



TECHN. DATA / ITEMS SUPPLIED

- Pneumatically actuated
- Carrier profile 45 x 45
- WT-guide 2 parts, PE
- Cover AL
- Friction wheel with drive roller
- 2 Pneumatic cylinders
- 4 corners 180
- Fastening kit

APPLICATIONS

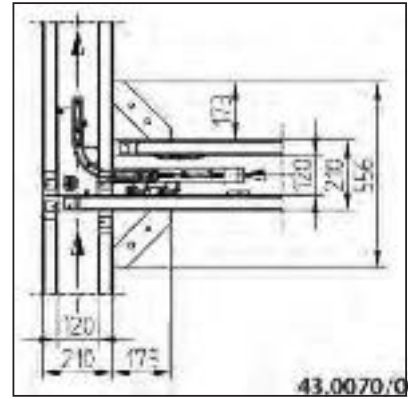
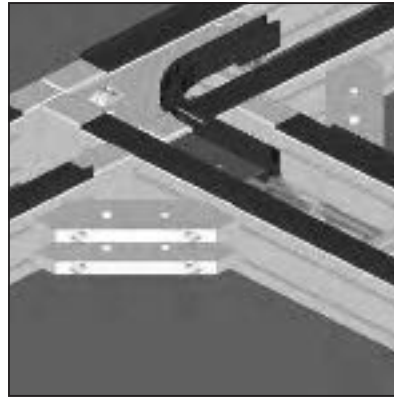
- Divert Workpiece trays from basic circuit to secondary lines
- Separation of work procedures from machine cycle
- Inserting further processing stations
- Forming storage units
- When discharge is active, WT is diverted from the line by 90° into a transverse transport. The orientation of the WT is not changed
- If the chute is inactive, the WT remains in the basic circuit
- Status query of the chute via the sensor
- suitable for track width 200

ASSEMBLY

- 1) Switch unit left **part no. 43.0073/0**
- 2) Switch unit right **part no. 43.0072/0**
- Install friction wheel on belt return unit (in transport direction, on the longer side of the line)
- Install pneumatic cylinder
- Attach curve guide
- Screw on cover
- Connect transverse transport with corners and aling
- Connect pneumatic cylinder to compressed air supply

SWITCH UNIT IN 200

part no. 43.0071/0



TECHN. DATA / ITEMS SUPPLIED

- Pneumatically actuated
- Carrier profile 45 x 45
- WT-guide 2-piece, PE
- Cover PE
- Friction wheel with drive roller
- 2 Pneumatic cylinders
- 4 corners 180
- Fastening kit

APPLICATIONS

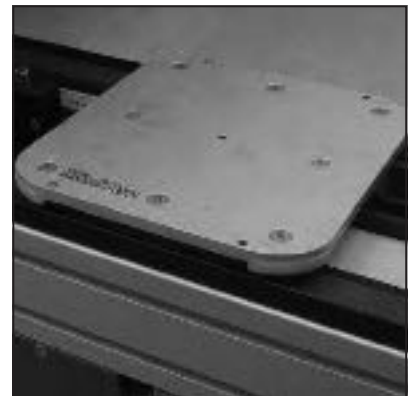
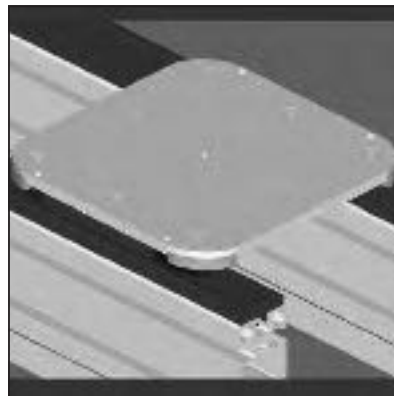
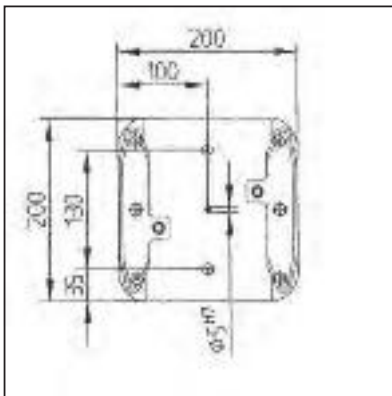
- Feed WHs from secondary lines back into the basic circuit.
- Separation of work procedures from machine cycle
- Inserting further processing stations
- Forming storage units
- If infeed is active, the WH is diverted from the secondary line to the basic circuit
- The orientation of the WH is not changed. Status query of the chute via the sensor
- suitable for track width 200

ASSEMBLY

- 1) Switch unit left **part no. 43.0071/0**
- 2) Switch unit right **part no. 43.0070/0**
- Install friction wheel on belt return unit (in transport direction, on the longer side of the line)
- Install pneumatic cylinder
- Attach curve guide
- Screw on cover
- Connect transverse transport with corners and aling
- Connect pneumatic cylinder to compressed air supply

WORKPIECE TRAY 200

part no. 43.1000/0



TECHN. DATA / ITEMS SUPPLIED

- Carrier plate Al, progressed on all sides and anodized with centering hole 5H7
- 4 positioning pins, st
- Shoes of highly abrasion-resistant PE, with integrated stop for stopper
- 2 damping pins, st, for proximity
- Size 200 x 200 mm
- Load max. 100 N
- Weight 1 kg

APPLICATIONS

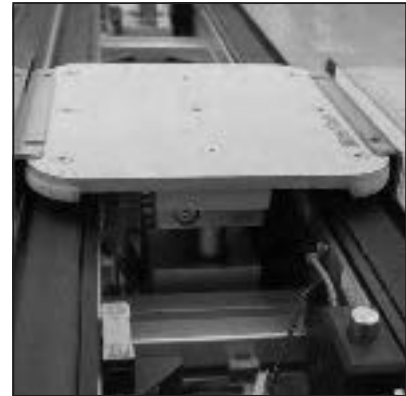
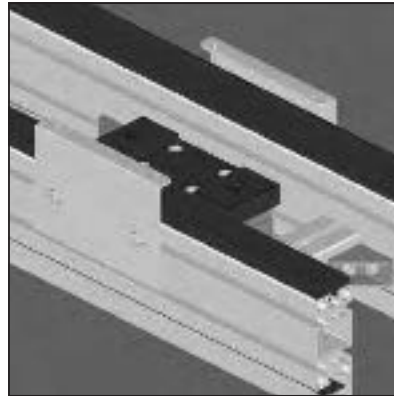
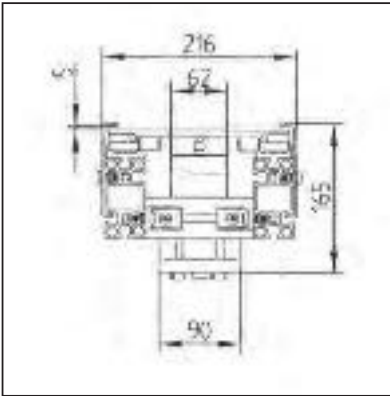
- Holding workpieces, jigs, identification, and data storage systems

ASSEMBLY

- Standard-WTs are delivered without holder holes
- Attachment holes for workpieces, mechanisms, and identification systems are created according to customer specifications

POSTIONER 200

part no. 43.0110/0

**TECHN. DATA / ITEMS SUPPLIED**

- Ready-for-use module with doubledacting pneumatic cylinder and valve
- WT receptacle mounted
- 2 overhead grip strips, galvanized steel
- Load max. 1000 N
- Positioning precision $\pm 0,03$ mm
- Lift height belt 5 mm

APPLICATIONS

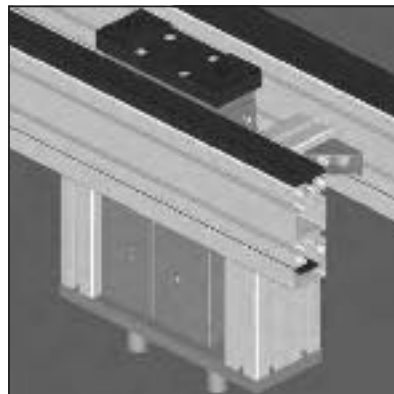
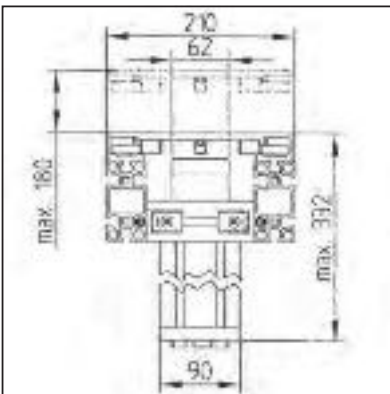
- Exact positioning of workpieces on the workpiece tray for processing or inspection

ASSEMBLY

- Attach lift unit to line profiles with included Fastening kit
- Screw overhead grip strips to outside of line, align exactly with positioner
- Make connection to internal compressed air supply
- Suitable stopper **part no. 43.1510/0** and proximity switch **part no. 43.0090/0**

LIFT STATION 200

part no. 43.0100/0

**TECHN. DATA / ITEMS SUPPLIED**

- Ready-for-use module with doubledacting pneumatic cylinder and valve
- WT receptacle mounted
- Lift height: Can be set from 5 mm to 180 mm above belt
- Load max. 1000 N

APPLICATIONS

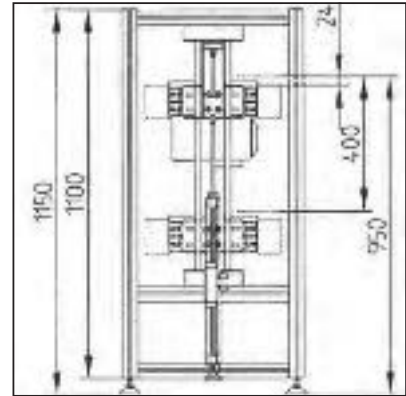
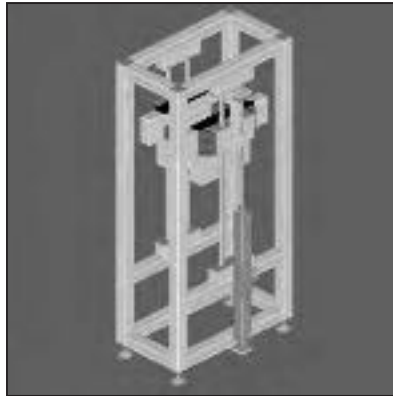
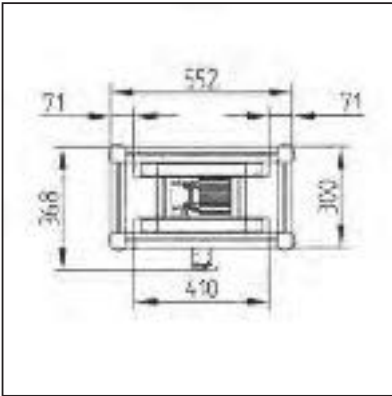
- Positioning of workpieces on the workpiece tray for processing or inspection

ASSEMBLY

- Attach lift station to line profiles with included Fastening kit
- Make connection to internal compressed air supply
- Suitable stopper **part no. 43.1510/0** and proximity switch **part no. 43.0090/0**

ELEVATOR STATION 200

part no. 43.0080/0



TECHN. DATA / ITEMS SUPPLIED

- Ready-for-use assembled module according to customer specification
Frame structure profiles 45 x 45
- Frame installation off construction profiles 45 x 45
- on skid mounted, powered dual track road
- Skid proceed with double-acting pneumatic cylinder
- Stable guidance of the skid with Ø 20 mm precision shafts and linear units LB series
- Lift height variable according to customer specification
- Load max. 480 N

APPLICATIONS

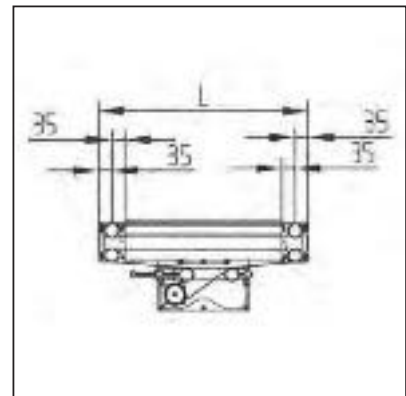
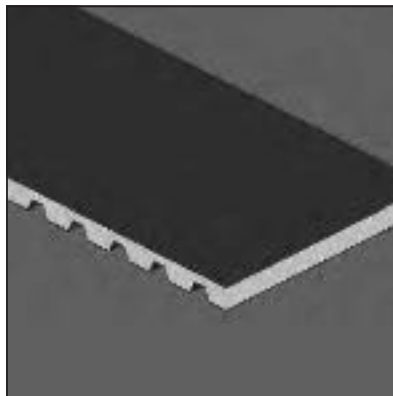
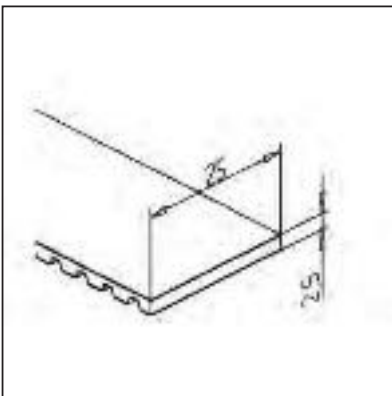
- Transport rollers at any length for driven or non-driven roller conveyors

ASSEMBLY

- Please indicate needed tube length
- Align lift station with transport levels

TIMING BELT

part no. 43.1411/0



TECHN. DATA / ITEMS SUPPLIED

- Endless belt, reinforced with steel insert
- Covered with plastic fabric on both sides to improve sliding characteristics and reduce friction
- Colour: green
- Applications

APPLICATIONS

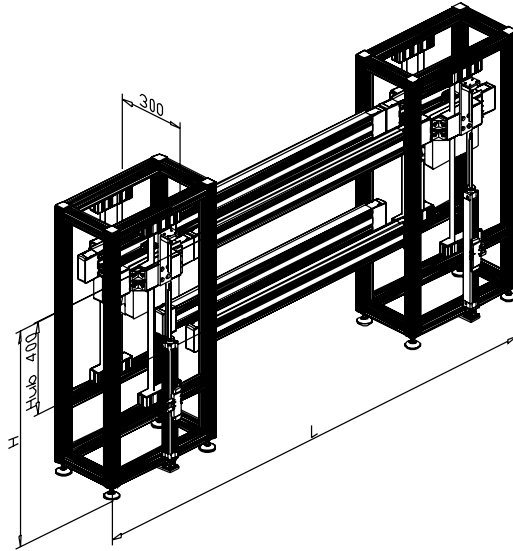
- All transfer systems TSG
- Calculation formula for timing belt length:
Total = (L - 70) x 2 + 473 mm, round up 5 mm

ASSEMBLY

- PVC, grey
- Remove lower belt cover (clip lock)
- Remove cover of drive unit and timing belt reverse units
- Insert belt
- Install cover and belt cover
- Tighten timing belt

TRANSFERSYSTEM TSG

REQUEST VERTICAL CIRCUIT TSG 200



Dimension L mm

Working height H (WT-Upper edge) mm

Number of stoppers Pieces

Number of positioners Pieces

Number of elevator stations Pieces

Direction of transport right left

Speed m/min

Frequency transformer yes no

Controller

Number of sensors Pieces

Contact details

Company Please call me back

Contact person Please send me an offer

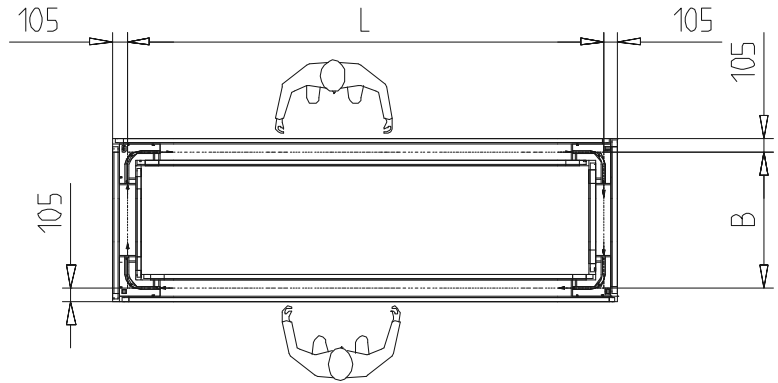
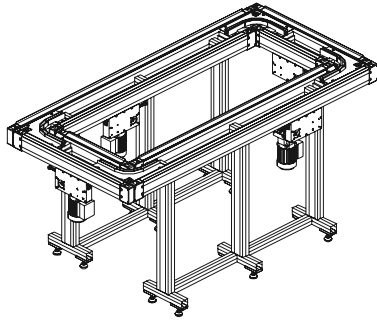
Phone no.

Fax no.

E-Mail

TRANSFERSYSTEM TSG

REQUEST BASIC CIRCUIT 90° TSG 200



Dimension L x B mm

Working height H (WT-Upper edge) mm

Number of stoppers Pieces

Number of positioners Pieces

Number of elevator stations Pieces

Direction of transport right left

Speed m/min

Frequency transformer yes no

Controller

Number of sensors Pieces

Contact details

Company Please call me back

Contact person Please send me an offer

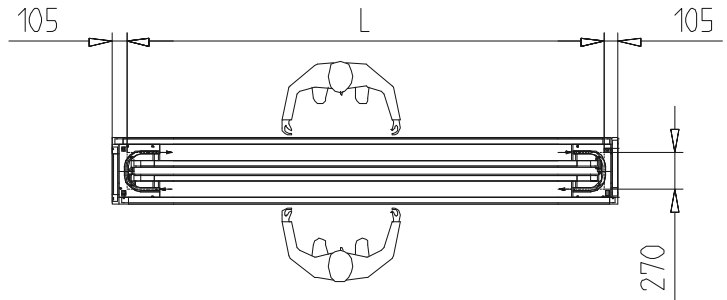
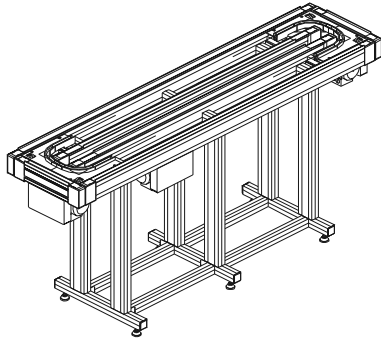
Phone no.

Fax no.

E-Mail

TRANSFERSYSTEM TSG

REQUEST COMPACT CIRCUIT 180° TSG 200



Dimension L x B mm mm

Working height H (WT-Upper edge) mm

Number of stoppers Pieces

Number of positioners Pieces

Number of elevator stations Pieces

Direction of transport right left

Speed m/min

Frequency transformer yes no

Controller

Number of sensors Pieces

Contact details

Company Please call me back

Contact person Please send me an offer

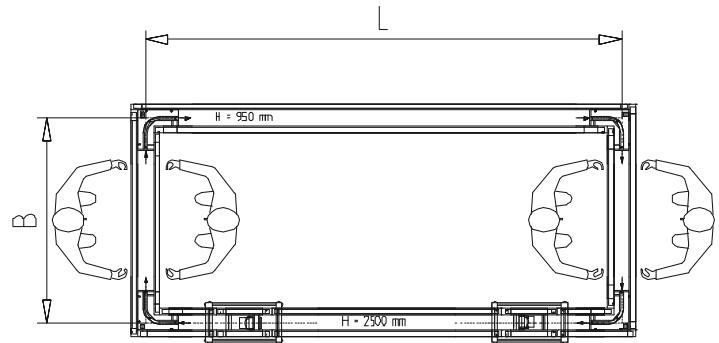
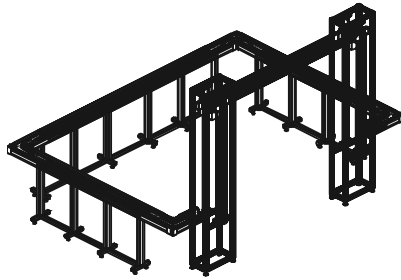
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Fax no.

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TRANSFERSYSTEM TSG

REQUEST U-CIRCUIT WIHT ELEVATOR STATIONS TSG 200



Dimension L x B mm

Working height H (WT-Upper edge) mm

Number of stoppers Pieces

Number of positioners Pieces

Number of elevator stations Pieces

Direction of transport right left

Speed m/min

Frequency transformer yes no

Controller

Number of sensors Pieces

Contact details

Company Please call me back

Contact person Please send me an offer

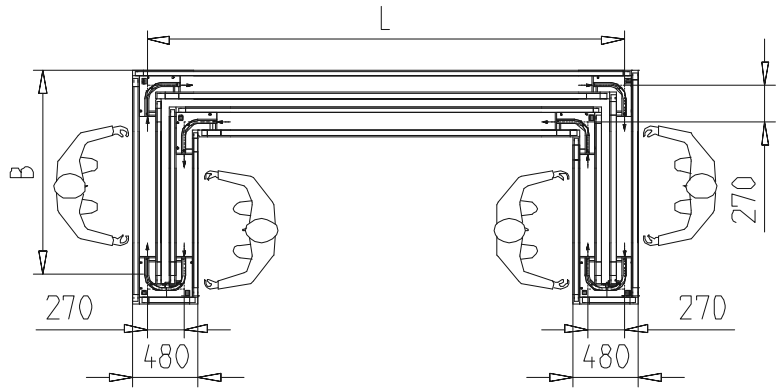
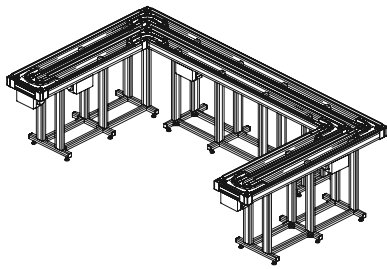
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Fax no.

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TRANSFERSYSTEM TSG

REQUEST DOUBLE-U-CIRCUIT TSG 200



Dimension L x B mm mm

Working height H (WT-Upper edge) mm

Number of stoppers Pieces

Number of positioners Pieces

Number of elevator stations Pieces

Direction of transport right left

Speed m/min

Frequency transformer yes no

Controller

Number of sensors Pieces

Contact details

Company Please call me back

Contact person Please send me an offer

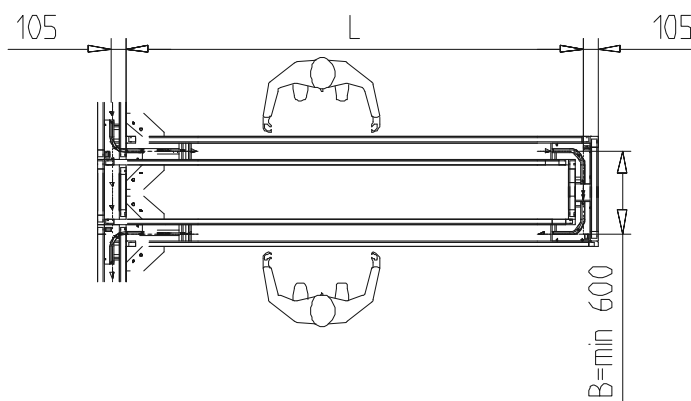
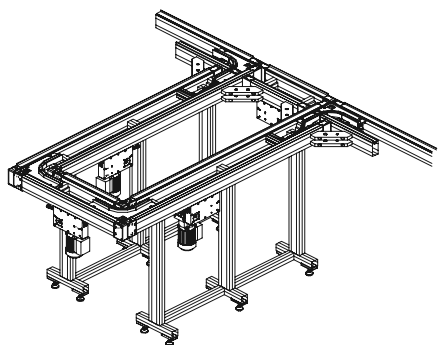
Phone no.

Fax no.

E-Mail

TRANSFERSYSTEM TSG

REQUEST SHUNT TSG 200



Dimension L x B mm mm

Working height H (WT-Upper edge) mm

Number of stoppers Pieces

Number of positioners Pieces

Number of elevator stations Pieces

Direction of transport right left

Speed m/min

Frequency transformer yes no

Controller

Number of sensors Pieces

Contact details

Company Please call me back

Contact person Please send me an offer

Phone no.

Fax no.

E-Mail

SEGMENTED CHAIN CONVEYOR GKF

FROM ICY TO HOT CONDITIONS

The GKF segmented chain conveyor has continually proved its reliability in numerous demanding applications. From the knowledge and experience gained, the range has been extended to incorporate more features with field-tested components. Great attention has been focussed on energy efficiency whilst maintaining the versatility of our tried-and-tested modular design.

As is the case for all MiniTec designs, the GKF range is based upon the tried-and-tested MiniTec profile system. The new track profile has been designed according to the same principles, meaning that the modular system has been retained without limitation. All components are suitable for expansions, add-ons or any protective devices which may be necessary. The new conveyor system can be optimally connected to the tried-and-tested MiniTec solutions in the areas of material handling, image processing, labelling, workstation design, etc.

The segmented chain made from plastic or low-corrosion stainless steel enables straight-line and curve-going horizontal and vertical motions.

The flexible track routing enables space-saving designs, with vertical curve routing or lift devices enabling use on multiple levels.

APPLICATION EXAMPLES FOR THE GKF SEGMENTED CHAIN CONVEYOR

Transport in inspection facilities. Connecting individual and repackaging facilities, labelling, shipping logistics, connecting workstations, assembly lines

CAR PARTS

Filters, gearwheels, fuel pumps, ball bearings, cast parts, lamps

COSMETICS + PHARMACEUTICALS

Pharmaceutical packaging, gauze bandages, paper rolls, spray cans, personal hygiene products, shampoo, toothpaste and toothbrushes, dental instruments.

FOOD

Trays with fruit, drink cans, food cans, packaged textiles, coffee cans, coffee packaging, plastic bottles, yoghurt, animal feed

ELECTRONICS

Electronic components, audiovisual equipment, accessories, batteries, mobile telephones, computer parts

PLEASE NOTE

Not suitable for bulk cargo!

SYSTEM SELECTION 90 TO 314 MM

The systems can be supplied with 8 different plastic chains made from modified acetal and 3 VA designs made from stainless steel 1.4016.

Chain bolt on all chains made from stainless steel 1.4305
Standardised chain separation: 38.1 mm

The practically gap-free surface enables also small components to be transported!

- Product width 0-428 mm
- Maximum weight of the conveyor goods in the case of horizontal transport 10 kg/m
- Maximum weight of the conveyor goods in the case of vertical transport 2 kg/m
- Maximum load on the conveyor 150 kg
- Maximum straight section of the conveyor track 40 m

HOLISTIC PROBLEM SOLUTION

The system can be supplied in assemblies for self-assembly or also as a ready-for-operation system. Upon request, we can assume complete planning and assembly responsibility, as well as the onsite commissioning. Our services include ergonomic design for operators and material flow, supplying transfer stations and workstations to assist in productivity.

SEGMENTED CHAIN CONVEYOR GKF

FROM ICY TO HOT CONDITIONS



Depending upon the conveyor goods, track routing and chain, the system is suitable for high conveyor speeds up to 30 m / min. All motors in use are equipped with overload protection. Optionally, frequency converters are available for variable speeds.

■ Temperature limits:

- Plastic chain (dry) -40°C to +80°C
- Plastic chain (wet) 0 °C to + 65 °C
- Stainless steel chain -40 °C to 120 °C

All chains are suitable for directly transporting the products or transporting the pallets.

To save energy and to reduce the maintenance frequency, we recommend that cam wheels are used instead of horizontal arches. Cam wheels are available with a minimum radius of 200 mm.

Sound level depends upon the conveyor speed, measured according to DIN 45 635 T1 on the motor side.

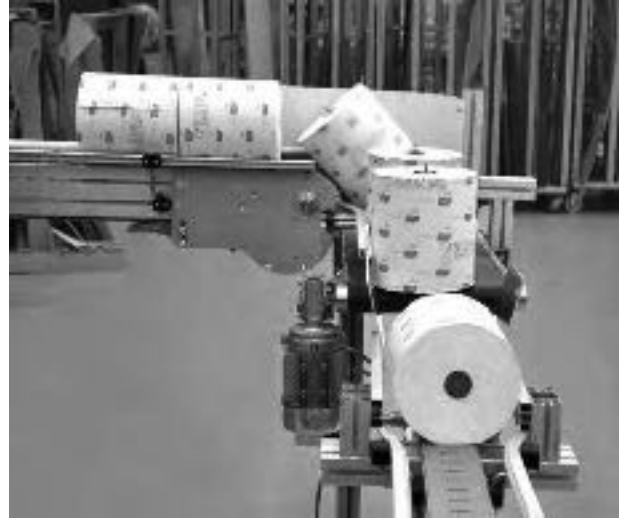
Chain	m/min	dB-A
VA chain	10	57,3
	30	73,2
acetal chain	10	62,8
	30	77,9

SEGMENTED CHAIN CONVEYOR GKF

SAMPLE APPLICATIONS



Coffee can transport below the roof



Transport and packing of sanitary products



Loading and unloading of automatic lathes



Surface inspection of car parts

SEGMENTED CHAIN CONVEYOR GKF

REQUEST

Standard dimension

Axial distance mm
 According to layout see Others attached

Operating conditions

Goods to be conveyed
 Dimensions B x L x H x x mm
 Unit weight kg
 Total belt load kg
 Temperature of goods °C
 Accumulation point



Subconstruction

Inlet height He mm
 Discharge height Ha mm
 Number of supports pcs.
 Supports height adjustable from mm to mm
 Lateral guide one side both sides
 Angle bracket for floor fastening part no. 21.1112/0
 Floor anchor 12 part no. 21.1115/0
 Feet part no.

Options

Chain type part no.

Drive

Motor arrangement right left
 Speed m/min.
 Speed adjustable from m/min. to m/min.

Others/Layout

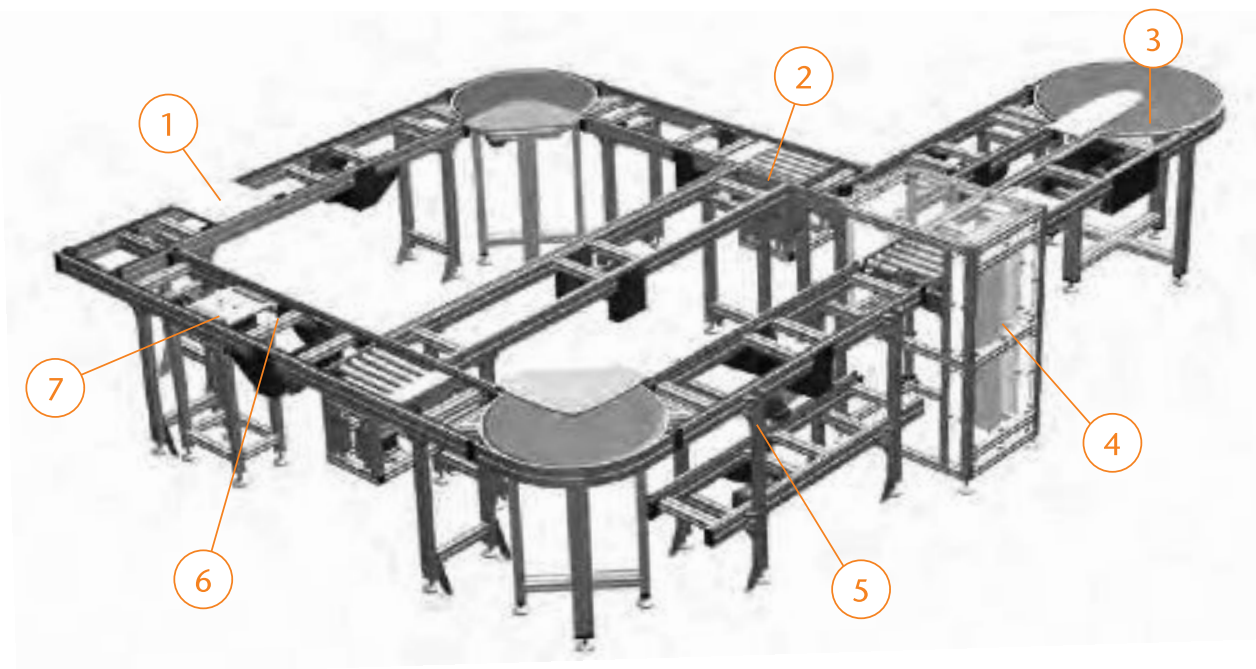
Contact details

Company Please call me back
 Contact person Please send me an offer
 Phone no.
 Fax no.
 E-Mail

FLEXIBLE-ASSEMBLY-LINES FMS

FMS is a flexible assembly system with workpiece carriers which are transported on chain roller conveyors, special belts or chains. Standardised modules for exact positioning, lifting or turning enable the very fast implementation of complete assembly lines.

Numerous installations at well-known automobile suppliers have demonstrated for years the reliability and economy of this system. The patented switching technology reduces the control expense for the entire system to a minimum.



FLEXIBLE-ASSEMBLY-LINES FMS

Modular assembly line professional team

- A complete transport and positioning system for „workpiece carriers“, the fastest and most versatile form for process optimisation in series production manufacturing
- Thanks to the modular design and the structure, planning, assembly and commissioning based on extruded aluminium profiles, complete systems can be calculated in a very short time.

1. Workpiece carrier

- Precision milled carrier plate
- Accessible from all sides, even from the bottom
- Slide rails made of anti-static polyethylene
- Wheels in the corners reduce the side friction and improve guiding properties
- Exact position detection with centring bushes

2. Transverse transport

- Inclusion and exclusion, change of direction
- Very low space requirement
- Simple to integrate into the system

3. Turntable

- without control elements
- practically maintenance free
- Consistent orientation

4. Lifts upward/downward

- Vertical method with pneumatic or electrical drive
- Precise guiding with linear units

5. Belt and chain conveyors

- Variations: Double belt, chain drive or combination
- Suitable for accumulation mode
- Structure of aluminium profiles
- Simple to use and can be reused

6. Separator

- Separator: with or without damping from 3 to 220 kg
- Switch holder: Various holders for inductive proximity switch M12 ensure the absence and throughput control of the workpiece carrier

7. Lift and positioning equipment

- Exact positioning of the WPC for processing sequences
- max. loading 100 kg
- optionally with turning device for change of direction

FLEXIBLE-ASSEMBLY-LINES FMS

REQUEST

Standard dimensions

Dimensions W x L x H x x mm

Goods to be conveyed W x L x H x x mm

Unit weight kg

Temperature of goods °C

Speed m/min

Balance point centered Distance mm

Workpiece pick-up no yes,

WP-carrier L x W x mm

Number of workpiece carriers pcs.

Ambient temperature °C

Surrounding conditions

Number of stoppers pcs.

Number of positioners pcs.

Number of sensor systems pcs.

Others/Layout

Contact details

Company Please call me back

Contact person Please send me an offer

Phone no.

Fax no.

E-Mail

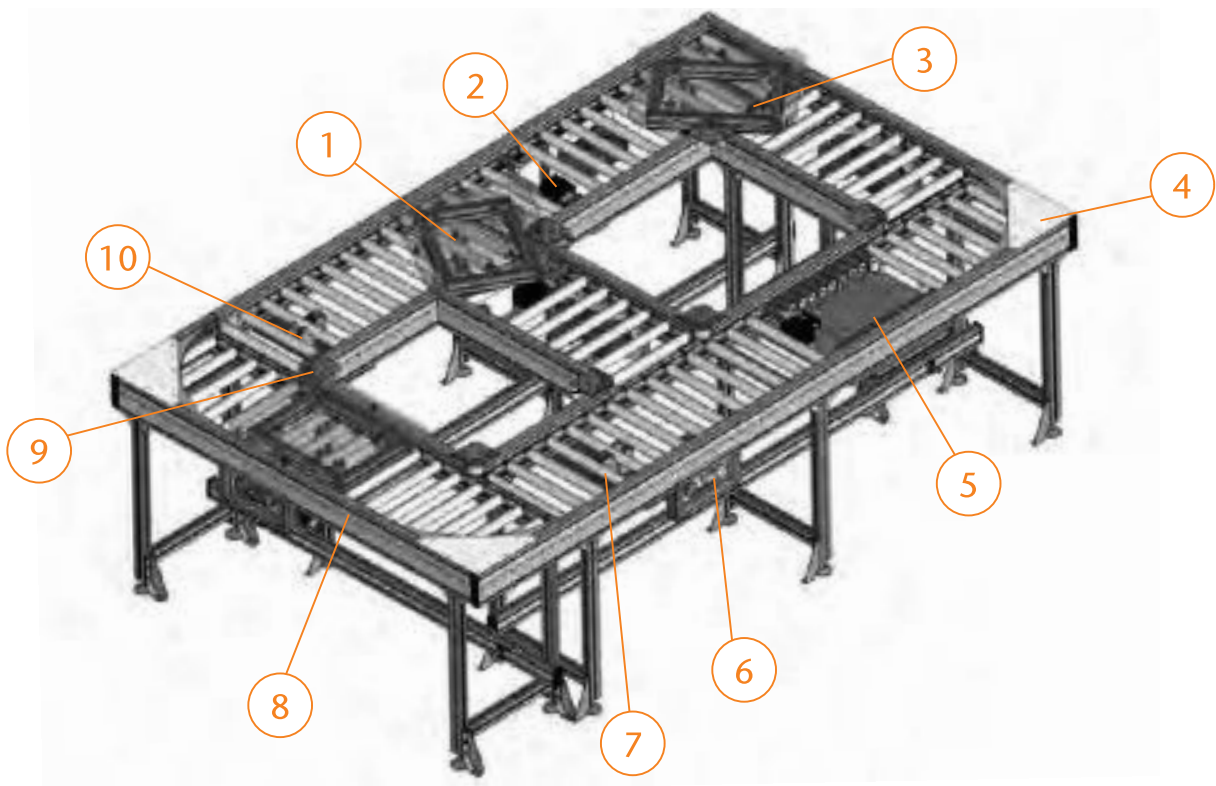
ROLLER CONVEYORS RMS

RMS is a pallet transfer system based on friction rollers and designed for very high loads. Among other things, transmissions, vehicle seats or engines are assembled on these systems.

The workpiece carriers are moved over highly precise accumulator rollers, which are driven by means of a continuous tangential steel chain. The RMS specific workpiece carriers are guided by side-attached guide rollers into the line.

Due to the special shape of the workpiece carrier in combination with the patented DELTA -offset, the direction changes are realised with a minimum of control and drive effort.

Special covers between the rollers make the transport system accessible for service work from the interior of the system.



ROLLER CONVEYORS RMS

System description

- Flexible modular concept
- Precise rollers with regulated friction
- Load per workpiece carrier: up to 250 kg
- Standard WPC widths: 400 and 500 mm
- Transport speeds: up to 15m/min
- Ingeniously simple and patented bypass
- Newly developed robust workpiece carriers
- Deflection system „Delta“

1. Bypass

- Powered switches for deflection of main and secondary lines

2. Rollers

- 3 mm steel pipe
- Nitrided surface
- Adjustable friction

3. Workpiece carrier

- Base frame made of aluminium profiles
- Sliding pieces made of anti-static polyethylene
- Plate carriers made to customer specifications

4. 90° deflection: WPC deflection without additional drive

5. Lift index unit: Load up to 300 kg

6. Drive unit

- Reversible drive direction
- Up to 9 m line per drive
- Automatic chain tension

7. Separator: Adjustable damping

8. Structure: Anodised aluminium profile

9. Deflection system

The „Delta“ deflection system is a standardised and universally installable system, that allows for all deflection variations in 3 designs:

- Delta 1 fixed for a simple 90° deflection
- Delta 2 spring loaded for inward transfer into a main or secondary line
- Delta 3 controllable and pneumatically activated for use on nodes with changing deflections

10. Hydraulic damped separator

- The specially developed separator allows the use of continuous rollers instead of stab support rollers
- High flexibility using simple changes in the installation position

ROLLER CONVEYORS RMS

REQUEST

General

Layout

Goods to be conveyed x x mm

Width 400 mm 500 mm others

Roller distance 120 mm 180 mm

Working height mm

Speed m/min

Balance point centered Distance mm

Work piece pick-up no yes,

WP-carrier - Base L x W x mm

Numbers of workpiece carriers Pieces

Ambient temperature °C

Surrounding conditions

Numbers of stoppers Pieces

Numbers of positioners Pieces

Numbers of sensor systems Pieces

Others/Layout

Contact details

Company Please call me back

Contact person Please send me an offer

Phone no.

Fax no.

E-Mail

5



558 5.1 MACHINE PROTECTION



563 5.2 SAVEGUARD

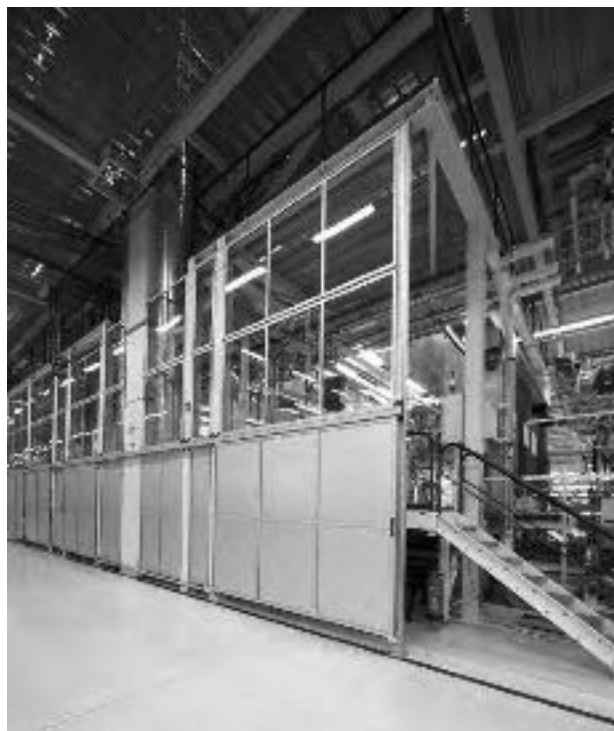


575 5.3 NOISE PROTECTION

SAFETY SYSTEMS
SAFETY SYSTEMS

MACHINE PROTECTION

EXAMPLES



MACHINE PROTECTION

EXAMPLES

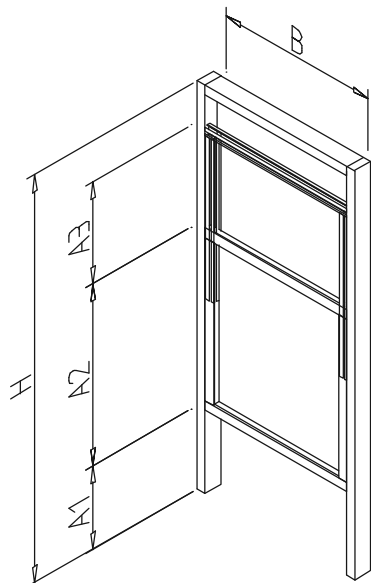


MACHINE PROTECTION

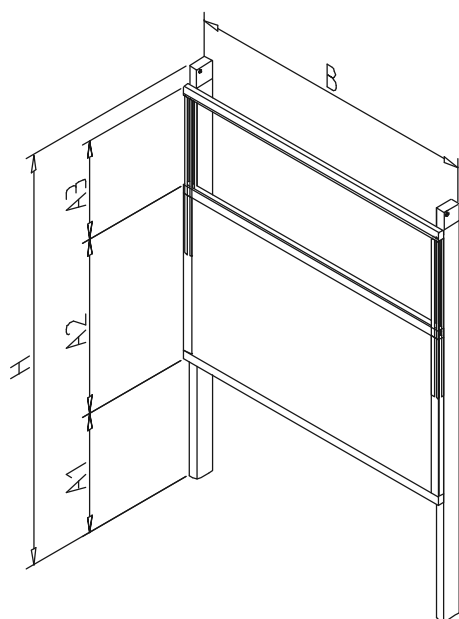
LIFTING DOOR

Completely assembled and ready for installation on your premises. Vertical profiles with 2 counterweights and cable pulleys.

Lifting door for workstation



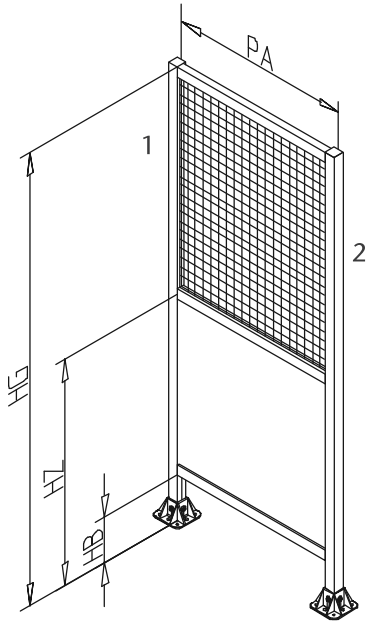
Lifting door for machine protection



MACHINE PROTECTION

GUARD UNIT FOR MACHINE PROTECTION

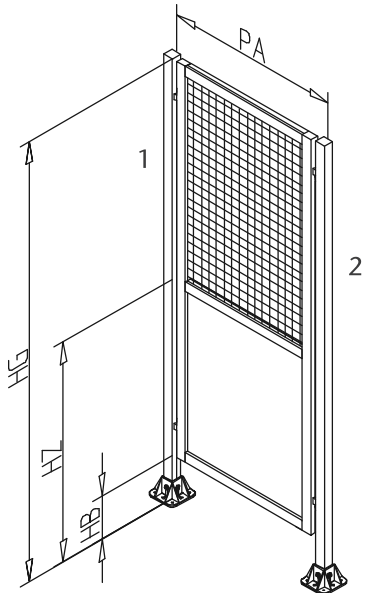
Guard unit with integrated frame

**Items supplied:**

- 1 vertical pillar profile (1)
- 2 horizontal clamp profiles
- 1 panel element, assembled:
- Corrugated mesh, mesh 40 mm, wire size 4 mm, zinc plated

The vertical profile (2) belongs to the next unit.
When used as a single element order one additional vertical profile.

Guard unit with exchangeable panel element

**Items supplied:**

- 1 framed panel element, assembled:
corrugated mesh, mesh 40 mm, wire size 4 mm, zinc plated
- 1 vertical pillar profile (1) with floor-fixing and
2 guard unit fixing angles.

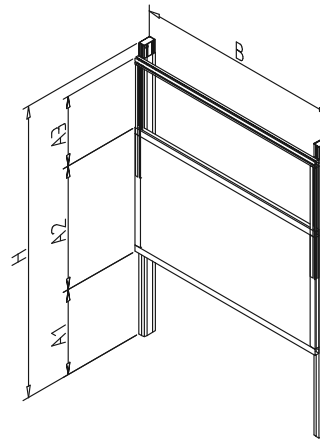
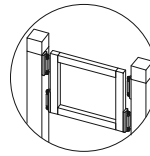
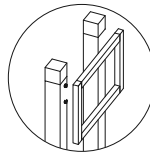
The vertical profile (2) belongs to the next unit.
When used as a single element, order one additional vertical profile.

MACHINE PROTECTION

REQUEST LIFTING DOOR REQUEST GUARD UNIT

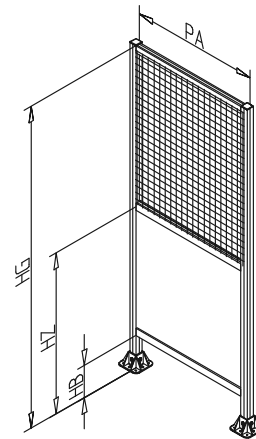
Lifting door

- Lifting door arrangement Outside Inside
- Lifting field width mm
- Lifting field height A2 mm
- Stroke A3 mm
- Stand-up dimension A1 mm
- Actuation Manual Pneumatic
- Panel element part no.
- Strokes per hour
- Additional fixed element
 Top yes no
 Bottom yes no



Guard unit

- Protective field frame Fixed Changeable frame
- Total height HG mm
- Clearance from floor HB mm
- Post spacing PA mm
- Intermediate strut yes no
- High strut HZ mm
- Panel element, top part no.
- Panel element, bottom part no.
- Feet Base foot Base plate Without



Contact details

- Company Please call me back
- Contact person Please send me an offer
- Phone no.
- Fax no.
- E-Mail

SAFETY SYSTEM SAVEGUARD

SAFETY SYSTEM SAVEGUARD
SAFETY DISTANCES

Safety system SaveGuard

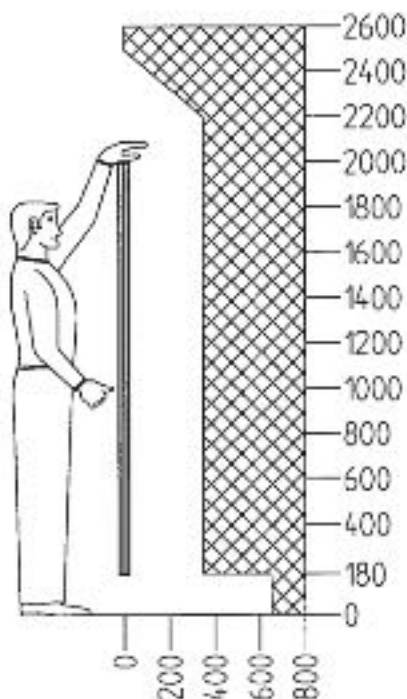


Individual safety installations are a frequent application for the versatile MiniTec profile system. Our MiniTec CADmenu design software allows you to design and calculate safety installations within the shortest time. They are precisely adjusted to customer's needs, with high demands made on safety standards visual appearance. All components for designing individual protection perimetres guards, doors, lifting doors, sliding doors etc. are specified in our MiniTec Profile System main catalogue. The same components were used to develop our standardised modules which provide cost-effective solutions that incorporate the standards 98/37/EG, EN ISO 12100-1 / EN ISO 12100-2 and EN 953. All components used meet the requirements of DIN EN ISO 10218-1.

Safety installations must prevent access to the source of danger and at the same time protect against projectiles, moving parts of machines and squirting liquids. The installation must be designed in such a way that it cannot be removed without tools. However, the dimensioning of the safety installation must at any rate be preceded by a risk assessment in accordance with EN ISO 12100-1 by the manufacturer of the equipment.

However, the dimensioning of the safety installation must be preceded by a risk assessment in accordance with EN ISO 12100-1 by the manufacturer of the equipment.

Safety Distances



If corrugated mesh with a mesh width of 40 mm is used, then appropriate safety distances from the source of danger must be observed. The resulting distances are different if solid panel elements are used. The necessary safety distances for upper extremities are defined in EN 13857.

Protection field

Height: 2000 mm

Distance to dangerous area: 350 mm

The safety distances for the lower extremities are defined in EN 811.

The safety distance to the source of danger depends on the ground clearance of the protection field:

Protection field

Ground clearance: 180 mm

Distance to dangerous area: 665 mm

SAFETY SYSTEM SAVEGUARD

MAX. LOAD
THE GRID SYSTEM

Max. Load

The load of the standard protection fields was determined in empirical trials. In the centre of the field, a 200 mm x 200 mm plate was statically loaded until the corrugated mesh was pressed out of the clamping profile. The specified values apply to protection fields made of clamping profile 32 x 32 with corrugated mesh, steel zinc plated, 40 mm x 40 mm x 4 mm.

Field height HS mm	Field size B mm	Load F N
1820	500	1200
1820	750	1200
1820	1000	1000
1820	1250	1000
1820	1500	1200
1820	1750	1100
1820	2000	1000

The dynamic load rating of the protection fields was determined by TÜV-Saarland in pendulum impact tests using a mass of 100 kg. All parameters required by the machine directive 98/37 EG and DIN EN 775:1993 and DIN EN 953:1987 were complied with.



The Grid System

The standardised SaveGuard system is an especially economic and quick solution for most applications. Individual heights, field sizes, special designs for noise protection or splash water protection and optional fastening types are available for special tasks.

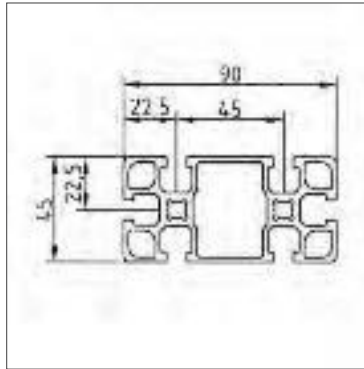
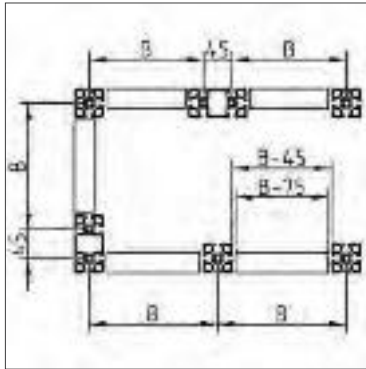


SAFETY SYSTEM SAVEGUARD

EXAMPLE FOR ASSEMBLY

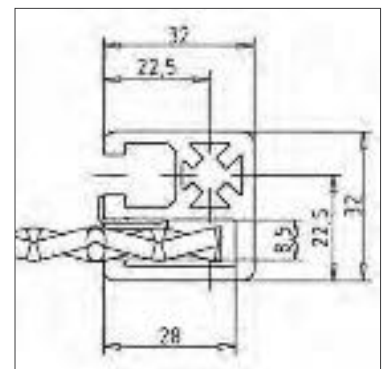
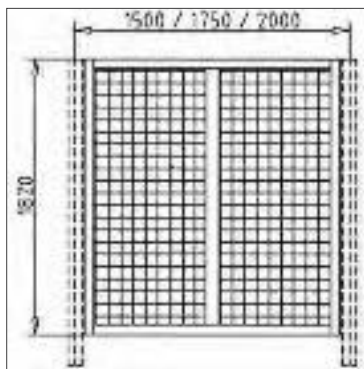
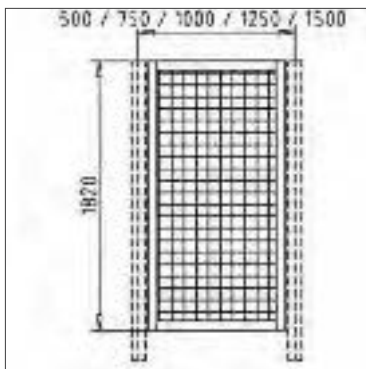
Widths Safety Fencing

Center To Center Distance of T-Slots „B”



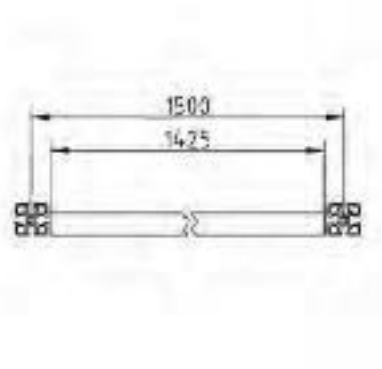
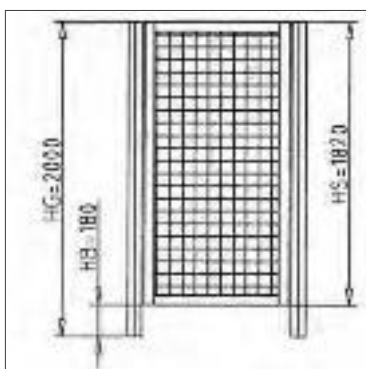
Standard widths 500, 750, 1000, 1250, 1500 mm
 1500, 1750, 2000 mm with additional vertical strut

The SaveGuard frames consist of special designed clamp-profiles 32 x 32 mm.
 High stability through deep T-slots for panel elements and distance profile.
 For add-on piece fastening all components of the MiniTec profile system can be used.



Height

Standard Total height „HG”= 2000 mm,
Height Safety Fencing HS 1800 mm, 200 mm ground clearance for easy cleaning



SAFETY SYSTEM SAVEGUARD

ASSEMBLY

The preassembled fields can be mounted on site by just one person. With stable feet, the posts are fastened to the ground by means of heavy-duty dowels. The posts are equipped with angles into which the protection fields are hung up and screwed tight. The fields can be aligned in any direction. Elongated holes in the angles enable spacing tolerances of the posts to be equalised.



SAFETY SYSTEM SAVEGUARD

FIELD SG 500/750/1000/1250/1500

Techn. data / items supplied

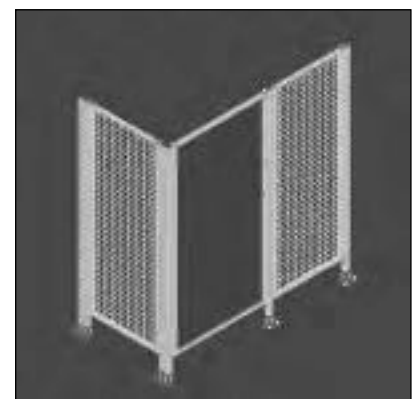
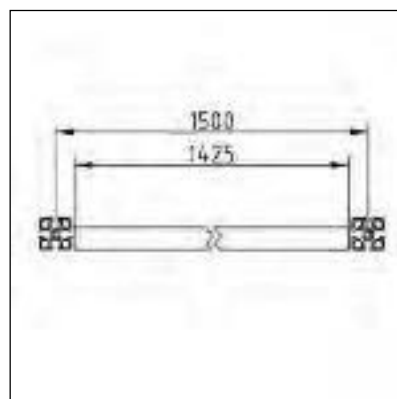
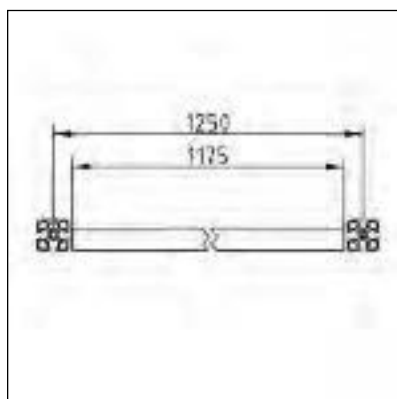
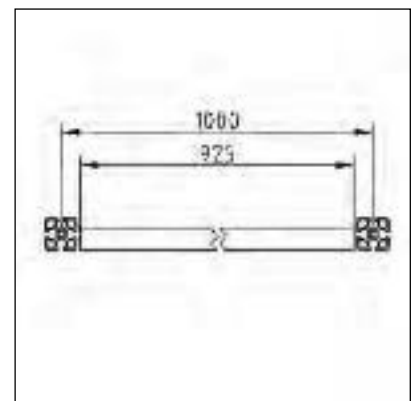
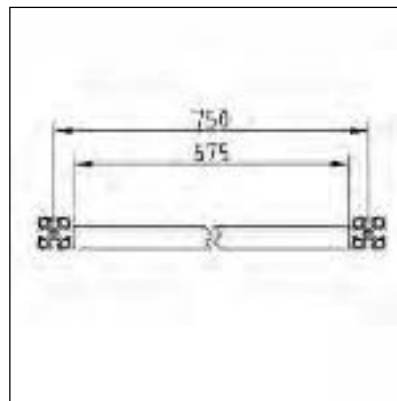
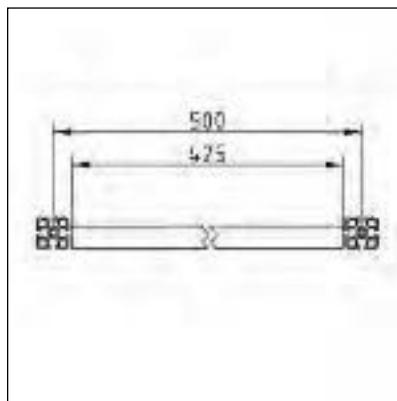
- Made of clamping profile 32 x 32 UL, completely preassembled
- With corrugated mesh 40 x 40 x 4 mm, galvanised steel or with PETG5
- Standard height HS: 1820 mm

Application

- Separation of dangerous areas
- As machine protection

Assembly

- Mount protection field to protection field post using fastening kit 19 part no. 23.0010/0 or mount fastening set for SG fields part no. 23.0011 / 0 on protection field post



Field size B	Corrugated mesh part no.	PETG5 part no.
500	23.0102/0	23.0112/0
750	23.0103/0	23.0113/0
1000	23.0104/0	23.0114/0
1250	23.0105/0	23.0115/0
1500	23.0109/0	23.0119/0

SAFETY SYSTEM SAVEGUARD

FIELD SG 1500/1750/2000

Techn. data / items supplied

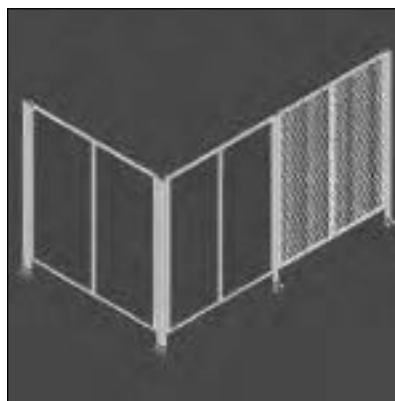
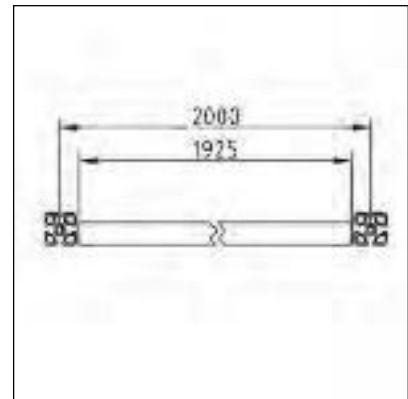
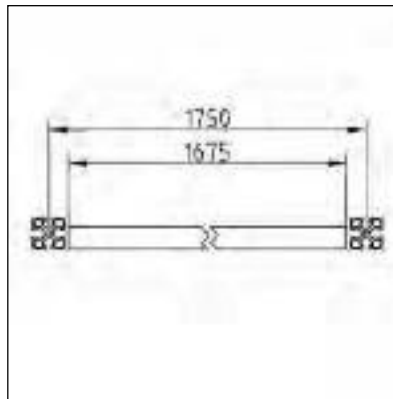
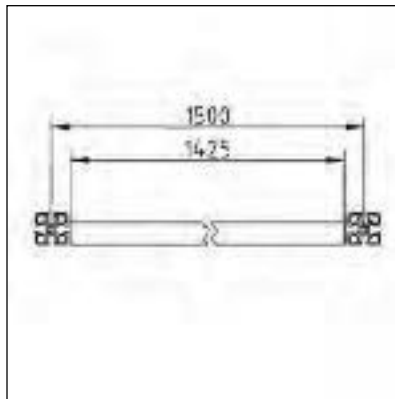
- Made of clamping profile 32 x 32 UL
- Completely preassembled
- With corrugated mesh 40 x 40 x 4 mm, galvanised steel or with PETG5
- Standard height HS: 1,800 mm
- Vertical brace, clamp profile 45x32
- Additional vertical strut

Application

- Separation of dangerous areas
- As machine protection

Assembly

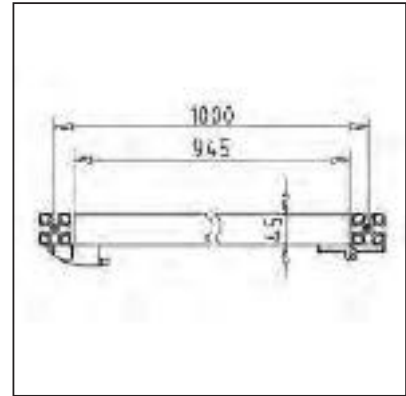
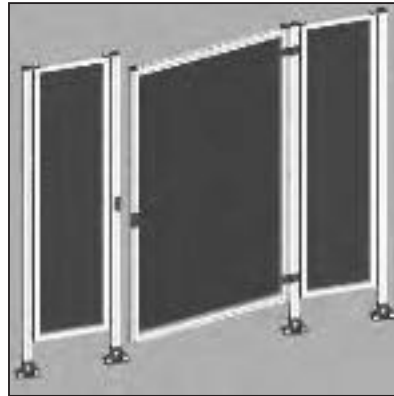
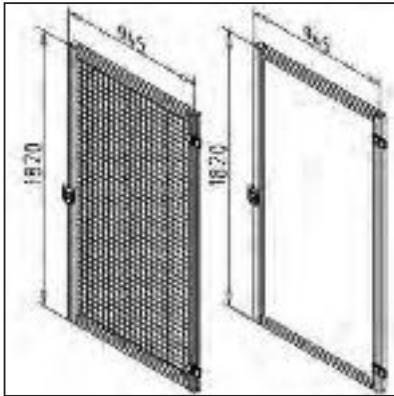
- Mount protection field to protection field post using fastening kit 19 Part-Nr. 23.0010/0.n



Field width B	Corrugated mesh part no.	PETG5 part no.
1500	23.0106/0	23.0116/0
1750	23.0107/0	23.0117/0
2000	23.0108/0	23.0118/0

DOOR SG 1000

part no. 23.1404/0



TECHN. DATA / ITEMS SUPPLIED

- Made of profile 45 x 45 F
- Completely preassembled with lock and hinges
- With polycarbonate 5, part no. 23.1414/0
- Further constructions on demand

APPLICATIONS

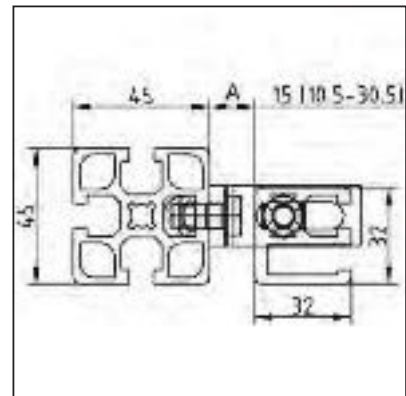
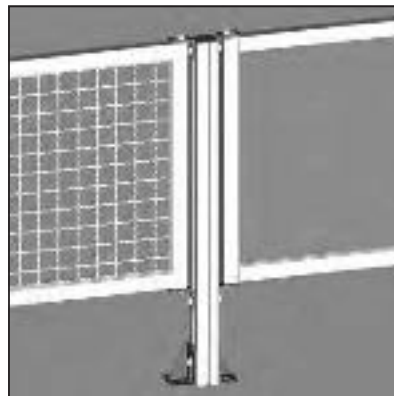
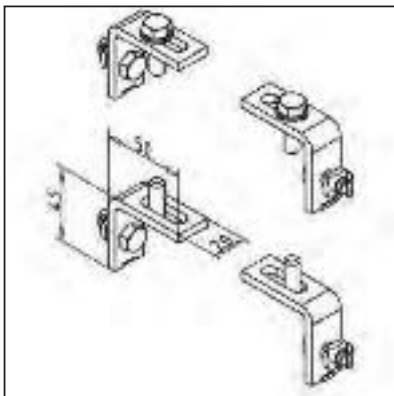
- As access to enclosures e.g. for maintenance

ASSEMBLY

- Install between two posts with groove spacing 1000mm
- Install lock fitting in post with two drillings
- Usable for left and right attempt

FASTENING KIT 19 FOR PROTECTION FIELDS

part no. 23.0010/0



TECHN. DATA / ITEMS SUPPLIED

- 4 protection field suspensions, galvanised steel
- With fastening kit
- Weight/Piece 0,091 kg

APPLICATIONS

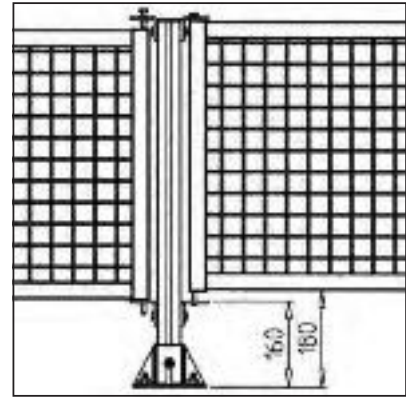
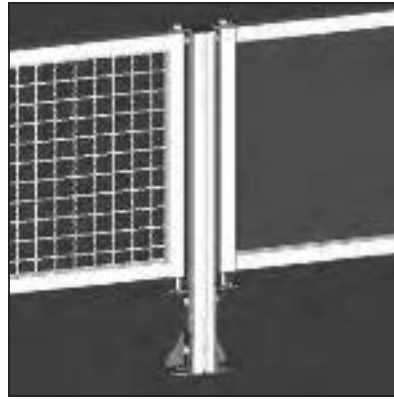
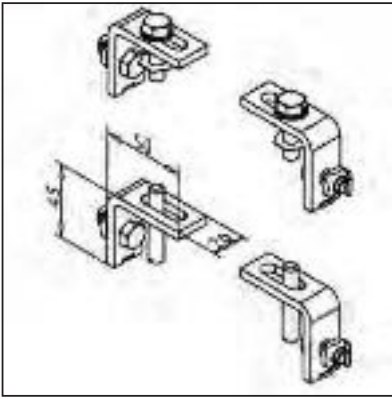
- Fastening of protection fields made of clamping profile 32x32, 45x32 or standard profiles
- Fastening of protection fields at any angle

ASSEMBLY

- Insert protection field into preassembled suspension. Tighten with screws included in delivery
- A = 10,5 mm - 30,5 mm

FASTENING KIT FOR PROTECTION FIELDS SG

part no. 23.0011/0

**TECHN. DATA / ITEMS SUPPLIED**

- 4 protection field suspensions, galvanised steel
- With fastening kit
- With label: Maintenance panel
- Upper screws are in a captive design
- Weight 0,366 kg

APPLICATIONS

- Fastening safety fields that are removed for servicing purposes. The screws to be loosened here are in a captive design.
- For clamping profile 32 x 32 and 45 x 32
- Fastening of protection fields at any angle

ASSEMBLY

- Insert protection field into preassembled suspension. Tighten with screws included
- A = 10,5 mm - 30,5 mm

SAFETY SYSTEM SAVEGUARD

REQUEST FOR FITTING FIELD

Height of protection field HS mm (standard 1820 mm)

Width of protection field B-75 mm

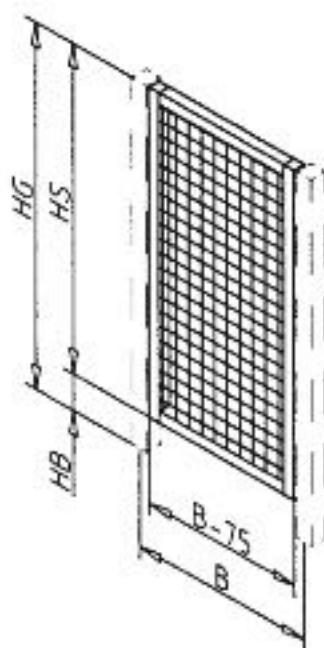
or

Height total HG mm (standard 2000 mm)

Ground clearance HB mm (standard 180 mm)

Groove centre spacing B mm

Panel element Corrugated mesh PETGS



Contact details

Company

Please call me back

Contact person

Please send me an offer

Phone no.

Fax no.

E-Mail

SAFETY SYSTEM SAVEGUARD

REQUEST FOR SLIDING DOOR

Post spacing B mm (standard 1000 mm)

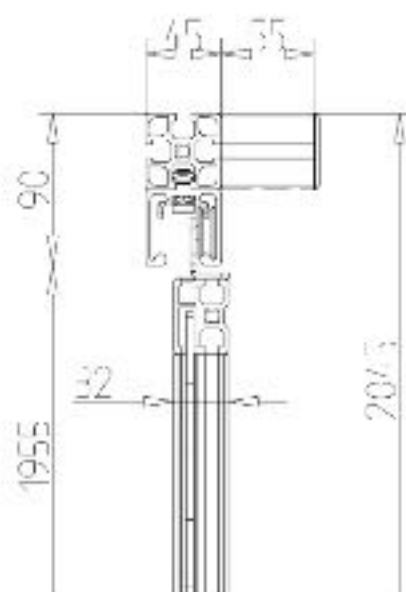
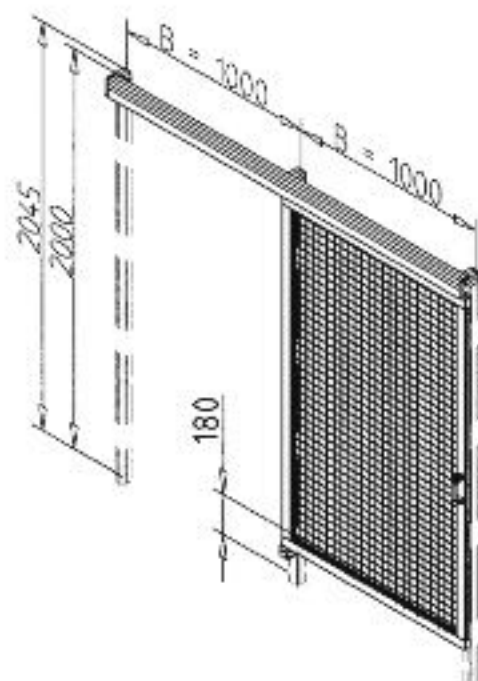
Post height HG mm (standard 2000 mm)

Handle one side both sides

Panel element Corrugated mesh PETGS

Additional field fixed
right yes no

left yes no



Contact details

Company

Contact person

Phone no.

Fax no.

E-Mail

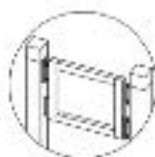
Please call me back

Please send me an offer

SAFETY SYSTEM SAVEGUARD

REQUEST FOR LIFTING DOOR

Lifting door arrangement

 outside inside

Groove centre spacing B

 mm

Lifting field height A2

 mm

Lift A3

 mm

Stand-up dimension A1

 mm

Actuation

 manual pneumatic

Panel element

 Corrugated mesh PETGS

Liftings per hour

Additional field fixed
top yes no

bottom

 yes no

Contact details

Company

 Please call me back

Contact person

 Please send me an offer

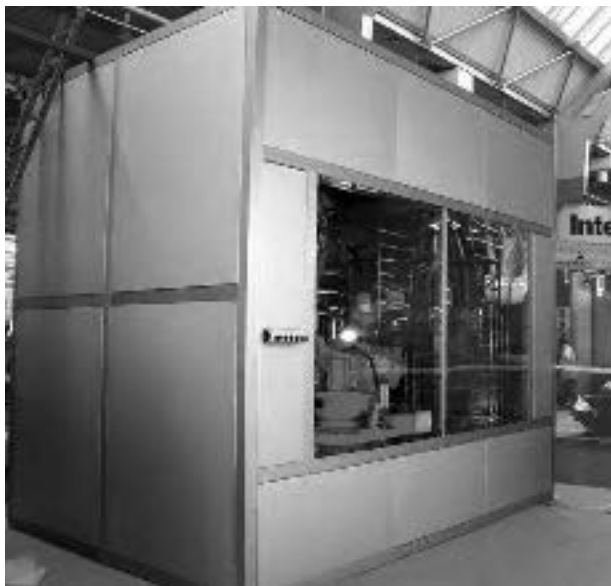
Phone no.

Fax no.

E-Mail

NOISE PROTECTION

EXAMPLES



NOISE PROTECTION

2033/10/EG – EUROPEAN HEALTH AND SAFETY REGULATION REGARDING NOISE

One solution for passive noise protection is to provide hearing protectors, but that affects other things such as difficult communication, unable to recognise audible warning signals and can be uncomfortable to wear. An active noise protection solution such as noise emission or guard units at the source provide a better solution for everyone. There are guidelines regulated by law for prevention of noise exposure and for employers to take appropriate actions according to the newest standards.

The new system for enclosures and noise reducing guard units were developed in cooperation with noise control specialist, Scharenberg, situated in Tarmstedt, Germany.

This new system is based on the well proven MiniTec profile system combined with 20 mm thick noise reducing mats and 34 mm thick noise reducing panels.

An excellent design makes it easy to assemble and give you easy access to the machines. If the guard unit in layout p34 is used properly you can reach a noise reduction of 25 dB(A) on a regular basis.



NOISE PROTECTION

NOISE CAUSES HEALTH PROBLEMS



Depending on the intensity and duration of noise exposure, there can be acute and long-term damages to health, capacity and general well-being to your employees.

- Psychological effects such as lapses of concentration, nervousness, irritability and aggressiveness.
- Physiological damage such as hearing disorder, high blood pressure, hypertension, cardiovascular diseases and headaches.
- Loss of efficiency and higher risk of injuries, impaired communication, incorrect decisions due to misunderstandings, higher error rate and demotivating working environment.

Because of the rising costs of occupational health and the consequential production downtimes, it is important to think about noise reduction. Improvements made to reduce noise in the working environment often increases productivity.



Key benefits of MiniTec noise reduction solutions

- efficient noise reduction
- cost-effective due to the use of the MiniTec profile system
- standard panels provide simple and assembly construction
- optimal accessibility through doors, lift gates, control windows
- easy removable walls
- optional also working with heat rejection

NOISE PROTECTION

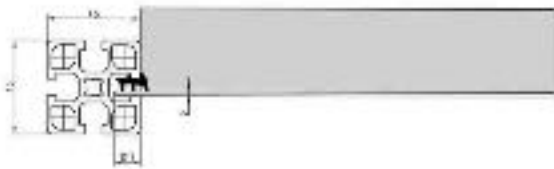
COMPONENT & REMARKS

Layout "p20"

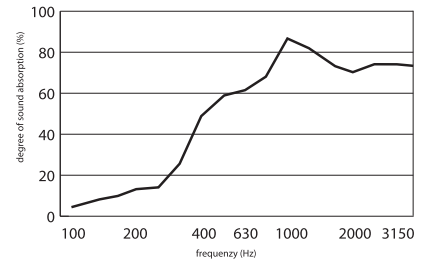
- base frame using MiniTec aluminium profiles
- panel element
- sound-absorbing panel, PU-foam 20 mm thick, black, part nr. 21.1879/0, for bonding and sealing on panel elements

Options for panel elements

- aluminium panel 2 mm, anodized, part nr. 21.1011/0
- built-in with Insert seal 2, part nr. 22.1083/0
- steel panel 1 to 2 mm, varnished or zinc-plated, built-in with Insert seal 2, part nr. 22.1083/0
- chipboard 8 mm, double-coated white, part nr. 21.1815/2
- chipboard 8 mm, double-coated light-grey, part nr. 21.1855/0

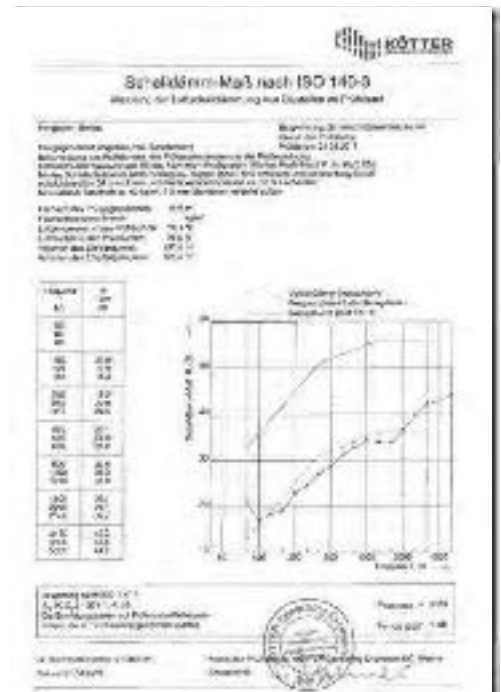
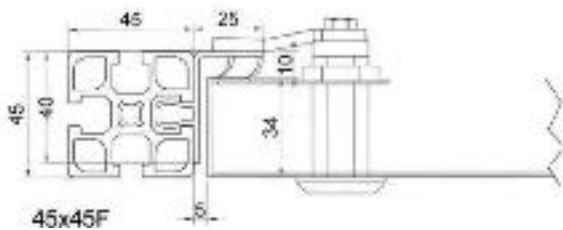


Degree of sound absorption measurement (DIN-EN-ISO 103534-2)



Layout „p34“

- base frame using MiniTec aluminium profiles
- noise reduction strip, part nr. 22.1130/1
- noise reduction panel 34 mm thick
- internal side perforated plate
- filling: premium mineral wool, with glass non-woven as trickle protection, non-flammable according to DIN 4102, building material class A2
- exterior sheet panel zinc-plated optional varnished in RAL colour

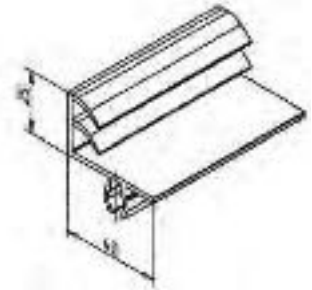


NOISE PROTECTION

COMPONENT & REMARKS

Noise reduction strip (part no. 22.1130/1)

- material: ABS grey
- with two side-fed sealing lips
- weight: 0,232 kg/m
- no tools and screws needed for attachment
- backfitting/retrofitting possible
- easy handling and easy removal
- less assembly-time
- sealed panels, door catches
- no mitre-cut necessary

**Noise reduction panel " p34"**

- Thickness 34 mm
- 1,5 mm steel panel zinc-plated, optional finish in RAL
- Insulation: mineral fibre, laminated, approx. 90 kg/m³
- 1,0 mm perforated plate inside, zinc-plated. approx. 35 % holes
- sound insulation certified according to ISO 140-3
- weight of panel 27 kg/m²

Layout

- panel firmly bolted together
- panel fixed with bolt lock
- door with handle

*panel firmly bolted together**panel fixed with bolt lock**door with handle***Options**

- windows, single or double
- finished according RAL
- panel sound absorber
- conduit sound absorber
- ventilator with thermostat
- sliding doors
- rain cover/shield

NOISE PROTECTION

COMPONENT & REMARKS

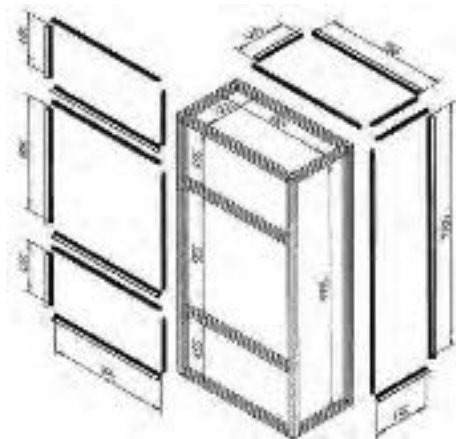
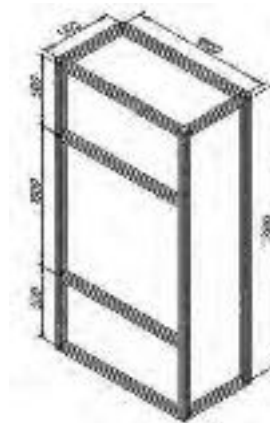
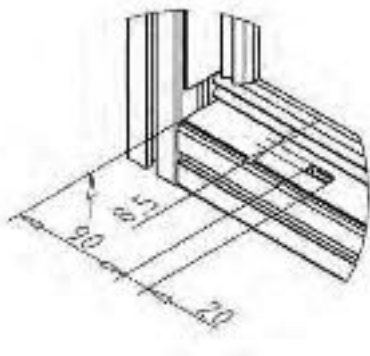
EXAMPLE FOR A BASE FRAME

1. Construction

- Please use the standard groove centre distance N from 250 to 2000 mm for constructing the carrier framework

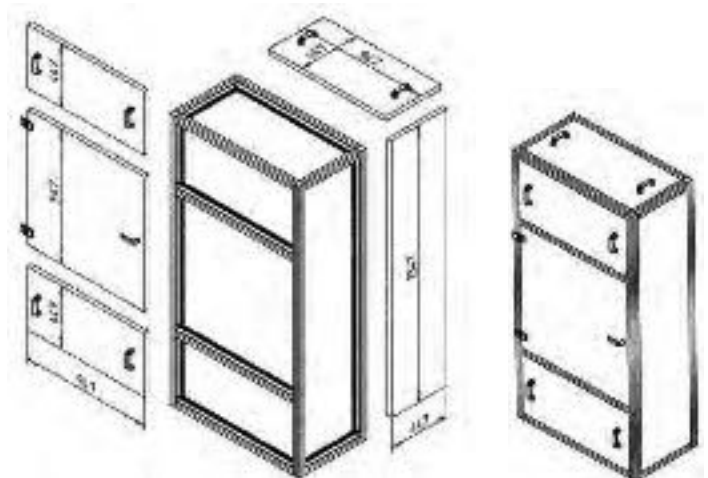
2. Insertion of noise reduction strip

- calculation of length for noise reduction strip
Horizontal N -45 mm, vertical N -95 mm
- cutting strips and inserting strips
- When using removable elements use an additional one on the bottom drill 2 long holes diameter 8,5x20, use snap bolt 25, part no 21.1758/0, put together with square-nuts



3. Insertion and fastening of the noise reduction elements

- firmly bolted elements to be fixed from the backside
- removable elements will be inserted into snap bolts from underneath, then swivel it into the base frame and secure it
- door elements and shutter to be fixed from the front



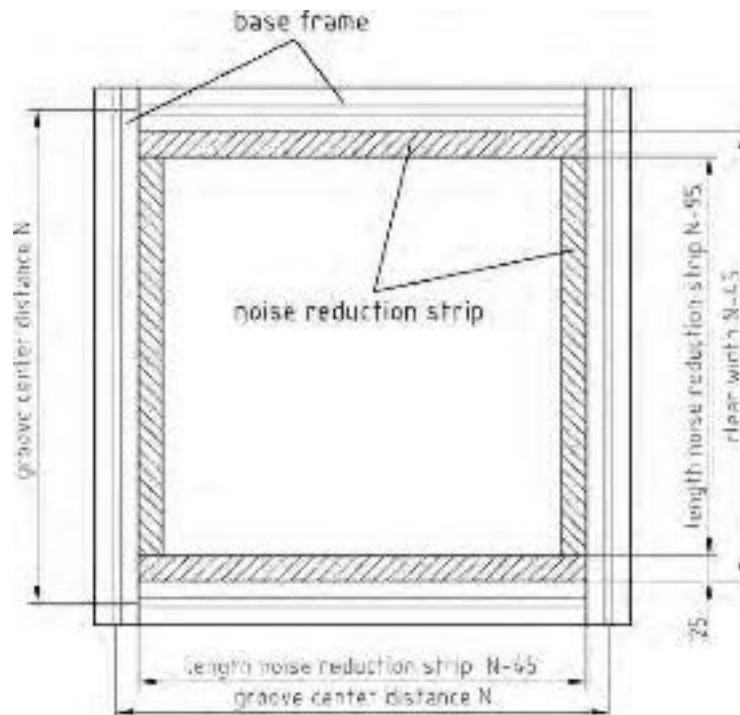
NOISE PROTECTION

COMPONENT & REMARKS

Preferential noise reduction panel sizes p34

Groove centre distance N mm	Panel size mm	Panel firmly bolted together part no.	Door part no.
250 x 250	197 x 197	56.0011/0	56.0013/0
500 x 250	447 x 197	56.0021/0	56.0023/0
1000 x 250	947 x 197	56.0031/0	56.0033/0
250 x 500	197 x 447	56.0041/0	56.0043/0
500 x 500	447 x 447	56.0051/0	56.0053/0
1000 x 500	947 x 447	56.0061/0	56.0063/0
250 x 1000	197 x 947	56.0071/0	56.0073/0
500 x 1000	447 x 947	56.0081/0	56.0083/0
1000 x 1000	947 x 947	56.0091/0	56.0093/0
250 x 2000	197 x 1947	56.0101/0	56.0103/0
500 x 2000	447 x 1947	56.0111/0	56.0113/0
1000 x 2000	947 x 1947	56.0121/0	56.0123/0

Calculation of length for noise reduction strip and panel size



NOISE PROTECTION

REQUEST

Dimensions of the machine

Width mm

Length mm

Height mm

Machine type

Current noise emission dB(A)

Noise reduction you are looking for? dB(A)

Frequency range if known Hz

Heat rejection required? yes no

Contact details

Company

Please call me back

Contact person

Please send me an offer

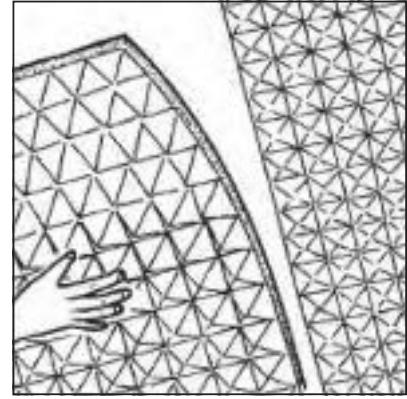
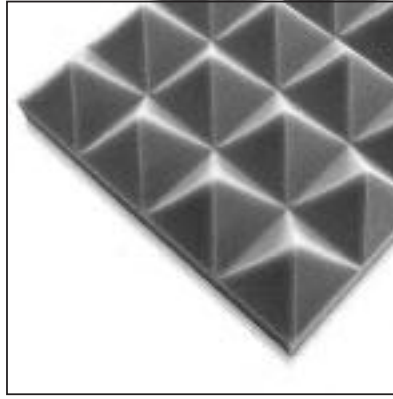
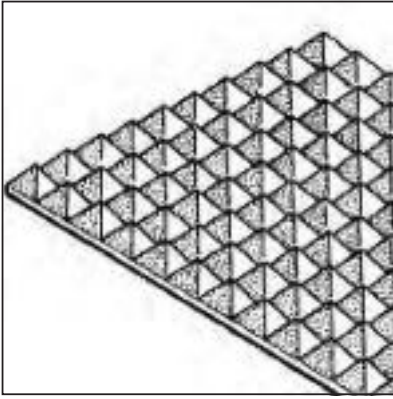
Phone no.

Fax no.

E-Mail

ACOUSTIC ABSORPTION BOARD PYRAMID

part no. 21.1819/0

**TECHN. DATA / ITEMS SUPPLIED**

- Material: PUR-foam, anthracite, 70mm
- Fire protection classification 3
- Heat co-efficient at 0°C 0,032 W/mK
- Weight 1,5 kg/m²
- Board size 1000 x 1000 mm
- **Other strenghts and performances on request**

APPLICATIONS

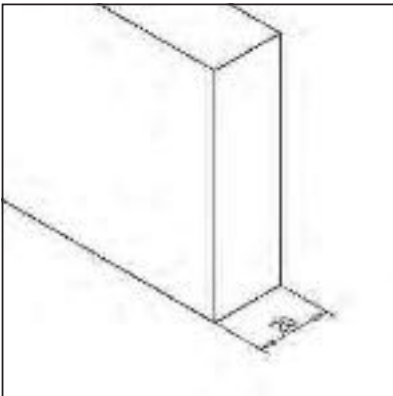
- Primary noise insulation through enclosure of noise source
- Secondary noise insulation in common rooms, master offices etc.

ASSEMBLY

- Fixation through conglutination with the underground
- According to underground suitable glue on request

ACOUSTIC ABSORPTION BOARD 20 MM

part no. 21.1879/0

**TECHN. DATA / ITEMS SUPPLIED**

- Material: Pu-foam, 20mm, black, adhesive
- Temperature resistance -40 bis +100°C
- Weight 0,650 kg/m²
- Board size max. 2000x1000mm

APPLICATIONS

- Through the black PU-skin immune to pollution

ASSEMBLY

- Lamination sheet pull down and glue on

6



586 6.1 LONGITUDINAL STOPS



588 6.2 VEHICLE EXTENSION

LONGITUDINAL STOPS & VEHICLE EXTENSION

LONGITUDINAL STOPS



MiniTec longitudinal stops are a proven turn-key solutions based on standard elements of the MiniTec profile system. Its modular structure enables optimum solutions for any kind of application. All stops are equipped with a height-adjustable foot with floor mounting points. The stop is Connected to the machine via adaptor plates. A Digital LCD Operator Panel is attached directly to the machine at operators height.

Simple dimension modifications, e.g. for saw blade thickness or distance between stop and tool can be carried out via Operator panel.

Standard lengths up to 6000 mm (measuring length: 5500 mm), other dimensions on request

Width carrying rollers:	200-600 mm
Distance between carrying rollers:	200 mm
Height adjustment:	±100mm
Standard height:	850 mm
Standard connection:	right
Length measuring:	magnetic tape
Measuring accuracy:	±0,15 mm
Measuring display:	LCD, double-spaced

Slide guide

Linear guide LR with 4 precision bearings, clearance adjusted, shafts Ø 12 mm , hardened special steel Cf 53, Mat. no. 1.1213

Slide clamping

Motor drive: automatically at stop position, manual drive: via switch (pneumatic) or via clamping lever.

Motor drive

AC-motor with positioning control system, integrated in housing. Displacement speed: 0.6 m/s

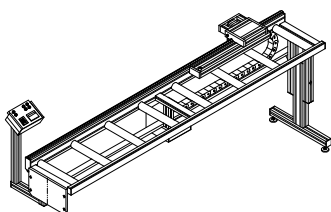
Input for motor drive

Input terminal with foil keyboard and LCD-display, fixed in switch-box plate at operator height next to the machine.

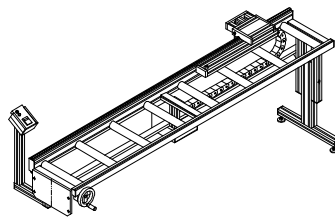
LONGITUDINAL STOPS



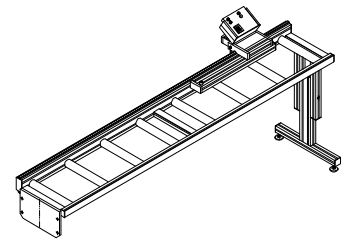
First cuts can easily be removed:
The top of the stop can be swung out of the conveyor by 180°. Adjustable measuring length compensation including scale, L = 400 mm, mounted onto slide.



Motorised drive with stationary display, integrated in the switchbox



Manual handwheel drive with stationary 230 V - display

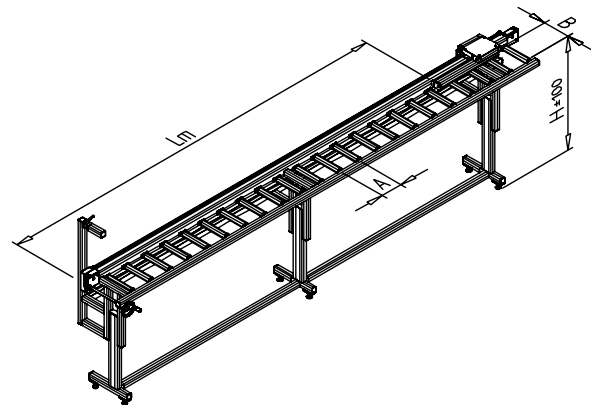


Manual slide displacement with battery-driven digital display on slide

REQUEST LONGITUDINAL STOP

Dimensions

- Measuring length Lm mm
- Roller distance A mm
- Roller width B mm
- Height H mm
- Load dN



Control

- Drive motorised handwheel manual
- Stop right left

Contact details

- Company Please call me back
- Contact person Please send me an offer
- Phone no.
- Fax no.
- E-Mail

MINITEC - VEHICLE INTERIOR CONSTRUCTION



The profile system has proven itself in almost all industrial areas through the standardised groove system and patented joining techniques without machining. The MiniTec aluminium profile system is also frequently used in custom vehicle manufacture - by both professional vehicle manufacturers and emergency rescue organisations.

By using the modular principle, modifications can be quickly and easily made at anytime to suit the ever changing needs of the User.

Workshops with customised assembly areas can quickly be transformed with modular shelving systems and transport trolleys for hoses and other equipment.

Tool shed construction · Mercedes-Benz Sprinter 211 CDI Kirkel-Neuhäusel Volunteer Fire Department

With the aid of the MiniTec profile system the Kirkel-Neuhäusel Volunteer Fire Department implemented the expansion of an equipment vehicle. Even drawers can be installed in exact dimensions using the modules from MiniTec.

Equipment extension - Iveco Magirus DLK 23/12 Waldmohr Volunteer Fire Department

The Waldmohr Volunteer Fire Department realised an extension with the MiniTec modules in the G1 of the DLK 23/12. This means that heavy equipment, such as chain saws or cut-off saws do not have to be lifted from the low equipment area. In this design the different equipment holders can be fastened on the surface profile 270 x 19 with no problem.



7



592 7.1 TOOLS



603 7.2 PROCESSING

TOOLS & PROCESSING
TOOLS & PROCESSING

MAGNETIC BIT HOLDER TORX

part no. 26.1820/0

**TECHN. DATA / ITEMS SUPPLIED**

- Automatic holder with strong permanent magnet

- Inclusive Torx Bit T 40 x 25 **part no. 26.1822/0**

APPLICATIONS

- Receptacle for bits Torx 40 for self-forming screws M8 of MiniTec Power-lock fastener

ASSEMBLY

- Retains the screws optimal on the tool in every position even at high revolution speed

BALL- HEADED KEY

part no. diverse

**TECHN. DATA / ITEMS SUPPLIED**

- Chrome plated, with handle PA GF, green

APPLICATIONS

- Fastening of MiniTec power-lock fastener

- Pretightening of bolt- and butt- fasteners

OTHER DESIGNS

- **BALL-headed key 4 A/F**
part no. 26.1817/0

- **BALL-headed key 5 A/F**
part no. 26.1084/0

T-HANDLE KEY

part no. diverse

**TECHN. DATA / ITEMS SUPPLIED**

- Tool steel chrome plated
- Plastic T-handle, black

APPLICATIONS

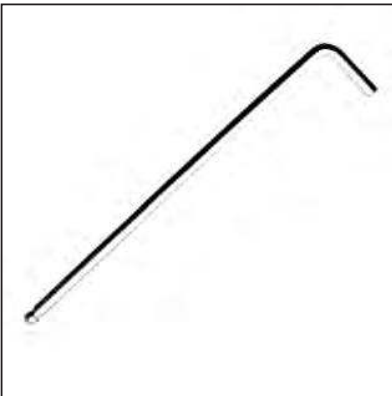
- Fastening of MiniTec power-lock fastener

OTHER DESIGNS

- T-handle key 4 A/F part no. 26.1810/0
- T-handle key 5 A/F part no. 26.1083/0

COMBI L-KEY

part no. diverse

**TECHN. DATA / ITEMS SUPPLIED**

- Chrome plated, one end ball headed

APPLICATIONS

- Fastening of MiniTec power-lock fastener
- Pretightening of hex socket cap screws and counter sunk screws M8

OTHER DESIGNS

- Combi L-key 4 A/F part no. 26.1811/0
- Combi L-key 5 A/F part no. 26.1085/0

T-HANDLE KEY TORX T40

part no. 26.1814/0

**TECHN. DATA / ITEMS SUPPLIED**

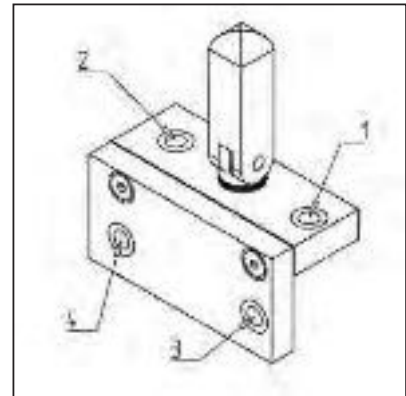
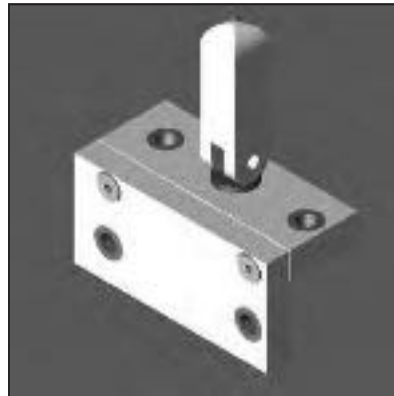
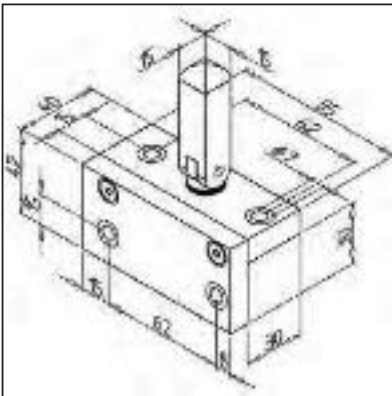
- Chrome plated
- Plastic T-handle, black

APPLICATIONS

- Fastening of MiniTec power-lock fastener SF

OTHER DESIGNS**DRILLING JIG 30**

part no. 26.1065/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium
- Steel drill bushes \varnothing 7 mm
- Eccentric clamp device
- Weight 0,220 kg

APPLICATIONS

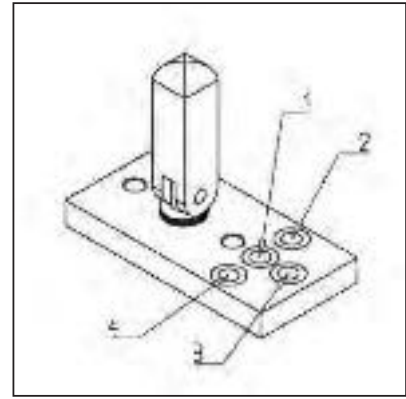
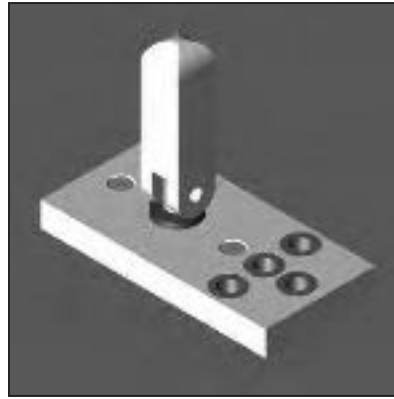
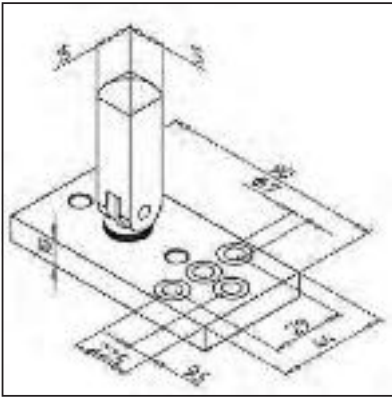
- 1) Positioning of step drilling for screw-connection
- 2) Precise positioning of drillings for pneumatic connections on profile surface
- 3) Screw connection of profiles 32 x 32

ASSEMBLY

- Clamp drilling jig on profile groove and bore through bushes

DRILLING JIG

part no. 26.1092/0

**TECHN. DATA / ITEMS SUPPLIED**

- Aluminium
- Steel drill bushes \varnothing 7 mm
- Eccentric clamp device
- Weight 0,220 kg

APPLICATIONS

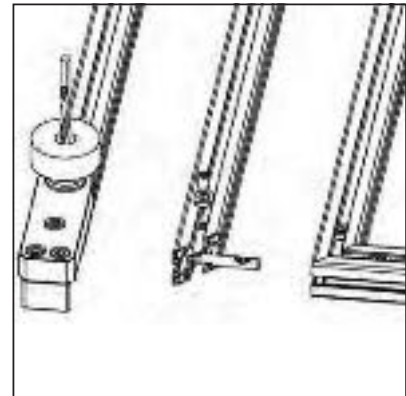
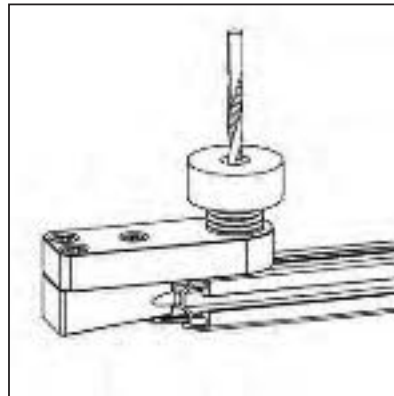
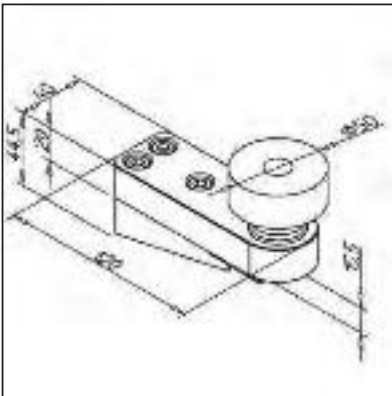
- 1) Positioning of step drilling for screw-connection
- 2) Precise positioning of drillings for pneumatic connections on profile surface
- 3) Screw connection of profiles 32 x 32

ASSEMBLY

- Clamp drilling jig on profile groove and bore through bushes

DRILLING JIG FOR MITRE CONNECTOR 30

part no. 26.1063/0

**TECHN. DATA / ITEMS SUPPLIED**

- Body: Aluminium, anodized
- Centering pin: steel
- Fixing-screw: plastic with steel bush
- Weight 0,408 kg

APPLICATIONS

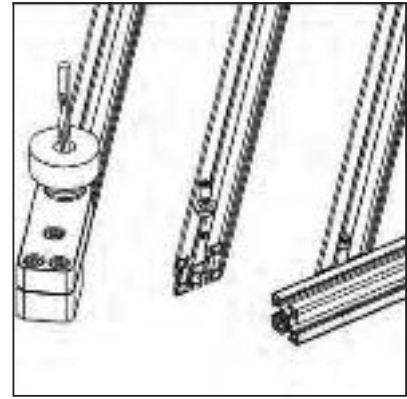
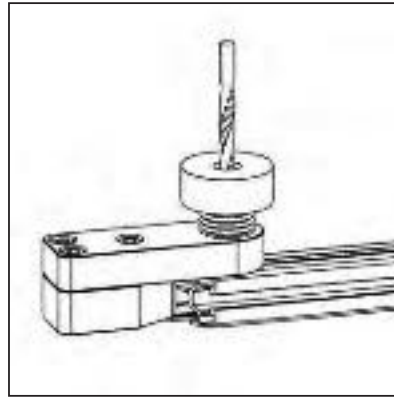
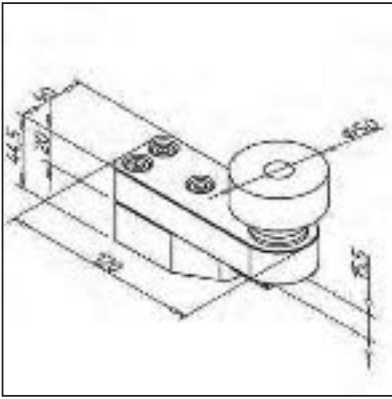
- Positioning of bore for set screw of mitre connector 30 in relation to mitre angle

ASSEMBLY

- Cut profile in desired angle
- Insert pin into core hole and fix plastic clamp screw
- Drill through-hole \varnothing 8,0 mm through drilling jig in profile
- Tighten mitre connector 30, **part no. 21.1890/0** with set screw

DRILLING JIG FOR MITRE CONNECTOR N30

part no. 26.1056/0



TECHN. DATA / ITEMS SUPPLIED

- Body: Aluminium, anodized
- Centering pin: steel
- Fixing-screw: plastic with steel bush
- Weight 0,477 kg

APPLICATIONS

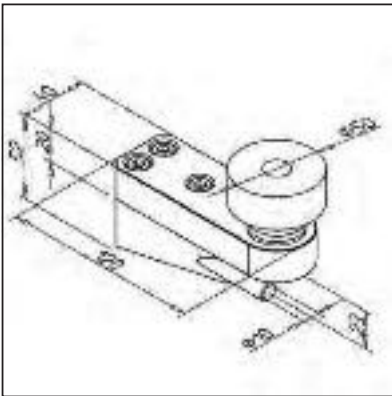
- Positioning of bore for set screw of mitre connector N30 in relation to mitre angle

ASSEMBLY

- Cut profile in desired angle
- Insert pin into core hole and fix plastic clamp screw
- Drill through-hole \varnothing 8,0 mm through drilling jig in profile
- Tighten mitre connector N30 **part no. 21.0945/0**

DRILLING JIG FOR MITRE CONNECTOR

part no. 26.1050/0



TECHN. DATA / ITEMS SUPPLIED

- Material: Aluminium
- Centering pin: steel
- Fixing-screw: plastic with steel bush
- Weight 0,450 kg

APPLICATIONS

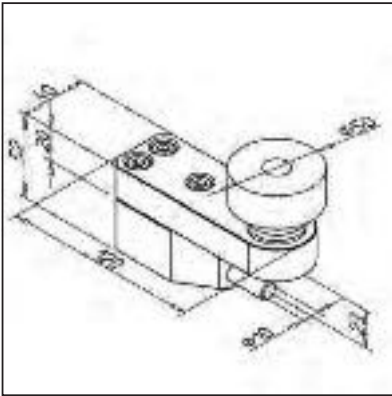
- Positioning of bore for set screw of mitre connector in relation to mitre angle
- Suitable for all MiniTec profiles

ASSEMBLY

- Cut profile in desired angle, rebore the center-bore \varnothing 10,1 mm with twist drill **part no. 26.1816/0**
- Insert pin into center bore and fix plastic clamp screw
- Drill bore \varnothing 8,0 mm through drilling jig in fixing screw
- Insert mitre-connector

DRILLING JIG FOR MITRE CONNECTOR N 45

part no. 26.1060/0



TECHN. DATA / ITEMS SUPPLIED

- Material: Aluminium
- Centering pin: steel
- Fixing-screw: plastic with steel bush
- Weight 0,556 kg

APPLICATIONS

- Positioning of bore for set screw of mitre connector N in relation to mitre angle
- Suitable for all MiniTec profiles

ASSEMBLY

- Cut profile in desired angle, Rebore center-bore to $\varnothing 10,1$ mm with twist drill **part no. 26.1816/0**
- Insert pin into center bore and fix plastic clamp screw
- Drill bore $\varnothing 8,0$ mm through drilling jig in fixing screw
- Tighten mitre-connector with set screw M8

THREAD FORMER M8

part no. 26.1082/0



TECHN. DATA / ITEMS SUPPLIED

- HSS-E
- Length: 95 mm

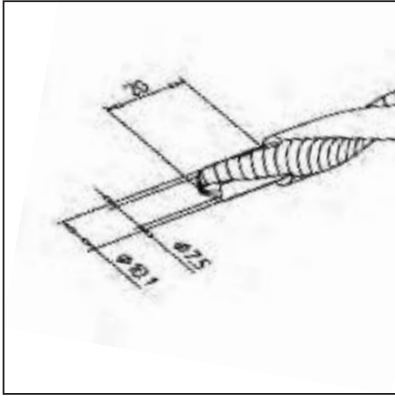
APPLICATIONS

- Roll-tap forming of M8 threads in core bores of all profiles

ASSEMBLY

STEP DRILL 10,1

part no. 26.1816/0



TECHN. DATA / ITEMS SUPPLIED

- HSS-steel
- Steps \varnothing 7,5 mm, 10,1 mm
- Shaft cylindric
- Length: 132 mm

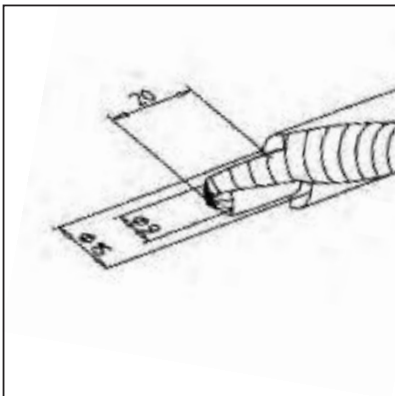
APPLICATIONS

- Drilling of center-bore in profiles of series 45 for mitre connector

ASSEMBLY

STEP DRILL 15

part no. 26.1815/0



TECHN. DATA / ITEMS SUPPLIED

- HSS-steel
- Steps \varnothing 9 mm, 15 mm
- Shaft cylindric
- Length: 165 mm

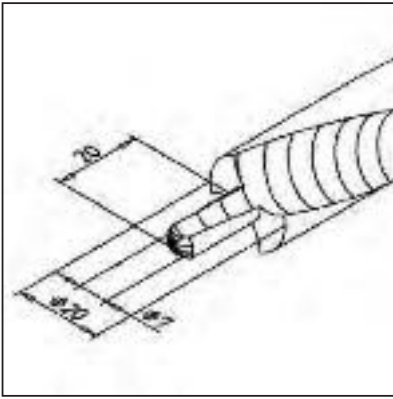
APPLICATIONS

- Production of step-bore for connection- and butt connector 15 in profiles of series 45, narrow sides 19 and 32

ASSEMBLY

STEP DRILL 20

part no. 26.1813/0

**TECHN. DATA / ITEMS SUPPLIED**

- HSS-steel
- Steps Ø 7 mm, 20 mm
- Shaft MK 2
- Length: 238 mm

APPLICATIONS

- Production of step-bore for connection- and butt connector 20 in profiles of series 45

ASSEMBLY**PISTOL-SHAPED PULSE SCREWDRIVER**

part no. 26.0800/0

**TECHN. DATA / ITEMS SUPPLIED**

- impulse screwdriver
- quick-change chuck
- Connection 1/4" quick coupling
- magnet with Torx bit T 40
- air consumption 0,4 m³/min
- V= max 7000 Rpm
- torque 10-20 Nm
- weight 0,992 kg
- without torque shut off

APPLICATIONS

- For screwing in self-tapping screws for MiniTec power-lock fasteners

ASSEMBLY

- due to a connected upstream of hydraulic elements there will only be a soft impact so working with this goes easy on your joints

THREAD FORMING MACHINE

part no. 26.1910/0



TECHN. DATA / ITEMS SUPPLIED

- Automatic changing of turning direction, quick reverse movement 230 V, 280 W

- For threads up to M10

- Complete with chuck

- Spindle housing: Ø 43 mm

- Weight 3,700 kg

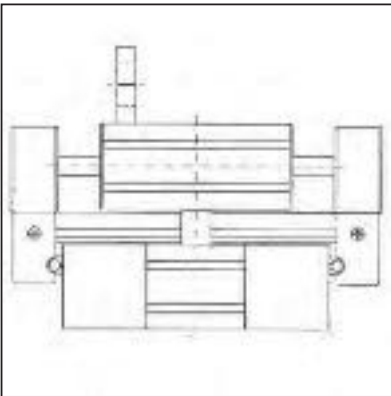
APPLICATIONS

- Cost effective forming of threads in core bores of profiles, To be used together with thread forming jig

ASSEMBLY

AUTOMATIC THREAD FORMING MACHINE

part no. 26.1970/0



TECHN. DATA / ITEMS SUPPLIED

- Made of MiniTec aluminium profiles

- 2-axis slide with machine seating for thread forming or drilling machines with spindle housing Ø 43 mm

- Complete with underframe

- Without machine

APPLICATIONS

- Rational thread forming

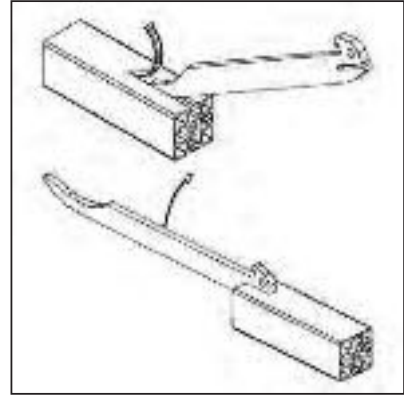
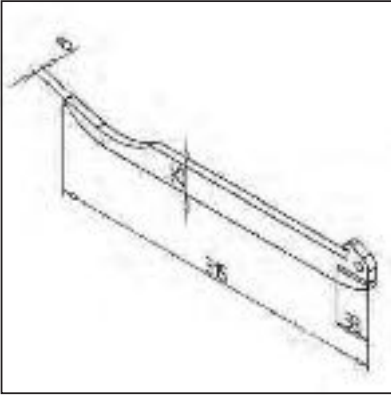
- Rational re boring of central bores

- Can be delivered with 1 - 4 slides for up to 4 machines

APPLICATIONS

TEAR- OFF LEVER

part no. 26.0815/0

**TECHN. DATA / ITEMS SUPPLIED**

- Steel, chrome plated
- Weight 0,456 kg

APPLICATIONS

- Rational opening of the MiniTec aluminium profiles G groove covers, e.g. for the installation of panel elements, attachment of linear guides etc.
- Rational opening of the MiniTec aluminium profiles G groove covers for the assembly of MiniTec power-lock fastener

APPLICATIONS

- Slick the slot end of the tool at the profile end on the groove cover and break it open towards the top; break off the groove cover by pulling up and down
- After tightening cut out is covered with end cap G **part no. 22.1056/0**
- Slick bended end under the groove cover and open in desired length. Opened grooves can be covered again with cover profiles

DEBURRING TOOL

part no. 26.0813/0

**TECHN. DATA / ITEMS SUPPLIED**

- Plastic handle
- Changable
- Weight 0,090 kg

APPLICATIONS

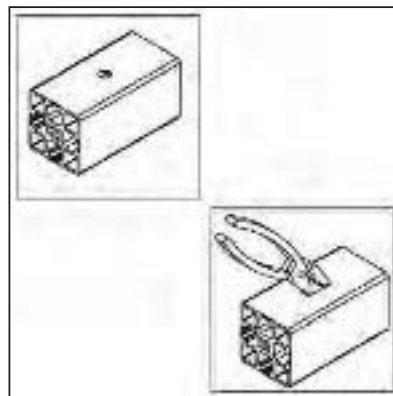
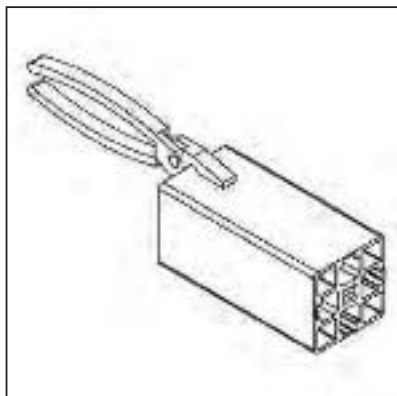
- For deburring of the profile groove after opening the grooves of profiles by closed profiles
- For deburring of bores

ASSEMBLY

- Set tool and slide along area to be deburred

FLAT PLIERS

part no. 26.0814/0

**TECHN. DATA / ITEMS SUPPLIED**

- plastic handle

- Weight 0,150 kg

APPLICATIONS

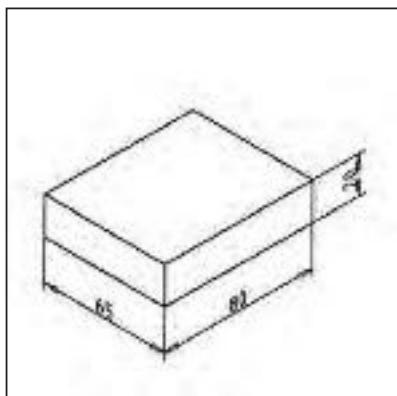
- For opening the profile grooves by closed profiles

ASSEMBLY

- Set flat pliers onto profile cover and break by swivelling several times

ANODISING POLISHER

part no. 26.0811/0

**TECHN. DATA / ITEMS SUPPLIED**

- elastic bound abrasant

- Weight 0,138 kg

APPLICATIONS

- to remove minor scratches on anodic coating

- to equal "shades" on anodic coating

ASSEMBLY

- also suitable for hard-to-reach positions (eraser can be cut to size)

- usable wet and dry - water intensifies the effect

- even polished sections without physical effort

- water- and oil-resistant

- ecofriendly, no detergents necessary

- long-life

PROFILE BENDING

NEW APPLICATIONS THANKS TO BENT PROFILES

- Decorative structures for exhibitions or office furniture
- Functional designs for swivelling constructions
- Machine guards exactly suited to the machine-shape
- Security-fences
- Curved roller-conveyors
- Holders e.g. for lamps in workstations

Technical features

For standard-applications, following the bending process no subsequent anodising is necessary. However, small visible cracks may occur in the anodised layer in the area of bending.

For applications requiring a very high quality visual finish, subsequent anodising of the curved profiles is necessary.

The grooves of the curved profiles do not change with the process. But power-lock fasteners require a minimum radius of 400 mm.

G-Type profiles and UL- profiles are not suitable for bending.

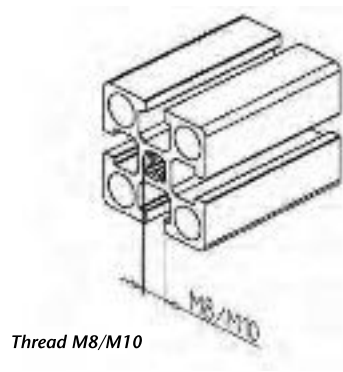
Thanks to the CNC-Control of our high performance bending machine, various radii on the same profile length are possible.



PROFILE	POSITION	MIN. RADIUS
19 X 45		250
19 X 32		200 500
32 X 32 F		300
45 X 32 F		350 600
45 X 45 F 45 X 45		500
45 X 90 S		750

PROCESSING SERVICES

THE MINITEC PROFILE SYSTEM REQUIRES THE MINIMUM OF PROCESSING. SAW CUTTING AND THREAD-FORMING ARE THE ESSENTIAL PROCESSES, ONLY IN EXCEPTIONAL CASES IS DRILLING REQUIRED.



Thread M8 x 20
in core bore for power-lock fastener

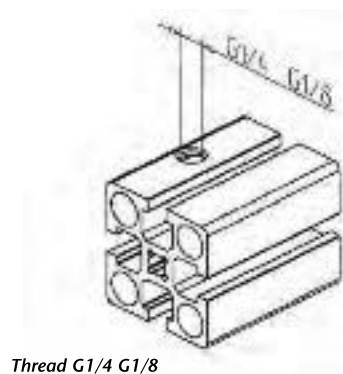
part no. 25.1087/0

Thread M10 x 25
in core bore for feet

part no. 25.1088/0

Thread G 1/4
on profile surface
for pneumatics

part no. 25.1089/0



Thread G 1/8
on profile surface
for pneumatics

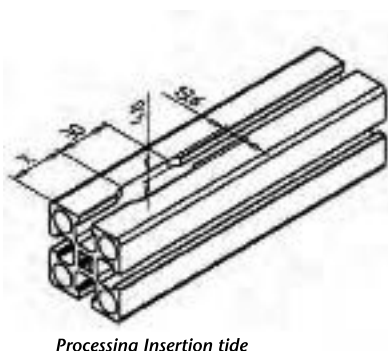
part no. 25.1090/0

Thread G 1/4
in core bore Ø 11,7 mm
for plug, pneumatics

part no. 25.1091/0

Through bore Ø 7 mm
for screw connection

part no. 25.1092/0



Insertion tide
on profile surface for subsequent
insertion of power-lock fastener

part no. 25.0315/0

Step bore Ø9 / Ø15
for bolt and butt fastener 15

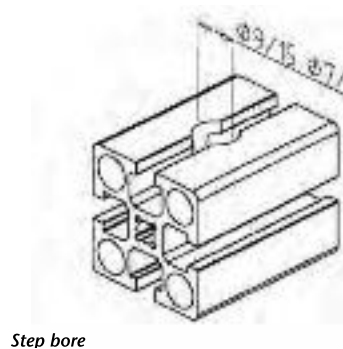
part no. 25.1085/0

Step bore Ø7 / Ø20
for bolt and butt fastener

part no. 25.1097/0

Processing for mitre connections
for mitre connector
(without cut)

part no. 25.1072/0



Mitre cut
for mitre connector
(see section fastening elements/
mitre connector)

part no. 25.1072/1

21.1347/6	465	21.1523/0	74	21.1788/3	133	21.1951/0	74
21.1348/0	120	21.1532/0	74	21.1788/4	133	21.1980/0	211
21.1349/0	91	21.1537/0	74	21.1788/5	133	21.1981/0	211
21.1351/0	75	21.1543/0	74	21.1788/6	133	21.1982/0	212
21.1351/1	75	21.1546/0	74	21.1790/0S	515	21.1983/0	212
21.1351/2	75	21.1547/0	74	21.1792/0	207	21.2000/0	222
21.1351/4	75	21.1550/0	74	21.1795/0	219	21.2002/0	224
21.1354/0	75	21.1552/0	74	21.1796/0	217	21.2003/0	223
21.1355/0	179	21.1557/0	74	21.1797/0	207	21.2010/0	115
21.1359/0	226	21.1566/0	74	21.1798/0	133	21.2019/0	223
21.1360/0	75	21.1567/0	75	21.1798/2	133	21.2020/0	114
21.1362/0	75	21.1568/0	75	21.1798/3	133	21.2030/0	114
21.1363/0	75	21.1569/0	75	21.1798/4	133	21.2034/0	116
21.1368/0	75	21.1570/0	75	21.1798/5	133	21.2041/0	116
21.1368/2	75	21.1571/0	74	21.1798/6	133	21.2053/0	149
21.1370/0	80	21.1574/0	25	21.1799/0	218	21.2058/0	153
21.1373/0	107	21.1574/1	25	21.1803/0	186	21.2059/0	152
21.1374/0	105	21.1595/0	74	21.1805/0	186	21.2068/0	87
21.1375/0	107	21.1627/0	75	21.1807/0	186	21.2074/0	75, 178
21.1376/0	106	21.1645/0	74	21.1808/0	186	21.2077/0	88
21.1377/0	106	21.1666/0	63, 75	21.1809/0	186	21.2077/6	88
21.1378/0	108	21.1701/0	441	21.1811/0	186	21.2078/0	88
21.1382/0	75	21.1706/0	164	21.1812/0	186	21.2078/6	463
21.1385/0	79	21.1707/0	168	21.1813/0	186	21.2105/0	113
21.1386/0	80	21.1708/1	93	21.1818/1	186	21.2106/0	112
21.1390/0	75	21.1710/1	92	21.1818/2	186	21.2109/0	92
21.1390/2	75	21.1711/0	213	21.1819/0	583	21.2110/0	162
21.1391/0	75	21.1712/0	210	21.1821/0	186	21.2111/0	113
21.1391/2	75	21.1713/0	210	21.1826/0	186	21.2113/0	101
21.1397/0	93	21.1714/0	218	21.1827/0	186	21.2120/0	160
21.1397/6	464	21.1716/0	514	21.1828/0	186	21.2123/0	74
21.1399/0	99	21.1717/0	514	21.1829/0	186	21.2127/0	74
21.1400/0	68, 86	21.1718/0S	515	21.1830/0	186	21.2134/0	74
21.1401/0	68, 85	21.1722/0	519	21.1831/0	186	21.2156/0	74
21.1403/0	100	21.1723/0	167	21.1832/0	186	21.2191/0	165
21.1404/0	98	21.1727/0	159	21.1833/0	186	21.2199/0	94
21.1407/0	99	21.1729/0	159	21.1836/0	186	21.2210/0	163
21.1411/0	87	21.1730/0	155	21.1838/0	208	21.2215/0	74
21.1472/0	102	21.1731/0	165	21.1839/0	209	21.2219/0	74
21.1472/6	462	21.1733/0	155	21.1840/0	209	21.2219/1	74
21.1473/0	102	21.1737/0	167	21.1842/0	149	21.2220/0	178
21.1475/0	152	21.1738/0	166	21.1843/0	149	21.2221/0	113
21.1476/0	153	21.1740/0	142	21.1844/0	149	21.2222/0	112
21.1482/0	74	21.1741/0	142	21.1846/0	148	21.2223/0	113
21.1492/0	75	21.1748/0	135	21.1847/0	148	21.2224/0	113
21.1500/0	74	21.1752/0	124	21.1848/0	148	21.2225/0	112
21.1501/0	74	21.1753/0	141	21.1851/0	148	21.2230/0	117
21.1501/1	74	21.1755/0	131	21.1862/0	149	21.2236/1	74
21.1502/0	74	21.1757/0	139	21.1863/0	149	21.2250/0	516
21.1503/0	74	21.1758/0	140	21.1864/0	149	21.2300/0	161
21.1503/1	74	21.1759/0	144	21.1871/0	148	21.2301/0	145
21.1504/0	74	21.1759/1	144	21.1872/0	148	21.2305/0	126
21.1505/0	74	21.1760/0	141	21.1873/0	148	21.2308/0	143
21.1506/0	74	21.1761/0	163	21.1874/0	148	21.2311/0	137
21.1506/1	74	21.1762/0	164	21.1879/0	583	21.2315/0	115
21.1507/0	74	21.1763/0	138	21.1881/0	148	21.2316/0	138
21.1508/0	74	21.1766/0	228	21.1882/0	148	21.2317/0	121
21.1509/0	74	21.1767/0	131	21.1883/0	148	21.2323/0	137
21.1510/0	74	21.1772/0	216	21.1884/0	148		
21.1511/0	74	21.1774/0	208	21.1890/0	68, 86		
21.1512/0	74	21.1775/0	205	21.1891/0	148		
21.1513/0	74	21.1776/0	205	21.1892/0	148		
21.1513/1	74	21.1777/0	206	21.1893/0	148		
21.1514/0	74	21.1778/0	217	21.1894/0	148		
21.1514/1	74	21.1780/0	206	21.1945/0	74	22.0978/1	63
21.1516/0	74	21.1781/0	221	21.1945/1	74	22.0979/1	63
21.1517/0	74	21.1782/0	221	21.1946/0	74	22.0980/1	94
21.1517/1	74	21.1783/0	161	21.1947/0	74	22.0981/1	63
21.1518/0	74	21.1784/0	162	21.1948/0	74	22.0991/0	194
21.1519/0	74	21.1788/0	133	21.1949/0	74	22.0992/1	63
21.1520/0	74	21.1788/2	133	21.1950/0	74	22.0993/1	63
						22.0994/1	63

22.0995/1	63
22.0996/1	63
22.0996/2	63
22.0997/1	89
22.1001/1	63
22.1002/1	63
22.1003/1	63
22.1004/1	63
22.1007/1	63
22.1008/2	63
22.1009/1	63
22.1010/0	190
22.1011/0	197
22.1014/1	63
22.1016/0	448
22.1017/1	63
22.1017/2	63
22.1018/1	63
22.1018/2	63
22.1019/1	63
22.1019/2	63
22.1020/1	189
22.1021/1	63
22.1022/0	448
22.1025/1	168
22.1029/0	191
22.1030/1	63
22.1031/1	63
22.1032/1	63
22.1033/1	92
22.1036/0	191
22.1037/0	191
22.1038/0	197
22.1039/0	182
22.1040/0	202
22.1041/0	203
22.1045/0	234
22.1046/1	63
22.1048/1	63
22.1049/1	63
22.1052/1	63
22.1054/0	63
22.1055/0	63
22.1056/0	63
22.1057/1	63
22.1058/1	63
22.1059/1	63
22.1060/2	63
22.1061/1	63
22.1062/2	63
22.1064/2	63
22.1065/2	63
22.1067/2	63
22.1067/5	63
22.1068/2	63
22.1069/1	63
22.1070/1	188
22.1073/1	194
22.1075/1	195
22.1076/0	183
22.1077/0	195
22.1078/0	196
22.1079/0	220
22.1081/0	192
22.1082/0	237
22.1083/0	192
22.1084/0	237
22.1085/0	199
22.1086/1	193
22.1087/0	203
22.1088/0	200

22.1088/1	200
22.1088/3	200
22.1089/0	200
22.1090/1	184
22.1092/0	185
22.1094/0	335
22.1095/0	335
22.1096/0	336
22.1097/2	189
22.1098/0	198
22.1098/1	198
22.1099/0	193
22.1104/0	201
22.1107/1	185
22.1116/1	231
22.1117/1	231
22.1118/1	232
22.1119/1	229
22.1120/1	229
22.1121/1	230
22.1130/1	579
22.1134/1	63
22.1135/0	201
22.1136/1	63
22.1137/1	63
22.1140/0	96
22.1143/1	92
22.1144/1	63
22.1146/1	63
22.1148/0	220
22.1149/2	63
22.1150/0	430
22.1151/0	442
22.1152/0	443
22.1154/1	233
22.1156/0	232
22.1158/0	182
22.1159/0	219
22.1161/1	188
22.1162/1	63
22.1164/0	166
22.1167/1	63
22.1168/1	63
22.1169/1	63
22.1170/0	198
22.1171/0	202
22.1174/0	191
22.1190/0	520
22.1196/0	519
22.1197/0	526
22.1198/0	526
22.1200/1	63
22.1201/1	63
22.1202/1	63
22.1204/0	235
22.1208/1	63
22.1209/1	63
22.1210/0	235
22.1212/0	234
22.1213/0	412
22.1220/1	63
22.1226/0	113
22.1230/0	174
22.1235/0	174
22.1240/0	175
22.1245/0	175
22.1250/0	176
22.1255/0	176
22.1260/0	177
22.1265/0	177

23

23.0010/0	570
23.0011/0	571
23.0030/0	569
23.0060/0	569
23.0102/0	567
23.0103/0	567
23.0104/0	567
23.0105/0	567
23.0106/0	568
23.0107/0	568
23.0108/0	568
23.0109/0	567
23.0112/0	567
23.0113/0	567
23.0114/0	567
23.0115/0	567
23.0116/0	568
23.0117/0	568
23.0118/0	568
23.0119/0	567
23.1404/0	570

24

24.1104/0	250
24.1105/0	249
24.1105/2	249
24.1105/3	249
24.1105/7	251
24.1106/0	249
24.1106/2	249
24.1106/3	249
24.1106/7	252
24.1107/0	249
24.1107/2	249
24.1107/3	249
24.1109/0	250
24.1110/0	251
24.1116/0	63
24.1117/0	63
24.1118/0	63
24.1126/0	117
24.1127/0	118
24.1128/0	118
24.1201/0	252
24.1205/0	253
24.1210/0	253

25

25.0315/0	604
25.1072/0	604
25.1072/1	604
25.1085/0	604
25.1087/0	604
25.1088/0	604
25.1089/0	604
25.1090/0	604
25.1091/0	604
25.1092/0	604
25.1097/0	604

26

26.0800/0	599
26.0811/0	602

26.0813/0	601
26.0814/0	602
26.0815/0	601
26.1050/0	596
26.1056/0	596
26.1060/0	597
26.1063/0	595
26.1065/0	594
26.1082/0	597
26.1083/0	593
26.1084/0	592
26.1085/0	593
26.1092/0	595
26.1101/0	169
26.1810/0	593
26.1811/0	593
26.1813/0	599
26.1814/0	594
26.1815/0	598
26.1816/0	598
26.1817/0	592
26.1820/0	592
26.1910/0	600
26.1970/0	600
26.3001/0	427
26.3001/1	428
26.3001/2	429
26.3002/0	428

27

27.0005/0	257
27.0006/0	257
27.0110/0	370
27.0118/1	255
27.0118/2	255
27.0118/3	255
27.0118/4	255
27.0118/5	255
27.0118/6	255
27.0119/1	255
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27.0119/3	255
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27.0137/2	255
27.0137/3	255
27.0137/4	255
27.0137/5	255
27.0137/6	255

28

28.0001/0	312
28.0001/1	313
28.0002/0	299
28.0004/1	314
28.0004/3	315
28.0005/0	313
28.0006/0	292
28.0006/3	292
28.0007/1	292
28.0007/2	293
28.0007/3	292
28.0007/4	293
28.0008/0	295
28.0008/3	295
28.0009/0	291
28.0009/3	291
28.0010/0	291
28.0010/3	291
28.0011/1	296
28.0011/2	296
28.0011/3	296
28.0011/4	296
28.0012/1	293
28.0012/2	294
28.0012/3	293
28.0012/4	294
28.0013/1	294
28.0013/2	295
28.0013/3	294
28.0013/4	295
28.0019/0	300
28.0021/0	313
28.0021/1	313
28.0022/0	314
28.0022/1	314
28.0026/0	83
28.0045/1	321
28.0046/1	321
28.0049/0	315
28.0052/0	299
28.0054/0	311
28.0055/0	311
28.0056/0	310
28.0057/0	312
28.0082/1	321
28.0083/1	321
28.0084/0	307
28.0084/1	307
28.0087/0	307
28.0087/1	307
28.0087/3	308
28.0087/4	308

28.0088/0	305
28.0088/1	305
28.0089/0	305
28.0089/1	305
28.0090/0	281
28.0091/0	306
28.0091/3	306
28.0092/0	306
28.0092/2	306
28.0093/0	280
28.0094/1	348
28.0095/1	350
28.0101/1	349
28.0102/1	349
28.0103/1	350
28.0112/0	278
28.0119/0	290
28.0120/0	238
28.0121/0	238
28.0122/0	239
28.0127/0	303
28.0132/0	334
28.0133/0	334
28.0136/0	333
28.0137/0	333
28.0138/0	303
28.0138/1	304
28.0138/2	304
28.0139/0	303
28.0139/1	304
28.0139/2	304
28.0140/0	302
28.0143/0	341
28.0144/0	343
28.0146/0	347
28.0148/0	302
28.0149/0	290
28.0150/0	339
28.0151/0	341
28.0152/0	340
28.0153/0	343
28.0154/0	348
28.0155/0	339
28.0156/0	340
28.0157/0	342
28.0158/0	119
28.0159/0	342
28.0170/0	330
28.0173/0	273
28.0174/0	274
28.0175/0	274
28.0178/0	338
28.0179/0	338
28.0180/0	279
28.0181/0	326
28.0182/0	327
28.0183/0	326
28.0185/0	329
28.0186/0	328
28.0187/0	327
28.0188/0	328
28.0192/0	332
28.0193/0	332
28.0196/0	331
28.0197/0	331
28.0248/0	309
28.0249/0	310
28.0264/0	272
28.0265/0	273
28.0270/0	316
28.0350/0	322

28.0351/0	324
28.0352/0	323
28.0353/0	324
28.0354/0	322
28.0355/0	330
28.0359/0	323
28.0371/0	325
28.0400/0	266
28.0500/0	268
28.0501/0	268
28.0502/0	280
28.0503/0	269
28.0504/0	269
28.0514/0	302
28.0520/0	302
28.0525/0	290
28.0526/0	290
28.0600/0	270
28.0601/0	270
28.0800/0	271
28.0801/0	272
28.0802/0	271
28.0808/0	301
28.0809/0	301
28.0810/0	308
28.0811/0	309
28.0813/0	318
28.0814/0	317
28.0815/0	317
28.0820/0	297
28.0821/0	298
28.0822/0	297
28.1000/0	261
28.1000/1	261
28.1000/2	261
28.1001/0	261
28.1002/0	261
28.1002/1	261
28.1002/2	261
28.1040/0	263
28.1041/0	263

29

29.0022/0	426
29.0111/0	412
29.0307/0	214
29.0402/0	224
29.0403/0	224
29.0404/0	224
29.0405/0	225
29.0406/0	225
29.0727/0	546
29.0727/1	546
29.0727/2	546
29.0727/3	546
29.0727/4	546
29.0727/5	546
29.0851/0	455
29.0852/0	456
29.5001/0	512
29.5002/0	513
29.5010/0	513
29.5019/0	486
29.5019/1	486, 498
29.5019/2	486
29.5019/3	486
29.5019/4	486
29.5019/5	486

29.5019/6	486, 498
29.5019/7	486
29.5019/8	486, 498
29.5019/9	486, 498
29.5022/0	505
29.5023/0	504
29.5025/0	522
29.5028/0	523
29.5029/0	502
29.5030/0	505
29.5031/0	506
29.5034/0	524
29.5036/0	509
29.5037/0	510
29.5042/0	504
29.5046/0	520
29.5046/2	240
29.5047/0	521
29.5047/2	240
29.5048/0	521
29.5048/2	240
29.5049/0	525
29.5051/0	525
29.5052/0	522
29.5055/0	524
29.5056/0	523
29.5060/0	509
29.5069/0	508
29.5260/0	512
29.5311/0	511
29.5312/0	510
29.5313/0	511
29.8012/0	199

32

32.0024/0	427
32.0029/0	369
32.0030/0	370
32.0047/0	370
32.0053/0	409
32.0070/0	363
32.0071/0	363
32.0075/0	364
32.0076/0	365
32.0077/0	365
32.0078/0	364
32.0080/0	362
32.0082/0	362
32.0111/0	358
32.0112/0	358
32.0121/0	359
32.0122/0	359
32.0155/0	435
32.0160/0	435
32.0165/0	436
32.0201/0	417
32.0210/0	363
32.0220/0	413
32.0222/0	414
32.0223/0	414
32.0224/0	415
32.0225/0	416
32.0226/0	415
32.0230/0	416
32.0306/0	417
32.0310/0	366
32.0320/0	367
32.0330/0	367

32.0331/0	368
32.0332/0	368
32.0333/0	369
32.0335/0	366
32.0340/0	371
32.0360/0	371
32.0401/0	375
32.0401/6	375
32.0410/0	373
32.0420/0	373
32.0430/0	373
32.0440/0	374
32.0450/0	374
32.0460/0	374
32.0461/0	374
32.0462/0	375
32.0464/0	375
32.0466/0	375
32.0470/0	373
32.0480/0	374
32.0492/0	374
32.0501/0	408
32.0502/0	429
32.0503/0	401
32.0504/0	401
32.0506/0	398
32.0507/0	426
32.0508/0	397
32.0509/0	403, 404
32.0510/0	395
32.0512/0	408
32.0512/6	408
32.0513/0	408
32.0514/0	405
32.0515/0	399
32.0516/0	405
32.0517/0	409
32.0518/0	410
32.0519/0	400
32.0521/0	400
32.0527/0	396
32.0528/0	398
32.0529/0	397
32.0530/0	395
32.0531/0	399
32.0532/0	403, 404
32.0533/0	420
32.0534/0	421
32.0535/0	419
32.0536/0	420
32.0537/0	418
32.0538/0	419
32.0539/0	418
32.0540/0	403
32.0540/5	403
32.0541/0	403
32.0541/5	403
32.0542/0	403
32.0542/5	403
32.0543/0	403
32.0543/5	403
32.0545/0	413
32.0547/0	425
32.0550/0	444
32.0553/0	446
32.0554/0	447
32.0560/0	444
32.0562/0	450
32.0569/0	446
32.0571/0	450
32.0572/0	449

32.0574/0	445
32.0575/0	447
32.0575/1	445
32.0580/0	438
32.0581/0	438
32.0583/0	439
32.0586/0	441
32.0601/0	422
32.0602/0	423
32.0605/0	411
32.0608/0	421
32.0609/0	422
32.0610/0	411
32.0615/0	423
32.0616/0	424
32.0617/0	424
32.0618/0	425
32.0620/0	410
32.0635/0	396
32.0635/6	470
32.0703/0	433
32.0720/0	393
32.0721/0	393
32.0722/0	393
32.0723/0	393
32.0724/0	393
32.0725/0	393
32.0730/0	393
32.0740/0	393
32.0741/0	393
32.0769/0	462
32.0770/0	432
32.0771/0	431
32.0772/0	432
32.0773/0	431
32.0774/0	430
32.0801/0	384
32.0802/0	378
32.0807/0	381
32.0808/0	381
32.0809/0	382
32.0810/0	378
32.0811/0	379
32.0812/0	379
32.0813/0	380
32.0814/0	380
32.0815/0	383
32.0816/0	384
32.0817/0	382
32.0818/0	383
32.0870/0	406
32.0870/1	406
32.0870/5	406
32.0876/0	407
32.0877/0	407
32.0901/0	439
32.0920/0	436
32.1001/0	459
32.1002/0	458
32.1003/0	459
32.1004/0	458
32.1007/0	461
32.1011/0	466
32.1013/0	461
32.1017/0	460
32.1018/0	460
32.1021/0	466
32.1030/0	467
32.1031/0	467
32.1034/0	468
32.1035/0	468

32.1036/0	469
32.1120/1	388
32.1121/1	388
32.1122/1	389
32.1123/1	388
32.1124/1	389
32.1130/0	389
32.1131/0	389
32.1132/0	389
32.1140/0	390, 391
32.1141/0	390, 391
32.1142/0	390, 391
32.1147/0	390
32.1148/0	391
32.2005/0	455
32.2010/0	454
32.2011/0	454
32.4100/0	373
32.4110/0	373
32.4120/0	373
32.4140/0	373
32.4160/0	373
32.4210/0	373
32.4220/0	373
32.4240/0	373
32.4260/0	373
32.4310/0	373
32.4320/0	373
32.4340/0	373
32.4360/0	374
32.4410/0	373, 374
32.4420/0	373, 374
32.4440/0	373, 374
32.4460/0	373, 374
32.4510/0	374
32.4520/0	374
32.4540/0	374
32.4560/0	374
32.4610/0	374
32.4610/0	374
32.4620/0	375
32.4640/0	375
32.4660/0	375
32.4700/0	373
32.4710/0	373
32.4720/0	373
32.4740/0	373
32.4760/0	373
32.4810/0	374
32.4820/0	374
32.4840/0	374
32.4860/0	374
32.4910/0	374
32.4920/0	374
32.4940/0	374
32.4960/0	374
32.5000/0	375
32.5010/0	375
32.5020/0	375
32.5040/0	375
32.5060/0	375
32.5100/0	375
32.5110/0	375
32.5120/0	375
32.5140/0	375
32.5160/0	375
32.5200/0	373
32.5210/0	373
32.5220/0	373
32.5240/0	373
32.5260/0	373

32.6000/0	375
32.6010/0	375
32.6020/0	375
32.6040/0	375
32.6060/0	375
32.6100/0	375
32.6110/0	375
32.6120/0	375
32.6140/0	375
32.6160/0	375
32.6200/0	373
32.6210/0	373
32.6260/0	373

33

33.0015/0	243, 499
33.0016/0	243, 499
33.0017/0	243, 499
33.0018/0	243, 499
33.0019/0	243, 499
33.0020/0	243, 499
33.0021/0	243, 499
33.0028/0	247
33.0036/0	246
33.0037/0	247
33.0038/0	246
33.0050/1	243
33.0051/1	243
33.0052/1	243
33.0053/1	243
33.0060/1	243
33.0061/1	243
33.0062/1	243
33.0063/1	243
33.0080/0	244
33.0081/0	244
33.0082/0	244
33.0083/0	244
33.0084/0	244
33.0085/0	244
33.0126/0	245, 499
33.0410/0	236
33.0411/0	236
33.0600/0	386
33.0605/0	386
33.0610/0	387
33.1010/0	263
33.1020/0	263
33.1030/0	264
33.3007/0	275
33.3008/0	276
33.3009/0	277
33.3010/0	275
33.3011/0	276
33.3012/0	277

35

35.0001/0	451
35.0041/0	451

43

43.0010/0	531
43.0011/0	532

43.0020/0	531
43.0030/0	532
43.0040/0	533
43.0050/0	533
43.0060/0	534
43.0071/0	536
43.0073/0	535
43.0080/0	538
43.0090/0	535
43.0100/0	537
43.0110/0	537
43.1000/0	536
43.1411/0	538
43.1510/0	534

50

50.0128/0	527
50.0977/1	119
50.1726/0	316

56

56.0011/0	581
56.0013/0	581
56.0021/0	581
56.0023/0	581
56.0031/0	581
56.0033/0	581
56.0041/0	581
56.0043/0	581
56.0051/0	581
56.0053/0	581
56.0061/0	581
56.0063/0	581
56.0071/0	581
56.0073/0	581
56.0081/0	581
56.0083/0	581
56.0091/0	581
56.0093/0	581
56.0101/0	581
56.0103/0	581
56.0111/0	581
56.0113/0	581
56.0121/0	581
56.0123/0	581

A

ACOUSTIC ABSORPTION BOARD 20 MM	583
ACOUSTIC ABSORPTION BOARD PYRAMID	583
AC-SERVO MOTORS- COMPLETE PACKAGES	242
ACTUATING BOW FOR SECURITY SWITCH B2	227
ACTUATING BOW FOR SECURITY SWITCH B3	227
ADAPTER 30 X 30 / G32	97
ADAPTER CAP FOR CONNECTOR STRIP FOR CABLE CONDUIT 45	233
ADAPTER FLANGE 30	160
ADAPTER FOR TOOL QUIVER	428
ADAPTER G32 / 30 X 30	97
ADAPTER G32 / G32	96
ADAPTER FLANGE 45	161
ADAPTOR PLATE	278
ADD-IN CYLINDER EZ	257
ADDITIONAL ANGLE FOR SEMI-OPEN COMPARTMENT	425
ADJUSTING UNIT VEN 45 X 90 F	328
ADJUSTING UNIT VEN 45 X 90 H	329
ADJUSTING UNIT VEN 45 X 90 S	327
ADJUSTING UNIT VEN 90	328
ADJUSTING UNIT VEW 45 X 90 F	326
ADJUSTING UNIT VEW 45 X 90 H	327
ADJUSTING UNIT VEW 90	326
ALU / PVC / OTHER MATERIALS	375
ANGLE 16 GD-Z	88
ANGLE 19 GD-Z	88
ANGLE 25 GD-Z	89
ANGLE 25 S	89
ANGLE 30 GD	90
ANGLE 30 GD, CONDUCTIVE	465
ANGLE 30 R 90°	92
ANGLE 45 GD	90
ANGLE 45 GD-Z	91
ANGLE 45 R 90°	92
ANGLE 45 VA	91
ANGLE 45 X 90 GD-Z	93
ANGLE 45°	93
ANGLE 90 GD CONDUCTIVE	465
ANGLE 90 GD-Z	94
ANGLE BRACKET	114
ANGLE BRACKET 45 / 15	115
ANGLE BRACKET 90° FOR CABLE CONDUIT 45	232
ANGLE BRACKET FIXABLE	115
ANGLE BRACKET FOR FLOOR FASTENING	158
ANGLE BRACKET R	116
ANGLE BRACKET R FIXABLE	117
ANGLE-BRACKET FOR SECURITY SWITCH	226
ANGLE-SHEET VA	95
ANGULAR PROFILE 89 X 89	61
ANGULAR SLIDE BAR	202
ANGULAR SLIDE BAR 30	202
ANODISING POLISHER	602
ANTI LIFT FOR SLIDING DOOR	223
ASSEMBLY	566
ATTACHMENT CLIP 16	419
ATTACHMENT CLIP 8	418
ATTACHMENT SET 45 FOR ADD-IN CYLINDER	257
ATTACHMENT SET 90 FOR ADD-IN CYLINDER	257
AUTOM. HOSE RECOILER	439
AUTOMATIC THREAD FORMING MACHINE	600

B

BALANCER	412
BALL BEARING LR 12	312
BALL BEARING LR 12 L	313
BALL BEARING LR 16	316
BALL BUSHING LME 20 UU	346
BALL CASTER	451
BALL- HEADED KEY	592
BALL LATCH 50	138
BALL LATCH 70	139
BALL LATCH SUPPORT 50	139
BALL LATCH SUPPORT 70	140
BASE AND TRANSPORT PLATE 32 X 90	146
BASE AND TRANSPORT PLATE 45 X 45 VA M10	152, 160
BASE AND TRANSPORT PLATE 45 X 90	146
BASE AND TRANSPORT PLATE 45 X 90 GD-Z	146
BASE AND TRANSPORT PLATE 90 X 90	147
BASIC BASEFRAME 200	532
BASIC LINE	531
BASIC MODULE 200	531
BASIC MODULE VARIABLE	532
BASICS	355
BATTERY OPERATED	246
BEARING ASSEMBLY FOR TRANSPORT ROLLERS 25	517
BEARING ASSEMBLY FOR TRANSPORT ROLLERS 36	518
BEARING ASSEMBLY S 25	518
BEARING ASSEMBLY S 36	519
BELT CONVEYOR - SERIES 45	479, 480
BELT CONVEYOR - SERIES 90	483
BELT DRIVE 45	309
BELT DRIVE 90	310
BELT DRIVING CYLINDER 45	503
BELT DRIVING CYLINDER 45 FOR PLUG-ON MOTOR D20	504
BELT DRIVING CYLINDER 45 ST FOR MOTOR KIT	505
BELT DRIVING CYLINDER 45 ST FOR PLUG-ON MOTOR D14	504
BELT DRIVING CYLINDER 90	508
BELT DRIVING CYLINDER 90 FOR MOTOR KIT 90	508
BELT TENSIONING CYLINDER 45 ST	503
BELT TENSIONING CYLINDER 90	507
BIT HOLDER	401
BOLT AND BUTT FASTENER	70
BOLT CONCENTRIC LR 16	317
BOLT LOCK 32 FOR FOUR-FACED KEY	124
BOLT LOCK 32 SOCKET HEX HEAD WRENCH A/F 10	126
BOLT LOCK 45 FOR FOUR-FACED KEY	125
BOLT LOCK 45 SOCKERT HEX HEAD WRENCH 10 A/F	125
BOLT-FASTENER 15	81
BOLT-FASTENER 20	81
BORE	603
BOTTLE/BEVERAGE BAG HOLDER	426
BRACE SOCKET 45 GD	159
BRACE SOCKET 45° / 90	159
BRACKET CONSOLE FOR MINIATURE ADJUSTMENT UNIT	325
BRAKE PLATE	450
BRAKE-ROLLER	450
BRAKE-ROLLER PVC 50	516
BUTT FASTENER	82

C

CABLE	206
CABLE CLIP	235
CABLE CLIP 30	234
CABLE CLIP 45	235
CABLE PULLEY 45	205
CABLE PULLEY 90	205
CABLE TROLLEYS FOR CIRCULAR LINES	416
CANTILEVER FOOT 175	165
CAP FOR C-PROFILE RAIL	414
CARRIER SECTION 45 R	443
CATCH 19	131
CATCH 32 FOR HANDLE PROFILE	449
CENTER DRIVE - 3 WHEELS SYSTEM	512
CENTER LUMINAIRE 116	387
CENTER LUMINAIRE 78	386
CENTERING BUSH	347
CENTRAL EARTHING BOX ESD	459
CHAIN 04	210
CHAIN 08	214
CHAIN PULLEY 32	208
CHAIN PULLEY 45 A	208
CHAIN PULLEY 45 I	209
CHAIN PULLEY 90	209
CHAIN REVERSE 90 S	213
CLAMP FOR TRANSPORTATION	169
CLAMP PROFILE 32 X 32	36, 181
CLAMP PROFILE 45 X 32	38, 181
CLAMP PROFILE PVC	185
CLAMP SUPPORT 10	522
CLAMPING CLAW	103
CLOSED PROTECTIVE HANDLE	121
CLUTCH 20	279
COMBI L-KEY	593
COMBINATION OF SLIDES AND RAILS	288
COMPACT HYDRAULIC ACTUATOR 230	371
COMPLETE SYSTEM WITH ADD-IN CYLINDER EZ	255
COMPLETE SYSTEM WITH ADD-ON CYLINDER AZ	255
CONDUIT 32	237
CONDUIT 45	237
CONDUIT 45 AL	230
CONDUIT 90 AL	233
CONDUIT AL	228
CONNECTING BAR	98
CONNECTING PLATE 30 X 60	101
CONNECTING PLATE 45 X 90	102
CONNECTING PLATE 45 X 90 CONDUCTIBLE	462
CONNECTING PLATE 90 X 32	101
CONNECTING PLATE 90 X 90	102
CONNECTING SHAFT 45	278
CONNECTING SHAFT 90	279
CONNECTION OF MOTORS	282
CONTAINER HOLDER 32-400	417
CONTAINER TABLE	358
CONTAINER TABLE WITH GANTRY	358
CONVEYOR BEARING 45	501
CONVEYOR BEARING 45 - 20	502
CONVEYOR BEARING 45 FOR PLUG ON MOTOR	502
CONVEYOR BEARING 45 WITH BORE	501

CONVEYOR BEARING 90	506
CONVEYOR BEARING 90 WITH BORE	507
CONVEYOR BELTS	486
CORNER 180	162
CORNER 90	161
CORNER CONNECTION 90 R 90°	94
COUNTERWEIGHT 45	216
COUNTERWEIGHT 90	217
COVER FOOT GD	168
COVER FOR FOOT 45	166
COVER PROFILE	198
COVER PROFILE	188
COVER PROFILE 30	188
COVER PROFILE 45 X 45 R	44
COVER PROFILE G	190
COVER PROFILE K	189
COVER PROFILE L	190
COVER PROFILE LR	315
CROSS CONNECTOR	66
CROSS-CONNECTOR 45	78
C-SECTION RAIL 30	413
CUP HOLDER	425
CURVE 180° 200	534
CURVE 90° 200	533
CYLINDER LOCK	124

D

DATA CONNECTION BOX CAT 6	393
DEBURRING TOOL	601
DEPOSITING BOARD/MONITOR SUPPORT ROTATABLE	408
DEPOSITING CONSOLE	408
DESK TABLE	359
DESK TABLE WITH GANTRY	359
DETENT PIN ADJUSTMENT F	456
DETENT PIN ADJUSTMENT H	455
DISTANCE PROFILE	182
DISTANCE PROFILE 30	182
DIVERTING STATION	547
DOCUMENT BAR	411
DOCUMENT CLIP	422
DOCUMENT SUPPORT	411
DOOR CHAIN CLAMPING DEVICE	210
DOOR CHAIN CLAMPING DEVICE (COUNTERWEIGHT) S	216
DOOR CHAIN CLAMPING DEVICE 90 S FRONT	214
DOOR CHAIN CLAMPING DEVICE 90 S SIDEWAY	215
DOOR CHAIN CLAMPING DEVICE 90 S SLIDE	215
DOOR CHAIN CLAMPING DEVICE KI-32	212
DOOR CHAIN CLAMPING DEVICE KI-45	212
DOOR CHAIN CLAMPING DEVICE KV-32	211
DOOR CHAIN CLAMPING DEVICE KV-45	211
DOOR HANDLE	135
DOOR HINGE LARGE	109
DOOR HINGE SMALL	108
DOOR SG 1000	570
DOOR STOP S	131
DOUBLE PANEL CLAMPING PROFILE	184
DOUBLE SLIDE BAR	203
DOUBLE TOOL CLAMP	398

DOUBLE-U CIRCUIT	530
DRAWER CONTAINER SET 1	381
DRAWER CONTAINER SET 2	381
DRAWING HOLDER	421
DRILL AND ALLEN KEY HOLDER	401
DRILLING JIG	595
DRILLING JIG 30	594
DRILLING JIG FOR MITRE CONNECTOR	596
DRILLING JIG FOR MITRE CONNECTOR 30	595
DRILLING JIG FOR MITRE CONNECTOR N 45	597
DRILLING JIG FOR MITRE CONNECTOR N30	596
DRIVING BELT NBR	526
DRIVING BELT PU	527
DRUM BEARING LEFT KNIFE EDGE	510
DRUM BEARING RIGHT KNIFE EDGE	511
DUMMY PLUG WITHOUT RESISTOR	459

E

EARTH CONDUCTOR ESD-SECTOR	461
EARTH LEAD ESD	458
ECCENTRIC BUSH	318
EDGE PROTECTION	191
EDGE PROTECTION	449
EDGE PROTECTION FOR CONDUIT 45 AL	231
EDGE PROTECTION FOR CONDUIT AL	229
ELECTRICALLY HEIGHT-ADJUSTABLE TABLE	363
ELECTRICALLY HEIGHT-ADJUSTABLE TABLE STROKE 300	365
ELECTRICALLY HEIGHT-ADJUSTABLE TABLE STROKE 400	364
ELECTRICALLY HEIGHT-ADJUSTABLE TABLE WITH GANTRY STROKE 300	365
ELECTRICALLY HEIGHT-ADJUSTABLE TABLE WITH PORTAL STROKE 400	364
ELEVATOR STATION 200	538
EMERGENCY RELEASE FOR TRUNK LOCK	138
END BLOCK	206
END CAP CONDUIT AL	229
END CAP FOR CONDUIT 45 AL	231
END CAP FOR CONDUIT 90 AL	234
END CAP LB 180	350
END CAP LB 45	348
END CAP LB 45 X 135	349
END CAP LB 45 X 180	349
END CAP LB 90	350
END CAP LR (LEFT)	315
END CAP LR (RIGHT)	314
END CAP LR 16	317
END CAPS	62, 63
ENERGY CHAIN R	236
ESD EARTHING BOX	458
ESD TABLETOP MELAMINE CONDUCTIVE, LIGHT GREY, 25	375
ESD TABLETOP RUBBER, CONDUCTIVE, 22	375
EXAMPLES	356
EXTENSION BASEFRAME 200	533

F

FASTENING KIT 19 FOR PROTECTION FIELDS	570
FASTENING KIT COUNTER CABINET	378
FASTENING KIT FOR CHAIN (COUNTERWEIGHT)	213

FASTENING KIT FOR PROTECTION FIELDS SG	571
FASTENING KIT FOR PROTECTIVE BELLOW LR 180	277
FASTENING KIT FOR PROTECTIVE BELLOW LR 45	275
FASTENING KIT FOR PROTECTIVE BELLOW LR 90	276
FASTENING KIT FOR TIMING BELT TENSIONING DEVICE 45 X 90 H	310
FASTENING KIT FOR TIMING BELT TENSIONING DEVICE 90	312
FASTENING KIT FOR TIMING BELT TENSIONING DEVICE 45	311
FASTENING KIT FOR TIMING BELT TENSIONING DEVICE 45 X 90 F	311
FEET GD	149
FEET PA	148
FEET PA WITH ATTACHMENT BORES	148
FEET VA	149
FIELD SG 1500/1750/2000	568
FIELD SG 500/750/1000/1250	567
FILTER REGULATOR AND MANUAL START-UP VALVE	438
FIXED CASTOR FOR HEAVY LOADS 100 / 135, CONDUCTIVE	469
FIXING KIT LRE	314
FIXING KIT LRK	313
FIXING PLATE 45 VA FOR WHEEL RIGID TYPE	153
FIXING PLATE FOR WHEEL RIGID TYPE	153
FLANGE BEARING 32	448
FLAT PLIERS	602
FLEXIBLE-ASSEMBLY-LINES FMS	550
FLEXIBLE-ASSEMBLY-SYSTEME FMS	551
FLOOR ANCHOR 10	156
FLOOR ANCHOR 12	156
FLOOR CABINET WITH DOUBLE DOORS	383
FLOOR MOUNTING PLATE 45	155
FLOOR MOUNTING PLATE 90	155
FLUSH-MOUNTING DISTRIBUTION BOARD	393
FOLDING DOOR SUPPORT	220
FOOT 45 GD	165
FOOT 45 GD OPEN	166
FOOT 45 GD S	167
FOOT 90 GD	167
FOOT 90 S	168
FOOT REST COMFORT	436
FOOT REST ECO	435
FOOT REST STANDARD	435
FREQUENCY TRANSFORMER FU 370 PP	245
FURNITURE WHEEL WITH LOCKING DEVICE	150
FURNITURE WHEEL WITHOUT LOCKING DEVICE	150

G

GAS SPRING 10/22	118
GAS SPRING 6 / 15	117
GAS SPRING 8 / 20	118
GLIDE-ROLL ELEMENT	218
GLIDE-ROLL ELEMENT PARALLEL	218
GRID SYSTEM	565
GROUNDING BLOCK	170
GROUNDING POINT	462
GUARD UNIT FIXING ANGLE 19	99
GUARD UNIT FIXING ANGLE 45 AL	99
GUARD UNIT FIXING ANGLE 45 ST	98
GUARD UNIT FIXING ANGLE GD-K	100
GUARD UNIT FOR MACHINE PROTECTION	561
GUARD UNIT WITH ADJUSTABLE FIXING ANGLE	100

GUIDE FOR SLIDING DOOR	220
GUIDE FOR SLIDING DOOR 30	219
GUIDE PROFILE 2	194
GUIDE PROFILE 3	195
GUIDE ROLLER 100 / 135 WITH ADJUSTER, CONDUCTIVE	468
GUIDE ROLLER 100 / 135 WITHOUT ADJUSTER, CONDUCTIVE	468
GUIDE ROLLER WITH LOCKING DEVICE D75X100, CONDUCTIVE	467
GUIDE ROLLER WITHOUT LOCKING DEVICE D75 X 100, CONDUCTIVE	467

H

HAMMER HEAD SCREW	80
HANDLE 120	123
HANDLE 120 ESD, BLACK	461
HANDLE 180	123
HANDLE 32 WITH PROFILE CYLINDER LOCK	127
HANDLE 32 WITHOUT PROFILE CYLINDER LOCK	127
HANDLE 45 WITH PROFILE CYLINDER LOCK	128
HANDLE 45 WITHOUT PROFILE CYLINDER LOCK	128
HANDLE 8 WITH PROFILE CYLINDER LOCK GREY	126
HANDLE 90	122
HANDLE AL	120
HANDLE AL ANGLED	120
HANDLE GP	121
HANDLE PROFILE	60
HANDLE PROFILE 32	60
HEAVY DUTY HINGE	116
HEIGHT SETTING FOR WORKTABLE	366
HEIGHT-ADJUSTABLE TABLECOLUMN	371
HINGE 19	104
HINGE 19 S	109
HINGE 32	104
HINGE 32 S	110
HINGE 45	105
HINGE 45 M6	111
HINGE 45 S	110
HINGE L 19/19	107
HINGE L 19/30	105
HINGE L 19/45	107
HINGE L 30/30	106
HINGE L 30/45	106
HINGE L 45/45	108
HINGED CANTILEVER C-RAIL 30	416
HINGED CANTILEVER ECO	417
HINGED FOOT D45 CONDUCTIVE	466
HINGED FOOT D80 CONDUCTIVE	466
HOLDER, SEMI OPEN FRONT CONTAINER	405
HORIZONTAL DOUBLE OUTLET	430
HYDRAULIC PUMPS	256
HYDRAULICALLY HEIGHT-ADJUSTABLE TABLE	362

I

ICAD ASSEMBLER	6
INSERT SEAL 2	192
INSERT SEAL 30	191
INSERT SEAL 4	192
INSERT SEAL 5	193

INSERT SEAL 6	193
INSERT SEAL 6,5	194
INSERTION TIDE	603
INTERNAL HINGE AL	111
INTERNAL ANGLE BRACKET OF CONDUIT AL	230
INTERNAL ANGLE FOR CONDUIT 45 AL	232

K

KANTAINER - HINGED CANTILEVER, 3-FOLD	407
KANTAINER - SHELF (STRAIGHT)	407
KEYBOARD STORAGE	410

L

LATERAL 40 F GUIDE, WHITE	525
LATERAL GUIDE	485, 524
LATERAL GUIDE 140 SUPPORT	523
LATERAL GUIDE 140 SUPPORT S	524
LATERAL GUIDE 70 SUPPORT	522
LATERAL GUIDE 70 SUPPORT S	523
LATERAL GUIDE F	525
LATERAL GUIDE SUPPORT U-SHAPED	521
LATERAL GUIDE SUPPORT, LONG	521
LATERAL GUIDE SUPPORT, SHORT	520
LEVELLING PLATE 180 ST	157
LEVELLING PLATE 90 ST	157
LIFT STATION 200	537
LIFTING-DOOR	560
LIMIT STOP FOR CABLE TROLLEY	415
LINEAR GUIDE LR 12 - 45	270
LINEAR GUIDE LR 12 - 90	270
LINEAR GUIDE LR 16 - 45 X 90	271
LINEAR GUIDE LR 16 - 90	271
LINEAR GUIDE LR 16 - 90 X 180	272
LINEAR MODULE LB 180	338
LINEAR MODULE LB 90	338
LINK	114
LINK 30 F	113
LINK 30 F / S	113
LINK 30 S	112
LOAD CAPACITY	289, 564
LOCKS	132
LONGITUDINAL STOPS	587
LUBRICATOR	438

M

MACHINE PROTECTION EXAMPLES	559
MAGNET 6 X 14 X 50	143, 402
MAGNET PLATE S	143
MAGNETIC BIT HOLDER TORX	592
MAGNETIC CATCH	141
MAGNETIC CATCH N	142
MAGNETIC CATCH S	142
MAGNETIC HOLDER	399
MAGNETIC SENSOR	246

MAGNETIC TAPE	246
MANUAL WORKPLACE SYSTEMS	354
MEASURING DISPLAY	246
MINI ADJUSTING UNIT FITTING KIT	322
MINI ADJUSTING UNIT WITH HANDLE PROFILE 32	324
MINI ADJUSTING UNIT WITH PROFILE 19 X 32	324
MINI ADJUSTING UNIT WITH PROFILE 19 X 45	323
MINI ADJUSTING UNIT WITH PROFILE 45 X 45	322
MITRE CONNECTIONS	68, 69
MITRE CONNECTOR 30	86
MITRE CONNECTOR 45	86
MITRE CONNECTOR N 30	85
MITRE CONNECTOR N 45	85
MODULE LR 6 Z 45	268
MODULE LR 6 Z 90	268
MODULE LR 6 Z COMPACT - 45	269
MODULE LR 6 Z COMPACT - 90	269
MONITOR CARRIER V 100	409
MONITOR CARRIER WITH HINGED BRACKET	410
MONITOR CARRIER WITH KEYBOARD STORAGE TFT	409
MOTOR ARRANGEMENT	499
MOTOR ATTACHMENT KIT 45 Ø 16 MM	505
MOTOR ATTACHMENT KIT 45 Ø 20 MM	506
MOTOR KIT 90	509
MOUNTING ANGLES	72
MOUNTING BASE, PIVOTED	180
MOUNTING BLOCK	418
MOUNTING BRACKET 19 GD-Z CONDUCTIVE	463
MOUNTING BRACKET 25 GD-Z CONDUCTIVE	463
MOUNTING BRACKET 30	87
MOUNTING BRACKET 45	87
MOUNTING BRACKET 45 GD CONDUCTIVE	464
MOUNTING BRACKET 45 X 90 GD-Z CONDUCTIVE	464
MOUNTING BRACKETS FOR ENERGY CHAIN R	236
MOUNTING DEVICE	453
MOUNTING KIT 45 S-A 180°	274
MOUNTING KIT 45 S-A 90°	274
MOUNTING KIT 90 S-A 180°	273
MOUNTING KIT 90 S-A 90°	273
MOUNTING KIT 90 S-S	272
MOUNTING PALTE, CONDUCTIVE	469
MULTI CONNECTOR 30	96
MULTIBLOCK 30 GD	178
MULTIBLOCK GD	179

N

NOISE COMPONENTS AND DESIGN	579
NOISE REQUEST	582

O

OPTIONS	498
OUTLET	431
OVERVOLTAGE PROTECTION	393

P

PAN HEAD SCREW 16	178
PANEL CLAMP BLOCK 23	174
PANEL CLAMP BLOCK 30	174
PANEL CLAMP BLOCK 32	175
PANEL CLAMP BLOCK 45	175
PANEL CLAMP PROFILE	185
PANEL CLAMPING PROFILE	183
PANEL ELEMENTS	171, 172
PANEL HOLDER	184
PARALLEL SLIDE BAR	203
PISTOL-SHAPED PULSE SCREWDRIVER	599
PIVOTING HOLDER	429
PLIERS HOLDER	399
PLUG	250
PLUG-ON MOTOR	245
PNEUMATIC 3-WAY DISTRIBUTOR	439
PNEUMATIC CONNECTION PLATE 45	249
PNEUMATIC CONNECTION PLATE 45 X 90	249
PNEUMATIC CONNECTION PLATE 90	249
PNEUMATIC END PLATE 45 X 90	251
PNEUMATIC END PLATE 90 X 90	252
PNEUMATIC LIFTING UNIT 100	253
PNEUMATIC LIFTING UNIT 15	252
PNEUMATIC LIFTING UNIT 50	253
POST SG 45 X 45	569
POST SG 45 X 90	569
POSTIONER 200	537
POWER LOCK FASTENER	65
POWER LOCK FASTENER N	67
POWER SUPPLY	392
POWER-LOCK FASTENER 30 SF	76
POWER-LOCK FASTENER 45 SF	76
POWER-LOCK FASTENER 45 SF SHORT	77
POWER-LOCK FASTENER N 30	77
POWER-LOCK FASTENER N 45	78
PROFESSIONAL MULTIPLE-SOCKET OUTLET, 6-FOLD	433
PROFIL 45 X 90 F	50
PROFIL 90 X 90 UL	55
PROFILE 16 X 30	26
PROFILE 19 X 11	25
PROFILE 19 X 19	25
PROFILE 19 X 32	34
PROFILE 19 X 45	34
PROFILE 19 X 90	49
PROFILE 23 X 16	26
PROFILE 23 X 23	27
PROFILE 23 X 30	27
PROFILE 270 X 19	59, 376
PROFILE 30 R 30°	31
PROFILE 30 R 45°	32
PROFILE 30 R 60°	32
PROFILE 30 R 90°	33
PROFILE 30 X 30	28
PROFILE 30 X 30 1G	29
PROFILE 30 X 30 2G	29
PROFILE 30 X 30 3G	30
PROFILE 30 X 30 G	28
PROFILE 30 X 60	30

PROFILE 32 X 180	58
PROFILE 32 X 32 F	36
PROFILE 32 X 32 UL	35
PROFILE 45 / 22,5°	48
PROFILE 45 / 45°	48
PROFILE 45 R 30°	47
PROFILE 45 R 4	45
PROFILE 45 R 45°	47
PROFILE 45 R 60°	46
PROFILE 45 R 90°	46
PROFILE 45 X 135 1G	54, 344
PROFILE 45 X 135 F	54
PROFILE 45 X 180 1G	55, 345
PROFILE 45 X 19	35
PROFILE 45 X 32 F	37
PROFILE 45 X 32 UL	37
PROFILE 45 X 45	39
PROFILE 45 X 45 1G	40
PROFILE 45 X 45 2G	41
PROFILE 45 X 45 2GG	42
PROFILE 45 X 45 3G	43
PROFILE 45 X 45 F	39
PROFILE 45 X 45 G	40
PROFILE 45 X 45 R	44
PROFILE 45 X 45 UL	38
PROFILE 45 X 45 UL 2GG	41
PROFILE 45 X 45 UL 3G	42
PROFILE 45 X 45 VA	43
PROFILE 45 X 60 F	53
PROFILE 45 X 90	51
PROFILE 45 X 90 2 G	52
PROFILE 45 X 90 G	52
PROFILE 45 X 90 S	51, 344
PROFILE 45 X 90 UL	50
PROFILE 60 X 60 F	53
PROFILE 60 X 60 X 30	31
PROFILE 90 R 90°	58
PROFILE 90 X 180 S	59, 346
PROFILE 90 X 32 UL	49
PROFILE 90 X 90 2 G	57
PROFILE 90 X 90 G	57
PROFILE 90 X 90 L	56
PROFILE 90 X 90 S	56, 345
PROFILE HANDLE 32	122
PROFILE HEIGHT ADJUSTMENT	45
PROFILE SECTIONS	17, 18, 19, 20, 21, 22, 23, 24
PROTECTIVE BELLOW LR 180	277
PROTECTIVE BELLOW LR 45	275
PROTECTIVE BELLOW LR 90	276
PROTECTIVE FIELD	73
PROXIMITY SWITCH	535
PROXIMITY SWITCH HOLDER 12	238
PROXIMITY SWITCH HOLDER 18	238
PROXIMITY SWITCH HOLDER 30	239
PULLEY CARRIER 25	519
PULLEY CARRIER 36	520
PULLEY D 25	441
PVC-BAR	195

Q

QUICK COUPLING 1/4	251
QUICK COUPLING 1/8	250
QUICK LABEL 27 X 75	422
QUICK LABEL 38 X 100	423

R

RAIL 135 F	293
RAIL 135 H	294
RAIL 180 F	296
RAIL 180 H	296
RAIL 19	291
RAIL 32	291
RAIL 45	292
RAIL 45 X 180 F	294
RAIL 45 X 180 H	295
RAIL 45 X 90 F	292
RAIL 45 X 90 H	293
RAIL 90	295
RAIL HOLDER	414
RAIL LR 16 - 45 X 90 H	297
RAIL LR 16 - 90	298
RAIL LR 16 - 90X180 H	297
RAIL LR 6 COMPACT	290
RAIL LR 6 S	290
RAILS	284, 285
RECYCLABLE MATERIAL COLLECTOR	426
RECYCLABLE MATERIAL COLLECTOR FOR ATTACHMENT	427
REQUEST	500
REQUEST ABOUT FITTING FIELD	572
REQUEST ABOUT SLIDING DOOR	573
REQUEST BASIC CIRCUIT 90°	540
REQUEST CLEAN ROOM CONVEYOR	496
REQUEST COMPACT CIRCUIT 180°	541
REQUEST DOUBLE-U CIRCUIT	543
REQUEST FOR LIFTING DOOR	574
REQUEST MACHINE PROTECTION	562
REQUEST NOSEBAR CONVEYOR	482
REQUEST RMS	554
REQUEST ROLLER CONVEYOR WITH DRIVE	490
REQUEST ROLLER CONVEYOR WITHOUT DRIVE	491
REQUEST SHUNT	544
REQUEST STANDARD BELT CONVEYOR 45	481
REQUEST STANDARD BELT CONVEYOR 90	484
REQUEST TIMING BELT CONVEYOR 32	494
REQUEST U-CIRCUIT WITH ELEVATOR STATION	542
REQUEST VERTICAL CIRCUIT	539
RETURN SHAFT 16 KNIFE EDGE	511
RETURN STOP	441
ROD LOCK	133
ROD LOCK WITH FALLING LATCH	134
ROLLER CARRIER 45 X 45 R WITH CAP	442
ROLLER CARRIER 45 X 45 R WITH SF CAP	443
ROLLER CONVEYOR WITH DRIVE	489
ROLLER CONVEYOR WITHOUT DRIVE	488
ROLLER CONVEYORS RMS	553
ROLLER ELEMENT	221

ROLLER ELEMENT FOR SLIDING DOOR	222
ROLLER ELEMENTS S	221
ROLLER STRIP BRACKET 19	447
ROLLER STRIP BRACKET 30	445
ROLLER STRIP BRACKET F	447
ROLLER STRIP BRACKET H	446
ROLLER STRIP END STOP	446
ROLLER STRIP FASTENING	445
ROLLER STRIP WITH CYLINDRICAL ROLLERS	444
ROLLER STRIP WITH FLANGED ROLLERS	444
ROLLING DOOR WITH DRIVE	224, 225
ROPE CLAMP	207
ROTARY LOCK 30	136
ROTARY LOCK 45	136
ROTATING ASSEMBLY	455
ROUND TOOL HOLDER 38 - 120	420
ROUND TOOL HOLDER 38-70	419
RUBBERIZED, STANDARD CURVE NR CHAIN	546
RUBBERIZED, STANDARD CURVE STAINLESS STEEL CHAIN	546

S

SAW CUT, SQUARE, MINIMIZED BURR	603
SCREW BLOCK 23	176
SCREW BLOCK 30	176
SCREW BLOCK 32	177
SCREW BLOCK 45	177
SCREW CONNECTION	71
SCREW CONNECTION 32	80
SCREW CONNECTION 45	79
SCREW SOCKET PROFILE	183
SCREW-CONNECTION 30 N	79
SCREWDRIVER HOLDER	429
SEALING LEDGE	196
SEALING LIP PROFILE	197
SEALING PROFILE	197
SECURITY SWITCH AZ 16 ZVR K	226
SECURITY SWITCH WITH LOCK	228
SEMI OPEN FRONT CONTAINER RACK	405
SEMI-OPEN COMPARTMENT BASE ELEMENT	423
SEMI-OPEN COMPARTMENT EXPANSION ELEMENT	424
SEMI-OPEN COMPARTMENT, SINGLE	424
SEMI-OPEN FRONT CONTAINER HOLDER, MULTIPLE	404
SEMI-OPEN FRONT CONTAINER HOLDER, SINGLE	404
SEMI-OPEN FRONT CONTAINERS	403
SENSOR HOLDERS	240
SHAFT 12	298
SHAFT 16	300
SHAFT 20	347
SHAFT 20 FOR LB-SYSTEM	348
SHAFT FASTENER LEFT LR 16	301
SHAFT RETENTION DEVICE	299
SHAFT RETENTION DEVICE RIGHT LR 16	301
SHAFT SUPPORT BLOCK WB 180	343
SHAFT SUPPORT BLOCK WB 45	341
SHAFT SUPPORT BLOCK WB 45 X 135	342
SHAFT SUPPORT BLOCK WB 45 X 180	342
SHAFT SUPPORT BLOCK WB 90	343
SHAFT SUPPORTING PROFILE	299

SHAFT SUPPORTING PROFILE LR 16	300
SIDE LUMINAIRE 36	386
SIGNAL PROFILE	189
SINGLE AND MULTIPLE POSITIONING AND CONTROL SYSTEM	243
SINGLE TOOL CLAMP, LARGE BASE PLATE	398
SINGLE TOOL CLAMP, SMALL BASE PLATE	397
SLIDE BAR 23	200
SLIDE BAR 8	200
SLIDE BAR 8 N	199
SLIDE BAR 8 N 30	198
SLIDE BAR 8-40 A	199
SLIDE BAR F	201
SLIDE BAR R	201
SLIDE CLAMPING UNIT (TOP) LWG / LWN / LW	316
SLIDE ELEMENT	219
SLIDE G 32	330
SLIDE LB 180	341
SLIDE LB 45	339
SLIDE LB 45 X 135	339
SLIDE LB 45 X 180	340
SLIDE LB 90	340
SLIDE LR 16 - 45	308
SLIDE LR 16 - 90	309
SLIDE LR 6	303
SLIDE LR 6 COMPACT	303
SLIDE LR 6 WITH COVER	304
SLIDE LR 6 Z	304
SLIDE LR 6 Z COMPACT	302
SLIDE LR6 COMPACT	302
SLIDE LW 135	307
SLIDE LW 180	307, 308
SLIDE LW 32	305
SLIDE LW 32 E	305
SLIDE LW 45	306
SLIDE LW 90	306
SLIDE LWG 32 X 45 - 45	334
SLIDE LWG 32 X 45 - 90	334
SLIDE LWG 45/45° - 45	333
SLIDE LWG 45/45° - 90	333
SLIDE LWN 32 X 45 - 45	332
SLIDE LWN 32 X 45 - 90	332
SLIDE LWN 45/45° - 45	331
SLIDE LWN 45/45° - 90	331
SLIDE LWN-S	330
SLIDE RAIL LG	335
SLIDE RAIL LN	335
SLIDE RAIL LN-S	336
SLIDE-ROLL ELEMENT	217
SLIDES	286, 287
SLIDING DOOR PROFILE	222
SLIDING INSERT FOR ROLLER CARRIER	442
SNAP BOLT 25	140
SNAP BOLT 40	141
SOCKET , CHANNEL SOCKET	393
SOCKET HOLDER	400
SPACER	526
SPIRAL CABLE HIGHELASTIC	460
SPURE WHEEL BACK-GEARED MOTOR	244
STANDARD CURVE CHAIN	546
STANDARD CURVE CHAIN WITH JAM ROLLERS	546

STANDARD CURVE STAINLESS STEEL CHAIN	546
STEEL BRACKET 250	420
STEEL BRACKET 400	421
STEP DRILL 10,1	598
STEP DRILL 15	598
STEP DRILL 20	599
STOP FOR SLIDING DOOR K	223
STOPPER	534
STOPPER 25	144
STOPPER 30	144
STOPPER 40	145
STRAP HANDLE PROFILE 32	448
STRENGTHENING ELEMENT 30	162
STRENGTHENING ELEMENT 30 X 60	163
STRENGTHENING ELEMENT 45	163
STRENGTHENING ELEMENT 45 VA	164
STRENGTHENING ELEMENT 90	164
STRIKING PLATE FOR DOOR LOCK	135
STRIP BRUSH 30	430
SUBSEQUENT MOUNTING OF PANEL ELEMENTS	173
SUPPORT BEARING 20	527
SUPPORT PROFILE	180
SUPPORT ROLLER KIT	513
SUPPORTING SHEET	513
SURFACE ELEMENTS	186, 187
SWING-OUT HINGE	112
SWITCH MEMORY + DISPLAY	370
SWITCH UNIT IN 200	536
SWITCH UNIT OUT 200	535
SWITCH, TWO-WAY SWITCH	393
SWIVEL PLATE	512
SYNCHRONOUS PULLEY 45	207
SYSTEM CONCEPTS	529

T

TABLETOP LINOLEUM, LIGHT GREY, 22	373
TABLETOP MELAMINE, LIGHT GREY, 22	373
TABLETOP MULTIPLEX, 40	374
TABLETOP MULTIPLEX, BEECH, NATURAL, 22	373
TABLETOP PLASTIC, 40	374
TABLETOP PLASTIC, LIGHT GREY, 22	373
TEAR- OFF LEVER	601
TECHNICAL DATA -	10, 12, 13
TECHNICAL DATA -	11
TECHNICAL DATA - ALUMINIUM PROFILE	7
TECHNICAL DATA - VA-PROFILE	8
TECHNICAL DATA 3 - GROOVE SYSTEM 30	9
TELESCOPIC GUIDE - STROKE 300, ELECTRICAL	369
TELESCOPIC GUIDE - STROKE 400, ELECTRICAL	370
TELESCOPIC GUIDE 545 - STROKE 280, ELECTRICAL	368
TELESCOPIC GUIDE 545 - STROKE 300	366
TELESCOPIC GUIDE 545 - STROKE 300, MANUAL	367
TELESCOPIC GUIDE 645 - STROKE 280, ELECTRICAL	369
TELESCOPIC GUIDE 645 - STROKE 300	367
TELESCOPIC GUIDE 645 - STROKE 300, MANUAL	368
TELESCOPIC GUIDE FULLY EXTENDABLE 400	384
T-HANDLE 19	129
T-HANDLE 32	129

T-HANDLE 45	130
T-HANDLE KEY	593
T-HANDLE KEY TORX T40	594
THE COMPANY	4, 5
THREAD	603
THREAD FORMER M8	597
THREAD FORMING MACHINE	600
THREAD SOCKET GD	179
THROUGH BORE	603
TIMING BELT	538
TIMING BELT 16 AT 5	280
TIMING BELT 32 AT 10	280
TIMING BELT CONVEYOR 32	493
TIMING BELT PULLEY T 45 Z	321
TIMING BELT PULLEY T 90 Z	321
TIMING BELT TENSIONER	281
TOOL CASE S	428
TOOL CASE S AS SET	427
TOOL HANGER H	412
TOOL HOLDER PLATE	396, 470
TOOL HOLDER SET	395
TOOL HOLDER WITH SLANTED HOOK ENDS	396
TOOL HOLDER WITH VERTICAL HOOK ENDS	397
TOOL SLIDE	413
TOOL SUPPORT	395
TOOL TROLLEY	415
TORQUE SUPPORT WA 20	509
TORQUE SUPPORT WA 30	510
TRANSPORT ROLLER 50-25	514
TRANSPORT ROLLER 50-36	514
TRANSPORT ROLLER S 50-25	515
TRANSPORT ROLLER S 50-36	515
TRUNK LOCK COMPACT	137
TRUNK LOCK WITH QUERY	137
T-SHEET VA	95
T-SLOT BAR 135	83
T-SLOT BAR 140	83
T-SLOT BAR 180	84
T-SLOT BAR 90	82
T-SLOT BAR PROFILE	84
TUBE AL 50 X 2	516
TUBE PVC 50 X 2	517
TURNING DEVICE 45 X 90	454
TURNING DEVICE 90X90	454
TWIST-STOP F	130
TWO-WAY SWITCH	432
TWO-WAY SWITCH/OUTLET	432

U

U-BAR FOR SLIDING DOOR	224
UNDER COUNTER CABINET WITH DOORS, LARGE, LEFT	384
UNDER COUNTER CABINET WITH DOORS, SMALL, LEFT	383
UNDER COUNTER CABINET WITH DRAWERS 200	382
UNDER COUNTER CABINET WITH DRAWERS, DRAWER 100/100/100	380
UNDER COUNTER CABINET WITH DRAWERS, DRAWER 100/200	379
UNDER COUNTER CABINET WITH DRAWERS, DRAWER 150/150	378
UNDER COUNTER CABINET WITH DRAWERS, DRAWER 50/100/150	379
UNDER COUNTER CABINET WITH DRAWERS, SHELF 50/100/150/200	380

UNDER COUNTER CABINETS WITH DRAWERS FOR HANGING FILES	382
UNIVERSAL CLAMPING SOCKET	452
UPRIGHT BEARING	119
U-PROFILE	196

V

VERTICAL DOUBLE OUTLET	431
VERTICAL SPANNER HOLDER	400

W

WHEEL RIGID TYPE	152
WHEEL SWIVEL TYPE WITH BRAKE D 100 X 131	154
WHEEL SWIVEL TYPE WITH BRAKE D 75 X 100	151
WHEEL SWIVEL TYPE WITHOUT BRAKE D 100 X 131	154
WHEEL SWIVEL TYPE WITHOUT BRAKE D 75 X 100	151
WORK MATS OFF RUBBER	436
WORKPIECE TRAY 200	536
WRISLET ELASTIC	460

