PROFILE SYSTEM

Part. N° 95.0025/0

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341 MACHINE PROTECTION

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358 TEAR-OFF LEVER
359 DEBURRING TOOL
359 TEAR-OFF PLIERS FOR G PROFILES

360 PROCESSING SERVICES

361 THREAD
361 THROUGH BORE
361 INSERTION TIDE
361 BORE
361 SAW CUT, SQUARE, MINIMIZED BURR

ABOUT US

The Company

MiniTec was founded on the sales of miniature linear guides and has successfully evolved into designing complete machines and devices for many industrial processes around the world.

The Production Program

Our linear technology combined with the Profile System is the ideal partnership for machine builders.

The components work together to provide optimum performance and the modular assembly system makes it possible to design and manufacture to unique specifications quickly and cost effectively.

The 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 according to ISO 9001 since 1994.

The Environment

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 to ISO 14001.

The Occupational Health and Safety

Since 2006 is our company certified with the OHSAS 18001 – Occupational Health and Safety Assessment Series.

The Innovation

For us innovation means more than just new products. All our processes are constantly optimized. Continuous training of our staff and close cooperation with research and education facilities are the base for a steady innovation process.

EXAMPLES OF APPLICATIONS

The applications of the MiniTec profile system are almost unlimited. This system offers economic solutions for general machinery designs but also for office furniture, partitions, sound proofing walls and boxes, individually constructed workstations and assembly lines, robots, portal systems, and linear guides

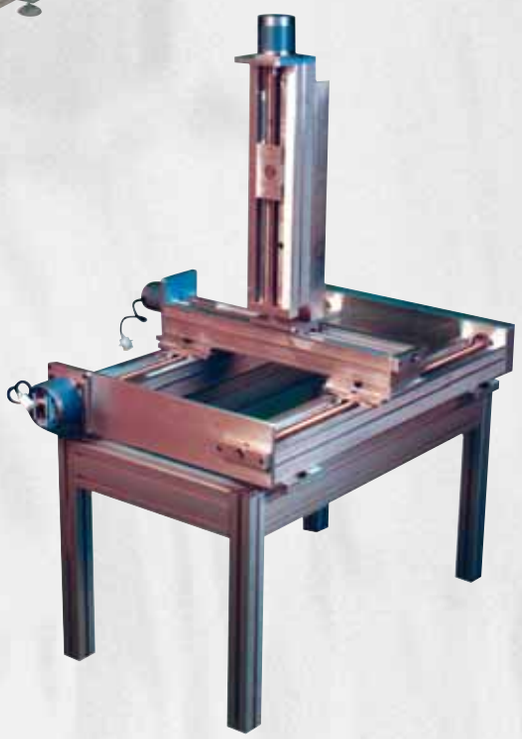
Roller conveyor with pneumatic stoppers

Brushing machine for furniture boards

Lay-Up station for solar cells

EXAMPLES OF APPLICATIONS

Framing of solar-modules



3-D-measuring machine

Optical quality inspection

EXAMPLES OF APPLICATIONS

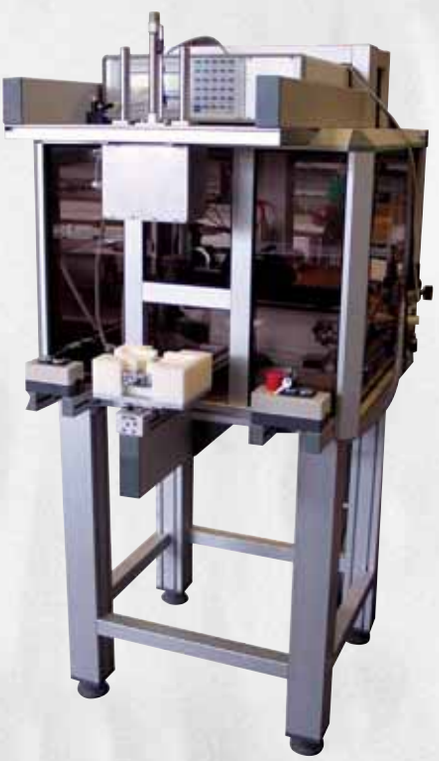
Packing unit for toothbrushes

Workstation

System Workstation with customized workpiece trays

EXAMPLES OF APPLICATIONS

Machine frame
with guarding



Automatic glue
dispenser

Conveyor with
label applicator

EXAMPLES OF APPLICATIONS

Very slow moving linear guide for environment test lab

Label printer and applikator

Height-adjustable table-top motorized

EXAMPLES OF APPLICATIONS

Longitudinal stop

Machine frame

Packingline with
roller conveyors

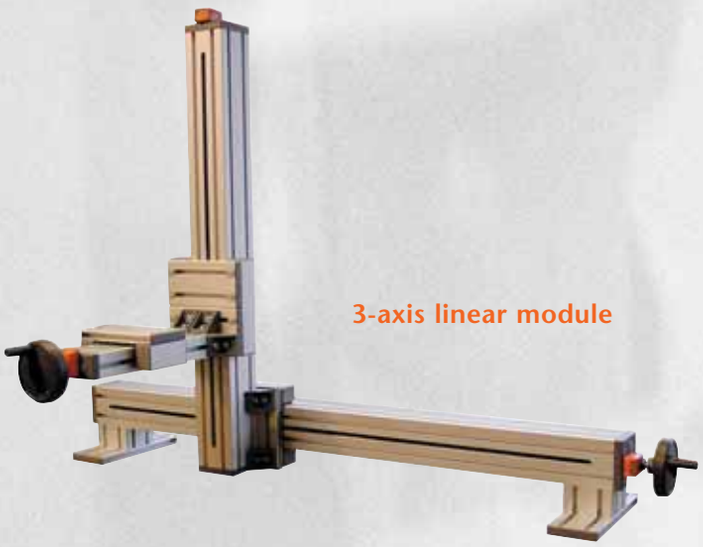
EXAMPLES OF APPLICATIONS

Optical measuring machine
with PC-control

Optical measuring machine
with PC-control

Optical measuring machine
with PC-control

EXAMPLES OF APPLICATIONS

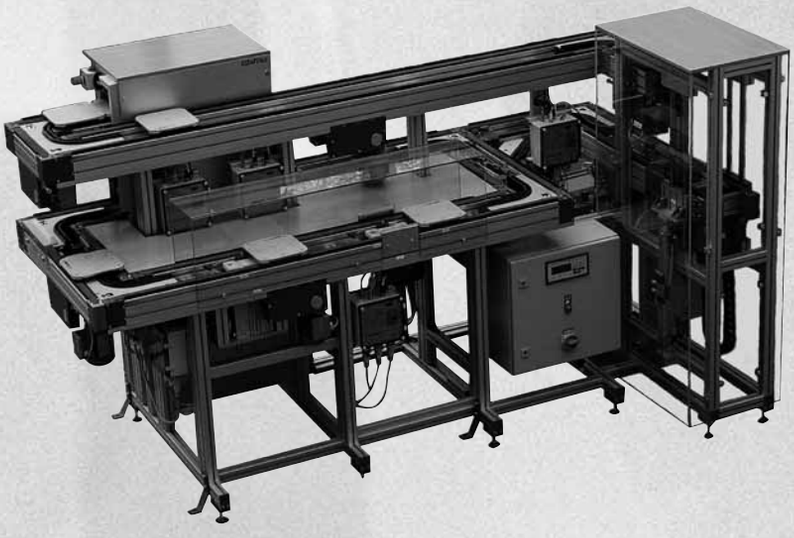


3-axis linear module

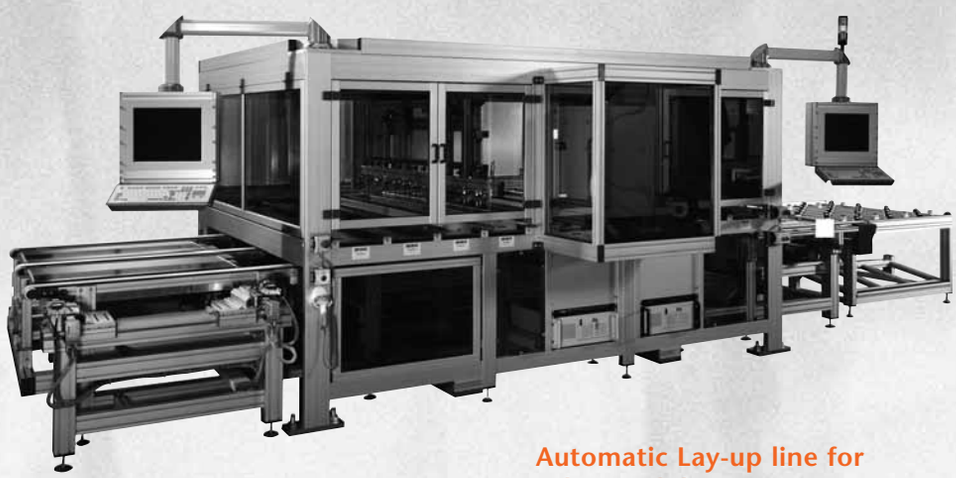
Machine frame with special glass screens
for high-temperature application

Conveyor

EXAMPLES OF APPLICATIONS



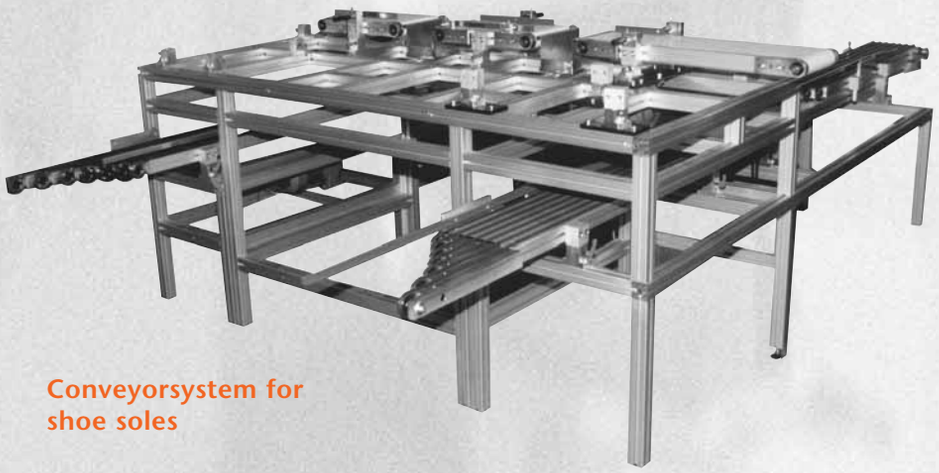
Transfer system TSG 200



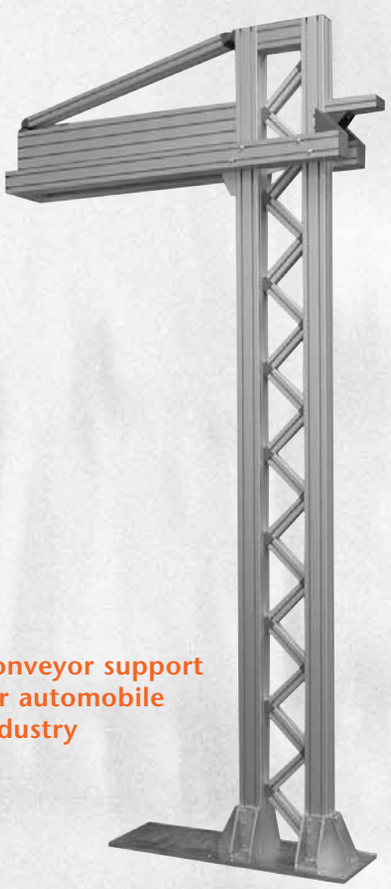
Automatic Lay-up line for solar modules

Workstation

EXAMPLES OF APPLICATIONS



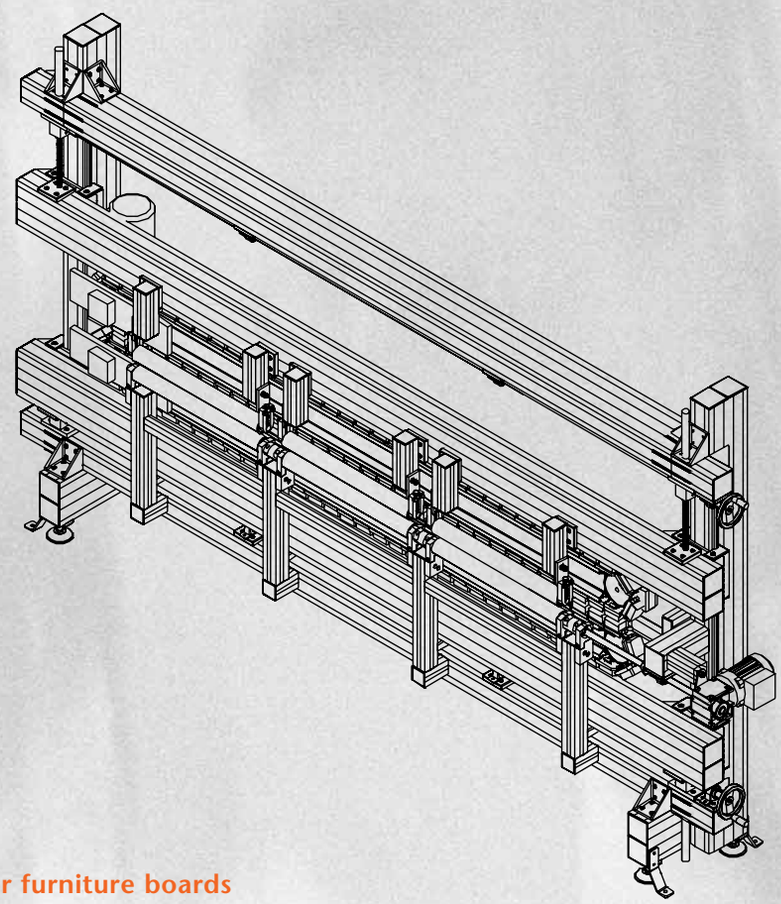
Conveyorsystem for shoe soles



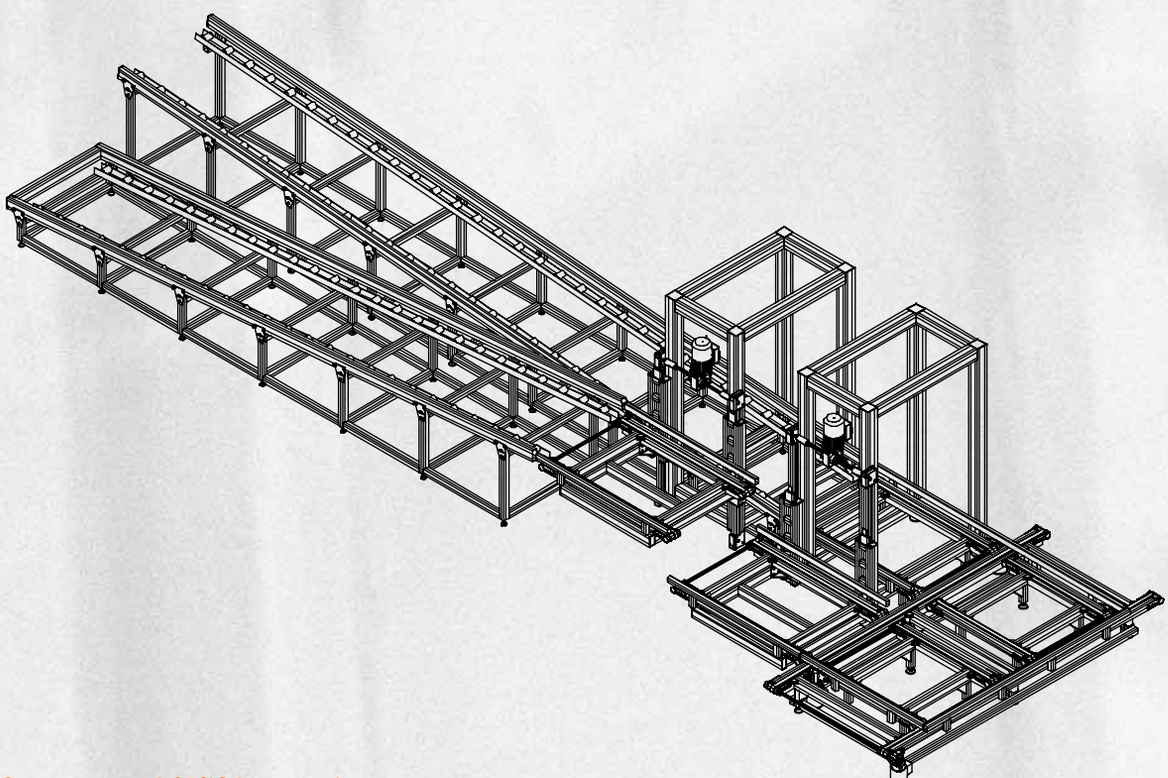
Conveyor support for automobile industry

Welding enclosure

PROJECT EXAMPLES

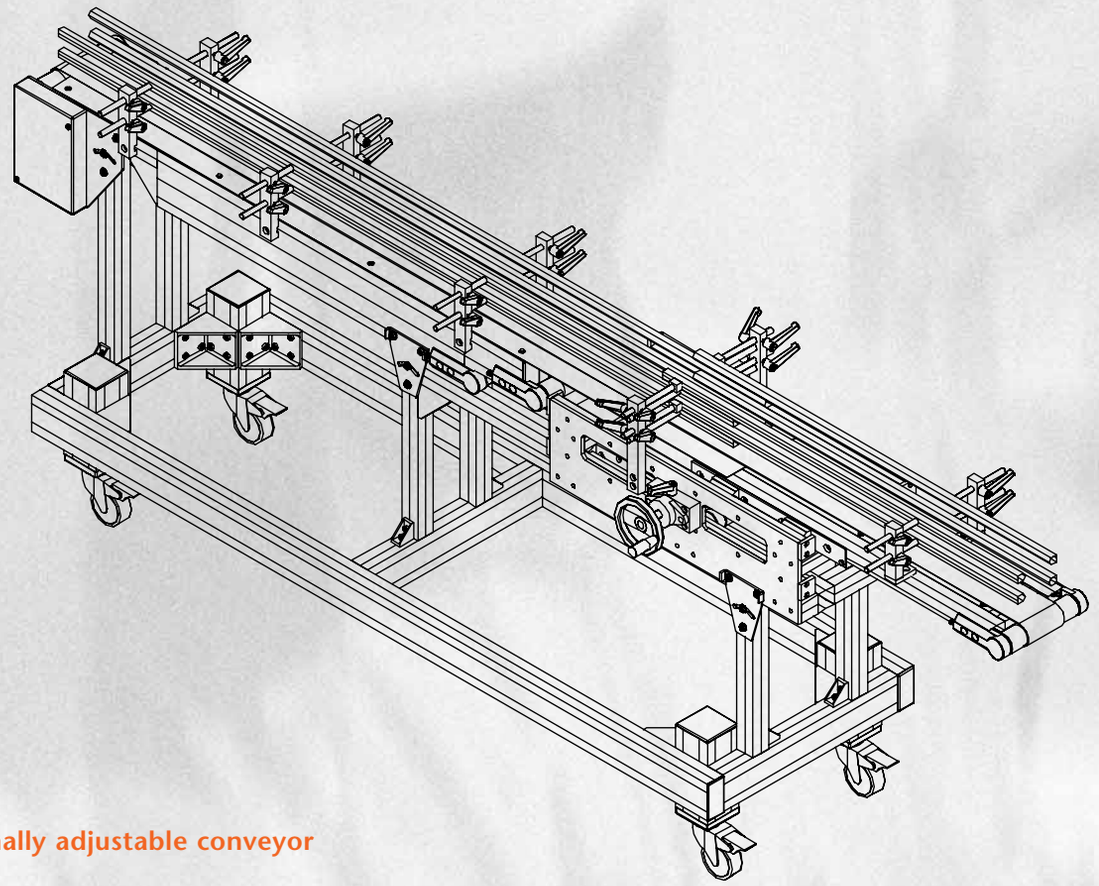


Brushing machine for furniture boards

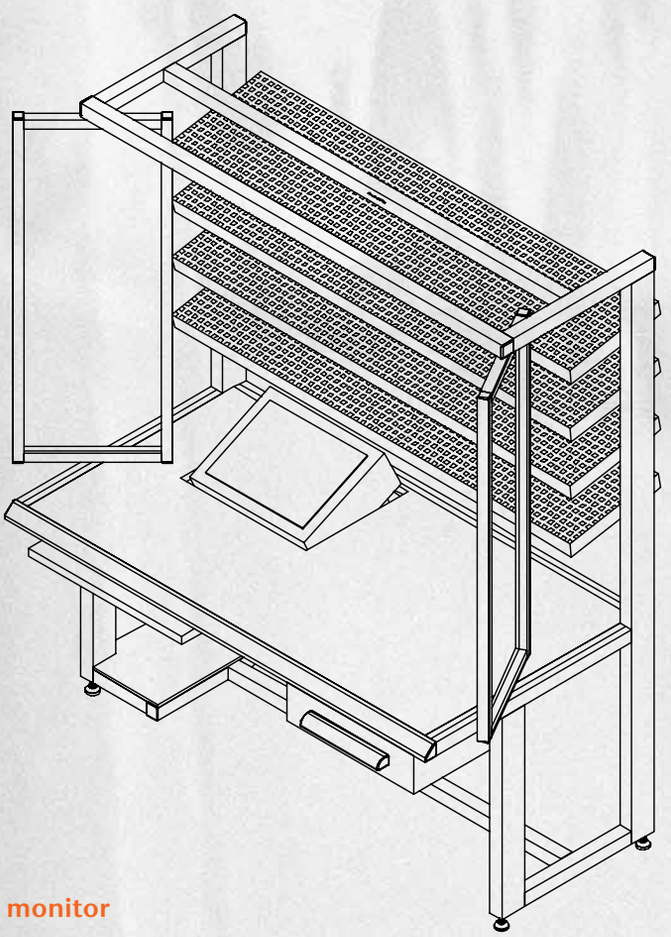


Transfersystem with lifting station

PROJECT EXAMPLES



Longitudinally adjustable conveyor



Workstation with hinged monitor

MiniTec CAD Support

Our CAD tools are the logical supplement to the hardware of our construction system. All planning and assembly requirements are comprehensively considered. The combination of components and software opens up the full potential for efficient, flexible, and modern machinery construction.

Time is a key factor in modern and economic machine construction. The time expended for a construction affects the costs to a great extent as well as the speed of implementation. It is not unusual that the expenditure for calculation, design, operation scheduling, and assembly to amount to more than half of the total costs. The ergonomic design of all the components of our system and the ease of assembly with our power-lock fastener without drilling results in a significant saving of time.

Planning and operations scheduling often offer an even greater potential for saving time. A fundamental step forward with regard to planning and avoidance of errors are our MiniTec CADmenu for AutoCAD and MiniTec iCAD design tools with more than 50 formats for all other CAD systems. The design time is reduced by more than 60% with these tools compared with conventional designing.

All components are contained in 2D and 3D in the electronic catalog. Defined insertion points facilitate positioning in the drawing. Any processing and the connectors that may be required are displayed for each of the components and can be added if desired. A parts-list is automatically created in which the overmeasurements for panel elements are correctly calculated. Identie parts are summarized in a order list. The weight of the individual items and the total weight is displayed. The parts list can be generated in German, English, or French. Interfaces to Word and Excel enable the data-transfer to planning systems and the creation of documentations or the further processing of the data.

MiniTec CADmenu *for AutoCAD* 2004 - 2008*

Part N° 95.0858/0

- Design tool using AutoCAD commands
- Automated design modules for
  - Linear axes
  - Safety equipment
  - Conveyor belts
  - Roller belts
  - Workplaces

° Installation routine for AutoCAD 2002 can be downloaded from our website www.minitec.de/cadsupport

MiniTec ICAD 3.5 *for all CAD Systems*

Part N° 95.0864/0

- Autonomous design tool that can also be used without a CAD system
- Direct interfaces to all common CAD systems such as Mechanical Desktop, ProEngineer, Solid Works, Solid-Edge, MegaCAD, etc.
- More than 50 data output formats in 2D and 3D
- Automated design module for linear axes

*AutoCAD is a registered trademark of AUTODESK, Inc. - Word and Excel are registered trademarks of Microsoft

PROFILES

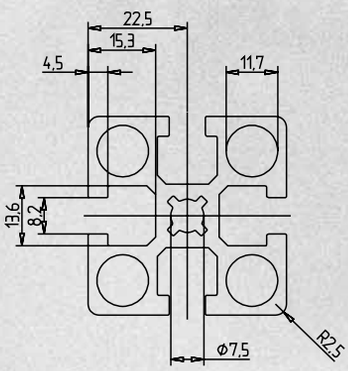
Material	Type:	Al Mg Si 0.5 F 25 EN-AW-6060 T6
	Specific weight:	2.75 g / cm^3
	Material no.:	3 3206.72 artificially aged
	min. Rm:	245 N / mm^2
	min. Rp 0,2:	200 N / mm^2
	Ductile yield A 5:	> 10%
	Ductile yield A 10:	> 8%
	Module of elasticity:	E: 70000 N / mm^2 G: 27000 N / mm^2
	Expansion hardness:	ca. 75 HB 2,5 / 187.5
	Heat extension:	23,8 · 10^{-6} K^{-1}
Surface		natural anodized E6/EV1
	Layer thickness:	approx. 10 µm
	Layer hardness:	250 - 350 HV
Tolerances		DIN EN 12020 Part 1 + 2
	Outer dimensions:	depending on size 0.2 to 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.	
Core boring	uniform 7.5 - 0.3 mm	
	The thread M8 must be made by thread former, not by tap.	
	Core bore reborable up to M12.	
Modular Dimension	Standard 45 mm	
	All profiles are based on the same modular dimension.	
	All grooves are uniform.	
	All bores are uniform.	

GROOVE SYSTEM

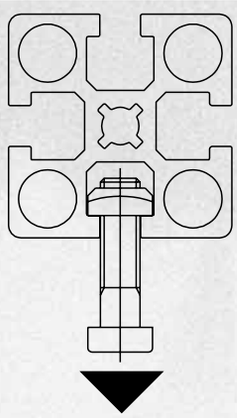
Grooves

Uniform in all profiles from 19 up to 180 mm
Width: 8,5 - 0,3 mm.
The grooves are sized for standard M8 with head Ø 13 mm and standard nuts with an outer dimension of 13 mm. Square and hexagonal nuts and screws cannot twist in the groove.

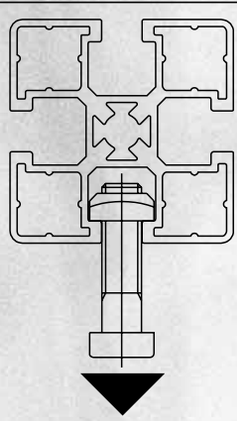
Basic dimensions



Load capacity

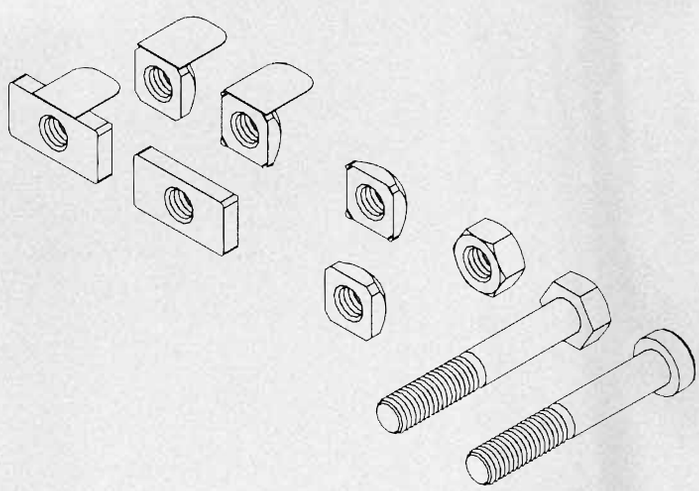


F = 6000 N



F = 4000 N

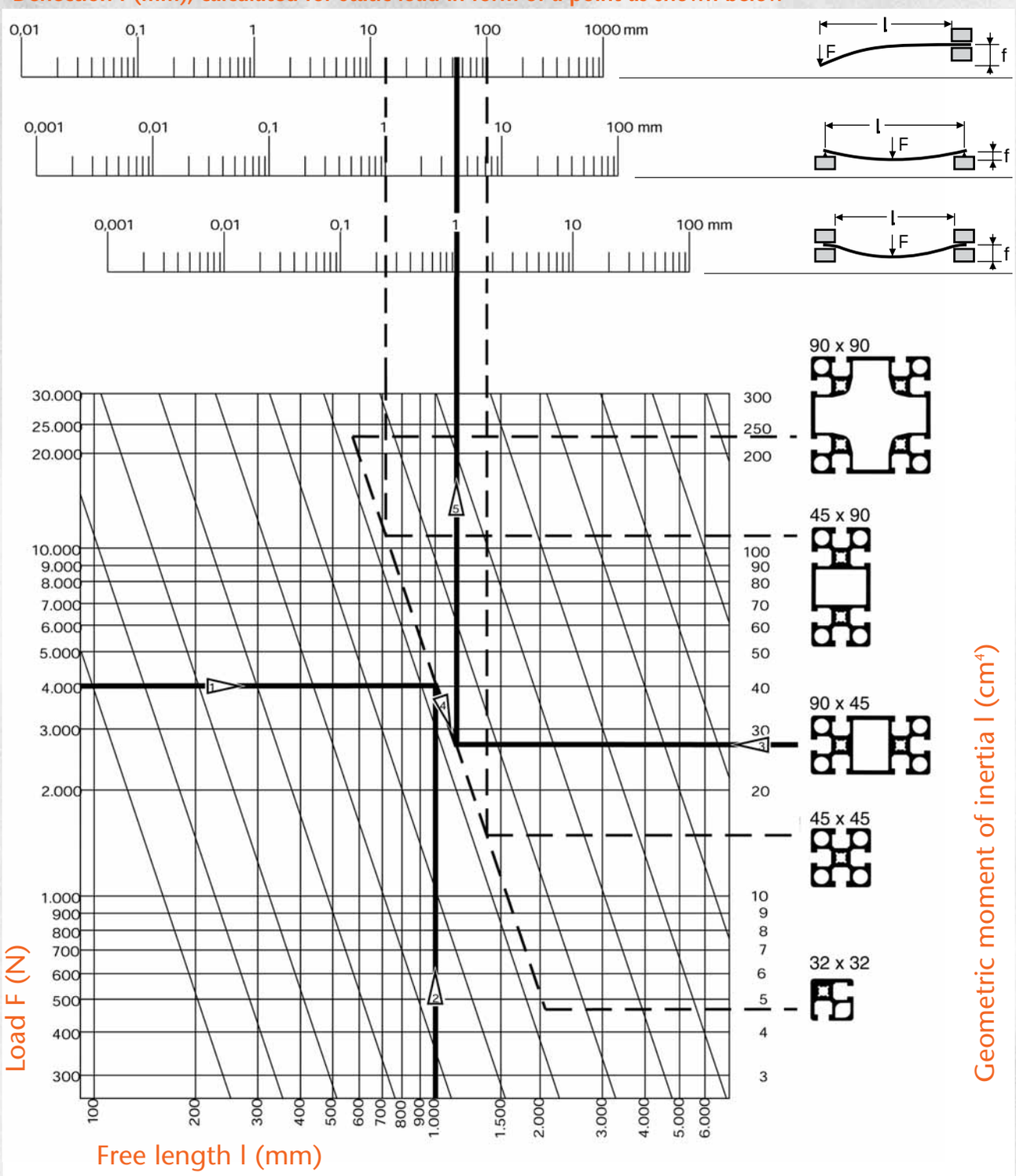
Useable screws and nuts



DEFLECTION OF MINITEC PROFILES

This mode of calculation is a function of our construction module for AutoCAD*

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



* AutoCAD is a registered trade mark of AUTODESK, Inc.

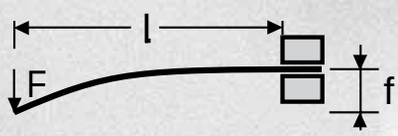
DEFLECTION OF MINITEC PROFILES

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

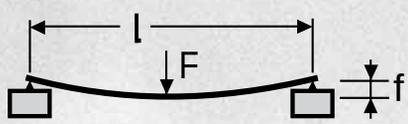
Example		
	f = Deflection	x mm
	F = Load	8 000 N
	L = Free length	700 mm
	I = Geom. moment of inertia	30.4 cm^4
	E = Modulus of elasticity	70 000 N / mm

Example 1



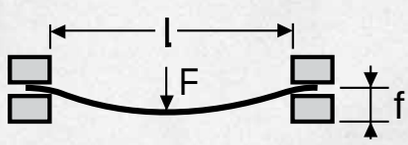
$$f = \frac{F \times L^3}{E \times I \times 3 \times 10^4} = 42{,}1 \text{ mm}$$

Example 2



$$f = \frac{F \times L^3}{E \times I \times 48 \times 10^4} = 2{,}7 \text{ mm}$$

Example 3

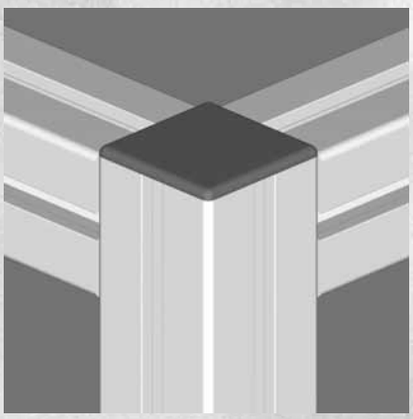


$$f = \frac{F \times L^3}{E \times I \times 192 \times 10^4} = 0{,}67 \text{ mm}$$

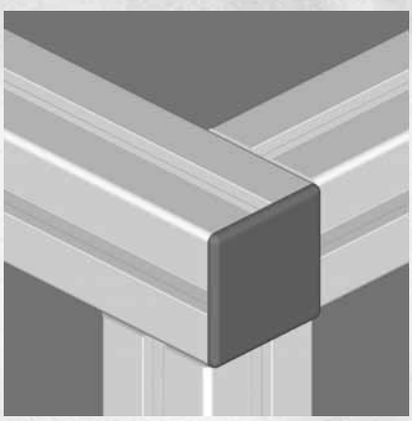
The above mentioned equations are easy to calculate using the diagram on previous page follow the steps in the given row for the respective value.

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

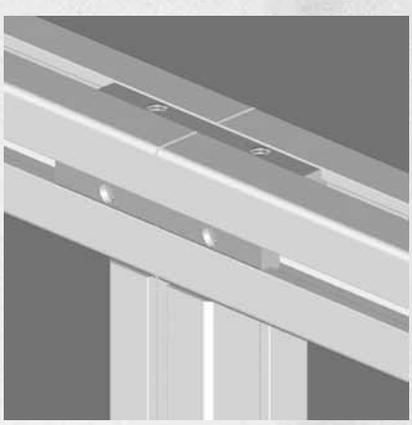
ASSEMBLY HINTS



Horizontal profiles should be assembled between vertical profiles running unbroken from bottom to top.

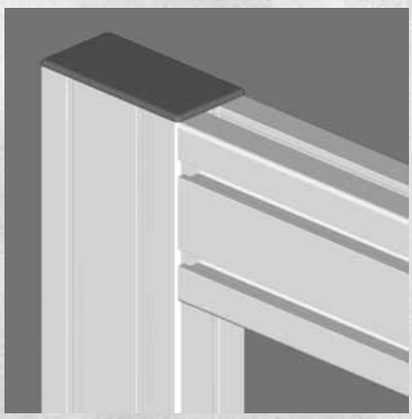


Make sure to assemble the vertical profiles an top of the horizontal profiles for higher loads.

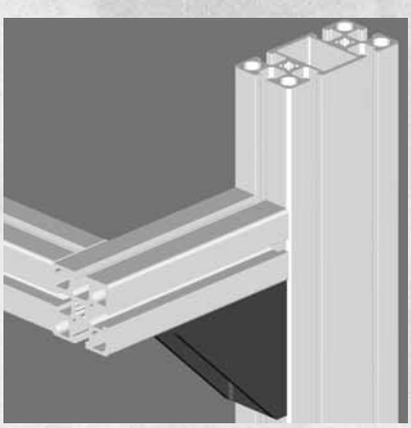


The joins of butt-fastened profiles should be supported.

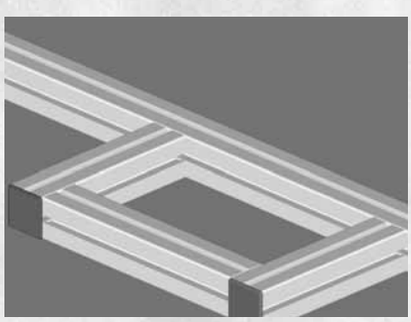
ASSEMBLY HINTS



Because of higher bending strength, profiles should be used edgewise.

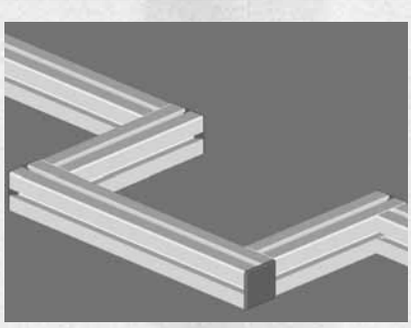


Torsional strain on connections should be avoided or supported by additional use of angles.



Right!

Supporting profiles must be built in as one piece avoid interruptions!



Wrong!

- ALUMINIUM PROFILES
- FASTENING ELEMENTS
- LINKS AND HINGES
- HANDLES, LOCKS, STOPS
- FEET, WHEELS, FLOOR FASTENINGS, SUPPORTS
- FITTING OF PANEL ELEMENTS ASSEMBLY POSSIBILITIES
- EDGE-, COVER-, SLIDE- AND SEALING PROFILES
- PREASSEMBLED ELEMENTS FOR LIFTING AND SLIDING DOORS
- ELECTRICAL INSTALLATION
- DRIVE UNITS AND CONTROL SYSTEMS
- PNEUMATIC CONNECTIONS
- HYDRAULIC VERTICAL ADJUSTMENT

1 SYSTEM COMPONENTS

ALUMINIUM PROFILES

There is only one groove shape for all MiniTec construction profiles. Thus all fasteners are useable in all profiles, the necessary stock of fastening material can be reduced to a minimum and all elements fit to all profiles.

PROFILE SECTIONS

Profile 19 x 32

Part No. 20.1000/0

Profile 32 x 32 UL

Part No. 20.1064/0

Profile 32 x 32 F

Part No. 20.1054/0

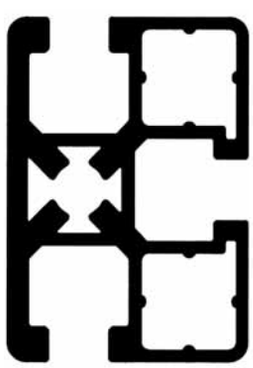
Clamp Profile 32 x 32

Part No. 20.1070/0

Profile 19 x 45

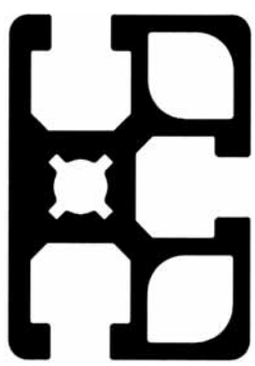
Part No. 20.1001/0

Profile 45 x 32 UL



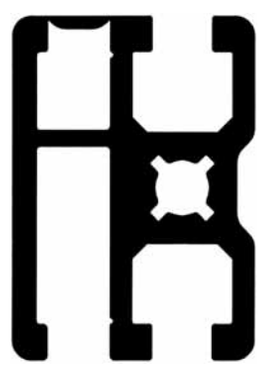
Part No. 20.1065/0

Profile 45 x 32 F



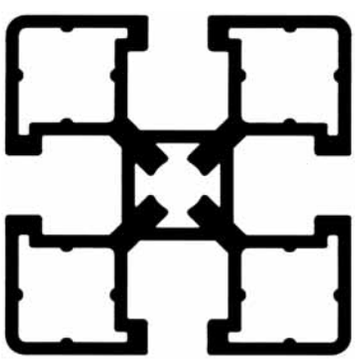
Part No. 20.1055/0

Clamp Profile 45 x 32



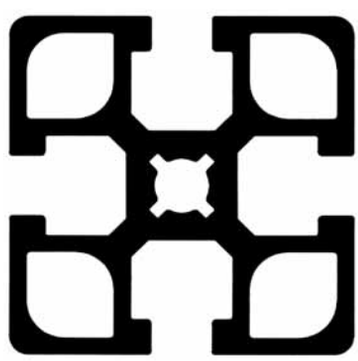
Part No. 20.1053/0

Profile 45 x 45 UL



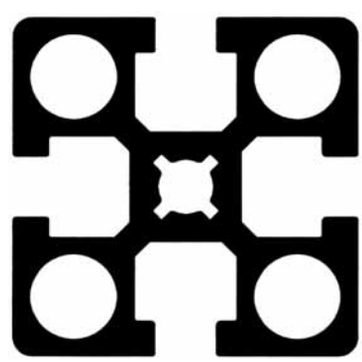
Part No. 20.1063/0

Profile 45 x 45 F



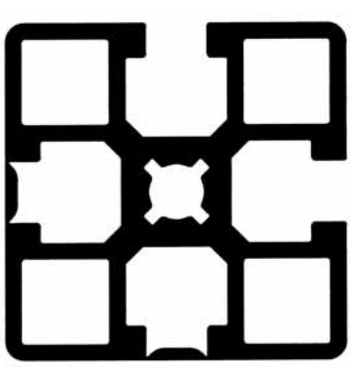
Part No. 20.1033/0

Profile 45 x 45



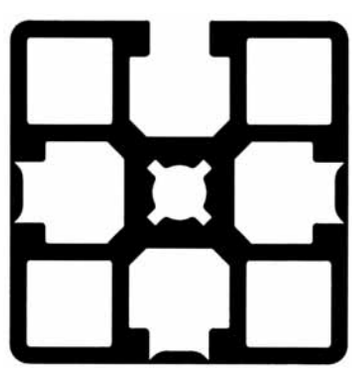
Part No. 20.1006/0

Profile 45 x 45 2G



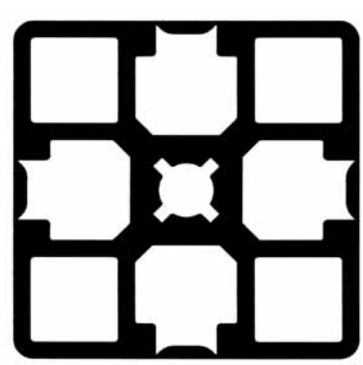
Part No. 20.1072/0

Profile 45 x 45 3G



Part No. 20.1048/0

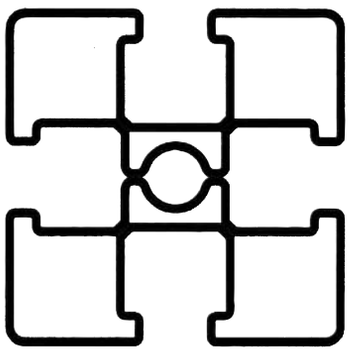
Profile 45 x 45 G



Part No. 20.1028/0

PROFILE SECTIONS

Profile 45 x 45 VA



Part No. 20.2000/0

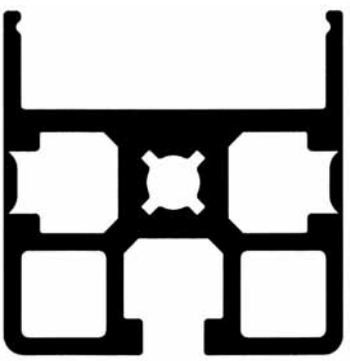
Profile 45 x 19

Part No. 20.1012/0

Cover Profile 45 x 45 R

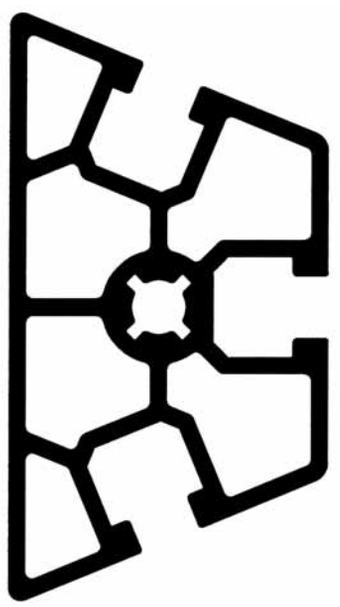
Part No. 20.1037/0

Profile 45 x 45 R



Part No. 20.1046/0

Profile 45/22,5°

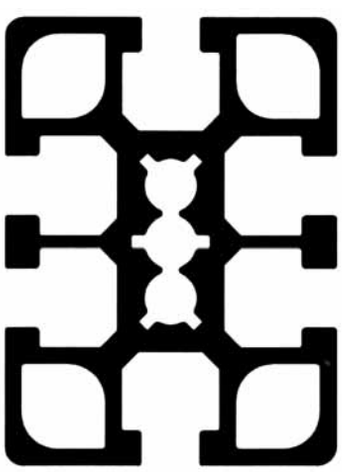


Part No. 20.1030/0

Profile 90 x 19

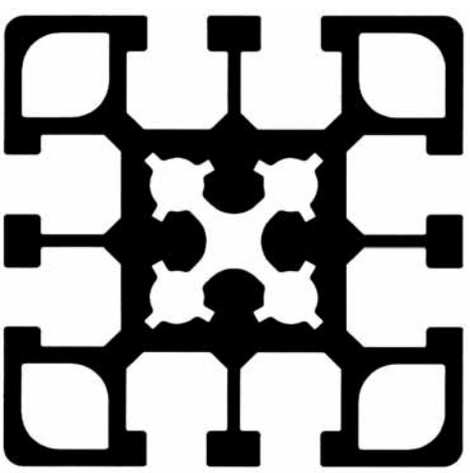
Part No. 20.1031/0

Profile 45 x 60



Part No. 20.1023/0

Profile 60 x 60 F



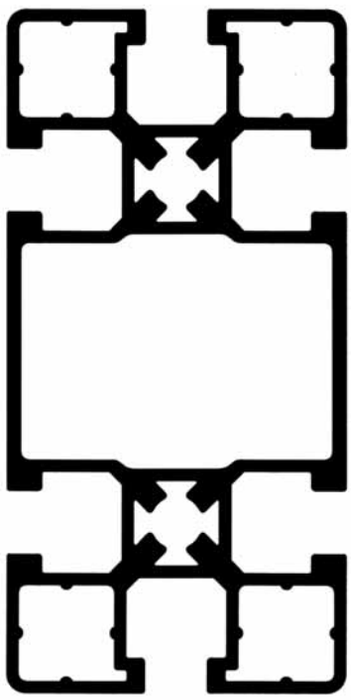
Part No. 20.1049/0

PROFILE SECTIONS

Profile 90 x 32 UL

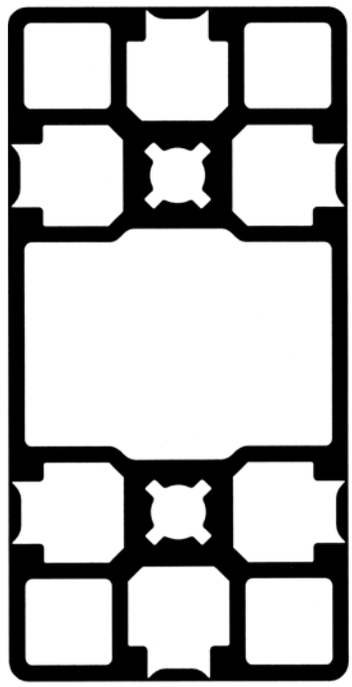
Part No. 20.1066/0

Profile 45 x 90 UL



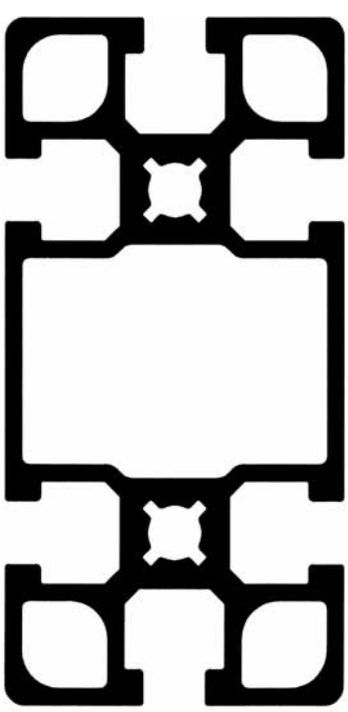
Part No. 20.1067/0

Profile 45 x 90 G



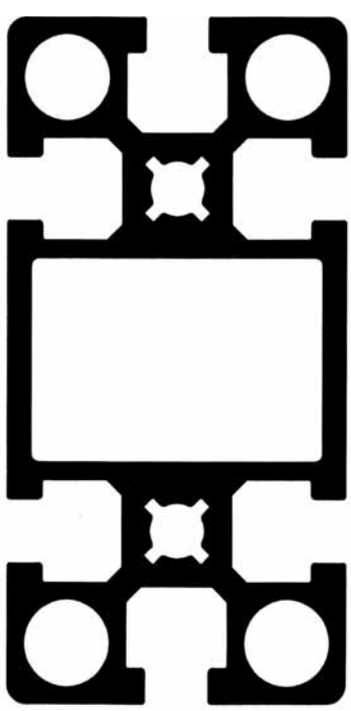
Part No. 20.1015/0

Profile 45 x 90 F



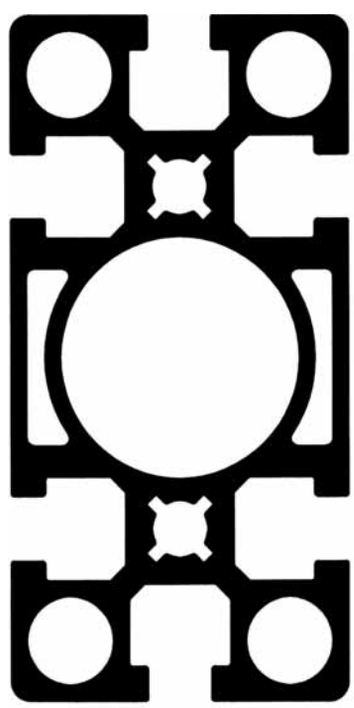
Part No. 20.1032/0

Profile 45 x 90



Part No. 20.1009/0

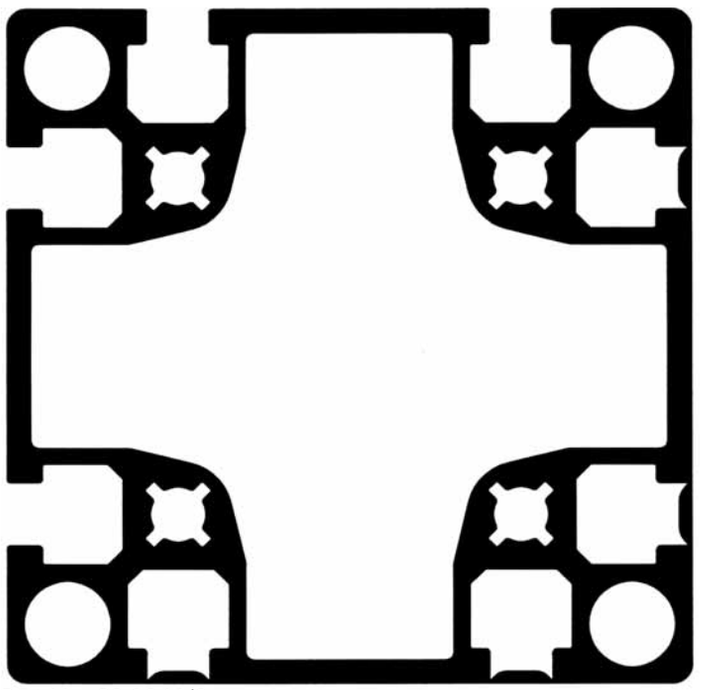
Profile 45 x 90 S



Part No. 20.1017/0

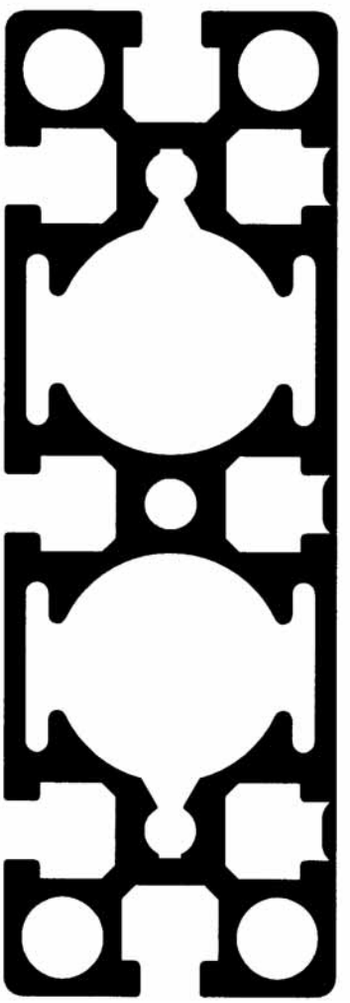
PROFILE SECTIONS

Profile 90 x 90 2G



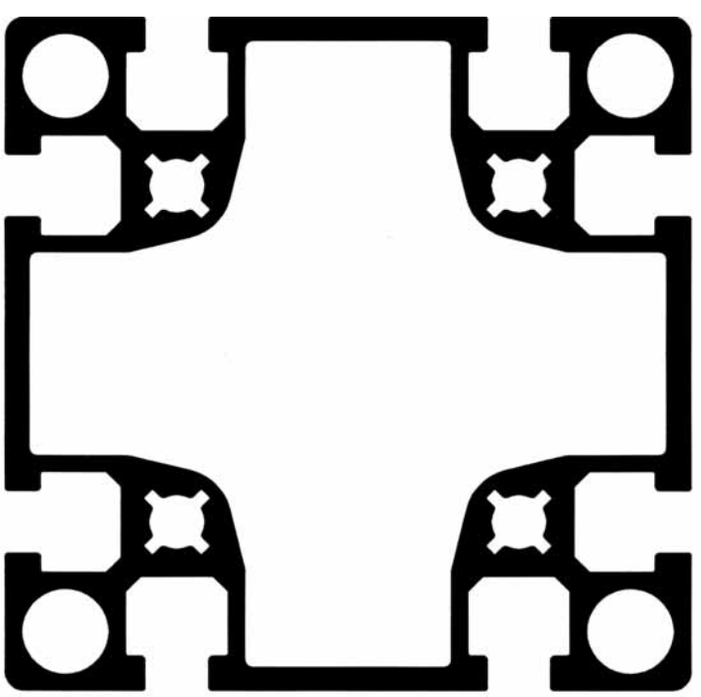
Part No. 20.1044/0

Profile 45 x 135 1G



Part No. 20.1078/0

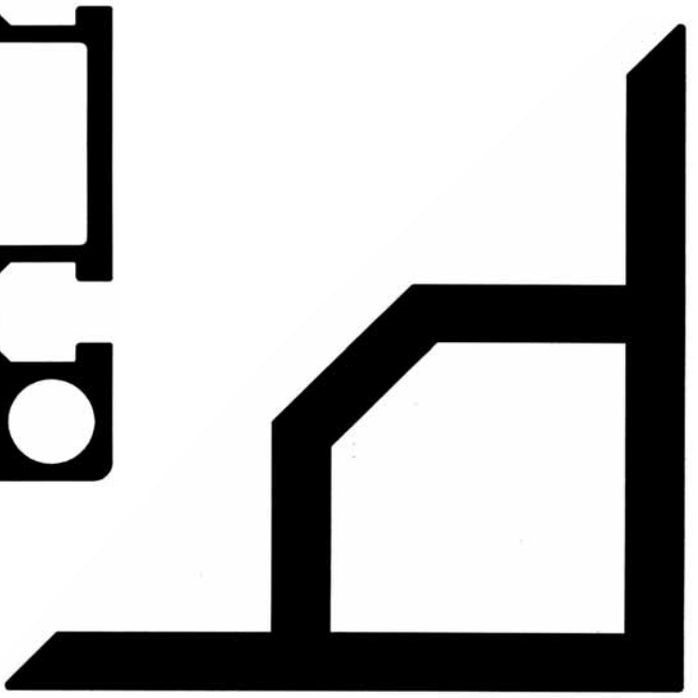
Profile 90 x 90 L



Part No. 20.1010/0

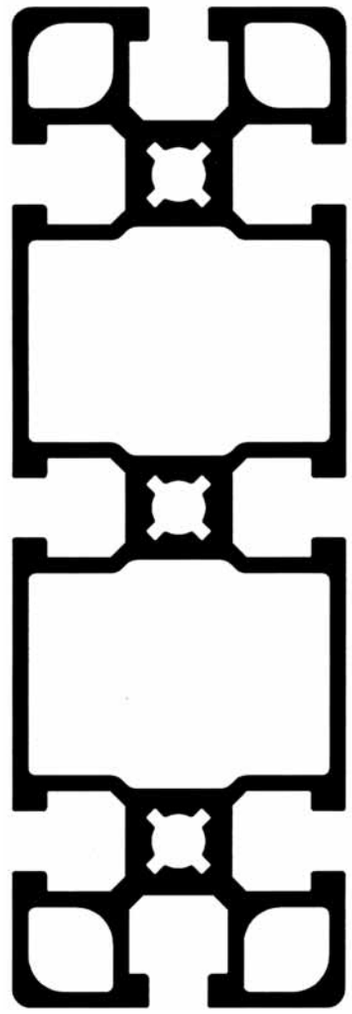
Angular Profile 89 x 89

Part No. 20.1011/0



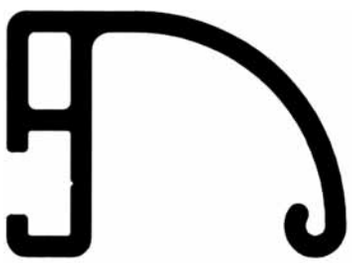
PROFILE SECTIONS

Profile 45 x 135 F

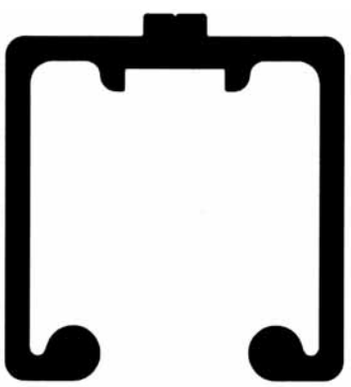


Part No. 20.1087/0

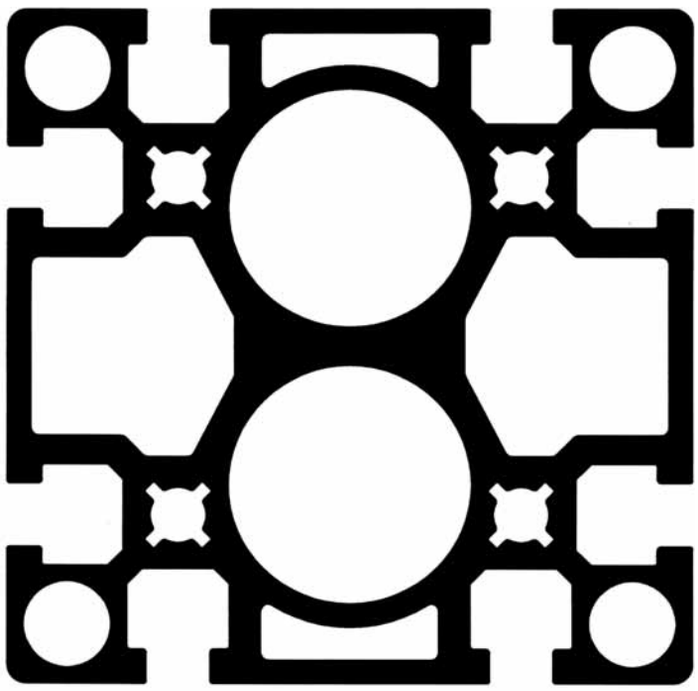
Handle Profile



Part No. 20.1045/0

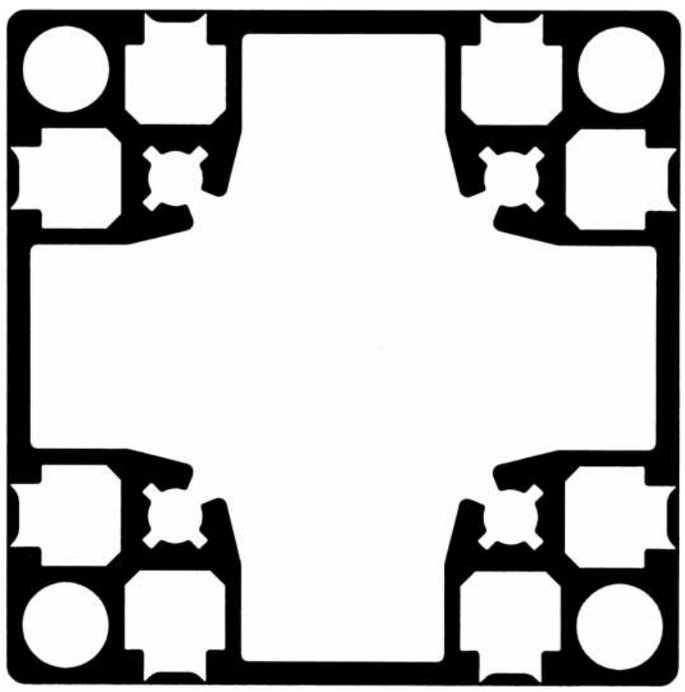


Profile 90 x 90 S



Part No. 20.1019/0

Profile 90 x 90 G



Part No. 20.1082/0

Sliding door Profile

Part No. 20.1038/0

Profile 19 x 270

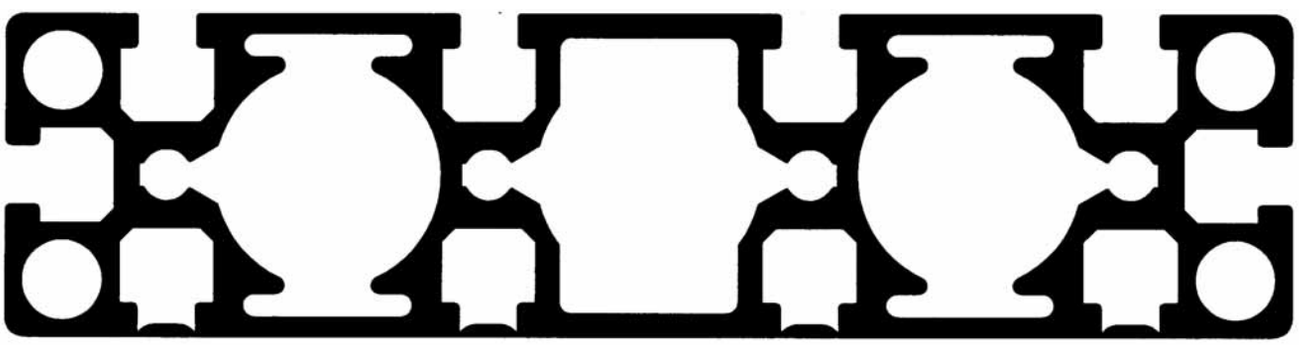
Part No. 20.1077/0

PROFILE SECTIONS

Profile 32 x 180

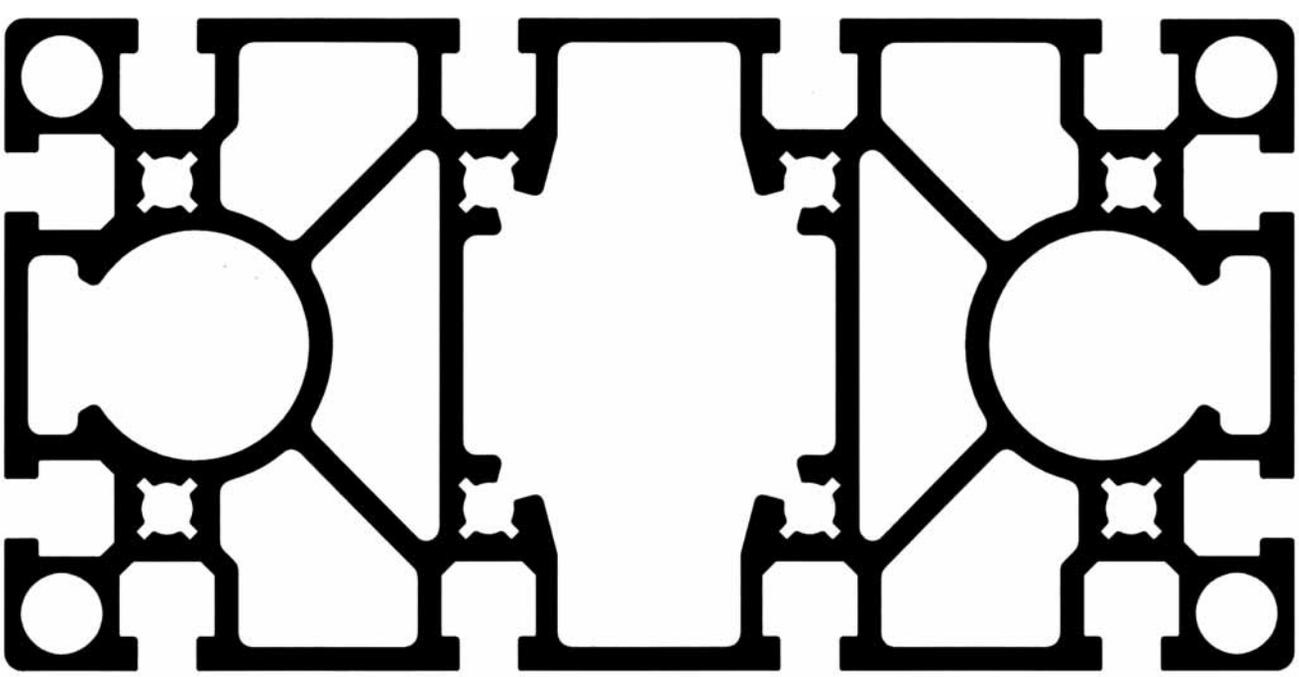
Part No. 20.1016/0

Profile 45 x 180 1 G



Part No. 20.1079/0

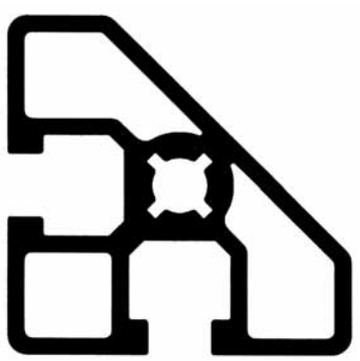
Profile 90 x 180 S



Part No. 20.1013/0

PROFILE SECTIONS

Profile 45/45°

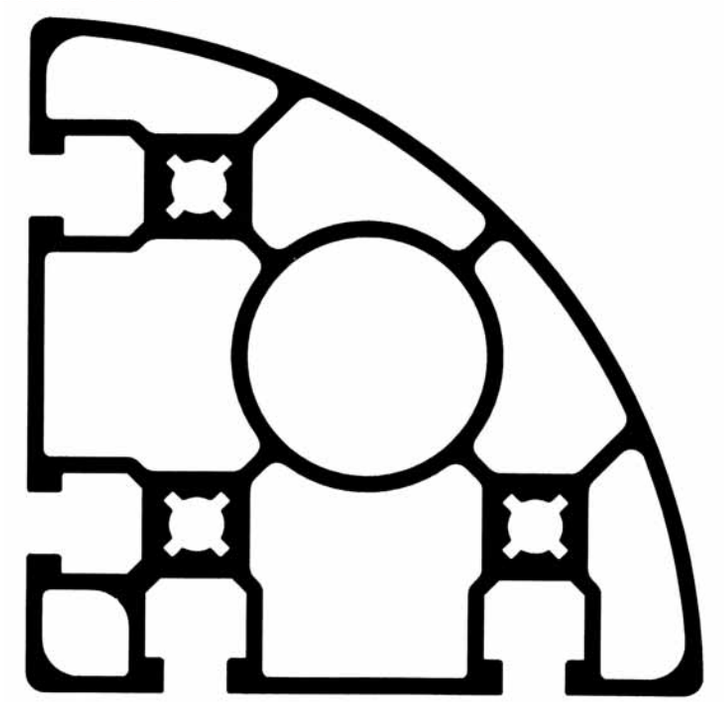


Part No. 20.1029/0

Profile 45 R 90°

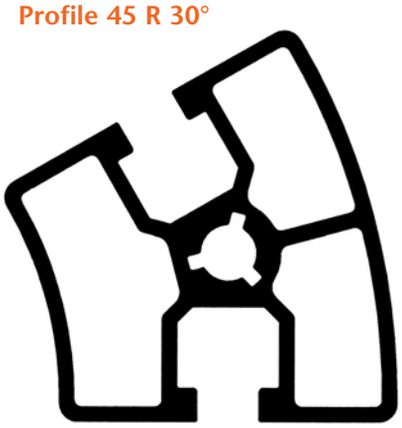
Part No. 20.1069/0

Profile 90 R 90°



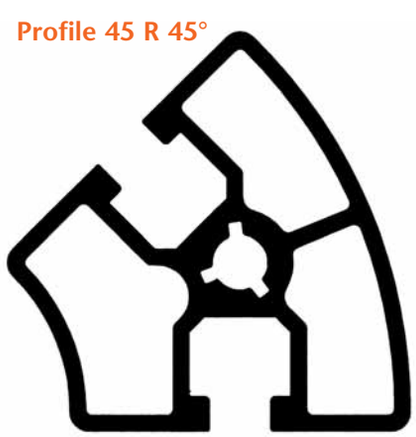
Part No. 20.1091/0

Profile 45 R 30°



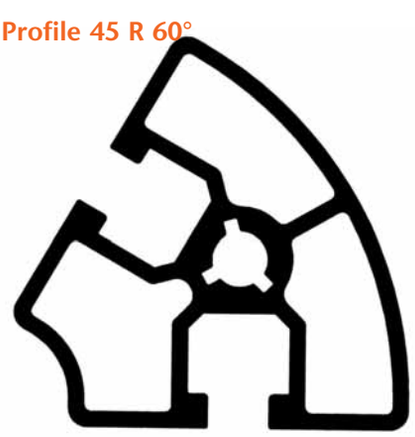
Part No. 20.1094/0

Profile 45 R 45°



Part No. 20.1095/0

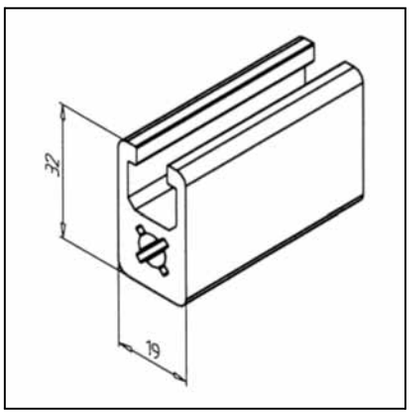
Profile 45 R 60°

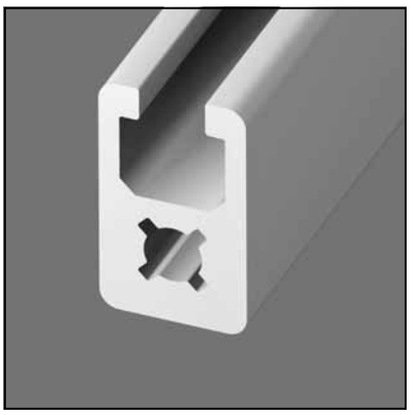


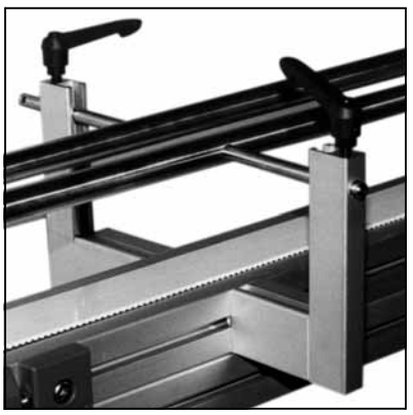
Part No. 20.1096/0

PROFILE 19 X 32

Part. N° 20.1000/0







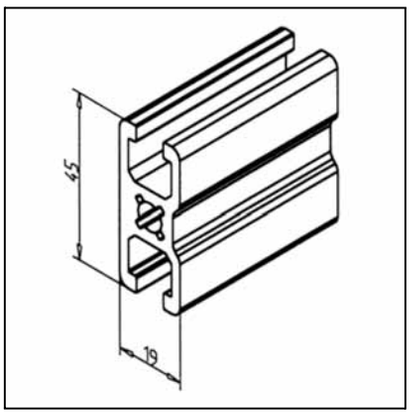
TECHN. DATA / ITEMS SUPPLIED	
- Ix =	3,102 cm⁴
- Iy =	1,526 cm⁴
- wx =	1,651 cm³
- wy =	1,606 cm³
- Weight	0,987 kg/m
- Length	6 m
- Packing unit	60 m

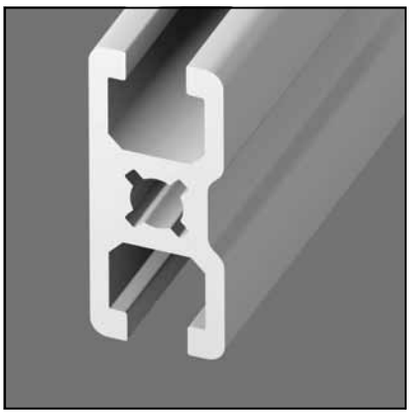
APPLICATIONS
- Light constructions
- Panel frames
- Light supports
- Grip rails

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

PROFILE 19 X 45

Part. N° 20.1001/0





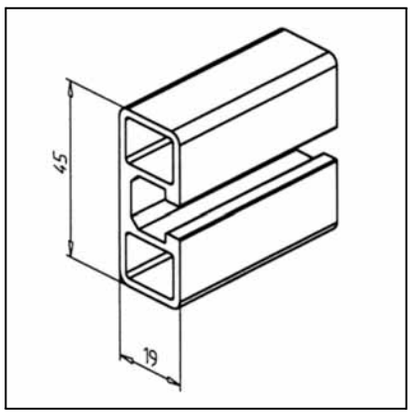
TECHN. DATA / ITEMS SUPPLIED	
- Ix =	6,173 cm⁴
- Iy =	1,843 cm⁴
- wx =	2,743 cm³
- wy =	1,836 cm³
- Weight	1,101 kg/m
- Length	6 m
- Packing unit	60 m

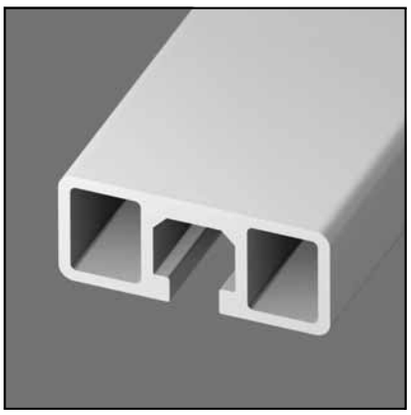
APPLICATIONS
- Light supports, Braces
- Light constructions
- Panel frames
- Shelves

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

PROFILE 45 X 19

Part. N° 20.1012/0





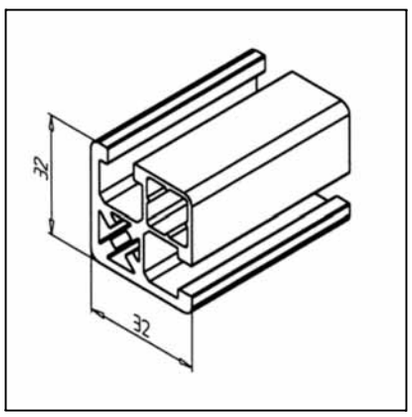
TECHN. DATA / ITEMS SUPPLIED	
- Ix =	6,045 cm^4
- Iy =	1,529 cm^4
- wx =	2,687 cm^3
- wy =	1,494 cm^3
- Weight	0,869 kg/m
- Length	6 m
- Packing unit	72 m

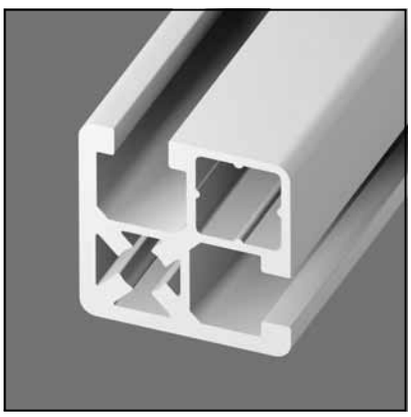
APPLICATIONS
- Light constructions
- Light Sliding doors
- Bracings
- Sliding windows
- Tables

ASSEMBLY
- Angle 25
- Bolt-fastener

PROFILE 32 X 32 UL

Part. N° 20.1064/0





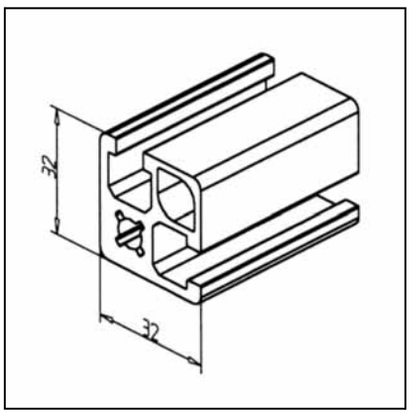
TECHN. DATA / ITEMS SUPPLIED	
- Ix =	4,100 cm^4
- Iy =	4,100 cm^4
- wx =	2,267 cm^3
- wy =	2,267 cm^3
- Weight	1,052 kg/m
- Length	6 m
- Packing unit	48 m

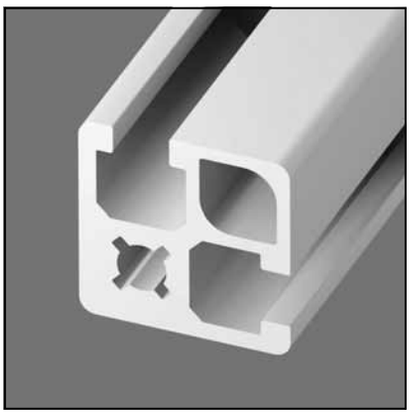
APPLICATIONS
- Light constructions
- Tables
- Horizontal or vertical-sliding doors
- Bracings

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

PROFILE 32 X 32 F

Part. N° 20.1054/0





TECHN. DATA / ITEMS SUPPLIED	
- Ix =	4,825 cm⁴
- Iy =	4,825 cm⁴
- wx =	2,703 cm³
- wy =	2,703 cm³
- Weight	1,288 kg/m
- Length	6 m
- Packing unit	48 m

APPLICATIONS

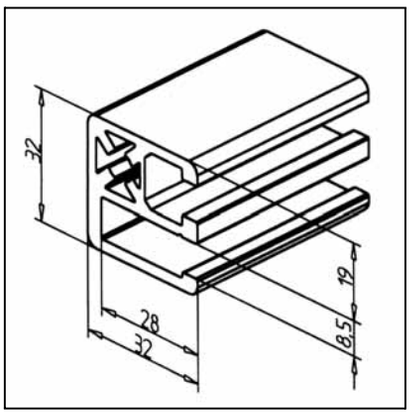
- Light constructions
- Tables
- Horizontal or vertical-sliding doors
- Bracings

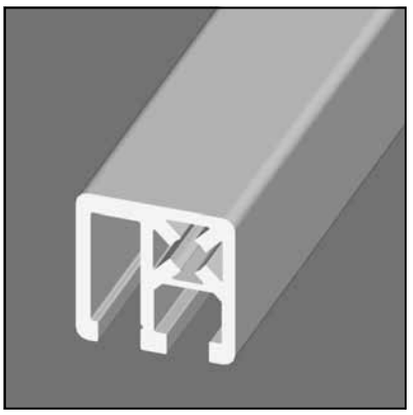
ASSEMBLY

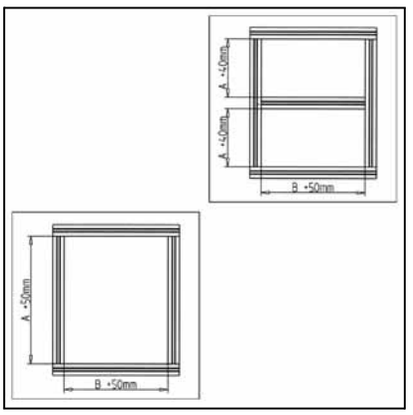
- MiniTec power-lock fastener
- Angle 19
- Bolt-fastener 15
- Screw connection

CLAMP PROFILE 32 X 32

Part. N° 20.1070/0







TECHN. DATA / ITEMS SUPPLIED	
- Ix =	5,024 cm⁴
- Iy =	4,418 cm⁴
- wx =	3,041 cm³
- wy =	2,398 cm³
- Weight	1,211 kg/m
- Length	6 m
- Packing unit	48 m

APPLICATIONS

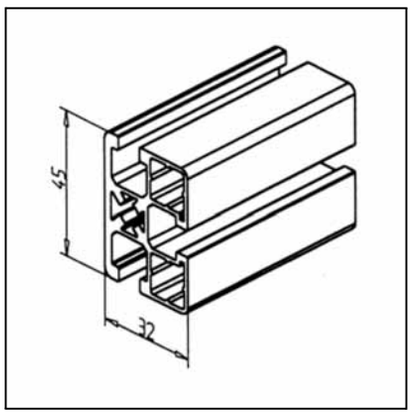
- All types of safety equipment
- For clamping surface elements such as wire mesh, panes, and plates up to a thickness of 8 mm
- Additional struts from clamping profile 45 x 32 must be used for larger safety fields to ensure sufficient protection against the surface elements pushing out; seperate out covering strips for profile 45 x32
- see page 157

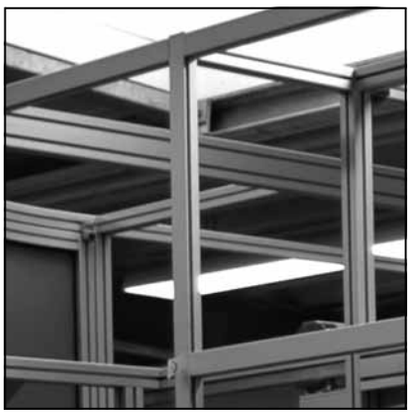
ASSEMBLY

- MiniTec profile connector; no drilling required
- No cut-outs in surface elements required
- Preassemble the framework on three sides with the closed side outwards
- Insert surface element and last profile strut
- Push i distance profile on the inside or knock in with a flat tool
- Also mount appropriate seal for surface elements < 4 mm

PROFILE 45 X 32 UL

Part. N° 20.1065/0





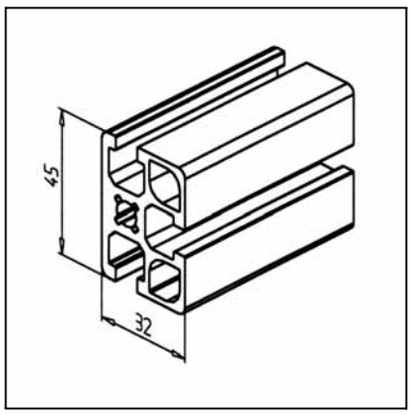
TECHN. DATA / ITEMS SUPPLIED	
- Ix =	8,292 cm⁴
- Iy =	5,178 cm⁴
- wx =	3,685 cm³
- wy =	2,815 cm³
- Weight	1,257 kg/m
- Length	6 m
- Packing unit	48 m

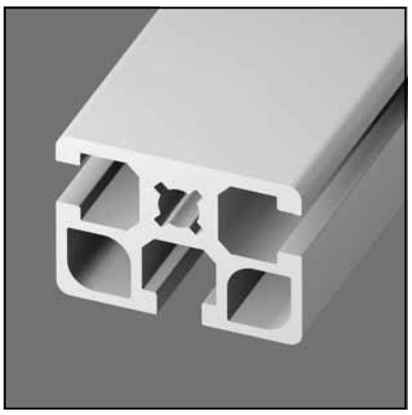
APPLICATIONS
- General constructions
- Light constructions
- Tables
- Racks
- Slidin-doors

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

PROFILE 45 X 32 F

Part. N° 20.1055/0





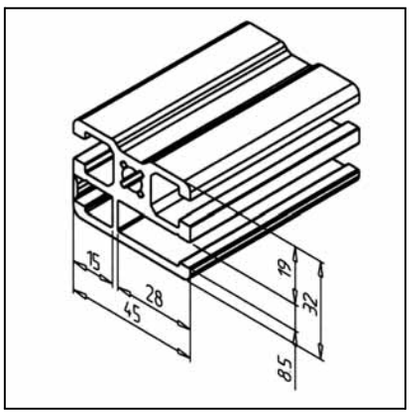
TECHN. DATA / ITEMS SUPPLIED	
- Ix =	10,189 cm⁴
- Iy =	6,499 cm⁴
- wx =	4,528 cm³
- wy =	3,762 cm³
- Weight	1,588 kg/m
- Length	6 m
- Packing unit	48 m

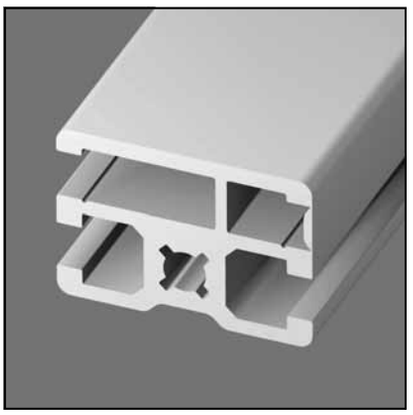
APPLICATIONS
- General constructions
- Tables
- Racks
- Sliding-doors
- Rails

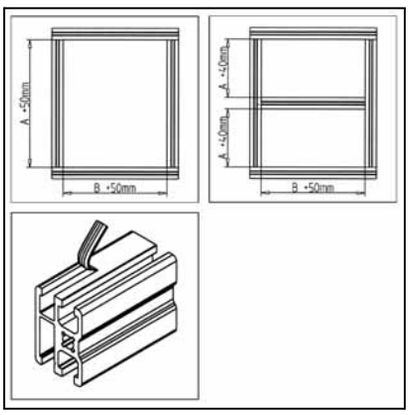
ASSEMBLY
- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90
- Bolt-fastener 15 / 20
- Screw connection

CLAMP PROFILE 45 X 32

Part. N° 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

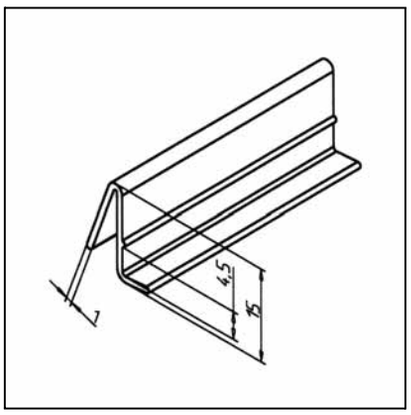
- All kinds of guard units
- Clamping of corrugated mesh or panel elements of all kinds up to 8 mm thickness
- For larger guards we propose to mount an additional brace to guarantee sufficient security
- After open the cover, the second groove is accessible
- See page 157

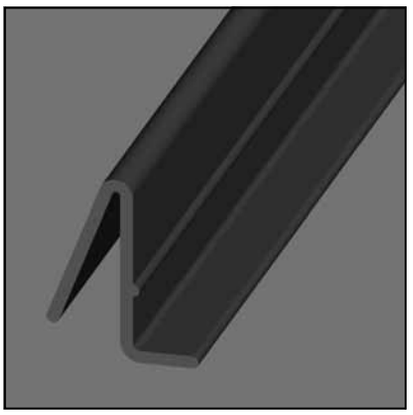
ASSEMBLY

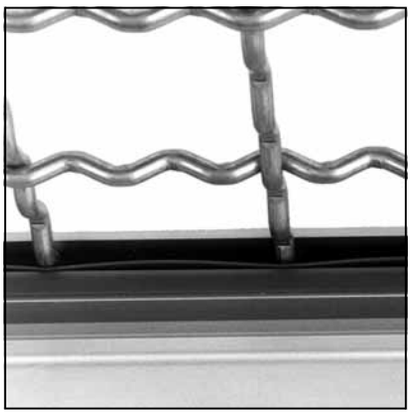
- MiniTec power-lock fastener; no bores necessary
- No cut-outs in panel elements for fastering elements necessary
- Premount 3 sides of the frame, the eve side of the profile outwards
- Insert surface element and mount last profile brace
- Depress the distance profile on the inner side or hit it with a flat tool
- For panel elements < 4 mm mount an additional insert seal

DISTANCE PROFILE

Part. N° 22.1039/0







TECHN. DATA / ITEMS SUPPLIED

- ABS, gray	
- Weight	0,055 kg/m
- Length	2 m

APPLICATIONS

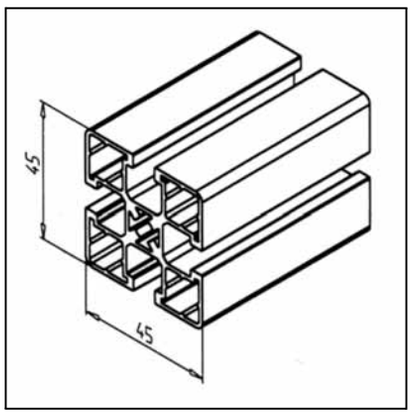
- Spacing element to use with clamp profile 45 x 32 **Part N° 20.1053/0** and clamp profile 32 x 32 **Part N° 20.1070/0** to fix corrugated mesh or panel elements
- Also for use with all other profiles to fix panel elements

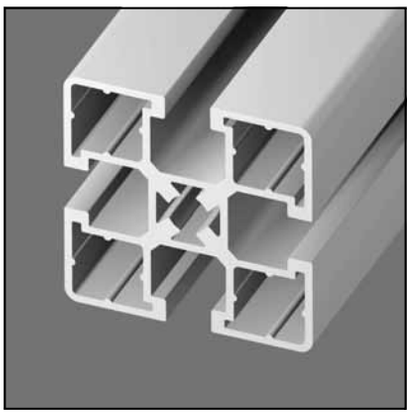
ASSEMBLY

- Mount frame and panel elements
- Press in with suitable tool in space between panel element and clamp profile

PROFILE 45 X 45 UL

Part. N° 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

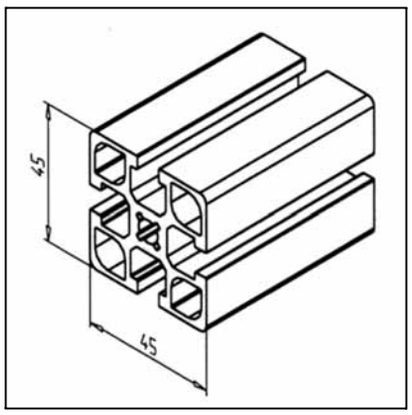
- General weight, optimized engineering structures
- General constructions

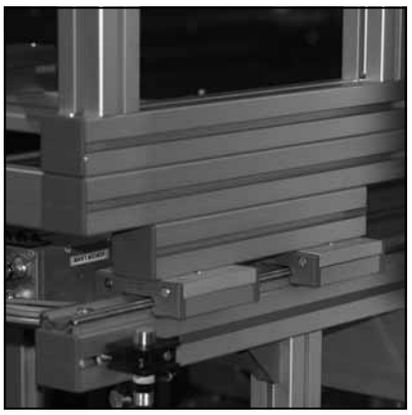
ASSEMBLY

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

PROFILE 45 X 45 F

Part. N° 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

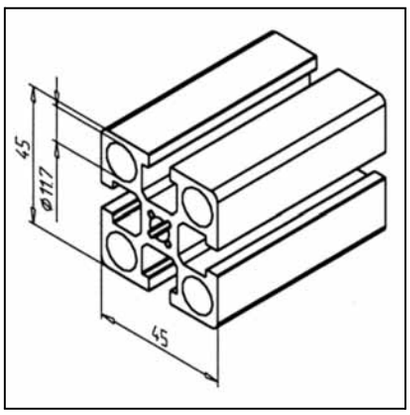
- General constructions

ASSEMBLY

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

PROFILE 45 X 45

Part. N° 20.1006/0



TECHN. DATA / ITEMS SUPPLIED	
- Ix =	15,934 cm⁴
- Iy =	15,934 cm⁴
- wx =	7,081 cm³
- wy =	7,081 cm³
- Weight	2,192 kg/m
- Length	6 m
- Packing unit	36 m

APPLICATIONS

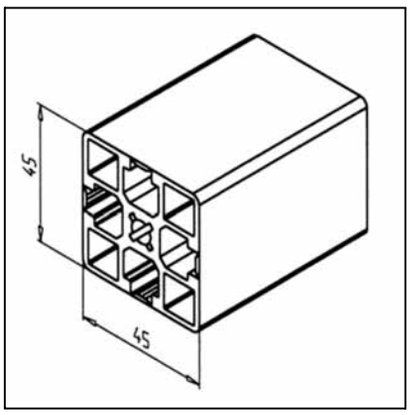
- General engineering structures
- Compressed air piping
- Linear guides

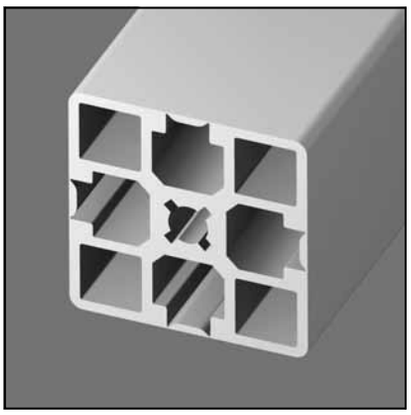
ASSEMBLY

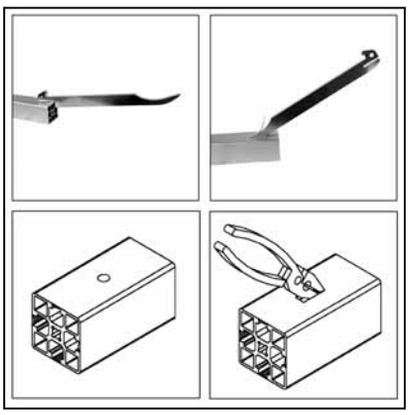
- MiniTec power-lock fastener
- Angle 25 / 45, bolt-fastener, screw connection
- 4 bores Ø 11,7 mm reborable for G 1/4" piping thread for blanking screws or sandard pneumatic connections
- Lateral connection of pneumatic elements directly into the profile

PROFILE 45 X 45 G

Part. N° 20.1028/0







TECHN. DATA / ITEMS SUPPLIED	
- Ix =	14,087 cm⁴
- Iy =	14,087 cm⁴
- wx =	6,261 cm³
- wy =	6,261 cm³
- Weight	1,997 kg/m
- Length	6 m
- Packing unit	36 m

APPLICATIONS

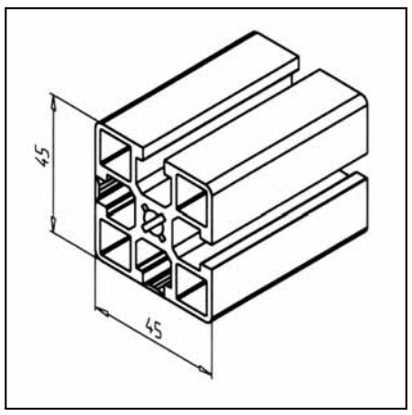
- General engineering structures, particularly for use in the food industry, in medical engineering and for the filling of beverages, where strict hygienic standards are set.
- Grooves can be closed with the aluminium cover profile L, **Part N° 20.1021/0,** when they turn out to be too big
- On request we offer silicon sealings for profile connections

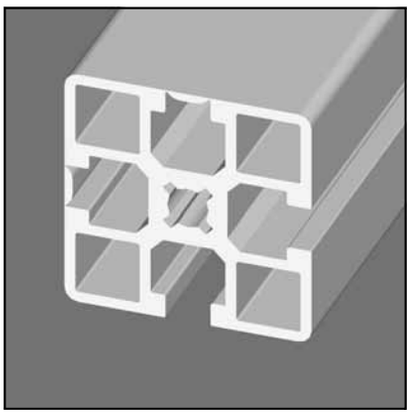
ASSEMBLY

- Angle 25 / 45
- For tigtening the MiniTec power-lock fastener, the groove cover must be opened by tear-off lever **Part N° 26.0815/0** at the profile end. This opening is covered by means of the cover plate G **Part N° 22.1056/0**
- The grooves can be opened up to any length with the groove opener **Part N° 26.0815/0**

PROFILE 45 X 45 2G

Part. N° 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

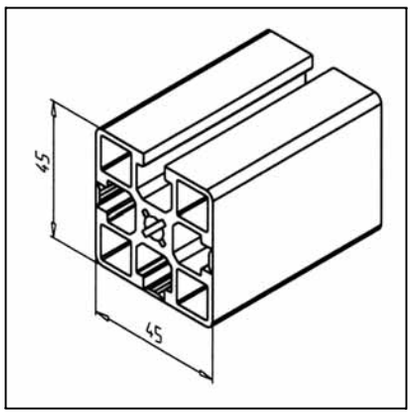
- General engineering structures, particularly for use in the food industry, in medical engineering and for the filling of beverages, where strict hygienic standards are set
- Grooves can be closed with the aluminium cover profile L, **Part N° 20.1021/0**
- On request we offer silicon sealings for profile connections

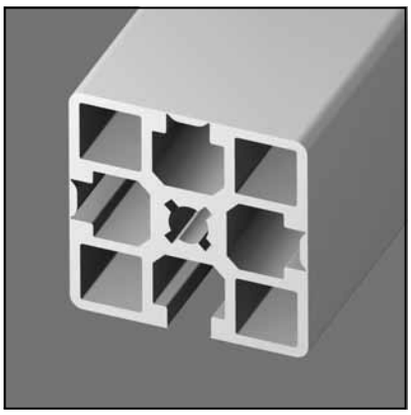
ASSEMBLY

- Angle 25 / 45
- MiniTec power-lock fastener
- For tightening the power-lock fastener, the groove cover must be opened by 30-33 mm at the profile end. This opening is covered by means of the cover plate G **Part N° 22.1056/0**

PROFILE 45 X 45 3G

Part. N° 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	1,952 kg/m
- Length	6 m
- Packing unit	36 m

APPLICATIONS

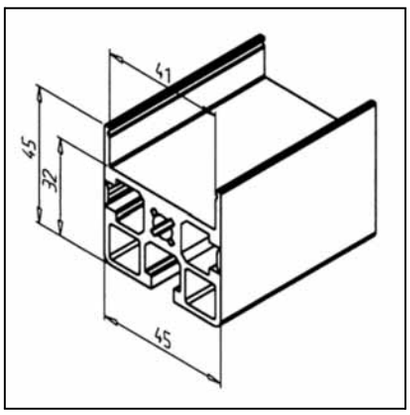
- General engineering structures, particularly for use in the food industry, in medical engineering and for the filling of beverages, where strict hygienic standards are set
- Grooves can be closed with the aluminium cover profile L, **Part N° 20.1021/0**
- On request we offer silicon sealings for profile connections

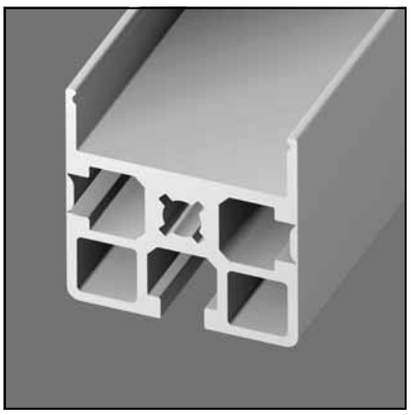
ASSEMBLY

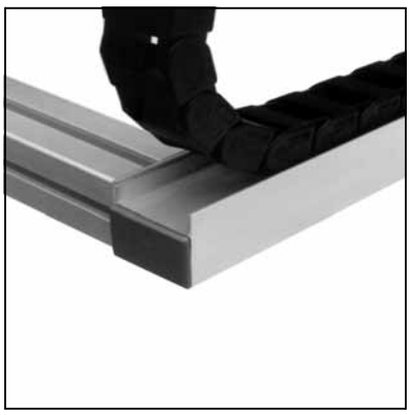
- Angle 25 / 45
- For tightening the MiniTec power-lock fastener, the groove cover must be opened by 30-33 mm at the profile end. This opening is covered by means of the cover plate G **Part N° 22.1056/0**
- The grooves can be opened up to any length with the groove opener **Part N° 26.0815/0**

PROFILE 45 X 45 R

Part. N° 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

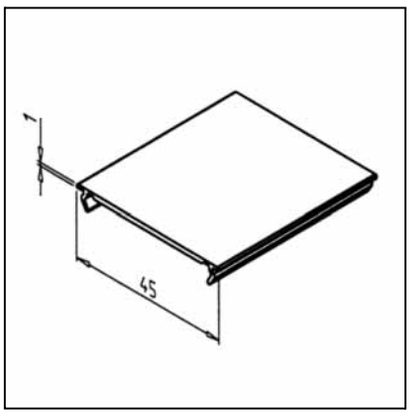
- Combination of constructional element and:
- Cable duct
- Guiding groove for belt conveyor
- Place of deposit
- Guide for cable chain

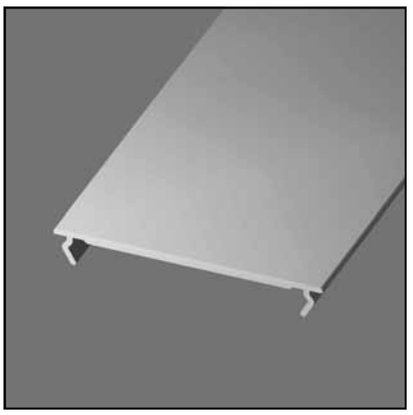
ASSEMBLY

- MiniTec power-lock fastener
- The lateral grooves can be opened up to any length with the groove opener **Part N° 26.0815/0**

COVER 45 X 45 R

Part. N° 20.1037/0





TECHN. DATA / ITEMS SUPPLIED	
- PVC impact resistant, grey	
- Weight	0,110 kg/m
- Length	2 m

APPLICATIONS

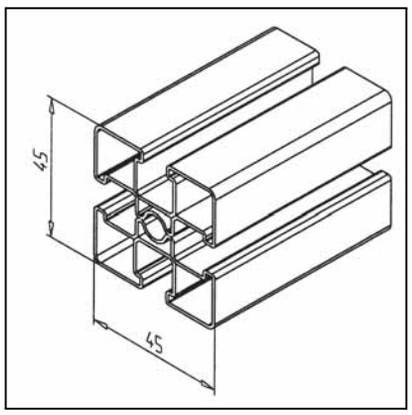
- Covering of profiles 45 x 45 R

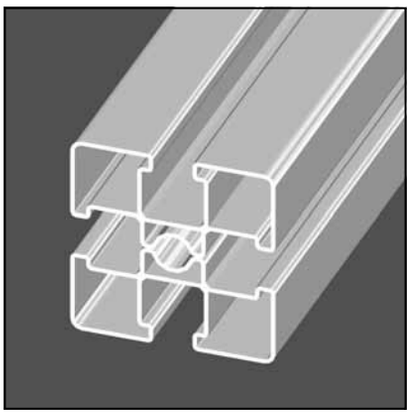
ASSEMBLY

- Cover is fastened by clipping

PROFILE 45 X 45 VA

Part. N° 20.2000/0





TECHN. DATA / ITEMS SUPPLIED	
- Material: WN DIN 1.4301 (X5 CrNi 18-10, SUS 304)	
- Modulus of elasticity:	200000N/mm²
- Ix / Iy	6,47 cm⁴
- Wx / Wy	2,88 cm³
- Weight:	2,759 kg/m
- Lenght:	6 m

APPLICATIONS

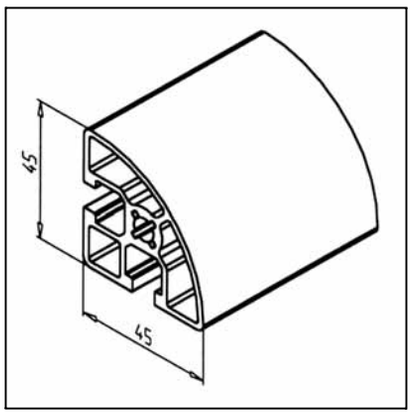
- Drinks- and beverage food Industry
- Outdoor constructions
- Chemical industry
- Pharmaceutical industry
- High temperatures

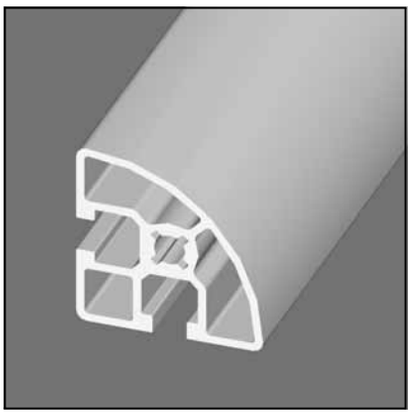
ASSEMBLY

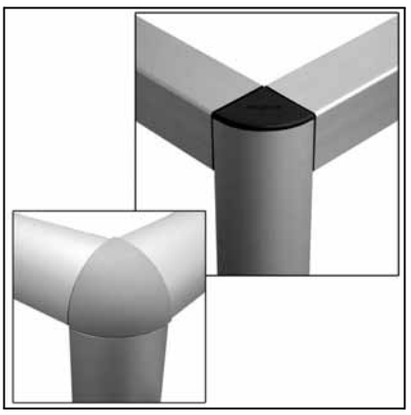
- Power lock fastener H
- Angles
- Screws M8, stainless
- End cap 45 x 45 VA **Part N° 22.1067/5**, see page 63
- Foot VA **Part N° 21.1865/0**, see page 140

PROFILE 45 R 90°

Part. N° 20.1069/0







TECHN. DATA / ITEMS SUPPLIED	
- Ix =	9,123 cm⁴
- Iy =	9,123 cm⁴
- wx =	3,574 cm³
- wy =	3,574 cm³
- Weight	1,478 kg/m
- Length	6 m
- Packing unit	48 m

APPLICATIONS

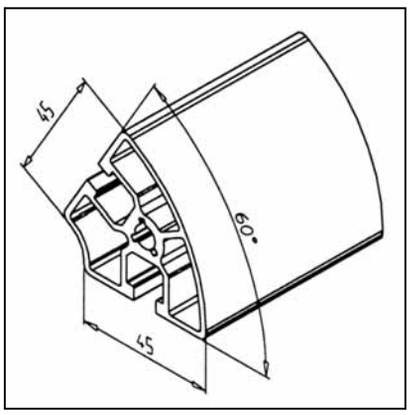
- Light construction
- Tables
- Racks
- Framework constructions

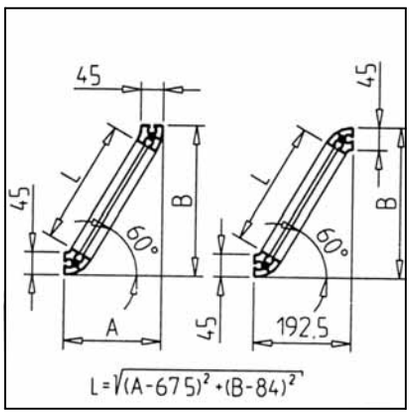
ASSEMBLY

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

PROFILE 45 R 60°

Part. N° 20.1096/0





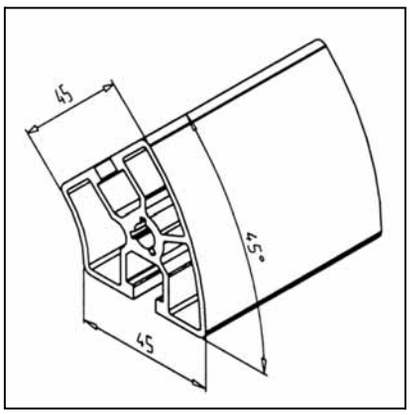
TECHN. DATA / ITEMS SUPPLIED	
- Ix =	11,446 cm⁴
- Iy =	10,280 cm⁴
- wx =	3,667 cm³
- wy =	3,752 cm³
- Weight	1,575 kg/m
- Length	6 m
- Packing unit	48 m

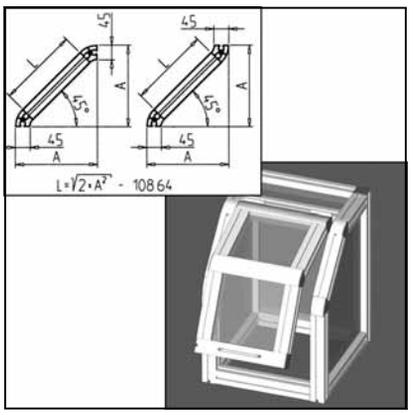
APPLICATIONS
- Cover with angle
- Posts for protection fields

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

PROFILE 45 R 45°

Part. N° 20.1095/0





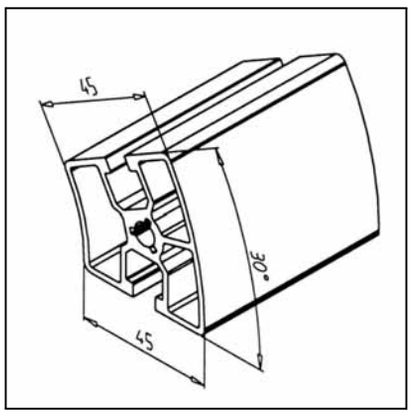
TECHN. DATA / ITEMS SUPPLIED	
- Ix =	12,457 cm⁴
- Iy =	11,296 cm⁴
- wx =	3,976 cm³
- wy =	3,837 cm³
- Weight	1,607 kg/m
- Length	6 m
- Packing unit	48 m

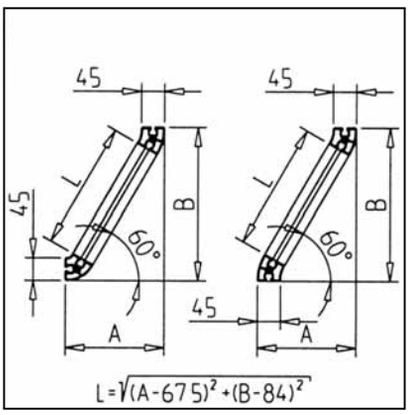
APPLICATIONS
- Cover with angle
- Posts for protection fields

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

PROFILE 45 R 30°

Part. N° 20.1094/0





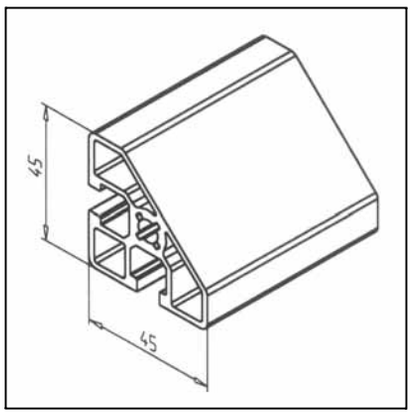
TECHN. DATA / ITEMS SUPPLIED	
- Ix =	12,138 cm⁴
- Iy =	11,006 cm⁴
- wx =	4,018 cm³
- wy =	3,883 cm³
- Weight	1,626 kg/m
- Length	6 m
- Packing unit	48 m

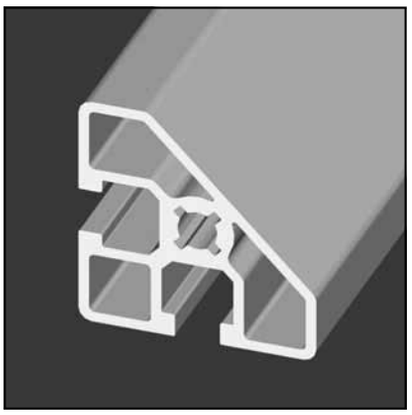
APPLICATIONS
- Cover with angle
- Posts for protection fields

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

PROFILE 45/45°

Part. N° 20.1029/0





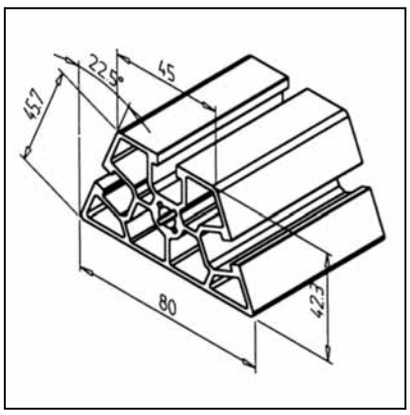
TECHN. DATA / ITEMS SUPPLIED	
- Ix =	8,626 cm⁴
- Iy =	8,626 cm⁴
- wx =	3,315 cm³
- wy =	3,315 cm³
- Weight	1,533 kg/m
- Length	6 m
- Packing unit	48 m

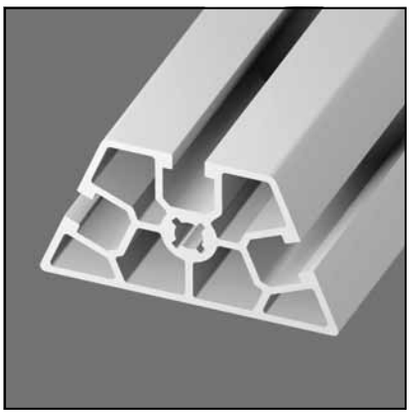
APPLICATIONS
- Light construction
- Tables
- Framework constructions

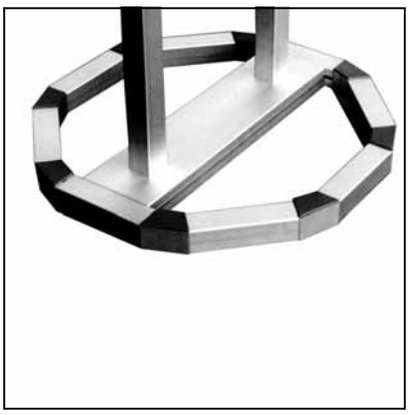
ASSEMBLY
- MiniTec power-lock fastener
- Angle 45 R 90°
- Bolt-fastener
- Angle 45 / 90
- Bolt-fastener

PROFILE 45/22,5°

Part. N° 20.1030/0







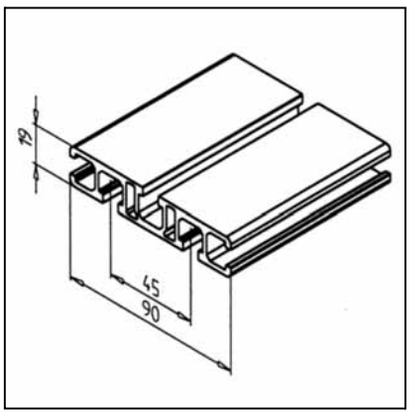
TECHN. DATA / ITEMS SUPPLIED	
- Ix =	14,506 cm⁴
- Iy =	33,432 cm⁴
- wx =	7,934 cm³
- wy =	8,515 cm³
- Weight	2,225 kg/m
- Length	6 m
- Packing unit	36 m

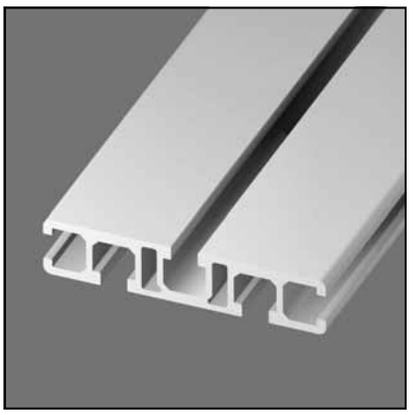
APPLICATIONS
- Guards
- Tables
- Connection of construction elements at an angle of 45°

ASSEMBLY
- MiniTec power-lock fastener
- Mounting angle
- Bolt-fastener

PROFILE 90 X 19

Part. N° 20.1031/0





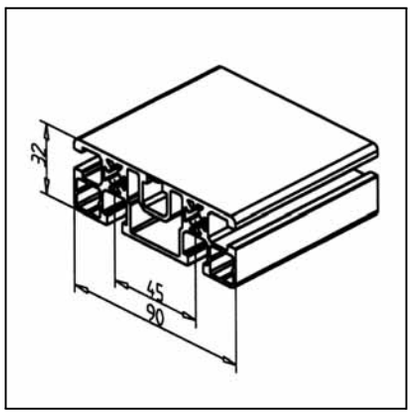
TECHN. DATA / ITEMS SUPPLIED	
- Ix =	3,316 cm⁴
- Iy =	44,948 cm⁴
- wx =	3,345 cm³
- wy =	9,988 cm³
- Weight	1,820 kg/m
- Length	6 m
- Packing unit	48 m

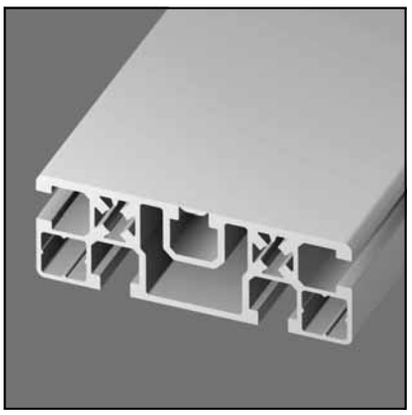
APPLICATIONS
- Bearing plates
- Bearing surfaces
- Slide plate for linear guide
- Plates for floor fastening
- Framework constructions

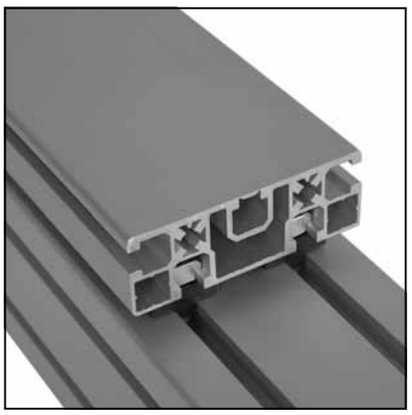
ASSEMBLY
- Bolt-fastener
- Mountig angle

PROFILE 90 X 32 UL

Part. N° 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

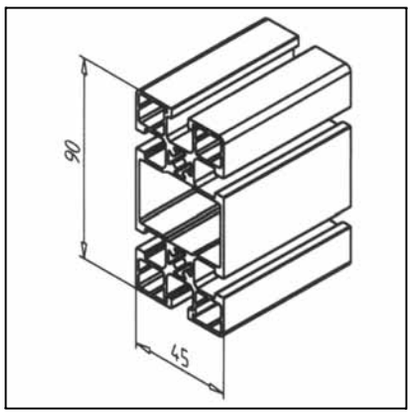
- General constructions
- General weight, optimized engineering structures
- Tables
- Racks
- Guards

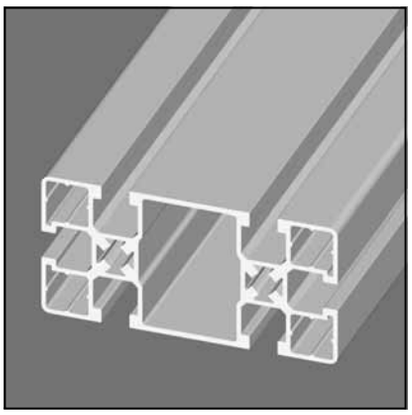
ASSEMBLY

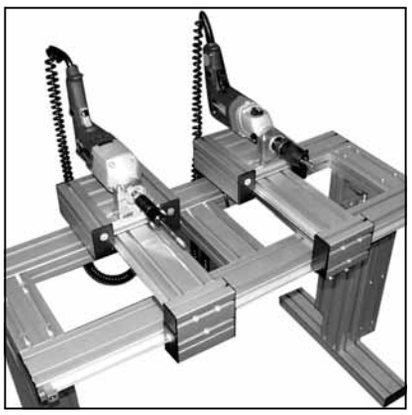
- MiniTec power-lock fastener
- Cross bolt fastener
- Mounting angle
- Screw connector
- The groove on top can be opened at any length by means th groove opener **Part N° 26.0815/0**

PROFILE 45 X 90 UL

Part. N° 20.1067/0







TECHN. DATA / ITEMS SUPPLIED	
- Ix =	73,921 cm^4
- Iy =	19,2 cm^4
- wx =	16,427 cm^3
- wy =	8,530 cm^3
- Weight	2,421 kg/m
- Length	6 m
- Packing unit	24 m

APPLICATIONS

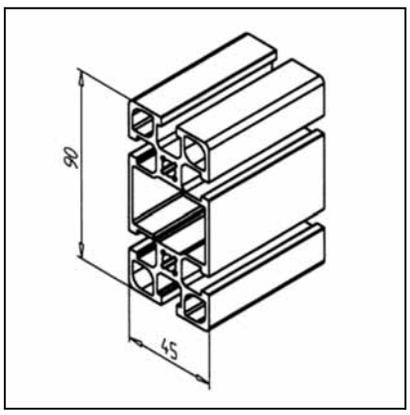
- General weight, optimized engineering structures
- Counterweighted sliding-doors and devices

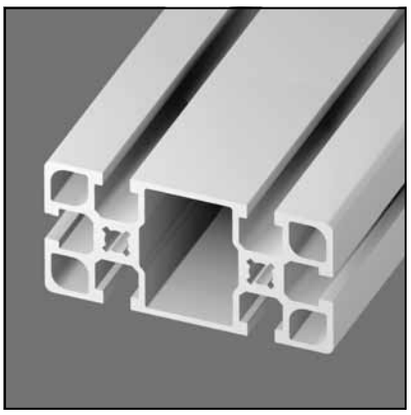
ASSEMBLY

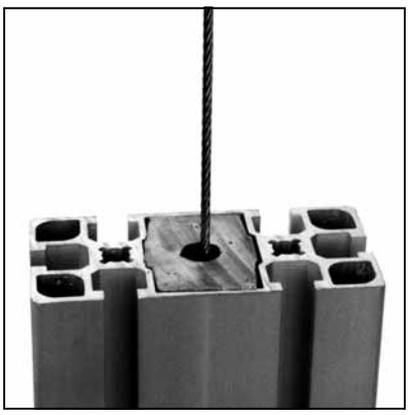
- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90
- Bolt-fastener
- Screw connection

PROFILE 45 X 90 F

Part. N° 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

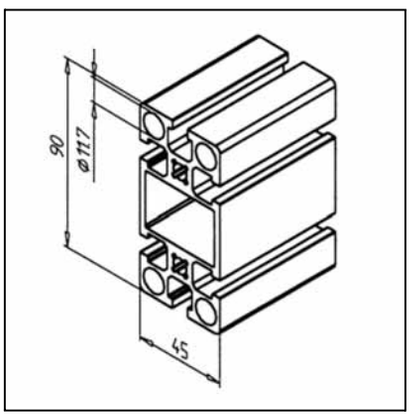
- General constructions
- Counterweighted sliding-doors and devices

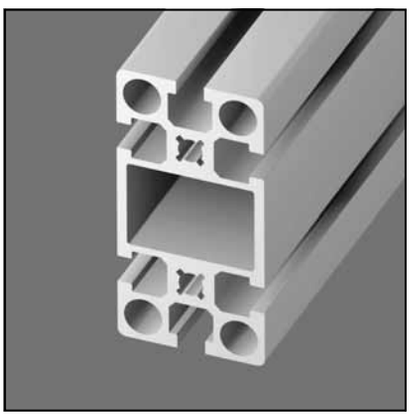
ASSEMBLY

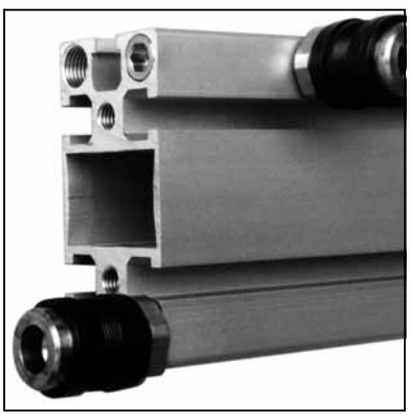
- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90
- Bolt-fastener

PROFILE 45 X 90

Part. N° 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

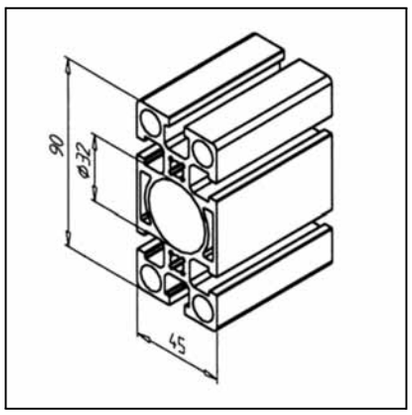
- Universal for general heavy duty construction
- Four cavities for compressed air piping
- Cavity is not suitable for counterweights

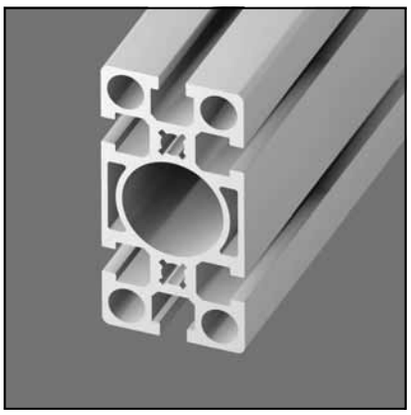
ASSEMBLY

- 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. Wider connecting-bores by use of pneumatic adapting plate

PROFILE 45 X 90 S

Part. N° 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

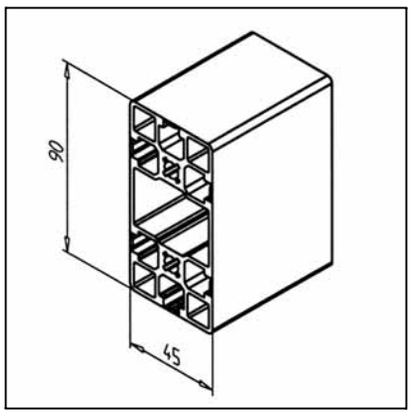
- Universal for general heavy duty constructios
- Linear guides LB
- Linear-guides
- 5 carities for pressed air piping
- Central bore Ø 32 mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders

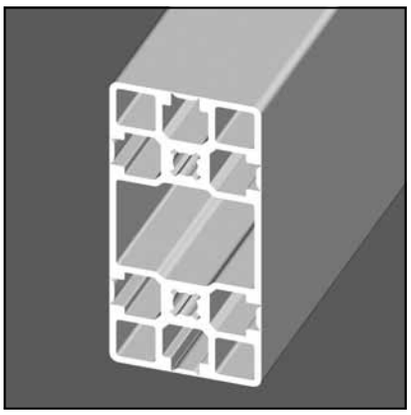
ASSEMBLY

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

PROFILE 45 X 90 G

Part. N° 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

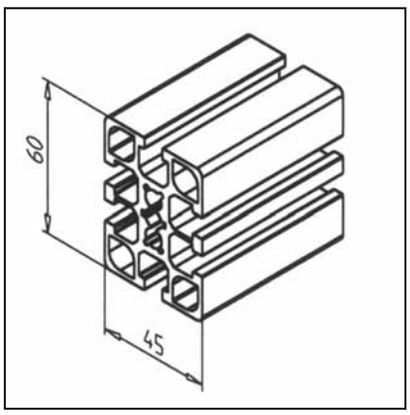
- General engineering structures, particularly for use in the food industry, in medical engineering and for the filling of beverages, where strict hygienic standards are set
- Guidance of inner counterweights in central cavity

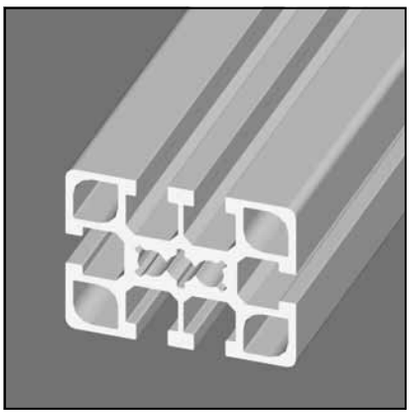
ASSEMBLY

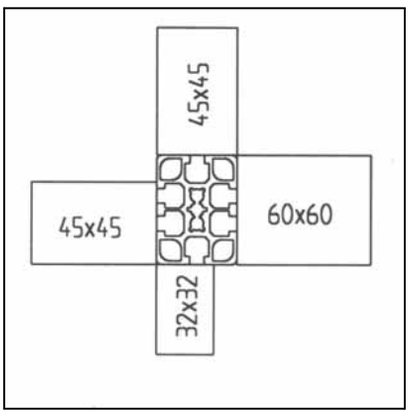
- MiniTec power-lock fastener
- All 6 grooves can be opened up to the length desired
- For series production the groove cover be removed easily and without burr by means of a groove opener **Part N° 26.0815/0**

PROFILE 45 X 60 F

Part. N° 20.1023/0







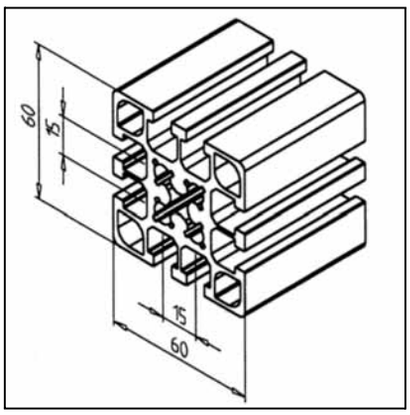
TECHN. DATA / ITEMS SUPPLIED	
- Ix =	32,068 cm⁴
- Iy =	17,587 cm⁴
- wx =	14,232 cm³
- wy =	5,856 cm³
- Weight	2,603 kg/m
- Length	6 m
- Packing unit	24 m

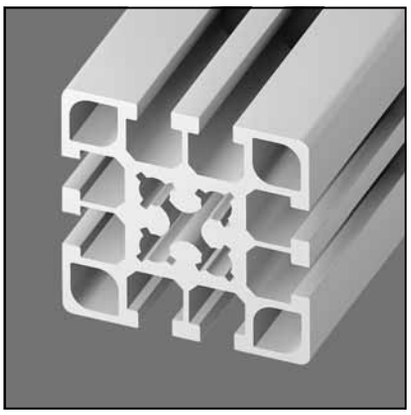
APPLICATIONS
- Universal for general constructions
- Corner post in large guard units
- Compatible with all system profiles

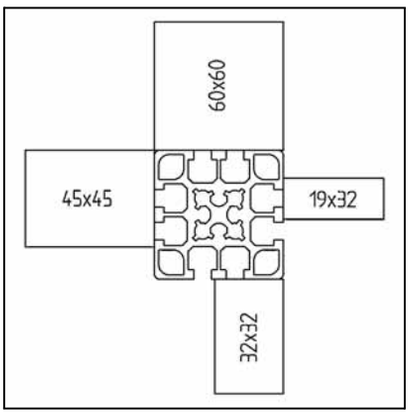
ASSEMBLY
- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90
- Central boring for thread M8

PROFILE 60 X 60 F

Part. N° 20.1049/0







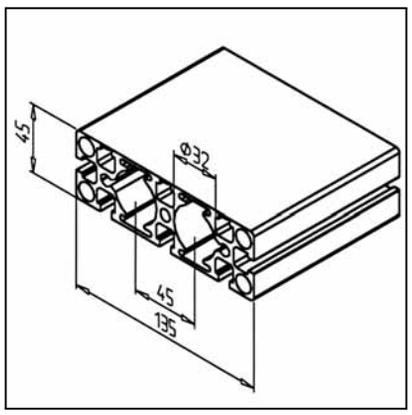
TECHN. DATA / ITEMS SUPPLIED	
- Ix =	40,715 cm⁴
- Iy =	40,715 cm⁴
- wx =	13,571 cm³
- wy =	13,571 cm³
- Weight	3,655 kg/m
- Length	6 m
- Packing unit	24 m

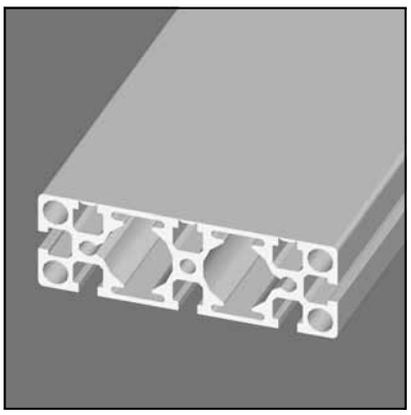
APPLICATIONS
- Universal for general constructions
- Corner post in large guard units
- Compatible with all system profiles

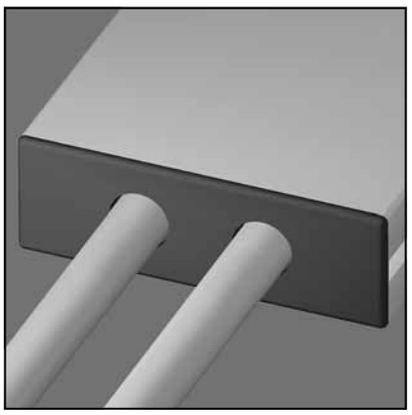
ASSEMBLY
- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90
- Central boring for thread M10

PROFILE 45 X 135 1G

Part. N° 20.1078/0







TECHN. DATA / ITEMS SUPPLIED

- Ix =	359,242 cm^4
- Iy =	47,064 cm^4
- wx =	20,618 cm^3
- wy =	53,221 cm^3
- Weight	5,570 kg/m
- Length	6 m
- Packing unit	12 m

APPLICATIONS

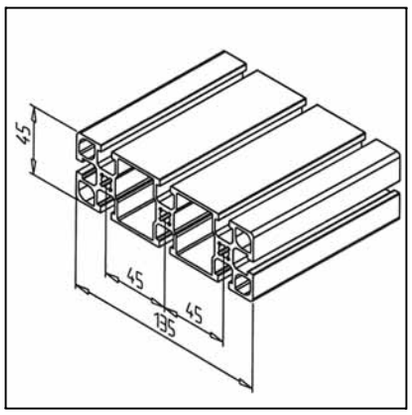
- General engineering structures, particularly for use in the food industry, in medical engineering and for the filling of beverages, where strict hygienic standards are set
- Linear guiding
- Central bore Ø 32 mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or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

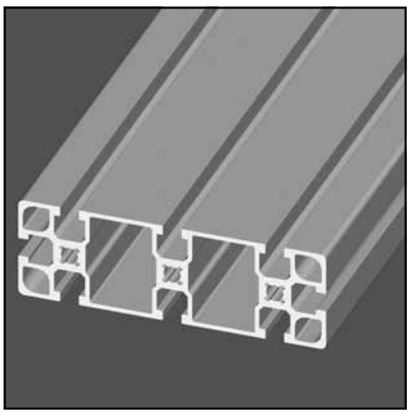
ASSEMBLY

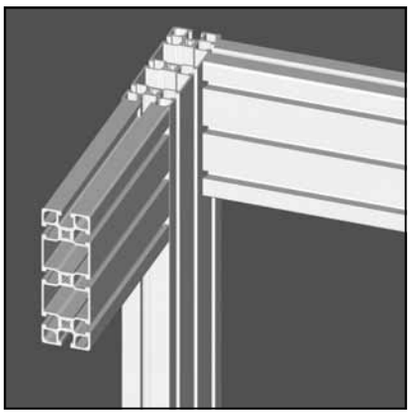
- MiniTec power-lock fastener
- 3 closed grooves can be opened up to the desired length, by means of the tear-off lever **Part N° 26.0815/0**

PROFILE 45 X 135 F

Part. N° 20.1087/0







TECHN. DATA / ITEMS SUPPLIED

- Ix =	34,958 cm^4
- Iy =	34,658 cm^4
- wx =	15,537 cm^3
- wy =	45,609 cm^3
- Weight	4,319 kg/m
- Length	6 m
- Packing unit	12 m

APPLICATIONS

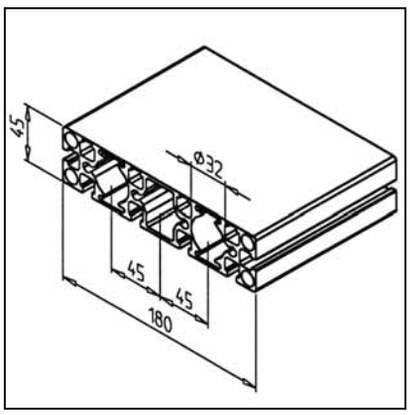
- General constructions
- Counterweighted sliding-doors and devices

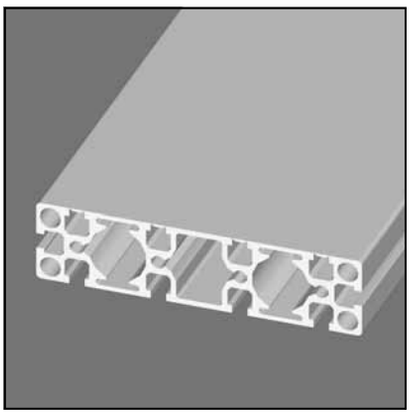
ASSEMBLY

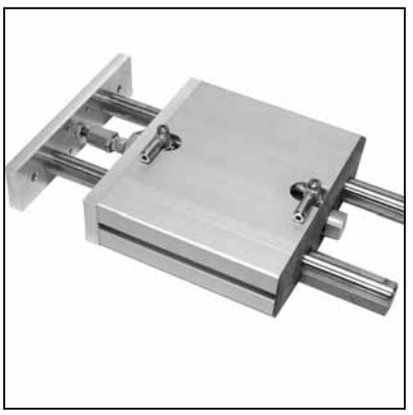
- MiniTec power-lock fastener
- Angle 19 / 25 / 45 / 45 x 90
- Bolt fastener

PROFILE 45 X 180 1G

Part. N° 20.1079/0







TECHN. DATA / ITEMS SUPPLIED	
- Ix =	810,885 cm⁴
- Iy =	61,015 cm⁴
- wx =	90,097 cm³
- wy =	26,704 cm³
- Weight	6,954 kg/m
- Length	6 m
- Packing unit	12 m

APPLICATIONS

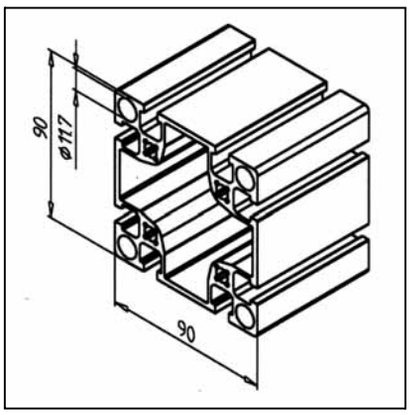
- General engineering structures, particularly for use in the food industry, in medical engineering and for the filling of beverages, where strict hygienic standards are set
- Linear guiding
- Central bore Ø 32 mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or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

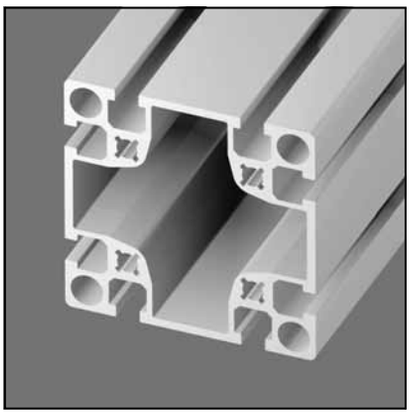
ASSEMBLY

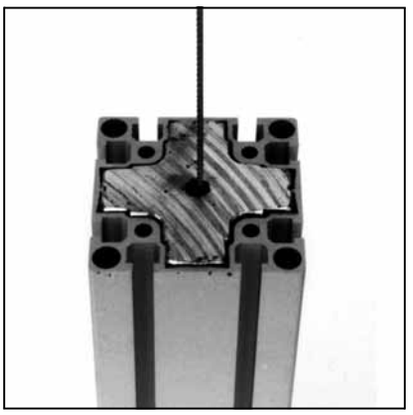
- MiniTec power-lock fastener
- 4 closed grooves can be opened up to the desired length, by means of the tear-off lever **Part N° 26.0815/0**

PROFILE 90 X 90 L

Part. N° 20.1010/0







TECHN. DATA / ITEMS SUPPLIED	
- Ix =	186,260 cm⁴
- Iy =	186,260 cm⁴
- wx =	41,391 cm³
- wy =	41,391 cm³
- Weight	5,222 kg/m
- Length	6 m
- Packing unit	12 m

APPLICATIONS

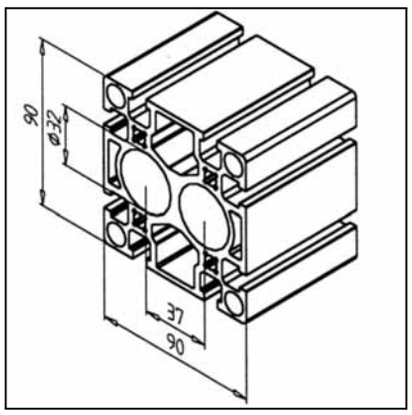
- General heavy duty applications
- The central cavity is constructed for guiding counterweights

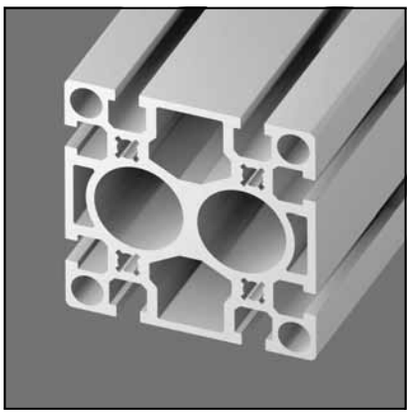
ASSEMBLY

- MiniTec power-lock fastener
- Angel 45 or 90
- Screw connection
- Bolt fastener

PROFILE 90 X 90 S

Part. N° 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

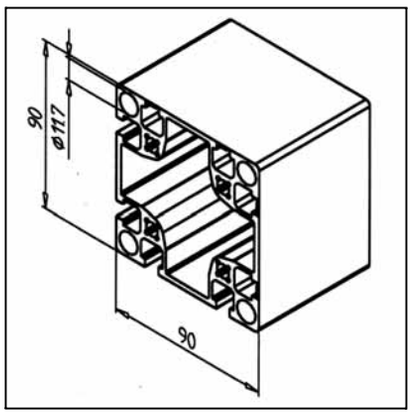
- Universal for general heavy duty constructions
- Linear guiding
- Central bore Ø 32 mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic dd-in cylinders

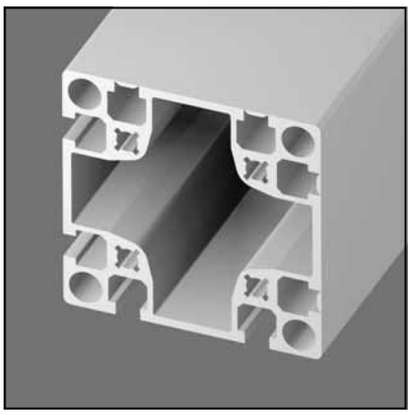
ASSEMBLY

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

PROFILE 90 X 90 2G

Part. N° 20.1044/0





TECHN. DATA / ITEMS SUPPLIED	
- Ix =	191,320 cm^4
- Iy =	191,324 cm^4
- wx =	42,083 cm^3
- wy =	42,084 cm^3
- Weight	5,623 kg/m
- Length	6 m
- Packing unit	12 m

APPLICATIONS

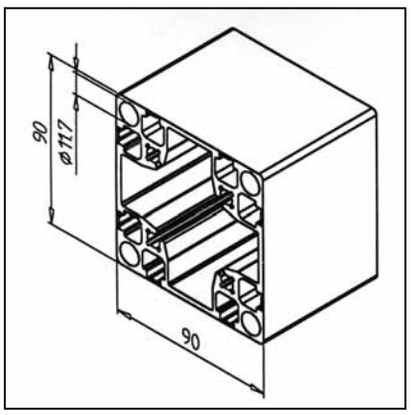
- Grooves can be teared off
- General engineering structures, particulary for use in the food industry, in medical engineering and for the filling of beverages, where strict hygienic standards are set
- The central cavity is constructed for guiding counterweights

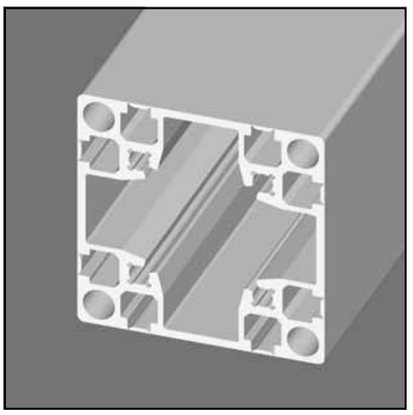
ASSEMBLY

- MiniTec power-lock fastener
- 4 closed grooves can be opened up to the desired length, by means of the tear-off lever **Part N° 26.0815/0**

PROFILE 90 X 90 G

Part. N° 20.1082/0





TECHN. DATA / ITEMS SUPPLIED

- Ix =	195,271 cm⁴
- Iy =	195,271 cm⁴
- wx =	43,393 cm³
- wy =	43,393 cm³
- Weight	5,329 kg/m
- Length	6 m
- Packing unit	12 m

APPLICATIONS

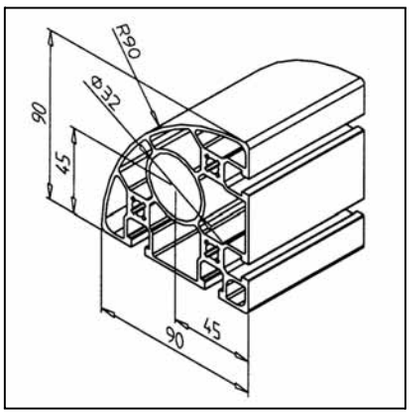
- Grooves can be teared off
- General engineering structures, particularly for use in the food industry, in medical engineering and for the filling of beverages, where strict hygienic standards are set
- The central cavity is constructed for guiding counterweights

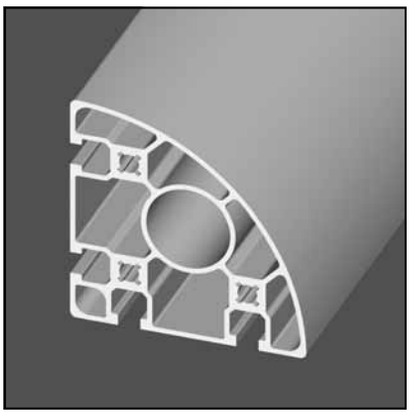
ASSEMBLY

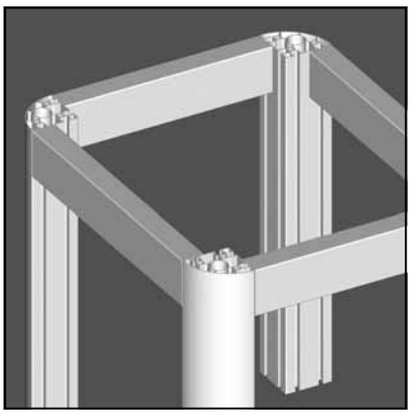
- MiniTec power-lock fastener
- 8 closed grooves can be opened up to the desired length, by means of the tear-off lever **Part N° 26.0815/0**

PROFILE 90 R 90°

Part. N° 20.1091/0







TECHN. DATA / ITEMS SUPPLIED

- Ix =	113,389 cm⁴
- Iy =	113,389 cm⁴
- wx =	21,874 cm³
- wy =	21,874 cm³
- Weight	4,265 kg/m
- Length	6 m
- Packing unit	12 m

APPLICATIONS

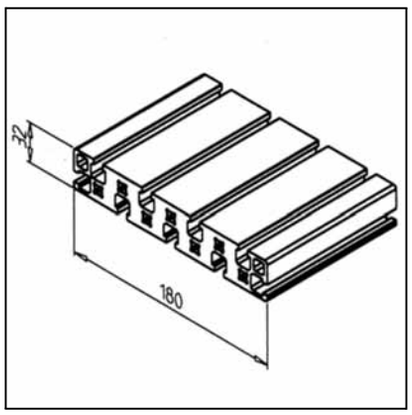
- Assembly
- General constructions

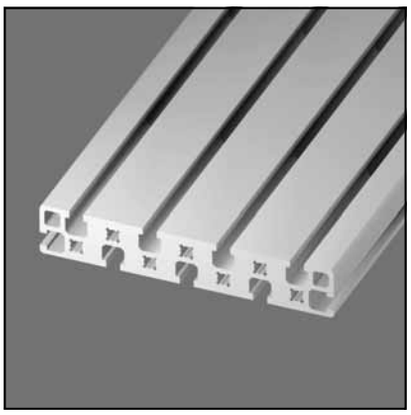
ASSEMBLY

- MiniTec power-lock fastener
- Angle
- Cross bolt fastener
- Bolt fastener
- End cap, **Part. N° 22.1021/1**
- Base and transport plate M10 - M20

PROFILE 32 X 180

Part. N° 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

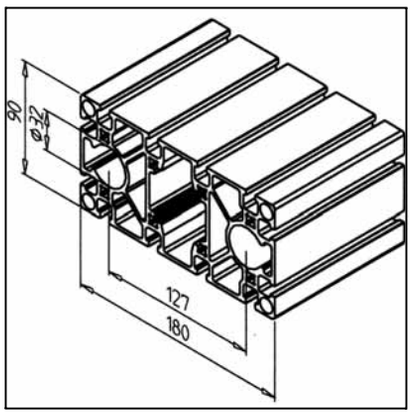
- Slides for MiniTec- linear system LR
- Clamping surfaces
- Bottom-plates
- Heavy duty constructions

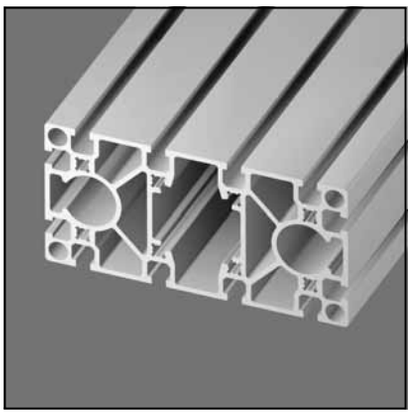
ASSEMBLY

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

PROFILE 90 X 180 S

Part. N° 20.1013/0





TECHN. DATA / ITEMS SUPPLIED	
- Ix =	1421,865 cm^4
- Iy =	376,784 cm^4
- wx =	157,983 cm^3
- wy =	83,729 cm^3
- Weight	11,482 kg/m
- Length	6 m
- Packing unit	6 m

APPLICATIONS

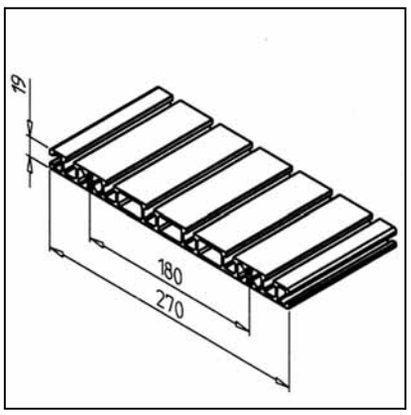
- Universal for general heavy duty constructions
- Linear guiding LB as slide
- Central bore Ø 32 mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic dd-in cylinders

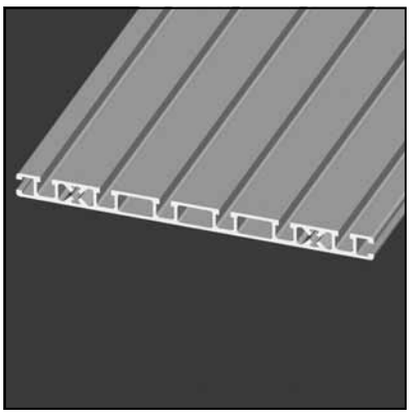
ASSEMBLY

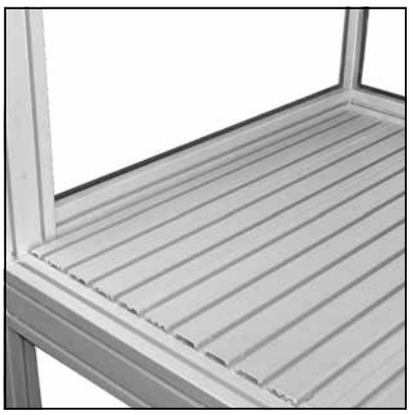
- MiniTec power-lock fastener
- Angle 45 or 90
- Screw connection

PROFILE 270 X 19

Part. N° 20.1077/0







TECHN. DATA / ITEMS SUPPLIED	
- Ix =	10,348 cm⁴
- Iy =	1352,197 cm⁴
- wx =	10,167 cm³
- wy =	100,162 cm³
- Weight	5,612 kg/m
- Length	6 m
- Packing unit	18 m

APPLICATIONS

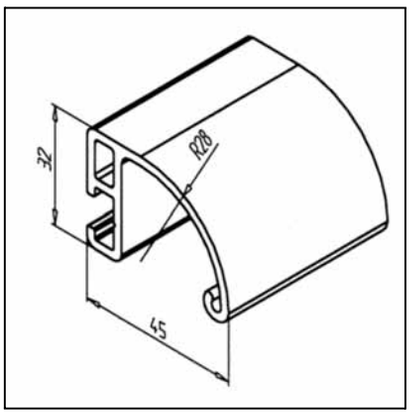
- Table tops
- Workstations
- Didactie installations i.e. pneumatic, electronics, automatic-control
- Demonstration units

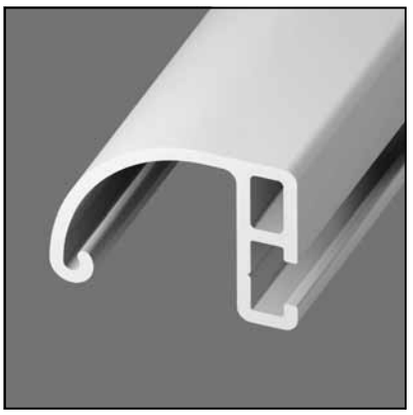
ASSEMBLY

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

HANDLE PROFILE

Part. N° 20.1045/0





TECHN. DATA / ITEMS SUPPLIED	
- Ix =	3,531 cm⁴
- Iy =	7,654 cm⁴
- wx =	1,985 cm³
- wy =	2,856 cm³
- Weight	0,890 kg/m
- Length	6 m
- Packing unit	60 m

APPLICATIONS

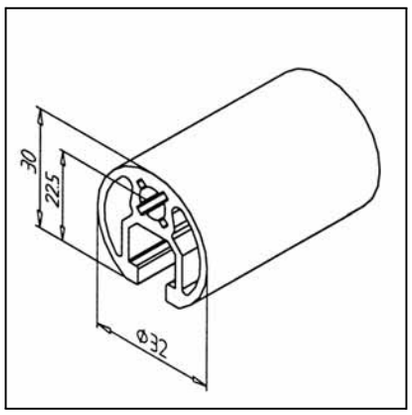
- Handles of different lengths
- Edges
- Table edges
- Cover ledge for cable, pneumatic conducts

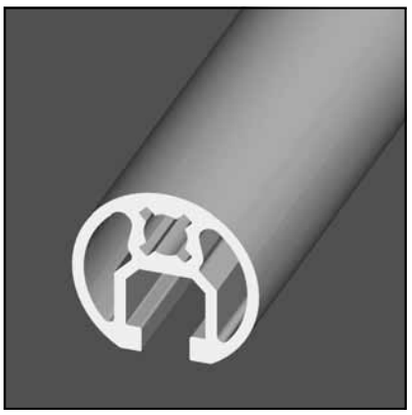
ASSEMBLY

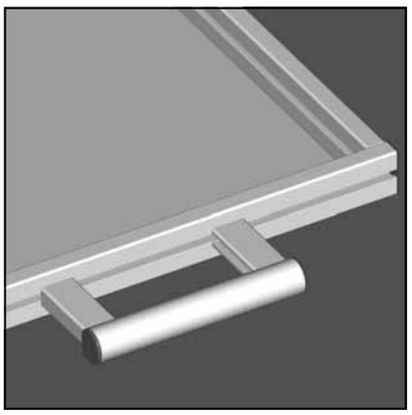
- Screw connection
- Mounting angle
- Lateral cover with end caps left **Part N° 22.1055/0** and right **Part N° 22.1054/0**

HANDLE PROFILE 32

Part. N° 20.1088/0







TECHN. DATA / ITEMS SUPPLIED	
- Ix =	2,601 cm^4
- Iy =	2,636 cm^4
- wx =	1,682 cm^4
- wy =	1,649 cm^4
- Weight	0,911 kg
- Length	6 m
- Packing unit	84 m

APPLICATIONS

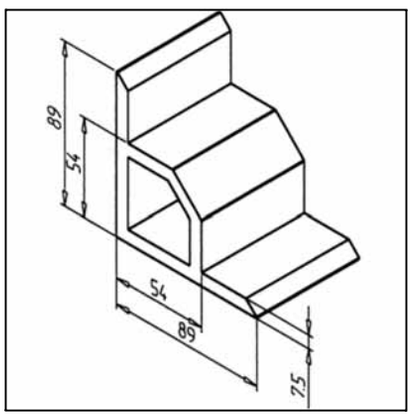
- Handles of different lengths for doors, drawer, handrails
- Edging of panel elements or posters up to 8 mm
- Horizontal profile for fixing of small roller conveyors

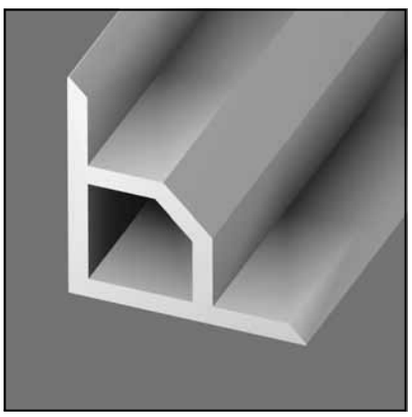
ASSEMBLY

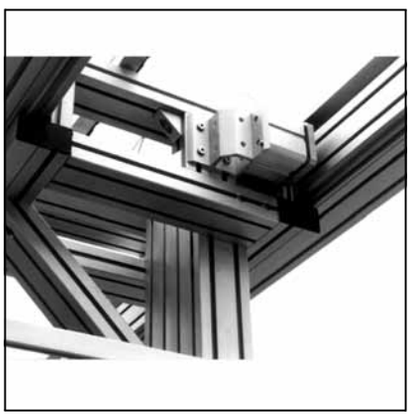
- MiniTec power lock fastener
- Angle 19
- Bolt fastener
- Screw connection
- Lateral cover with end cap for handle profile 32

ANGULAR PROFILE 89 X 89

Part. N° 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	6 m
- Packing unit	72 m

APPLICATIONS

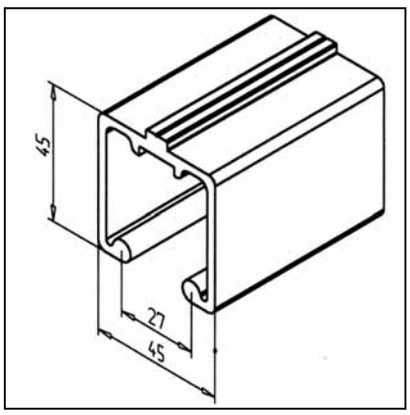
- Consoles
- Supports
- Material for special mounting angles

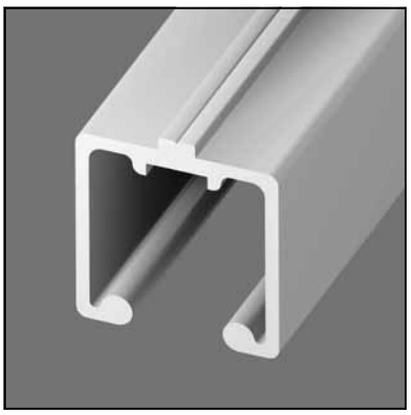
ASSEMBLY

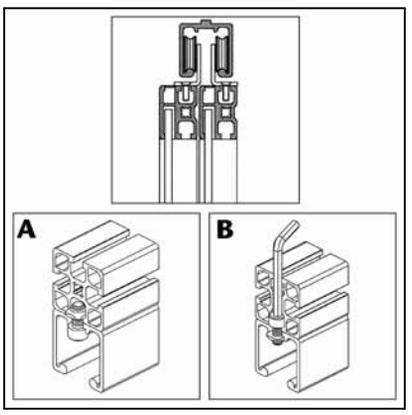
- Screws M8 x 20 and square nuts M8

SLIDING DOOR PROFILE

Part. N° 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	5 m
- Packing unit	40 m

APPLICATIONS

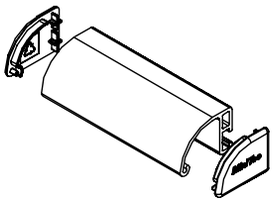
- Two wing sliding doors
- One wing sliding doors

ASSEMBLY

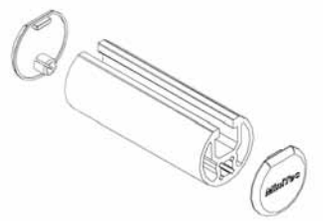
- Drill Ø 5 mm holes in centering groove; bore pitch: 250 - 400 mm depending on the load
- A) Position M8 F square nuts in the supporting profile and fasten the sliding rail profile with M8 x 25 cap screw
- B) Drill holes or step holes in the supporting profile and insert the square nuts in the sliding profile; the nuts are secured against torsion

END CAPS

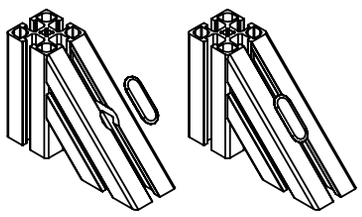
All end caps are non-aging and oil-resistent ABS, grey, thickness 3 mm. The end caps are also available in black on demand. For cut-off face covering of profiles. No deburring necessary.



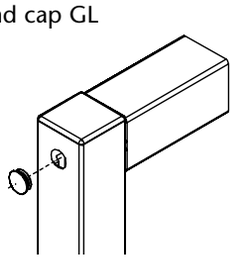
End cap handle profile



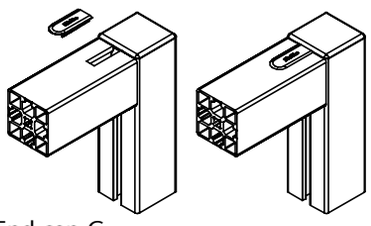
End cap handle profile 32



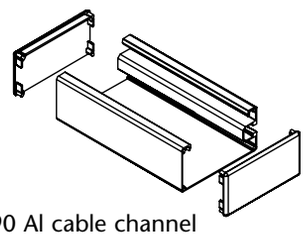
End cap GL



Lamellar plug



End cap G



90 Al cable channel

For profile:	Part no. Profile	Part no. End cap
19 x 32	20.1000/0	22.1060/1
19 x 45	20.1001/0	22.1064/1
45 x 19	20.1012/0	22.1063/1
32 x 32 UL, F	-	22.1062/1
Clamp profile 32 x 32	20.1068/0	22.1032/1
		22.1032/3, with drilling
Handle profile 32	20.1088/0	22.1023/1
45 x 32 UL, F	-	22.1065/1
Clamp profile 45 x 32	20.1053/0	22.1046/1
		22.1046/3, with drilling
45 x 45, UL, F, G, 2G, 3G	-	22.1067/1
45 x 45 R	20.1046/0	22.1065/1
45 R 90°	20.1069/0	22.1034/1
45/45°	20.1029/0	22.1051/1
45/22,5°	20.1030/0	22.1052/1
90 x 19	20.1031/0	22.1053/1
90 x 32 UL	20.1066/0	22.1061/1
45 x 90, UL, F, S, G	-	22.1068/1
45 x 60 F	20.1023/0	22.1058/1
60 x 60 F	20.1049/0	22.1057/1
45 x 135 G	20.1024/0	22.1049/1
45 x 180 G	20.1026/0	22.1048/1
90 x 90 L, S, 2G	-	22.1069/1
32 x 180	20.1016/0	22.1059/1
90 x 180 S	20.1013/0	2 x 22.1069/1
Handle profile right	20.1045/0	22.1054/0
Handle profile left	20.1045/0	22.1055/0
Conduit 90 Al	20.1056/0	22.1045/0
90 R 90°	20.1091/0	22.1021/1

Designation		Part no. End cap
End cap G	(PA 6)	22.1056/1
End cap GL	(PA 6)	22.1208/1
Lamellar plug 7	(PE)	22.1200/1
Lamellar plug 9	(PE)	22.1201/1
Lamellar plug 15	(PE)	22.1202/1

End cap Aluminium

Designation	Part no. End cap
End cap 45 x 45 Al	22.1067/2
End cap 45 x 90 Al	22.1068/2
End cap 19 x 45 Al	22.1064/2

(End cap AL, anodized, thickness: 2,5 mm, without screw; suitable screw: countersunk screw M8 x 20)

End cap stainless steel

Designation	Part no. End cap
End cap 45 x 45 AV	22.1067/5

(End cap VA, stainless steel, thickness: 5 mm, without screw; suitable screw: countersunk screw VA M8 x 16)

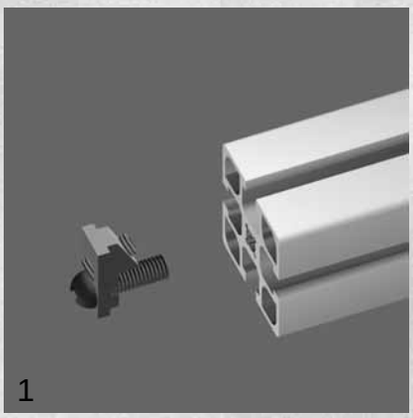
NOTES...

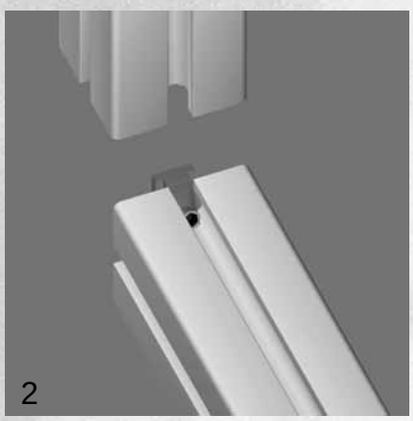
FASTENING ELEMENTS

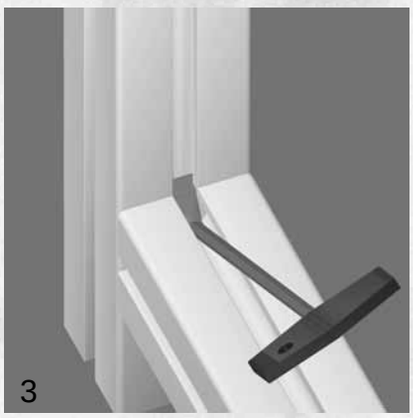
MINITEC - POWER LOCK FASTENER

Applications Extremely strong power-lock connection. Accurate location of the profiles, integrated mounting- aid, moveable, low-cost due to minimal processing. Can be used for all types of constructions.

Assembly For direct self-tapping of screw M8 into core bore or processing by using a thread former







Assembly

1 Screw the fastener by hand into the end of the profile 1.
2 Bring 2nd profile to the required position.
3 Tighten the set-screw M8 with hexagon key 4 A/F with T-handle. Recommended locking torque: ~12 Nm

Advantages

- The groove of the profile connection remains free for panels, etc.
- The connection is invisible from outside.
- Subsequently easily adjustable
- Power-locked in correct position
- Static load: 6000 N (UL profile: 4000 N)
- Easy construction of cross-joints
- Electrically conductive connection

Variants

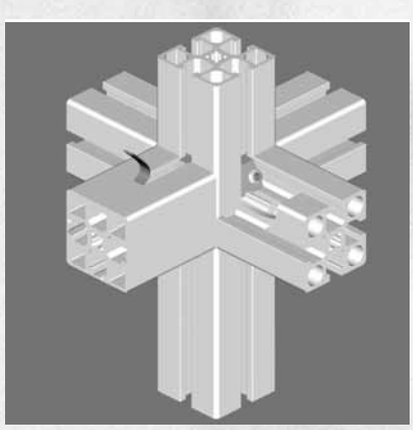
Power lock fastener(standard):
Part N° 21.1018/0
For profile connections without special requirements. Profile needs to be tapped (thread M8).

Power lock fastener SF:
Part N° 21.0818/0
For profile connections without special requirements. With self-cutting screw, so tapping is not necessary.

Power lock fastener ESD:
Part N° 21.1393/0
For profile connections that need to be electrically conducting. Profile needs to be tapped (thread M8).

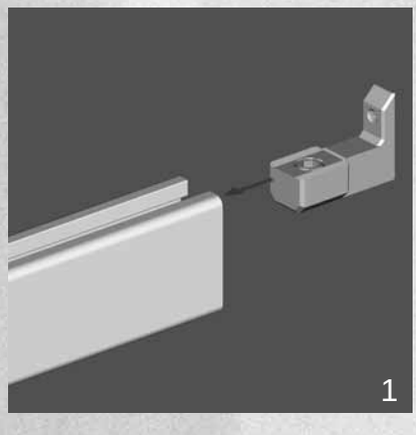
Power lock fastener ESD SF:
Part N° 21.0810/0
For profile connections that need to be electrically conducting. With self-cutting screw, so tapping is not necessary.

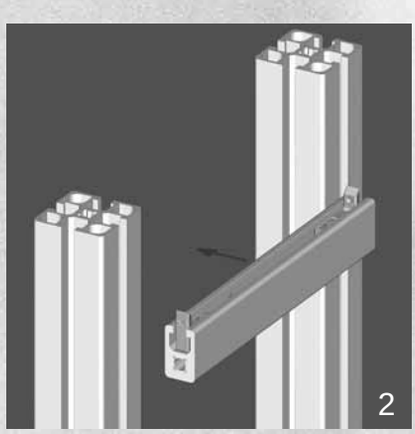
Power lock fastener H:
Part N° 21.1018/1
For corrosion resistant profile connections. Profile needs to be tapped (thread M8).

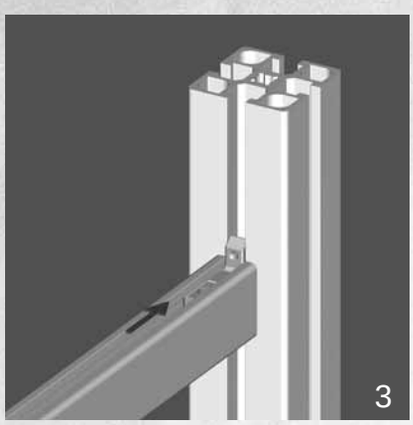


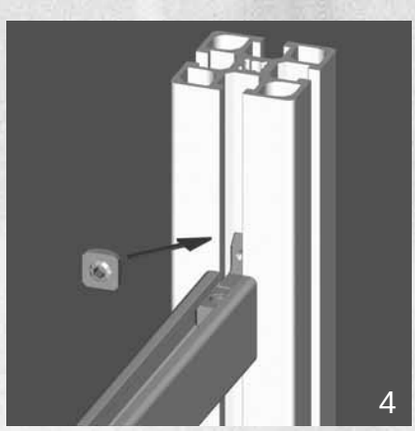
MINITEC - POWER-LOCK FASTENER N

Applications For subsequent insert of profiles in existing frames







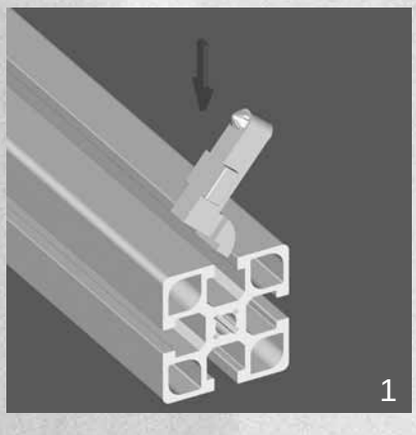


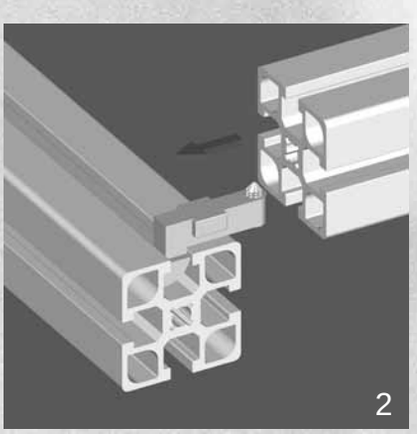
Assembly

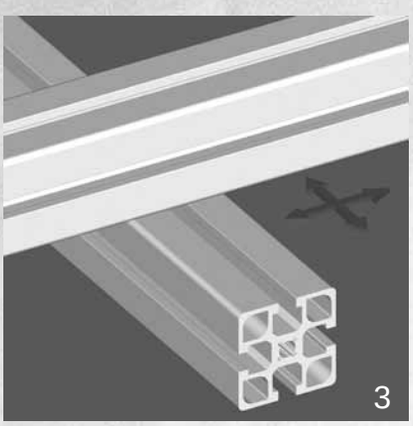
1. Insert Power-lock fastener N into profile
2. Set profile in the required position
3. Insert fastener in the existing profile
4. Slide nut over the L-shape end of the fastener and tighten with hex-key. Than tighten set screw (both fastener 10 Nm).

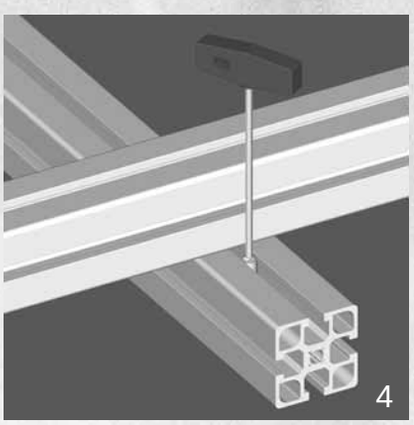
MINITEC - CROSS-CONNECTOR

Applications For the retrospective installation of profiles in existing constructions









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

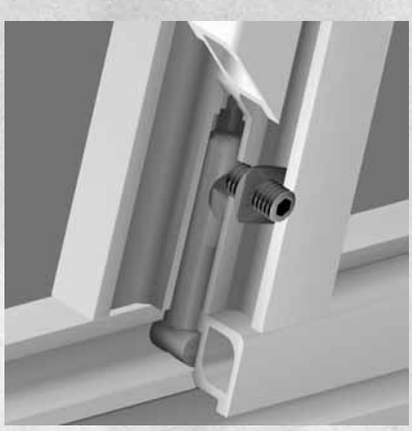
MITRE CONNECTIONS

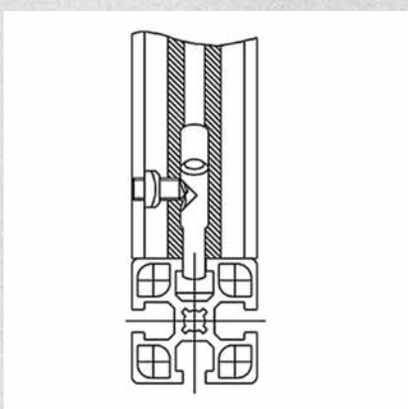
Mitre connector N

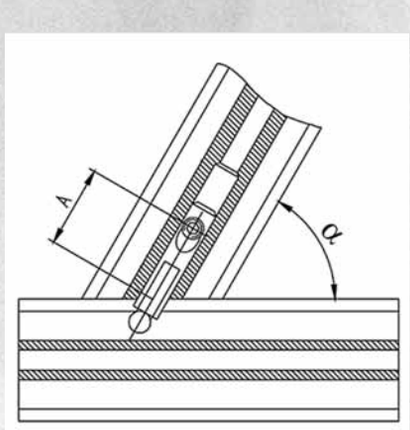
Drill Ø 10.2 mm bore in the profile core bore. Drill Ø 8.2 bore depending on the angle and at distance A from the profile end (see table). Insert the mitre connector in the open profile end, position the M8 square nut with the setscrew and tighten it.

Use drilling jig for mitre connector N, Part N° 26.1060/0.

Angle α	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°
Distance A (mm)	21	24	26	28	29	30	30.5	31	31.5	32	32	32	32



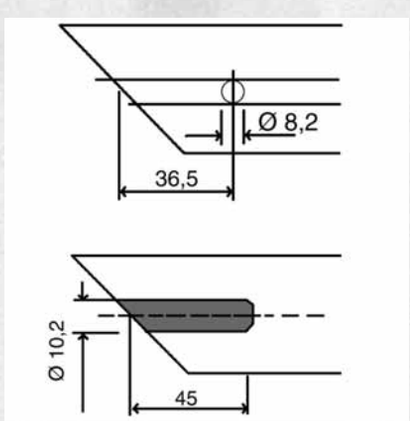


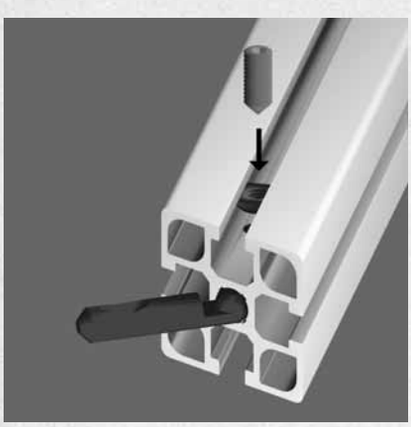


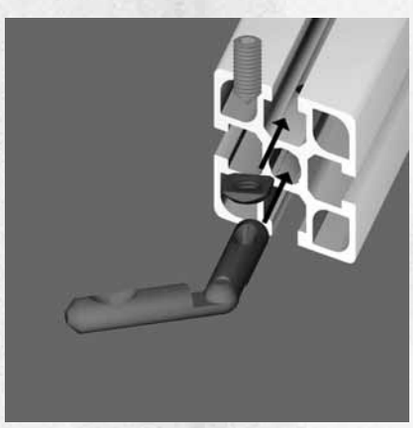
Mitre connector

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 setscrew, and tighten it.

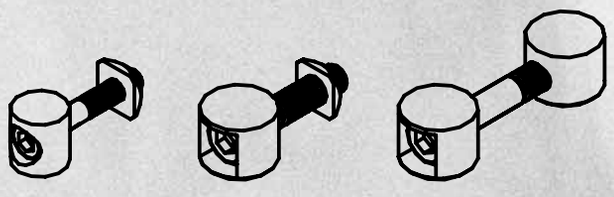
Use drilling jig for mitre connector, Part N° 26.1050/0.







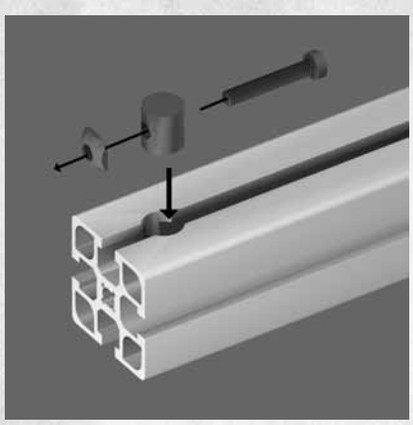
BOLT AND BUTT FASTENER

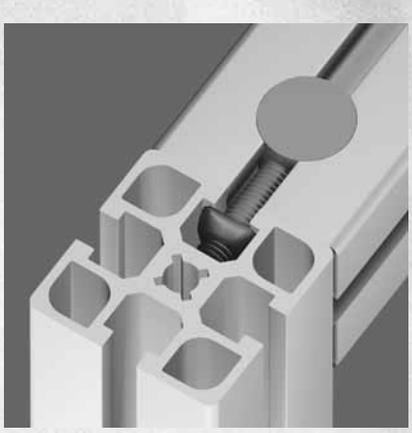


Application Subsequent assembly of profiles into existing frames, extension of profiles.

Processing Step drilling Ø 7 / Ø 20 mm, resp. Ø 9 / Ø 15 mm depth: 16 mm, position: middle of the groove, 20 mm from profile end.

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





Assembly

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 thightening with L-key 5 A/F.

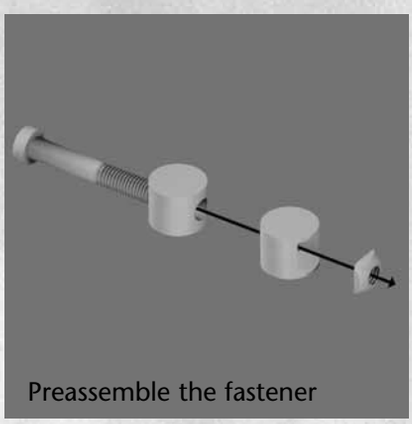
- Recommended locking torque: 15 Nm
- Static load: 3500 N

BUTT FASTENER

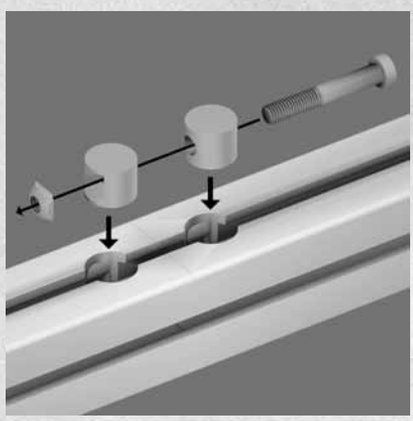
Butt Fastener

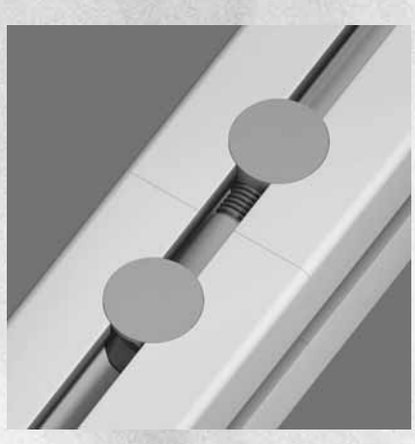
Insert the fastener into the bore holes Ø 7 x 20 mm. Tighten the fastener with L-key 5 A/F.

- Recommended locking torque: 15 Nm



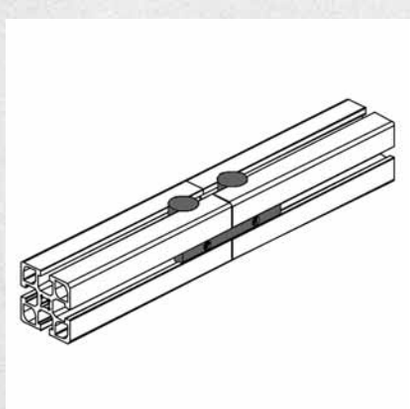
Preassemble the fastener

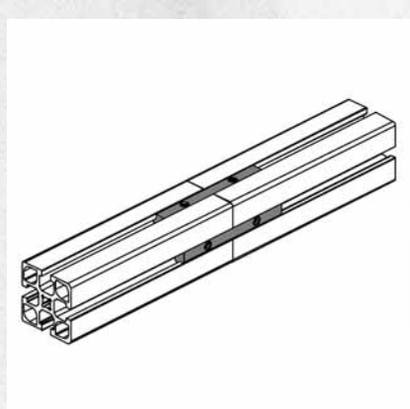




T-Slot Bars

Profile connection with steel t-slot bars.
You can achieve optimum strength by combining the two extension methods.

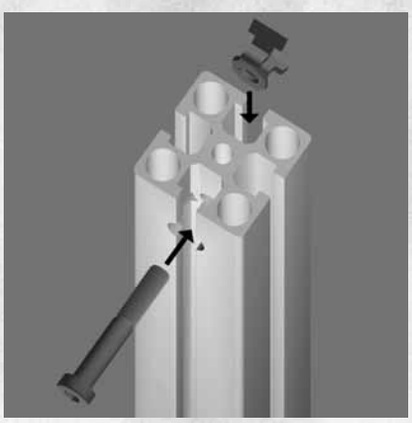


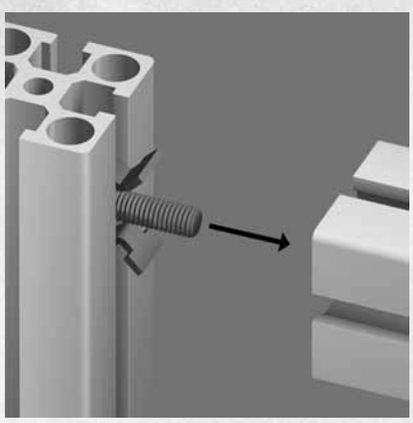


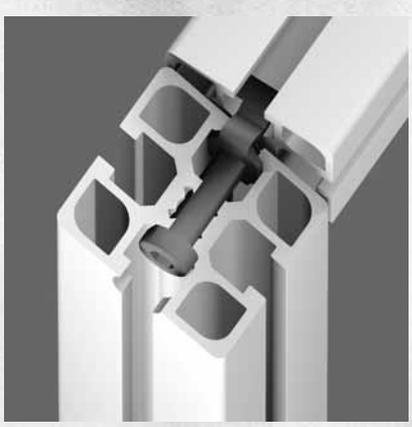
SCREW CONNECTION

Application Connections which must be secured against dislocation.

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







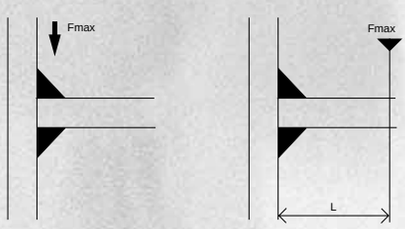
Assembly

- Form the tread M8 with thread former
- Drill the through hole bore 9 x 15 at the position where the connection is required.
- Insert the position fixing element and the screw.
- Tighten the screw with hexagon key 5 A/F

- Definitely secured against dislocation
- Static load: 18000 N
- Recommended locking torque: 20 Nm

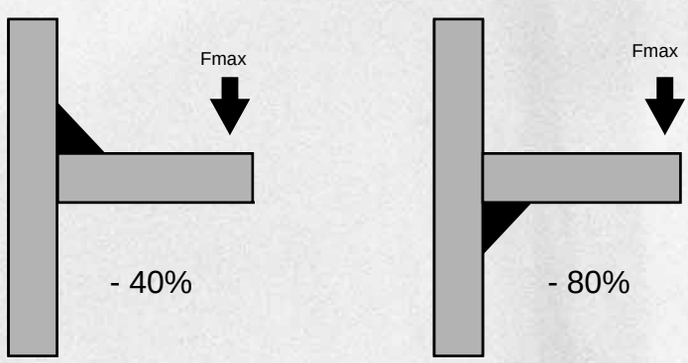
MOUNTING ANGLES

- None processing
- Suitable for subsequent mounting of profiles into existing frames
- Adjustable



Load Capacity:	Angle 19:	2 screws	1.200 N	400 Nm
	Angle 25:	2 screws	1.200 N	400 Nm
	Angle 45:	2 screws	1.200 N	400 Nm
	Angle 45 x 90:	4 screws	2.400 N	800 Nm
	Angle 90:	8 screws	4.800 N	1.600 Nm

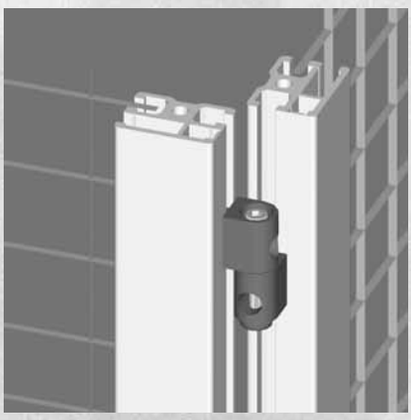
These values are valid only for angles mounted in pairs (up and downside as shown in the pictures).
If used one-sided, the load reduces as follows:



Assembly

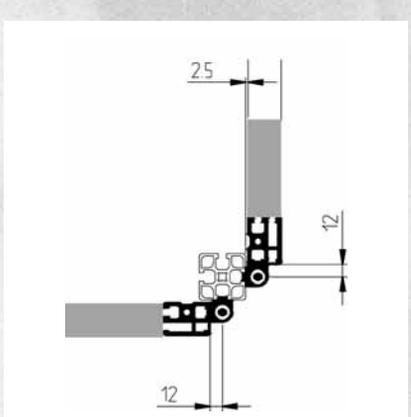
1. Preassemble the angle with necessary screws and nuts M8.
2. Fix the angle slightly at the vertical profile in the desired position.
3. Insert the horizontal profile and tighten all screws.
   Recommended locking torque: 20 Nm

GUARD UNIT WITH ADJUSTABLE FIXING ANGLE

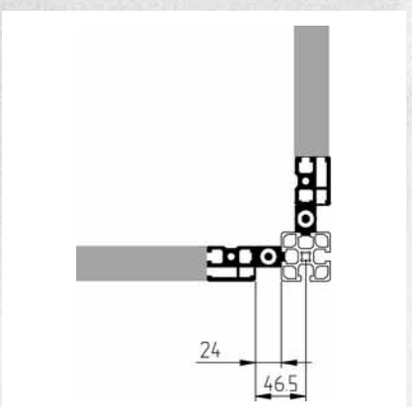


For fixing of MiniTec-aluminium profile guard units and erection of protective guard units at any angle.

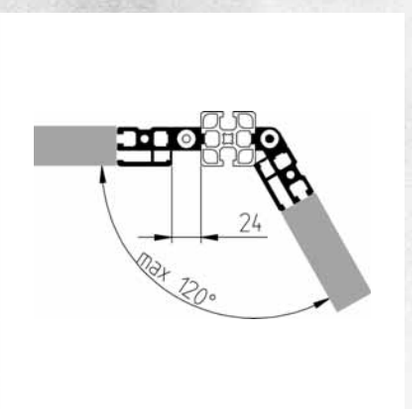
Assembly options:



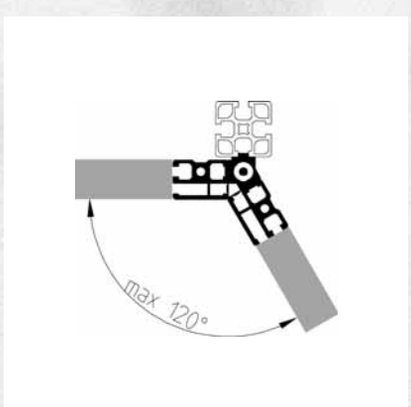
Without gap between guard unit and post



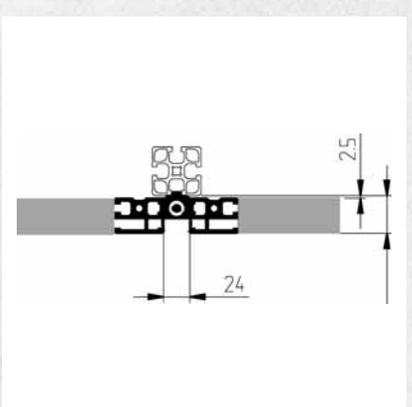
24 mm gap between guard unit and post



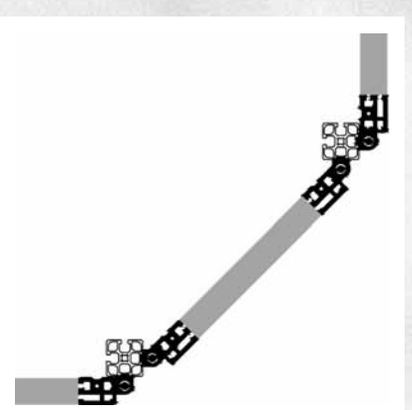
24 mm gap between guard unit and post



No gap between guard unit and post

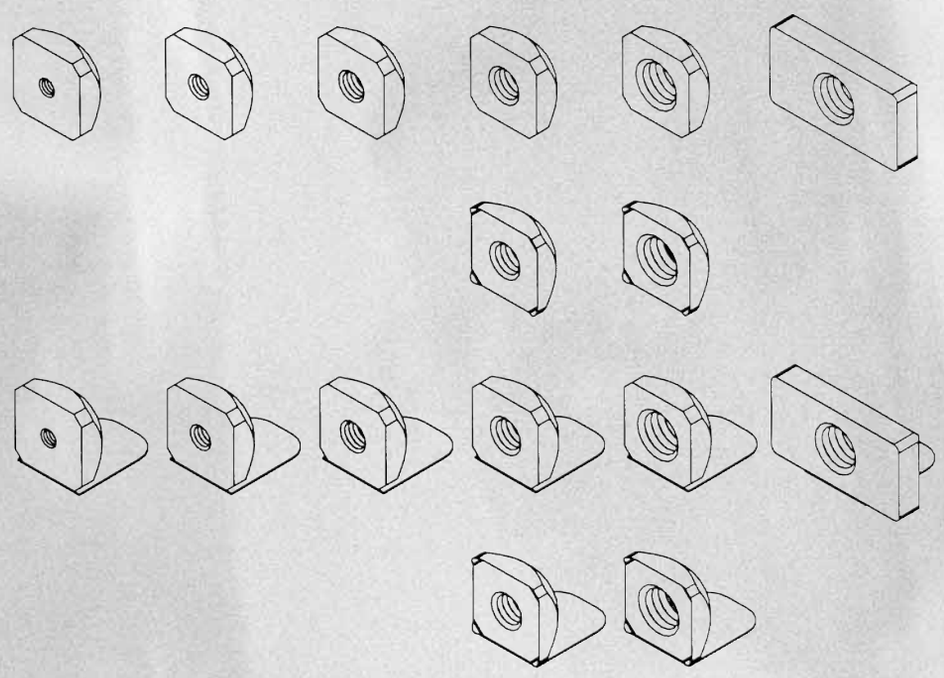


No gap between guard unit and post

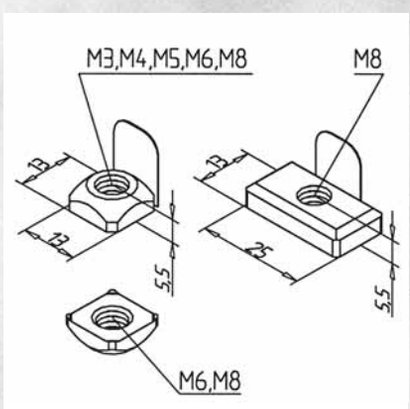


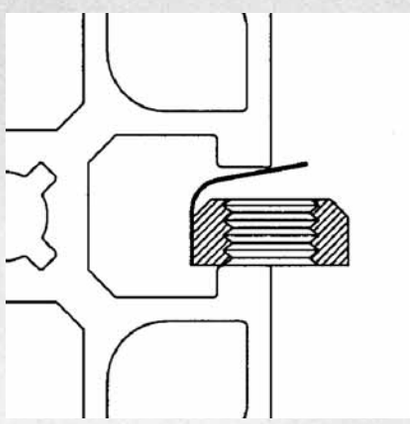
No gap between guard unit and post

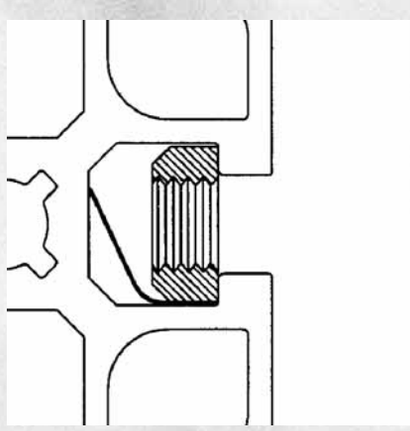
SQUARE NUTS



Application Economical and easy fixing of fasteners and elements available with threads M3, M4, M5, M6 and M8.

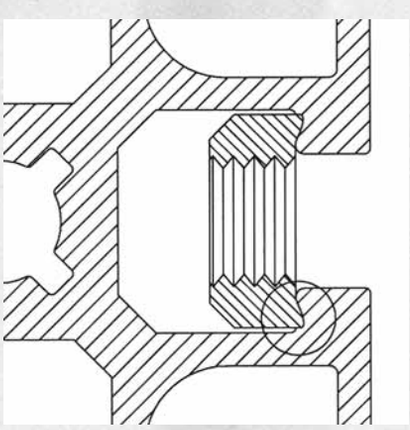






Assembly For applications in vertical profiles use special nuts with position-fixing. The spring metal keeps the nut in the desired position. Moveable by screw-driver.

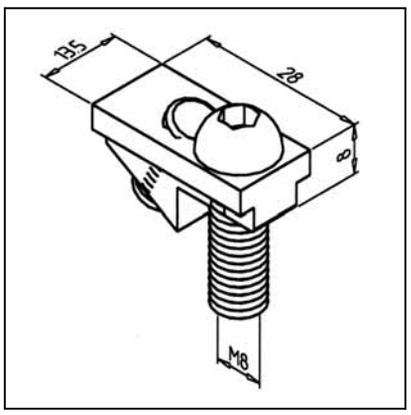
- Insertable into the profile groove at any desired point.

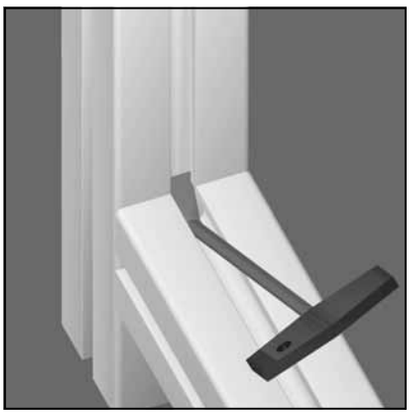


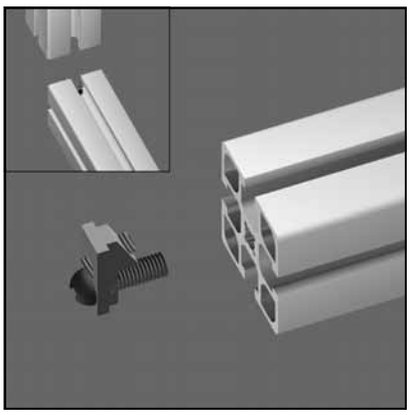
With nuts M6 Z and M8 z the integrated noses intrude the anodizing and secure electrical conductivity.

POWER-LOCK FASTENER

Part. N° 21.1018/0







TECHN. DATA / ITEMS SUPPLIED

- 1 connecting element, zinc plated
- 1 Hex socket cap screw M8 x 25, galvanized
- Weight 0,029 kg
- **Stainless version Part N° 21.1018/1**
- **ESD suitable version Art.-Nr. 21.1393/0**
- Power-Lock fastener SF **Part. N° 21.0818/0**

APPLICATIONS

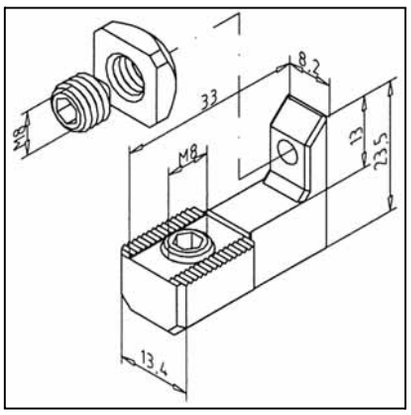
- Power-lock connection for all profiles, also suitable for crossjoints
- For larger profile sections several fasteners can be used
- For all profiles

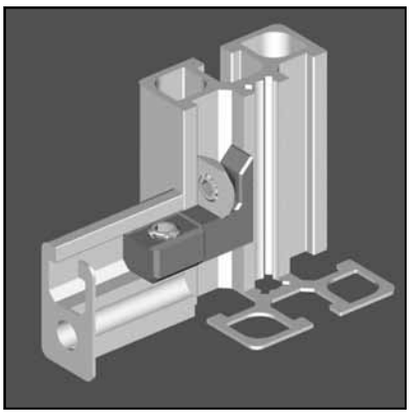
ASSEMBLY

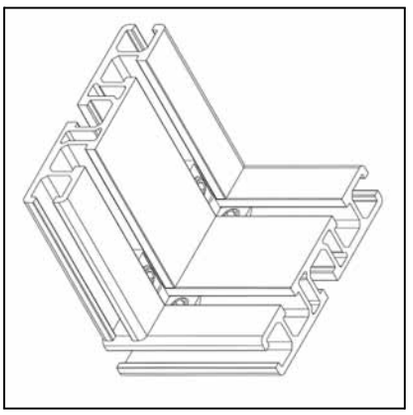
- Mount fastener by hand onto profileface
- Tighten setscrew M8 with key SW 4
- Recommended locking torque 12 Nm
- See page 66

POWER-LOCK FASTENER N

Part. N° 21.0918/0







TECHN. DATA / ITEMS SUPPLIED

- 1 Fastener N, zinc plated, with set screw M8x10
- 1 Nut M8 with set screw M8x8
- Weight 0,034 kg/m

APPLICATIONS

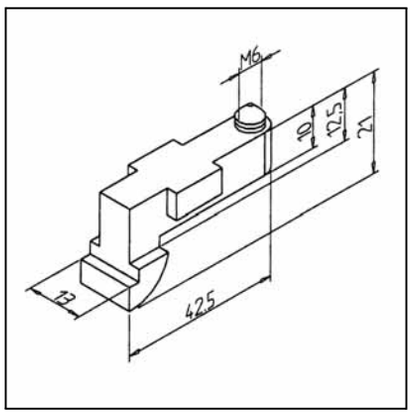
- For all profiles
- In particular useful for subsequent inset of profiles in existing frames
- For profile sections bigger than 45x45 several fasteners can be used

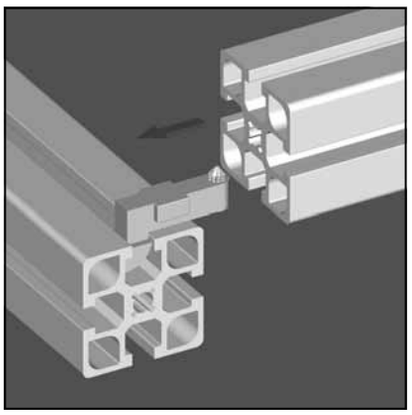
ASSEMBLY

- 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 M8x10 of fastener
- Recommended torque for both screws: 10 Nm

CROSS-CONNECTOR

Part. N° 21.0006/0





TECHN. DATA / ITEMS SUPPLIED

- 1 connecting element, steel, galvanized, chromated, with preassembled set screw M6 x 16
- Weight 0,04 kg

APPLICATIONS

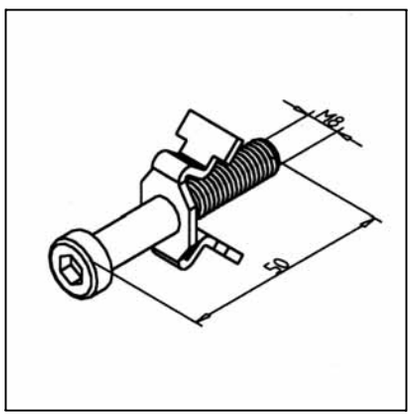
- For connecting all types of profile
- Particularly for mounting profiles on existing constructions
- For profile sections bigger than 45 x 45 several fasteners can be used

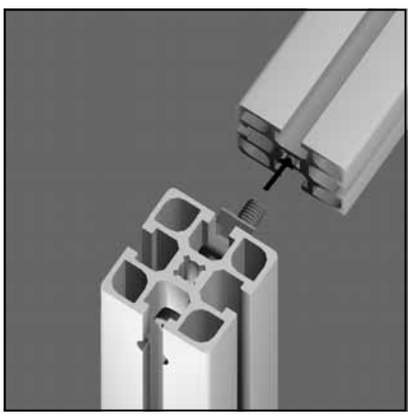
ASSEMBLY

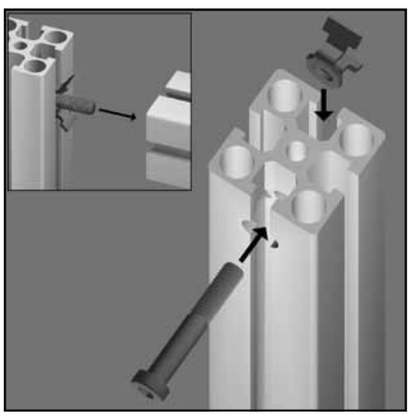
- Swing the connector into the existing frame
- Push the new profile over the connector
- Tighten stud bolt in connector with wrench size 3 to 10 Nm torque

SCREW CONNECTION 45

Part. N° 21.1017/0







TECHN. DATA / ITEMS SUPPLIED

- Hex socket cap screw M8 x 50, zinc plated
- Position fixing element, steel zinc plated
- Weight 0,03 kg

APPLICATIONS

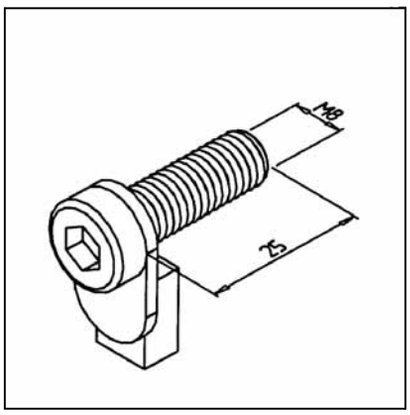
- Profile connections which must be secured against dislocation

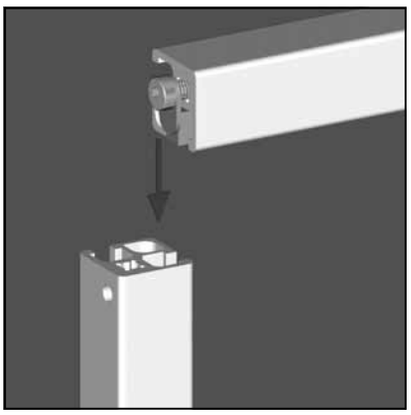
ASSEMBLY

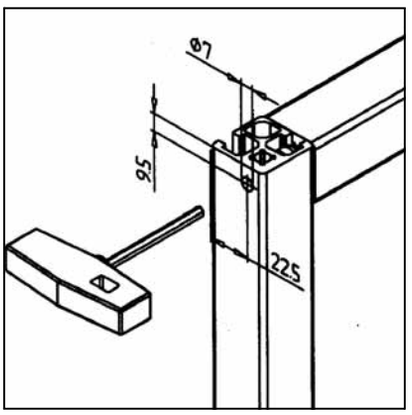
- From thread M8 x 25 into profile to be fixed
- Bore step-drilling Ø 9 x 15 at the position of required connection
- Insert the position-fixing element into the groove and put the screw through the bore of the element
- Tighten the screw
- Recommended locking torque 20 Nm
- see page 72

SCREW CONNECTION 32

Part. N° 21.1386/0







TECHN. DATA / ITEMS SUPPLIED

- Hex socket cap screw
- Anti-rotation device
- Weight 0,02 kg

APPLICATIONS

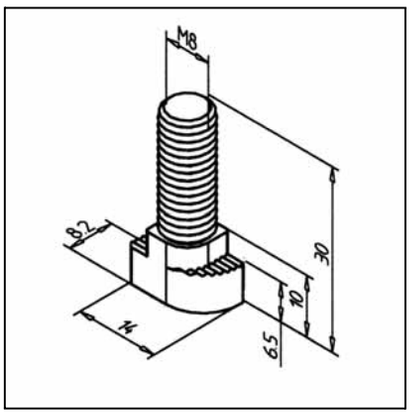
- Connection with effective anti-rotation function for profile series 32 and 19

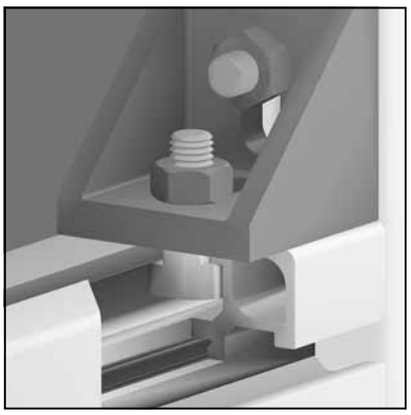
ASSEMBLY

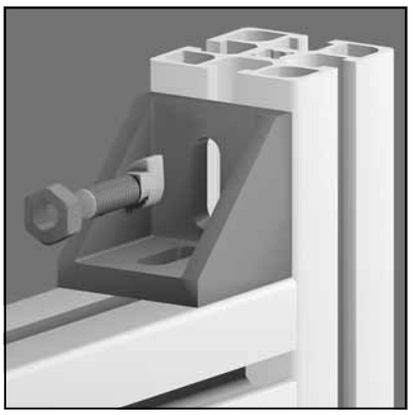
- Form a thread M8 with thread former
- Drill a through hole bore Ø 7 in profile 2
- Insert the anti-rotation device in profile 1 and connect with profile 2
- Tight the screw with recommended locking torque: 20 Nm

HAMMER HEAD SCREW

Part. N° 21.1370/0







TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- Weight 0,012 kg

APPLICATIONS

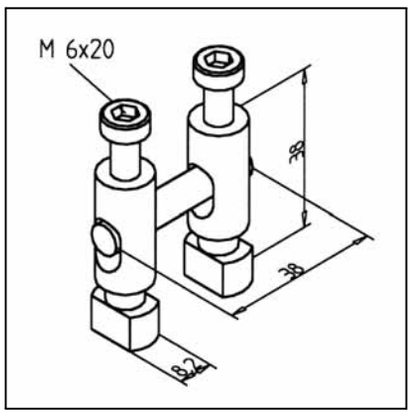
- Simple attachment of add-on parts or accessories on profiles
- Attachment of mounting angle 45 GD **Part N° 21.1133/0** and 90 GD **Part N° 21.1000/0**

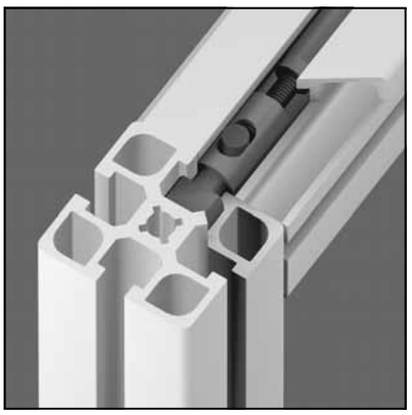
ASSEMBLY

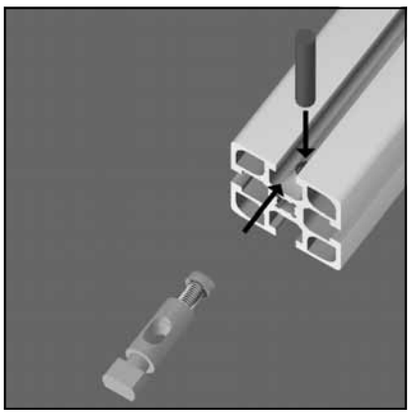
- Insert hammer head bolt into profile groove, tighten nut M8
- When tightening the nut, the hammer head will turn crosswise

CROSS BOLT FASTENER

Part. N° 21.1036/0







TECHN. DATA / ITEMS SUPPLIED

- 2 stretch connectors, steel zinc plated
- 1 cross-bolt Ø 7, special steel
- 2 hex socket cap screws M6 x 20
- Weight 0,067 kg

APPLICATIONS

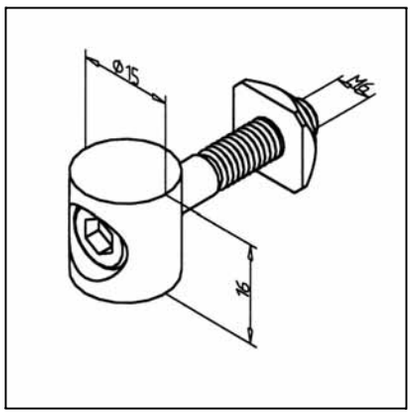
- Fitting to all profiles
- For subsequent fitting of profiles into existing frames

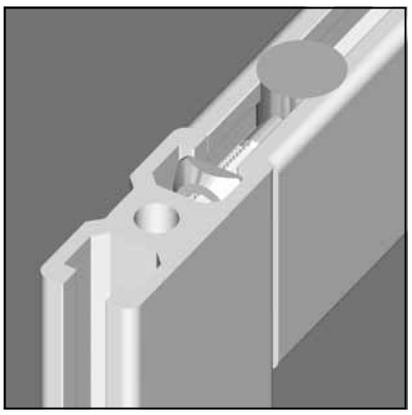
ASSEMBLY

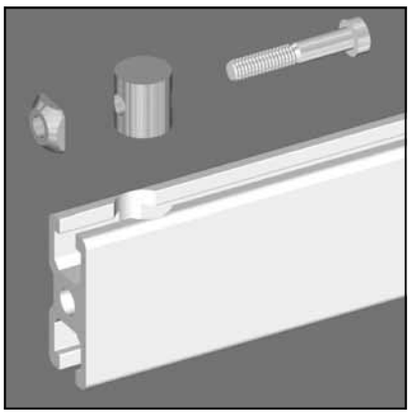
- Drill cross bore Ø 7,5 mm; 12 mm from profile end
- Insert stretch connectors into profile grooves and cross-bolt through connectors
- Pre-tighten the screws M6 with ball-headed key 5 A/F, final tightening with L-key

BOLT-FASTENER 15

Part. N° 21.1024/0







TECHN. DATA / ITEMS SUPPLIED

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

APPLICATIONS

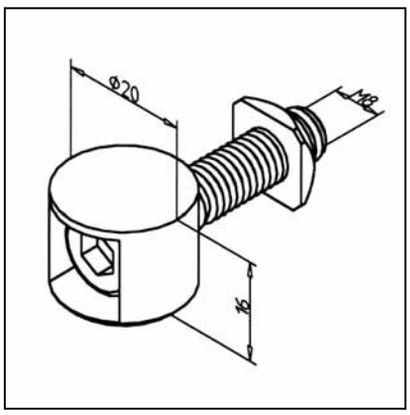
- For connection of profiles 19 and 32
- Particularly useful for profiles which have to be fitted subsequently into existing constructions

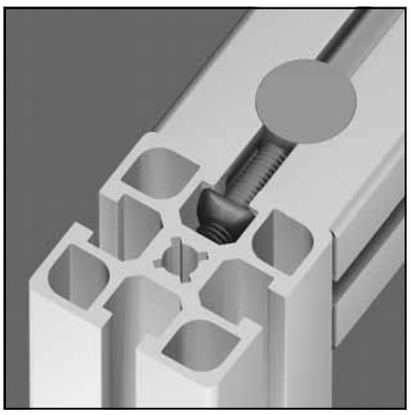
ASSEMBLY

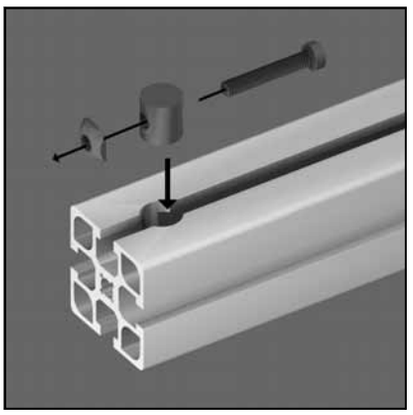
- Step drilling Ø 9 x 15, depth 16 mm, positioned 22,5 mm from profile end to the middle of the groove
- Insert the bolt into the step drilling and pretighten by using ball-headed key 4 A/F
- Final tightening with L-key
- Recommended locking torque 15 Nm
- See page 70

BOLT-FASTENER 20

Part. N° 21.1021/0







TECHN. DATA / ITEMS SUPPLIED

- 1 Bolt GD Zn
- Fixing kit
- Weight 0,037 kg

APPLICATIONS

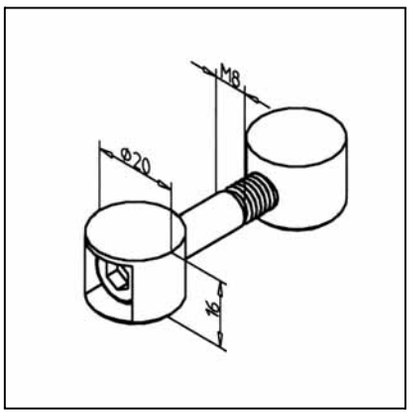
- For connection of all profiles
- Particularly useful for profiles which have to be fitted subsequently into existing constructions
- For connection of profile 45 x 19

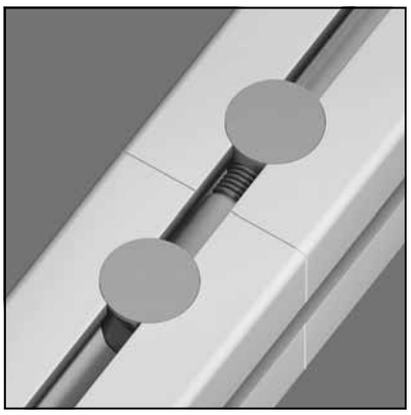
ASSEMBLY

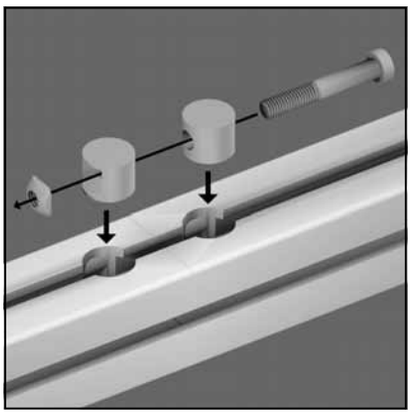
- Step drilling Ø 7 x 20 depth 16 mm, positioned 22,5 mm from profile end to the middle of the groove
- Insert the bolt into the step drilling and pretighten by using ball-headed key 5 A/F
- Final tightening with L-key
- Recommended locking torque 15 Nm
- See page 70

BUTT FASTENER

Part. N° 21.1020/0







TECHN. DATA / ITEMS SUPPLIED

- 2 Bolts GD Z
- Fixing kit
- Weight 0,045 kg

APPLICATIONS

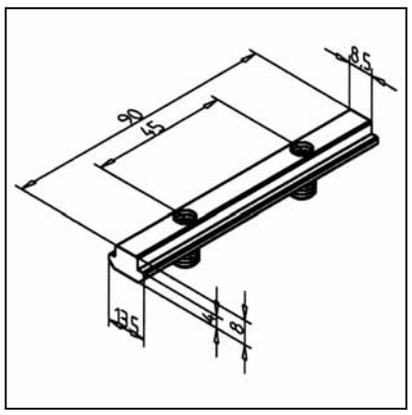
- Profile extension
- Butt fastener

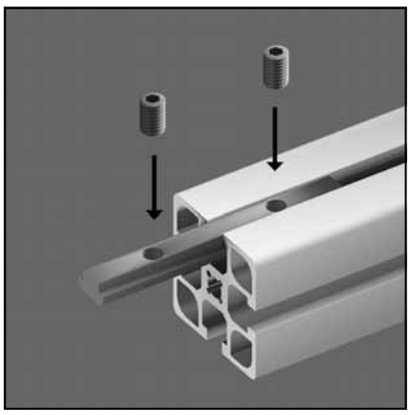
ASSEMBLY

- Step drilling Ø 7 x 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 71

T-SLOT BAR 90

Part. N° 21.1029/0





TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- 2 set-screws M8 x 14, 4 A/F, zinc plated
- Weight 0,060 kg
- **Stainless version Part N° 21.0992/0**

APPLICATIONS

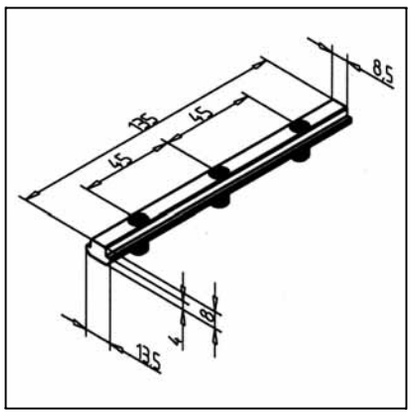
- Profile extension
- Fixing of bearings for linear guides

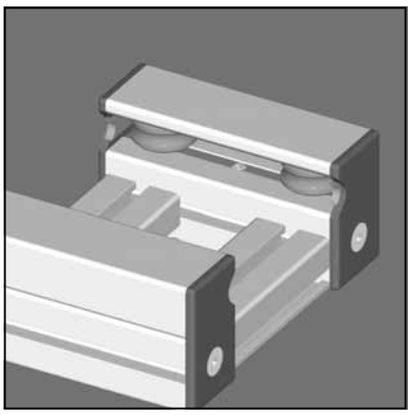
ASSEMBLY

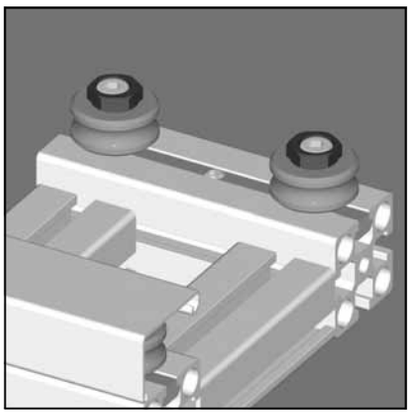
- Insertion into the profile groove
- Clamp with set-screw
- No processing required
- For larger profiles or heavy - duty applications use multiple t-slot bars
- See page 71

T-SLOT BAR 135

Part. N° 21.0988/0







TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- 3 set-screws M8 x 14, 4 A/F, zinc plated
- Weight 0,089 kg
- **Stainless version Part N° 21.0987/0**

APPLICATIONS

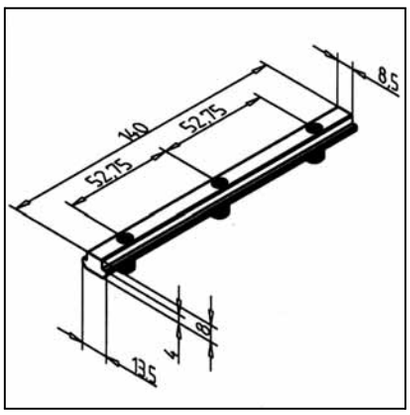
- Fixing of bearings in standard slide LW

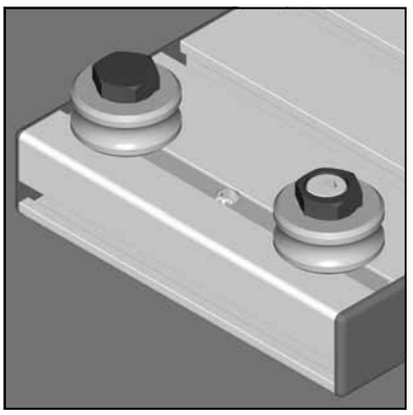
ASSEMBLY

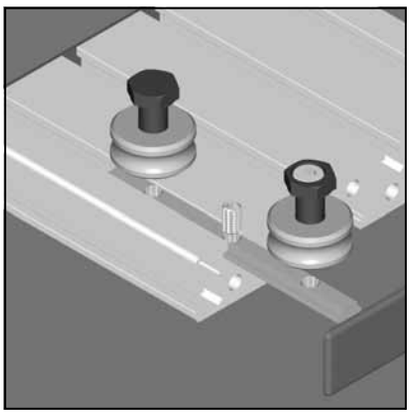
- Insertion into the profile groove
- No processing required

T-SLOT BAR 140

Part. N° 28.0026/0



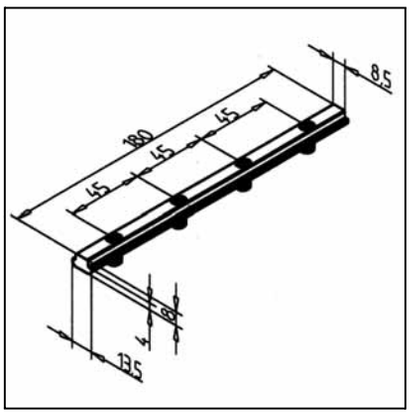


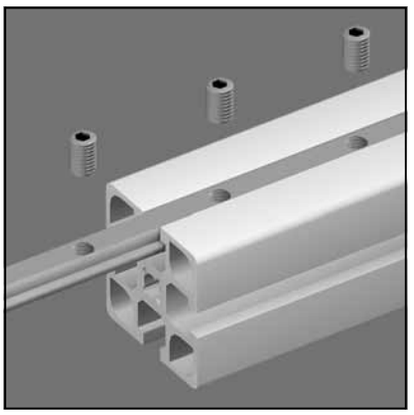


TECHN. DATA / ITEMS SUPPLIED	APPLICATIONS	ASSEMBLY
- Steel, zinc plated	- Fixing of bearings in linear slides LW 32 E	- Insertion into the profile groove
- 3 set-screws M8 x 14, 4 A/F, zinc plated		- No processing required
- Weight 0,094 kg		
- Stainless version Part N° 28.0030/0		

T-SLOT BAR 180

Part. N° 21.1101/0

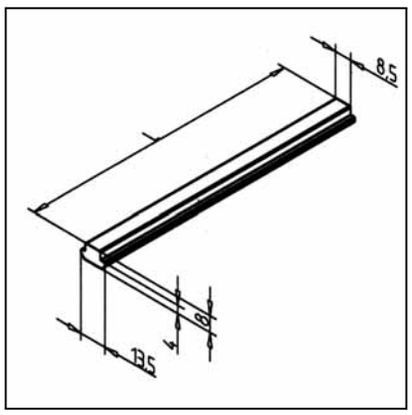


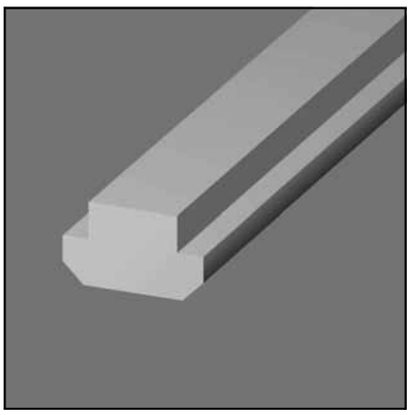


TECHN. DATA / ITEMS SUPPLIED	APPLICATIONS	ASSEMBLY
- Steel, zinc plated	- Face fastening of profiles or ready-for-use elements	- Insertion into the profile groove
- 4 set-screws M8 x 14, 4 A/F, zinc plated	- Profile extension	- No processing required
- Weight 0,120 kg	- Fixing of bearings for linear guides	- For larger profiles or heavy - duty applications use multiple t-slot bars
- Stainless version Part N° 21.0986/0		- See page 71

T-SLOT BAR PROFILE

Part. N° 21.1030/0





TECHN. DATA / ITEMS SUPPLIED

- Steel, plain
- Weight 0,680 kg/m
- Length 3,000 m
- **Stainless version Part N° 21.1030/1**

APPLICATIONS

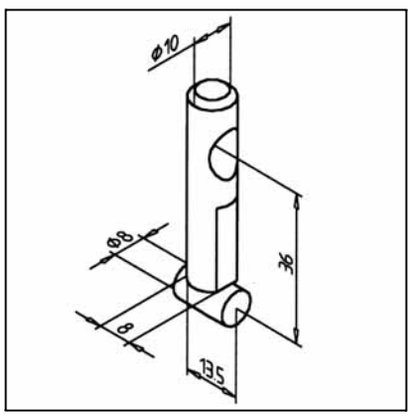
- Production of clamping ledges, connecting elements for special lengths
- Production of reinforcing elements
- Ledges with special perforation

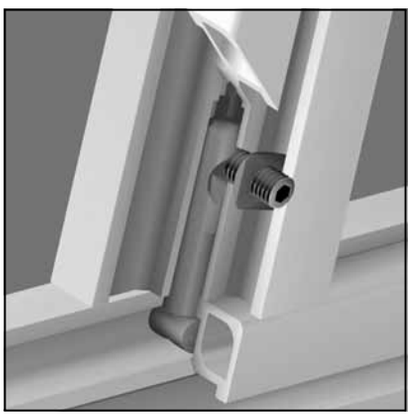
ASSEMBLY

- Insertion into the profile groove

MITRE CONNECTOR N

Part. N° 21.1401/0





TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- Fixing kit
- Weight 0,051 kg

APPLICATIONS

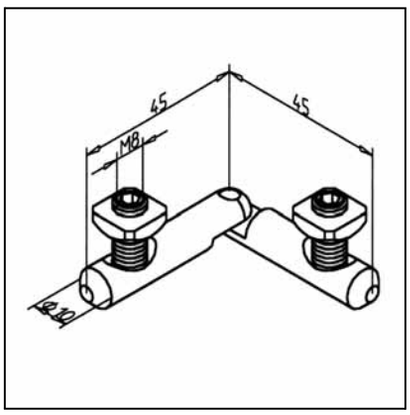
- Mitre connection of profiles on profile groove

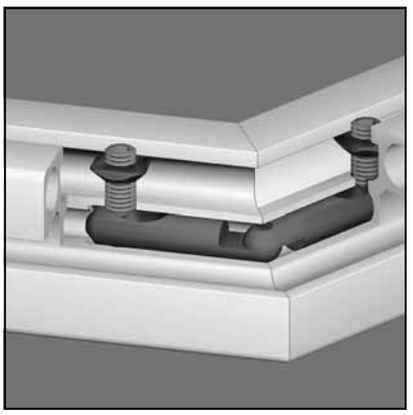
ASSEMBLY

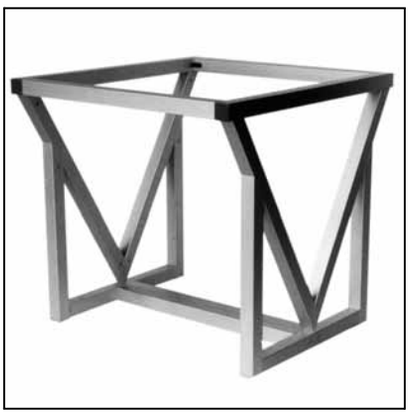
- Drill Ø 10,2 mm bore in the profile core bore
- Drilling jig see page 354

MITRE CONNECTOR

Part. N° 21.1400/0







TECHN. DATA / ITEMS SUPPLIED

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

APPLICATIONS

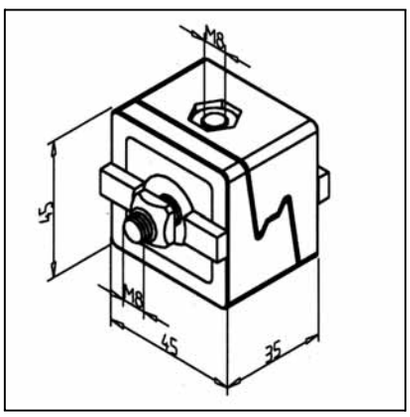
- Show cases
- Exhibition racks
- Displays
- Frames

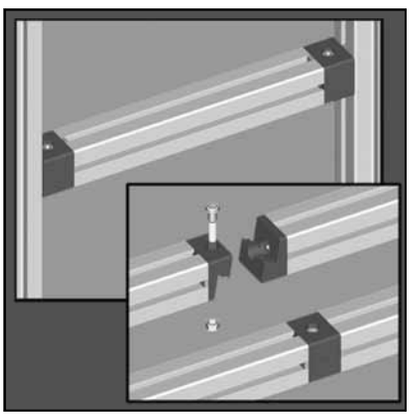
ASSEMBLY

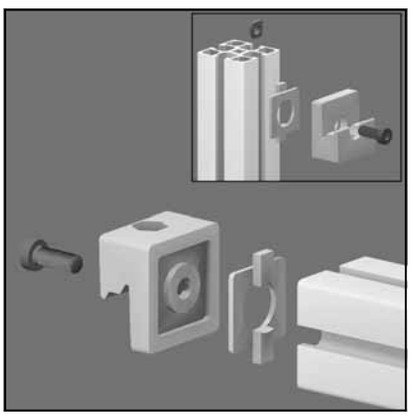
- Rebore core bore to Ø 10,2 mm
- Process a drill Ø 8,2 mm in the distance of 36,5 mm from the profile ends
- Insert the mitre connector into both profile ends
- Position square nuts on top of the thread M8 (strengthening of the thread)
- Tighten the connector with set-screws M8, see page: 354
- Measure see page 69

MOUNTING BRACKET 45

Part. N° 21.1411/0







TECHN. DATA / ITEMS SUPPLIED

- GD Zn, powder coated, grey
- Fixing kit
- Weight 0,426 kg

APPLICATIONS

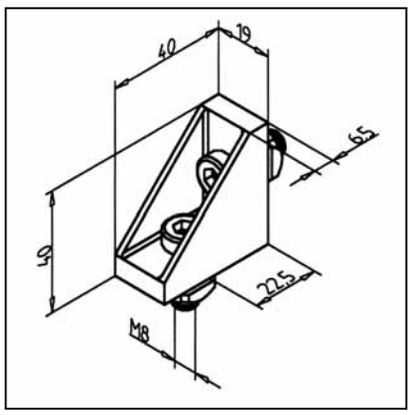
- Connection of profiles
- For subsequent fitting of profiles into existing constructions, displacable in direction of the groove
- Fixing of supports
- removable attachments

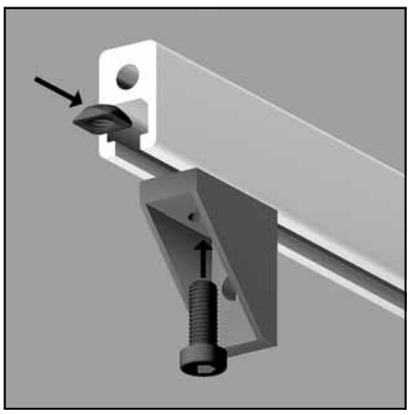
ASSEMBLY

- Use fixing kit from supply schedule
- In case of mounting into vertical profiles, the use of square-nut M8 with position-fixing **Part N° 21.1351/2** is recommended
- Recommended locking torque 20 Nm

ANGLE 19 GD

Part. N° 21.1107/0





TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fixing kit
- Weight 0,033 kg

APPLICATIONS

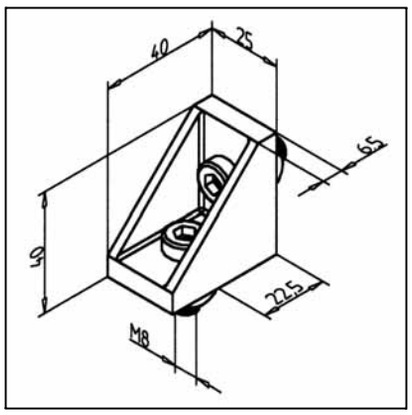
- Connection of profiles 19 and 32
- Subsequent fitting of profiles into existing constructions, displacable in direction of the groove
- Fixing of supports

ASSEMBLY

- Use fixing kit from supply schedule
- In case of mounting into vertical profiles, the use of square-nut M8 with position-fixing **Part N° 21.1351/2** is recommended
- Recommended locking torque 20 Nm
- See page 73

ANGLE 25 GD

Part. N° 21.1102/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fixing kit
- Weight 0,044 kg

APPLICATIONS

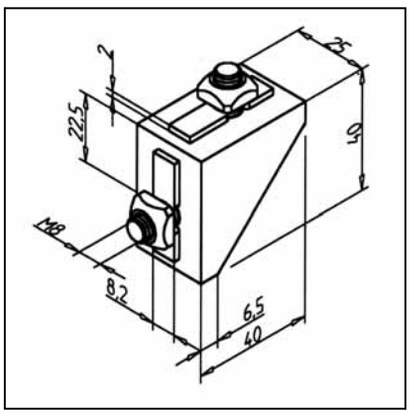
- General constructions, particularly useful for subsequent fitting of profiles into existing constructions
- Fixing of panel elements, table tops
- Strengthening of all profile constructions

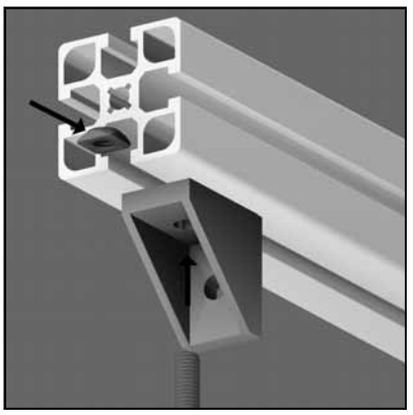
ASSEMBLY

- Use fixing kit from supply schedule
- For subsequent mounting into vertical profiles use square nut M8 with position-fixing **Part N° 21.1351/2**
- Recommended locking torque 20 Nm
- See page 73

ANGLE 25 S

Part. N° 21.1134/0





TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Locking device against torsion
- Fixing kit
- Weight 0,066 kg

APPLICATIONS

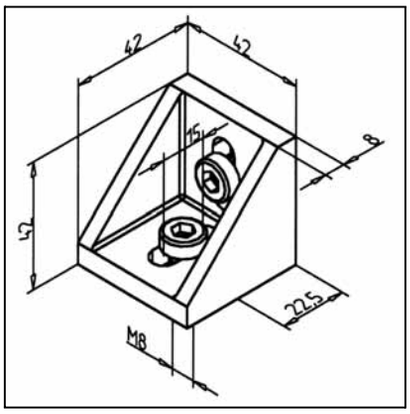
- General constructions, particularly useful for subsequent fitting of profiles into existing constructions
- Strengthening of profile connections

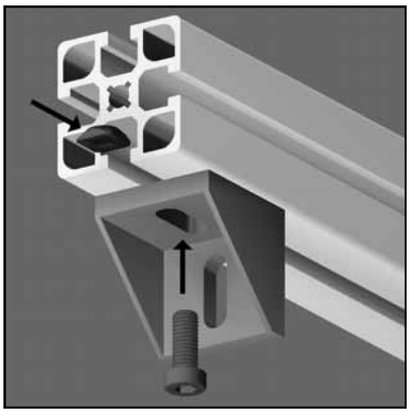
ASSEMBLY

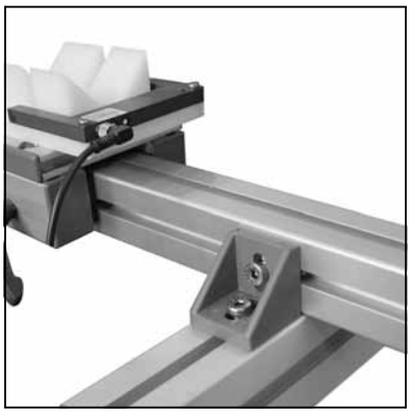
- Use fixing kit from supply schedule
- For mounting into vertical profile use square nut M8 with position-fixing **Part N° 21.1351/2**
- Recommended locking torque 20 Nm
- See page 73

ANGLE 45 GD

Part. N° 21.1133/0







TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fixing kit
- Weight 0,072 kg

APPLICATIONS

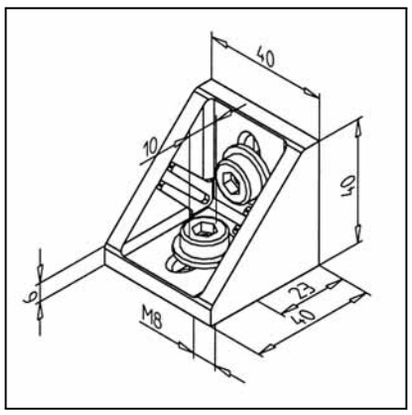
- General constructions, particularly useful for subsequent fitting of profiles into existing constructions
- Fixing of panel elements, table tops
- Strengthening of profile constructions

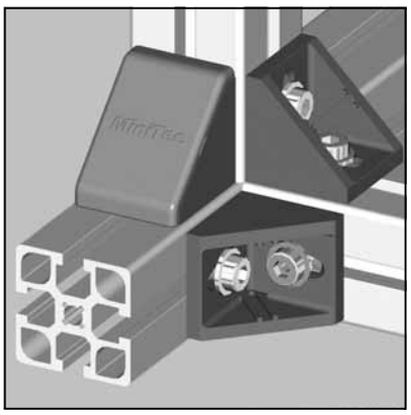
ASSEMBLY

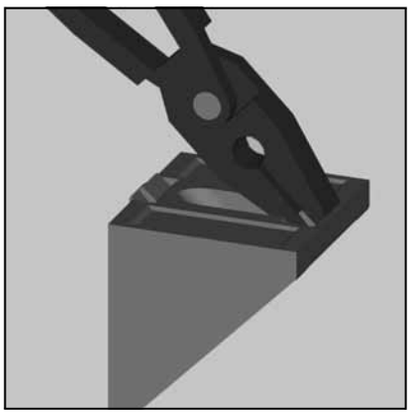
- Use fixing kit from supply schedule
- For subsequent mounting into vertical profiles use square nut M8 with position-fixing **Part N° 21.1351/2**
- Hammer head screw **Part N° 21.1370/0** can be used
- Recommended locking torque 20 Nm
- See page 73

ANGLE 45 GD-Z

Part. N° 21.1349/0







TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fixing kit
- Removable centering tabs
- Weight 0,083 kg

APPLICATIONS

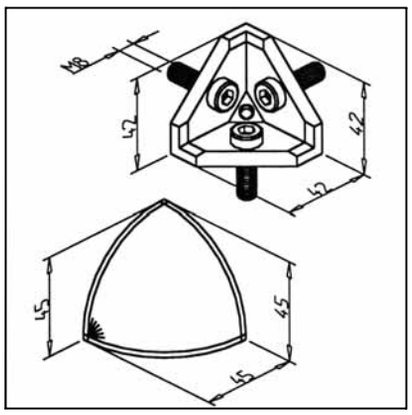
- General constructions, particularly useful for subsequent fitting of profiles into existing constructions
- Fixing of panel elements, table tops
- Strengthening of profile constructions

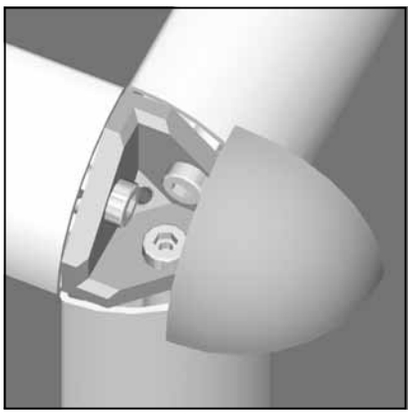
ASSEMBLY

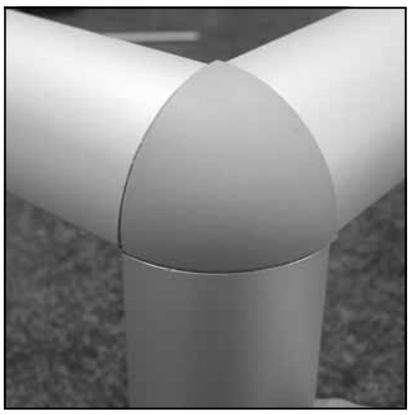
- Use fixing kit from supply schedule
- Break centering tabs with pliers if non-aligning grooves
- For subsequent mounting into vertical profiles use square nut M8 with position-fixing **Part N° 21.1351/2**
- Hammer head screw **Part N° 21.1370/0** can be used
- Recommended locking torque 20 Nm
- End cap MW 45 GD-Z **Part. N° 22.1024/1**

ANGLE 45 R 90°

Part. N° 21.1710/1







TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, nature
- End cap 45 R 90°, grey
- Fixing kit
- Weight 0,063 kg

APPLICATIONS

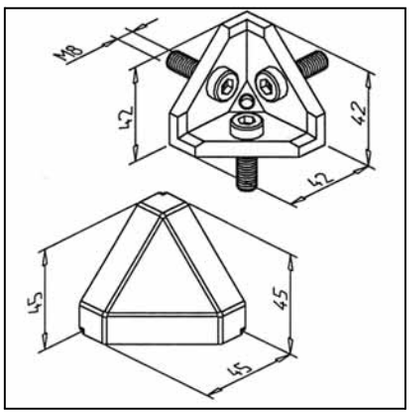
- Corner fastening of profiles 45 R 90°
- Constructions for show cases, tables etc.

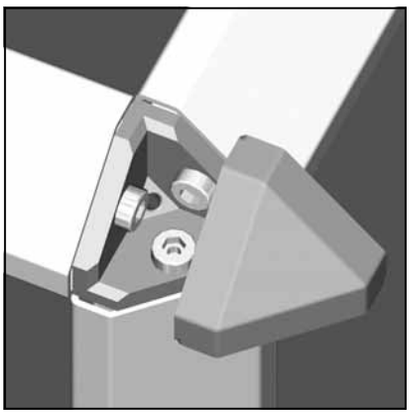
ASSEMBLY

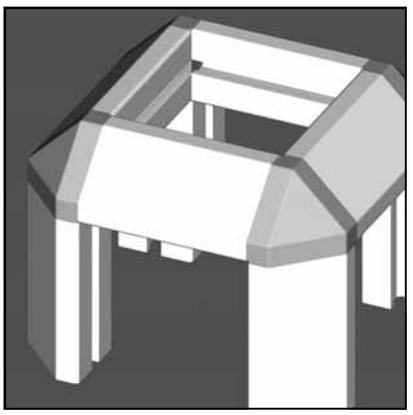
- With screws M8 x 25 from the fastening kit in central bore of the profile
- Clip into the end cap

ANGLE 45°

Part. N° 21.1708/1







TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, nature
- End cap 45°/3, grey
- Fixing kit
- Weight 0,062 kg

APPLICATIONS

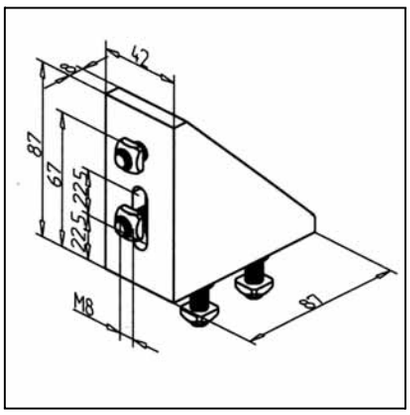
- Corner fastening of profiles 45 / 45°
- Constructions for show cases, tables etc.

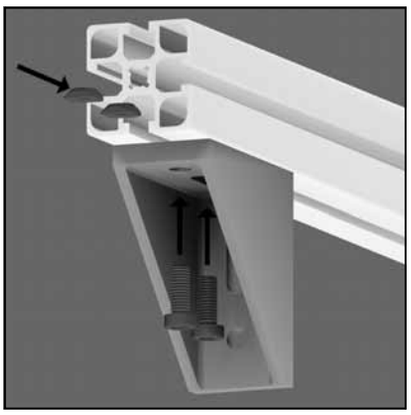
ASSEMBLY

- With screws M8 x 25 from the fastening kit in central bore of the profile
- Clip into the end cap

ANGLE 45 X 90 GD

Part. N° 21.1135/0





TECHN. DATA / ITEMS SUPPLIED

- Aluminium, powder coated, grey
- Fixing kit
- Weight 0,216 kg

APPLICATIONS

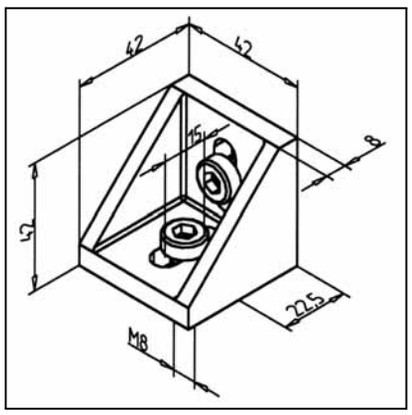
- General constructions, particularly useful for subsequent fitting of profiles into existing constructions
- Fixing of panel elements, table tops
- Strengthening of all profile connections

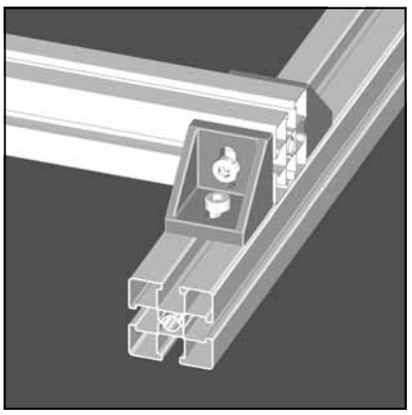
ASSEMBLY

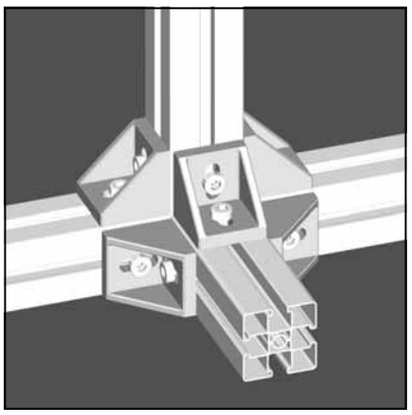
- Use fixing kit from supply schedule
- For mounting into vertical profile use square nut M8 with position-fixing **Part N° 21.1351/2**
- Recommended locking torque 20 Nm
- See page 73

ANGLE 45 VA

Part. N° 21.0007/0







TECHN. DATA / DELIVERY CONTENTS

- Material: WN DIN 1.4301 X5 CR NI 18 - 10, SUS 304, stainless steel
- Fixing kit
- Weight 0,072 kg

APPLICATIONS

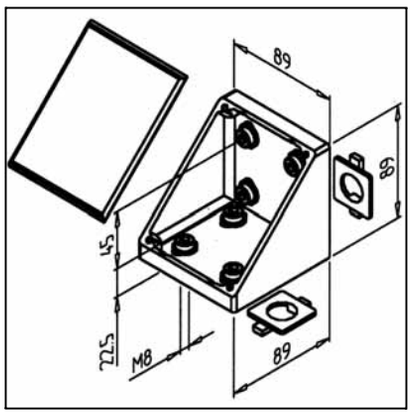
- General constructions, particularly useful for subsequent fitting of profiles into existing constructions
- Fixing of panel elements, table tops
- Strengthening of profile constructions

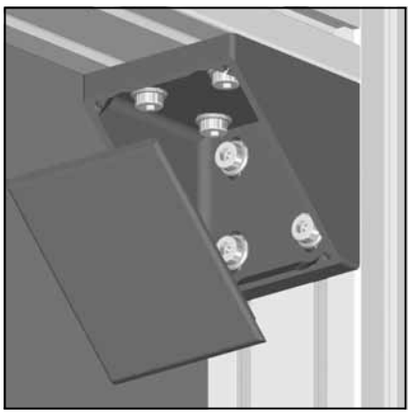
ASSEMBLY

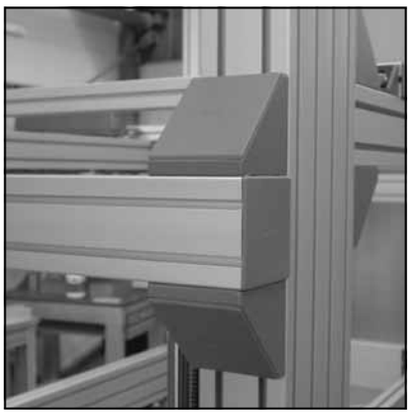
- Use fixing kit from supply schedule
- For subsequent mounting into vertical profiles use square nut M8 with position-fixing **Part N° 21.1351/2**
- Hammer head screw **Part N° 21.1370/0** can be used
- Recommended locking torque 20 Nm

ANGLE 90

Part. N° 21.1000/0







TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fixing kit
- Locking device against rotation
- End caps
- Weight 0,270 kg

APPLICATIONS

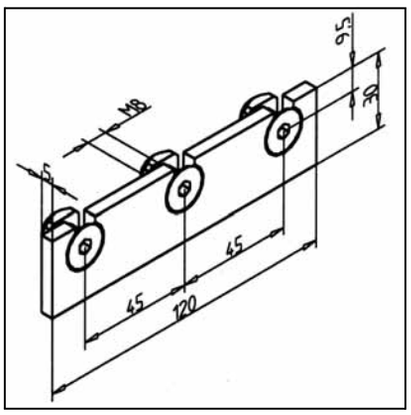
- For profiles 90 and 180
- General constructions, particularly useful for subsequent fitting of profiles into existing constructions
- Fixing of panel elements, table tops
- Strengthening of all profile connections

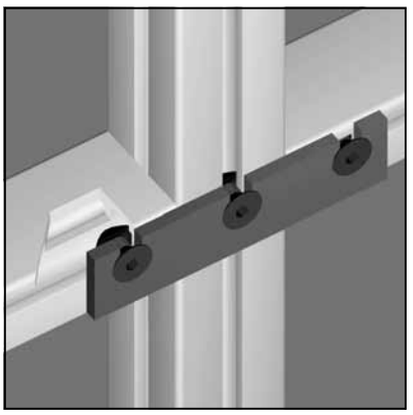
ASSEMBLY

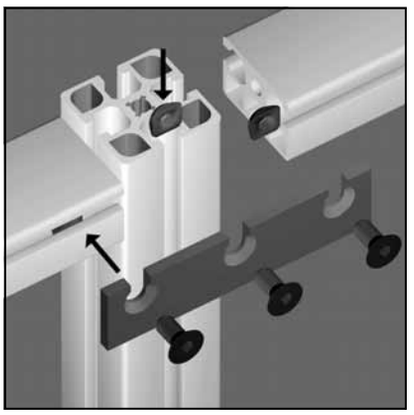
- Use fixing kit from supply schedule
- For subsequent mounting into vertical profiles use square nut M8 with position-fixing **Part N° 21.1351/2**
- Hammer head screw can be used
- Recommended locking torque 20 Nm
- See page 73

CONNECTING BAR

Part. N° 21.1113/0







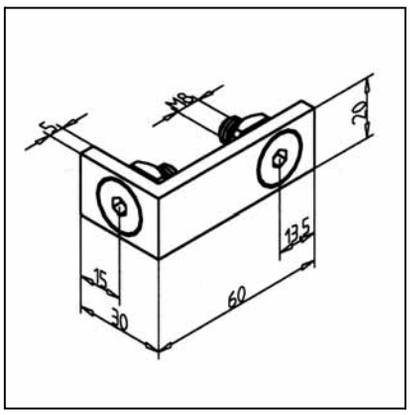
TECHN. DATA / ITEMS SUPPLIED	
- Bar steel, zinc plated	
- Fixing kit	
- Weight	0,103 kg

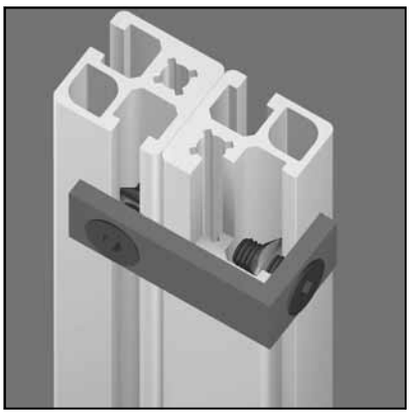
APPLICATIONS
- Connection of different profiles
- Subsequent fitting of profiles

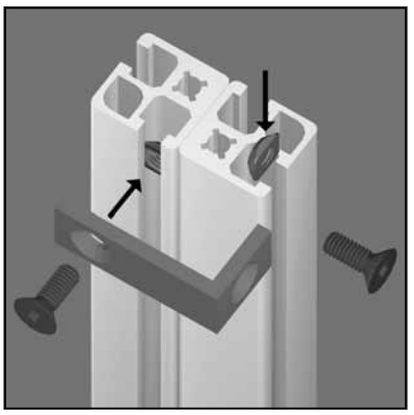
ASSEMBLY
- Use fixing kit from supply schedule
- No processing required

CONNECTING ANGLE 32

Part. N° 21.1406/0







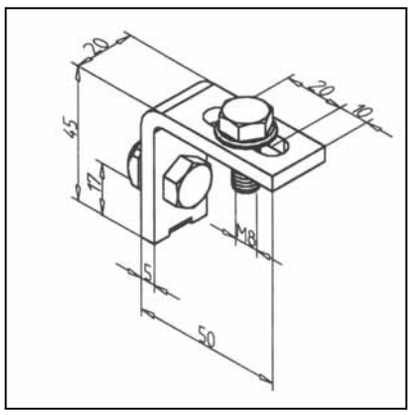
TECHN. DATA / ITEMS SUPPLIED	
- Steel, zinc plated	
- Fixing kit	
- Weight	0,093 kg

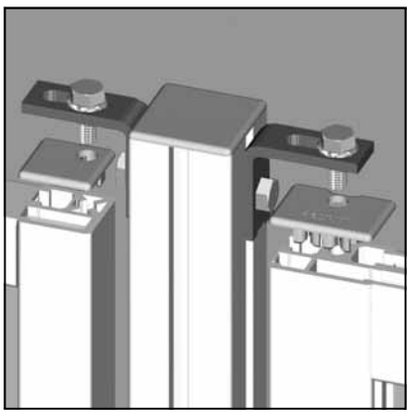
APPLICATIONS
- Parallel fastening of profiles 32 x 32

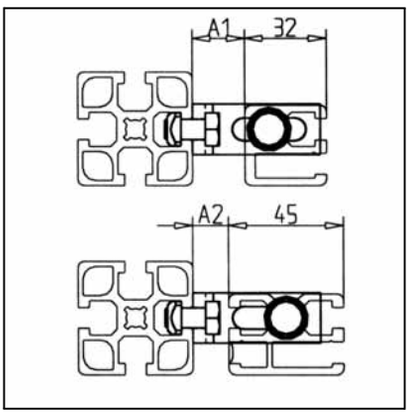
ASSEMBLY
- Use fixing kit from supply schedule
- No processing required

GUARD UNIT FIXING ANGLE 19

Part. N° 21.1399/0







TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- Fixing kit
- Weight 0,091 kg

APPLICATIONS

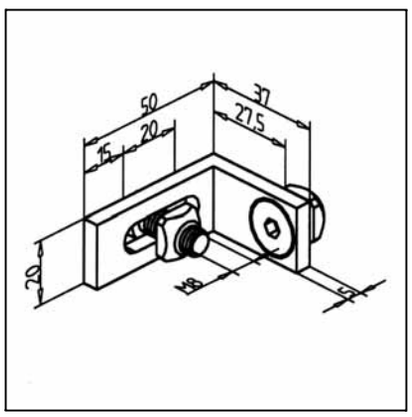
- Fixing of frame-elements made from clamp-profiles 32 x 32 or 45 x 32 or from all other standard profiles
- Fixing of guards at any angle
- For clamp profile 32 x 32 use end cap **Part N° 22.1032/3**
- For clamp profile 45 x 32 use end cap **Part N° 22.1046/3**

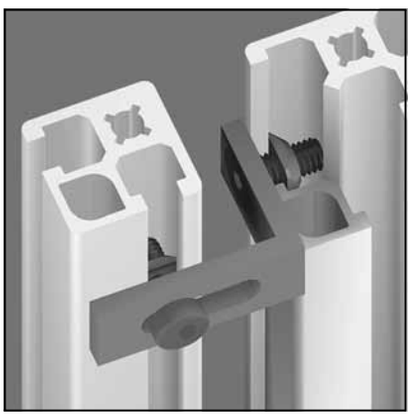
ASSEMBLY

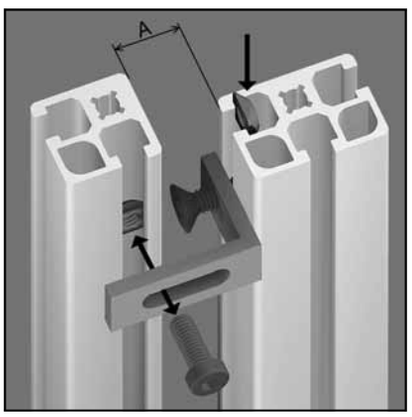
- Drill thread M8 x 20 in both ends of vertical profiles of the guard
- Insert guard in angles, adjust position of the angles and fix it (wrench 13)
- Fix the guard with screws from supply schedule
- Alternatively: use snap bolts 25 **Part N° 21.1758/0** in lower threads of the guard for very quick assembly, fixing with upper screws only
- A1 = 10,5 mm - 30,5 mm
  A2 = 10,5 mm - 17,5 mm

GUARD UNIT FIXING ANGLE 32

Part. N° 21.1405/0







TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- Fixing kit
- Weight 0,081 kg

APPLICATIONS

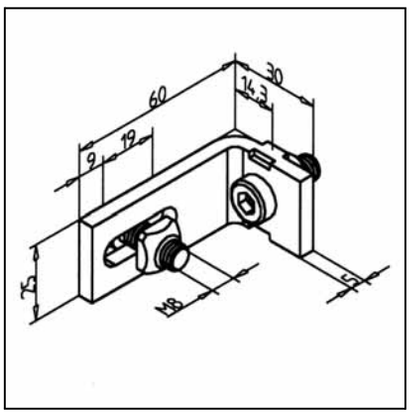
- Fixing of frame-elements made from profiles 32 x 32 and 45 x 32. For frames made of profiles in 32 range
- This element differs from connecting angle 32 by a long hole, enabling adjustment up to 15 mm

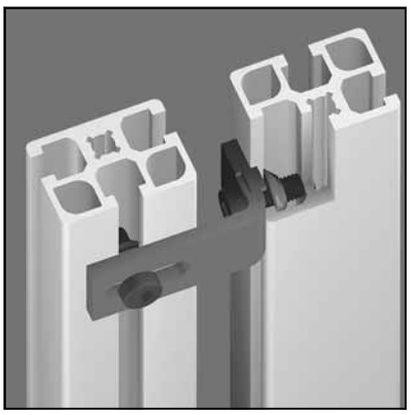
ASSEMBLY

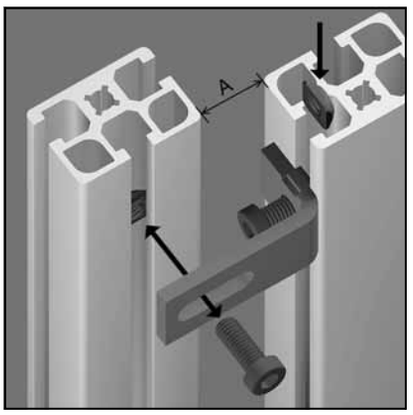
- Use fixing kit from supply schedule
- No processing required
- First fix the angle to vertical profile, then screw guard unit from rear with angle
- A = 6 mm - 25 mm

GUARD UNIT FIXING ANGLE 45

Part. N° 21.1404/0







TECHN. DATA / ITEMS SUPPLIED	
- Steel, zinc plated	
- Fixing kit	
- Weight	0,068 kg

APPLICATIONS

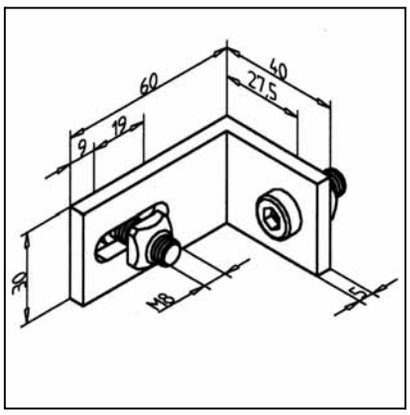
- Fixing of frame-elements made from profile 45 x 32
- Usuable in frames made from any profile, flush mounting of element

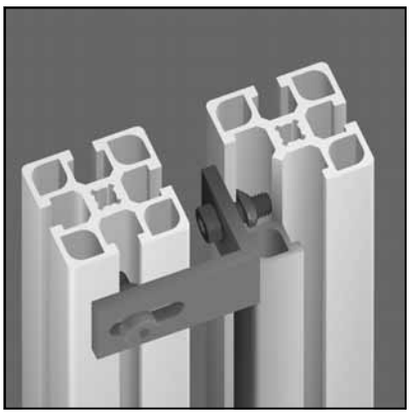
ASSEMBLY

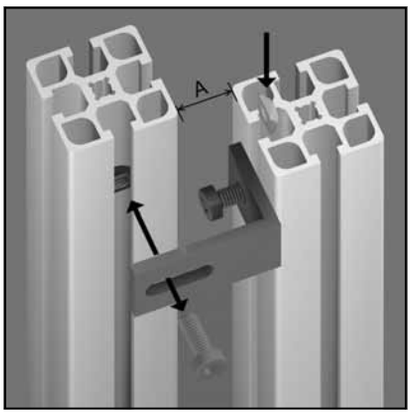
- Use fixing kit from supply schedule
- No processing required
- First fix the angle to vertical profile, then screw guard unit from rear with angle
- A = 10 mm - 28 mm

GUARD UNIT FIXING ANGLE 45 AL

Part. N° 21.1407/0







TECHN. DATA / ITEMS SUPPLIED	
- Aluminium, natural anodized	
- fixing kit	
- Weight	0,045 kg

APPLICATIONS

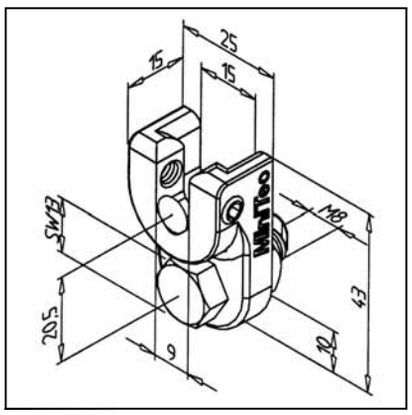
- Fixing of frame-elements made from profile 45 x 45
- Usuable in frames made from any profile
- Flush mounting of element

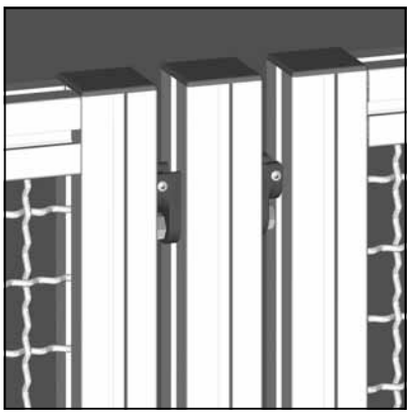
ASSEMBLY

- Use fixing kit from supply schedule
- 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

Part. N° 21.0008/0





TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fixing kit
- Weight 0,043 kg

APPLICATIONS

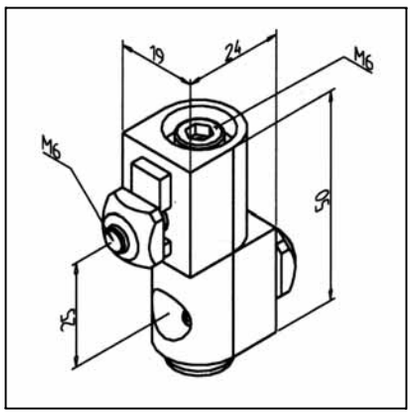
- Protective panels from all profiles
- Movable flaps
- It is also possible to mount the panels at the front when fitting the suspensions to the front of the post

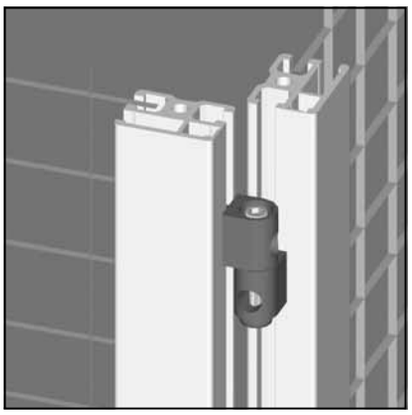
ASSEMBLY

- Screw the protective panel suspension to the pillars
- Attach M8 x 25 cheese-head screws to the protective panel
- Hang the protective panel in place, and tighten the set screw using an Allen key from the rear
- A = 16 mm ± 0.75
- **Protective panel cannot be removed from outside**

GUARD UNIT WITH ADJUSTABLE FIXING ANGLE

Part. N° 21.1403/0





TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fixing kit
- Weight 0,118 kg

APPLICATIONS

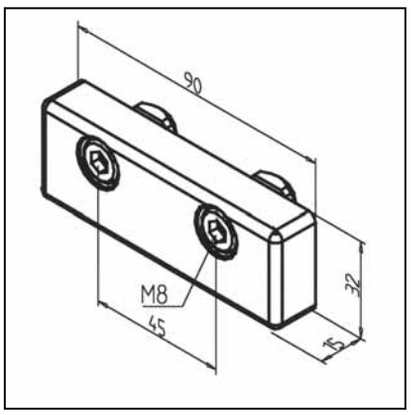
- Connection of profiles at any angle
- Erection of protective guard units at any angle

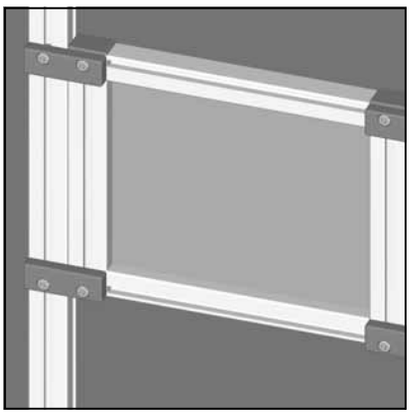
ASSEMBLY

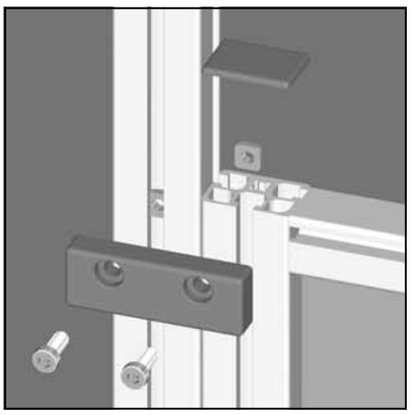
- Mount the lower fixing half on the post and align it
- Mount the upper half on the guard unit and insert the guard unit
- Insert the cap screw and tighten it with key 4 A/F. The inserted hexagon nut in the lower fixing half is secured against torsion
- See page 74

CONNECTING PLATE 90 X 32

Part. N° 21.1346/0







TECH. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fixing kit
- Weight 0,170 kg

APPLICATIONS

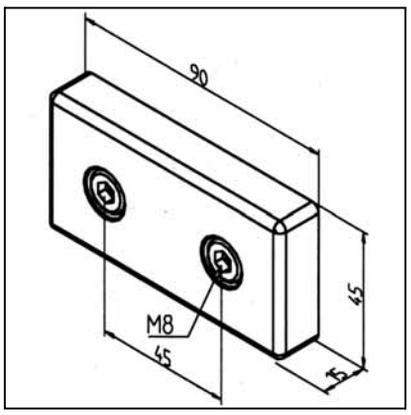
- Split-free connection of two guards
- Strengthening of guard units
- Connection of premounted units or modules

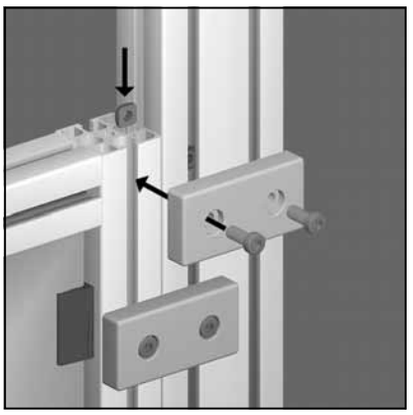
ASSEMBLY

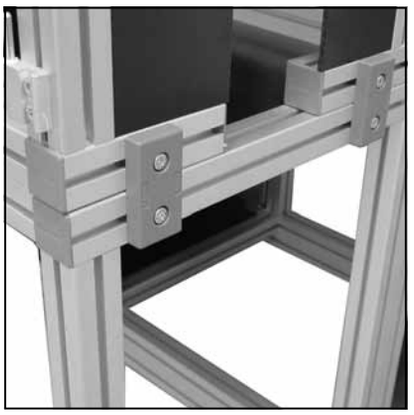
- Use fixing kit from supply schedule

CONNECTING PLATE 45 X 90

Part. N° 21.1472/0







TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fixing kit
- Weight 0,17 kg

APPLICATIONS

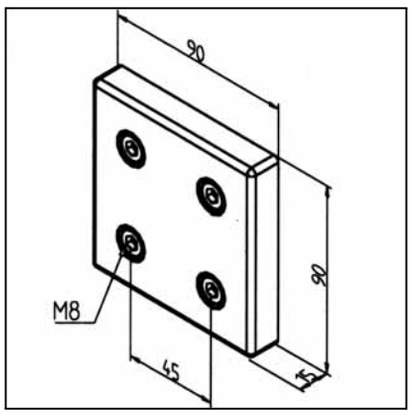
- Connection of guards without cracks
- Strengthening of guard units
- Connection of premounted constructions

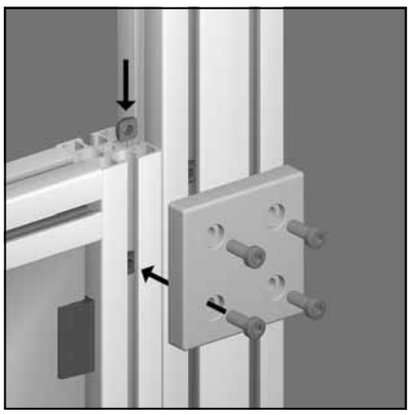
ASSEMBLY

- Use fixing kit from supply schedule

CONNECTING PLATE 90 X 90

Part. N° 21.1473/0





TECHN. DATA / ITEMS SUPPLIED	
- Aluminium GD, powder coated, grey	
- Fixing kit	
- Weight	0,330 kg

APPLICATIONS

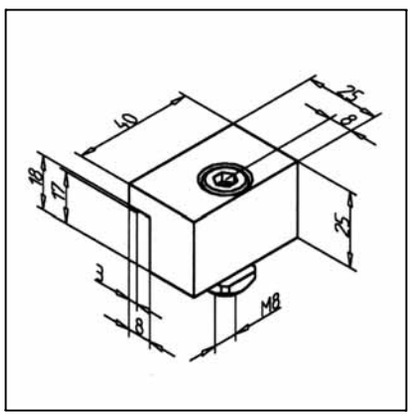
- Connection of guards without cracks
- Strengthening of guard units
- Connection of premounted constructions

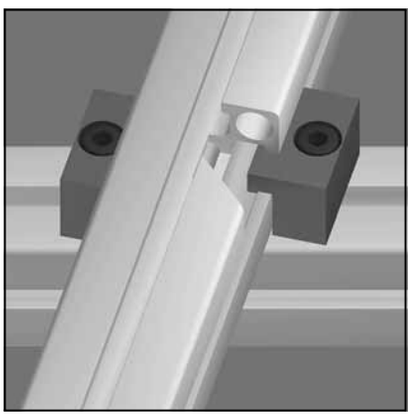
ASSEMBLY

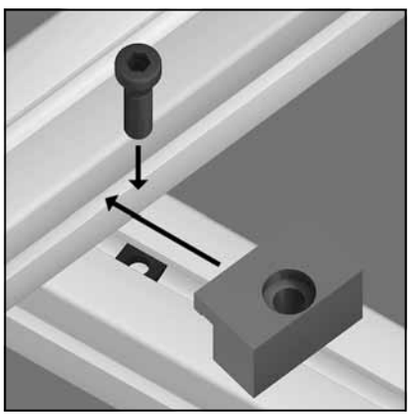
- Use fixing kit from supply schedule

CLAMPING CLAW

Part. N° 21.1027/0







TECHN. DATA / ITEMS SUPPLIED	
- Aluminium anodized	
- Fixing kit	
- Weight	0,069 kg

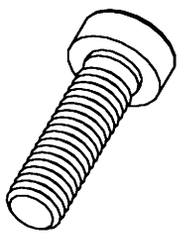
APPLICATIONS

- Parallel connection of profiles at various angles

ASSEMBLY

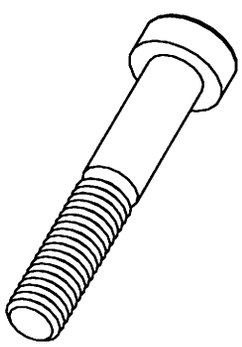
- Use fixing kit from supply schedule
- No processing required

HEX SOCKET CAP SCREWS



M8, 5 A/F

Screw	Part no. (steel, zincplated)	Part no. (stainless steel)
M8 x 16	21.1200/0	21.1200/1
M8 x 20	21.1202/0	21.1202/2
M8 x 25	21.1204/0	21.1204/1
M8 x 30	21.1206/0	------
M8 x 35	21.1208/0	21.1208/1
M8 x 40	21.1210/0	------
M8 x 45	21.1211/0	------
M8 x 50	21.1212/0	21.1212/1
M8 x 60	21.1214/0	------
M8 x 70	21.1282/0	------
M8 x 80	21.1225/0	------
M8 x 90	21.1226/0	------



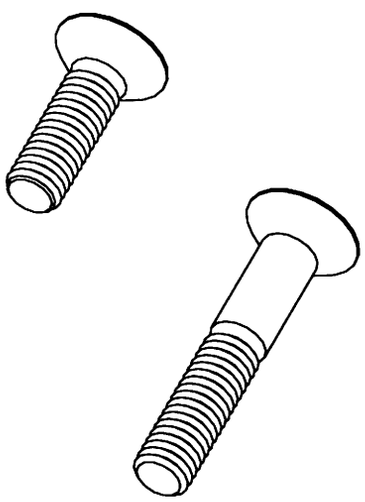
M6, 4 A/F

Screw	Part no. (steel, zincplated)	Part no. (stainless steel)
M6 x 12	21.1143/0	------
M6 x 16	21.1238/0	21.1238/1
M6 x 20	21.1240/0	21.1340/1
M6 x 25	21.1242/0	21.1242/1
M6 x 30	21.1243/0	21.1243/1
M6 x 35	21.1245/0	------
M6 x 40	21.1247/0	------
M6 x 45	21.1172/0	------
M6 x 50	21.1171/0	------
M6 x 60	21.1154/0	------
M6 x 80	21.1199/0	21.1199/1

M5, 4 A/F

Screw	Part no. (steel, zincplated)	Part no. (stainless steel)
M5 x 12	21.1220/0	------
M5 x 16	21.1235/0	------
M5 x 20	21.1222/0	------
M5 x 25	21.1224/0	------
M5 x 30	21.1237/0	------
M5 x 40	21.1284/0	------
M5 x 45	21.1219/0	------

COUNTERSUNK SCREWS



M8, hex socket

Screw	Part no. (steel, zincplated)
M8 x 16	21.1513/0
M8 x 20	21.1514/0
M8 x 25	21.1520/0
M8 x 30	21.1516/0
M8 x 40	21.1547/0
M8 x 50	21.1517/0
M8 x 60	21.1523/0

M5, hex socket

Screw	Part no. (steel, zincplated)
M5 x 16	21.1503/0
M5 x 20	21.1504/0
M5 x 25	21.1505/0

M6, hex socket

Screw	Part no. (steel, zincplated)
M6 x 16	21.1506/0
M6 x 20	21.1507/0
M6 x 30	21.1508/0
M6 x 40	21.1510/0
M6 x 60	21.1512/0

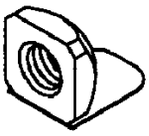
M4, hex socket

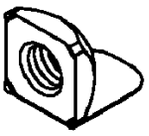
Screw	Part no. (steel, zincplated)
M4 x 16	21.1501/0
M4 x 20	21.1502/0
M4 x 30	21.1203/0

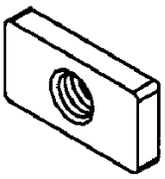
SQUARE NUTS

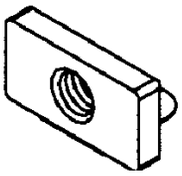
The square nuts are insertable into the profile groove at any desired point. See page 67.
This enables subsequent mounting of elements into existing constructions without partial dismantling.

The spring metal keeps the nut in the right position. Moveable by screw-driver. Especially for use in vertical profiles.









Square nuts

square nut	Part no. (steel, zincplated)	Part no. (stainless steel)
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 spring metal

square nut	Part no. (steel, zincplated)	Part no. (stainless steel)
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 nuts Z

square nut	Part no. (steel, zincplated)	Part no. (stainless steel)
M8	21.1390/0	-
M6	21.1391/0	-

Square nuts Z with spring metal

square nut	Part no. (steel, zincplated)	Part no. (stainless steel)
M8	21.1390/2	-
M6	21.1391/2	-

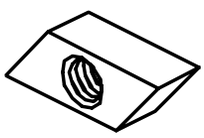
Square nuts M8 L

square nut	Part no. (steel, zincplated)	Part no. (stainless steel)
M8	21.1368/0	-

Square nuts M8 L with spring metal

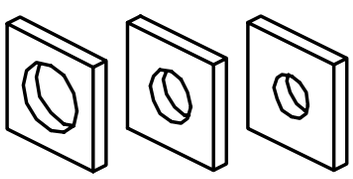
square nut	Part no. (steel, zincplated)	Part no. (stainless steel)
M8	21.1368/2	-

RHOMBUS NUT

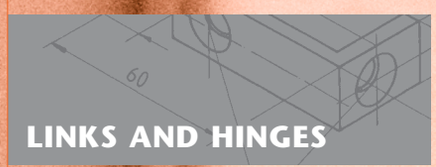


Rhombus nut	Part no. (steel, zincplated)
M6	21.1352/0
F	21.1354/0

SQUARE WASHER

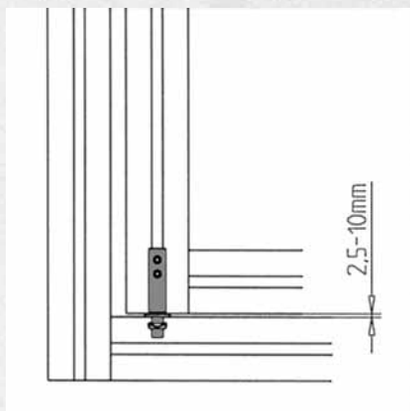


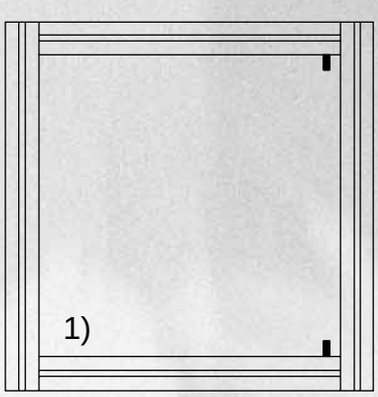
Square washer	Part no. (steel, zincplated)	Part no. (stainless steel)
Square washer 8	21.1360/0	21.1360/1
Square washer 6	21.1363/0	------
Square washer 5	21.1362/0	------

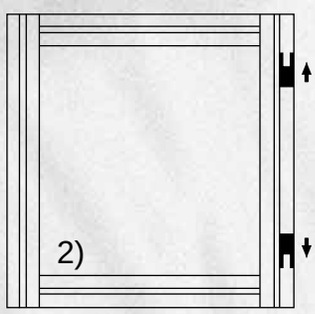


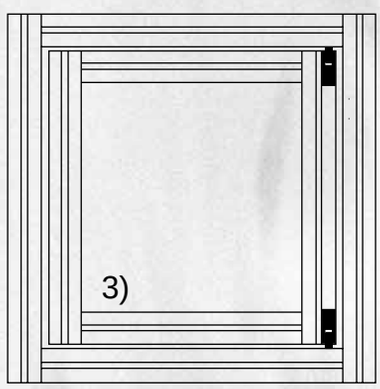
LINKS AND HINGES

INTERNAL HINGE AL





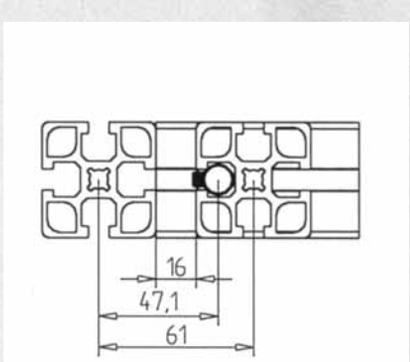




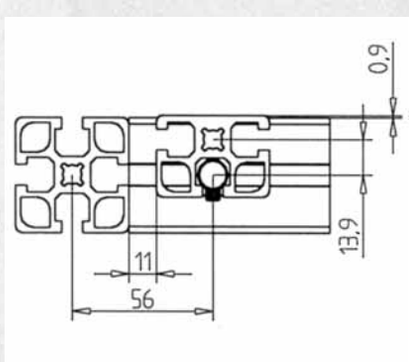
Assembly

1) Screw snap bolts onto the frame and insert washer.
2) Insert hinge into door element.
3) Hold the door element above the grooves, push hinges onto snap bolts and tighten them.

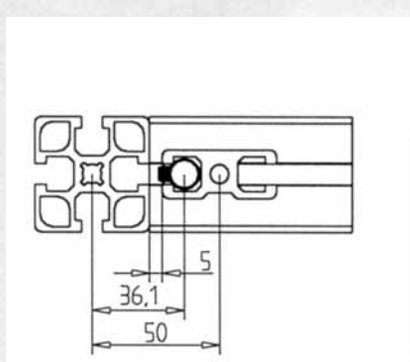
Distance of the snap bolts from the frame:



Assembly in inner groove:
47,1 mm



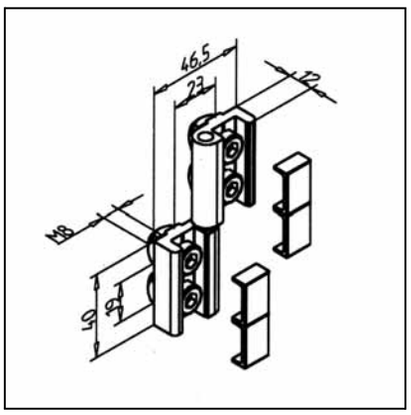
Assembly in central groove:
56 mm

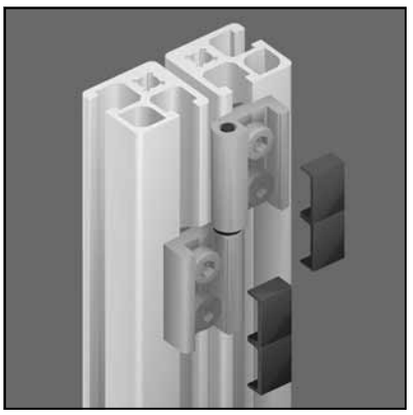


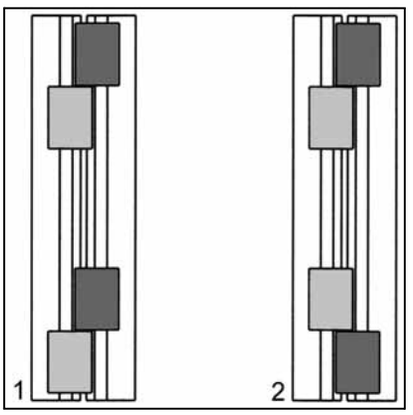
Assembly in inner groove:
36,1 mm

HINGE 19

Part. N° 21.1100/0







TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural anodized with steel-cylinder-bolt
- Fixing kit
- End caps
- Weight 0,111 kg
- Load max. 400 N

APPLICATIONS

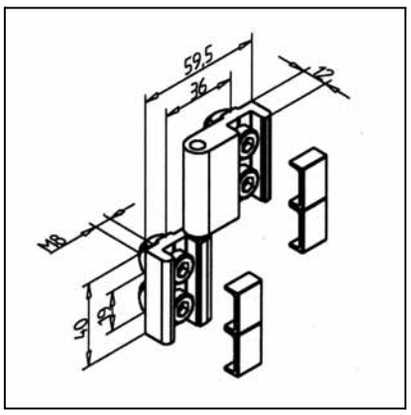
- Swing doors and lids
- Mount in reversed orientation for non lift removable or horizontal applications
- Connection of profiles 19 at various angles

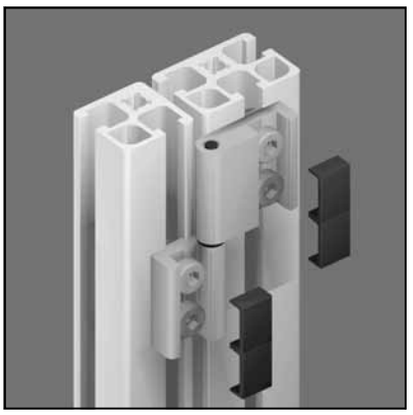
ASSEMBLY

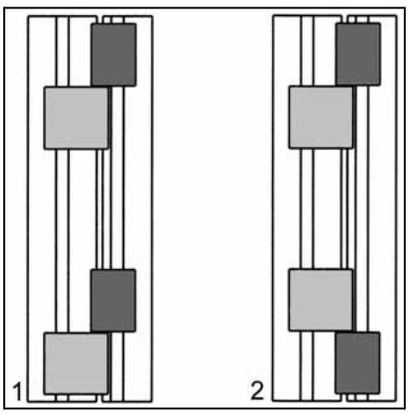
- Use fixing kit from supply schedule
- For fixing directly on panel elements or on profile surfaces we deliver hinge 19 without fixing element **Part N° 21.1100/2**
- 1: lift removable
- 2: non lift removable

HINGE 32

Part. N° 21.1095/0







TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural anodized with steel-cylinder-bolt
- Fixing kit
- End caps
- Weight 0,128 kg
- Load max. 400 N

APPLICATIONS

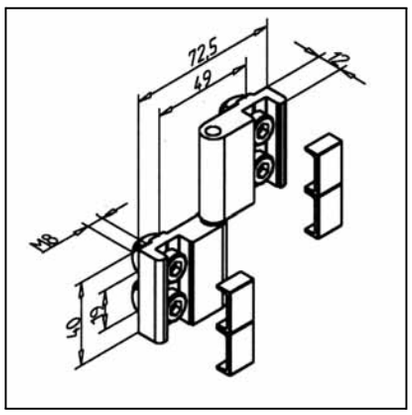
- Swing doors and lids
- Mount in reversed orientation for non lift removable or horizontal applications
- Connection of profiles 19, 32 and 45 at various angles

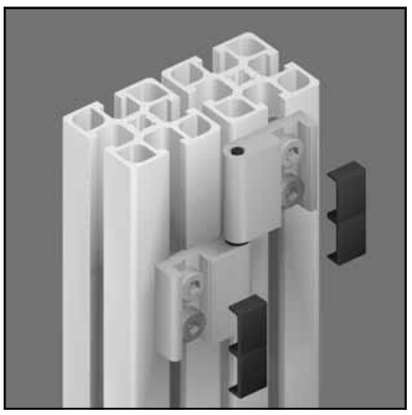
ASSEMBLY

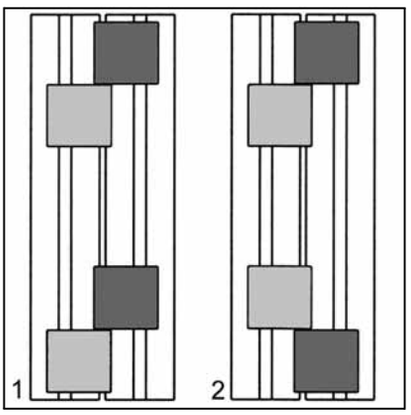
- Use fixing kit from supply schedule
- For fixing directly on panel elements or on profile surfaces we deliver hinge 32 without fixing element **Part N° 21.1095/2**
- 1: lift removable
- 2: non lift removable

HINGE 45

Part. N° 21.1096/0







TECHN. DATA / ITEMS SUPPLIED	
- Aluminium, natural anodized with steel-cylinder-bolt	
- Fixing kit	
- End caps	
- Weight	0,145 kg
- Load max.	400 N

APPLICATIONS

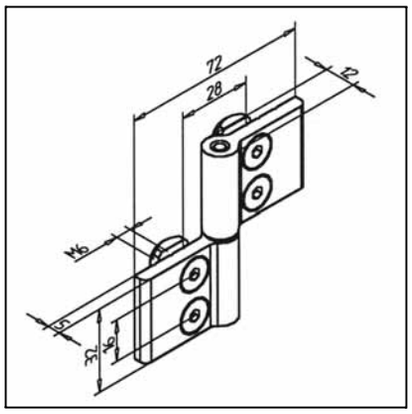
- Swing doors and lids
- Connection of profiles 45 at various angles
- Attachment of guards
- Mount in reversed orientation for non lift removable or horizontal applications

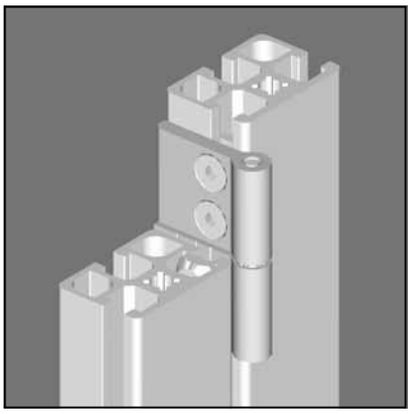
ASSEMBLY

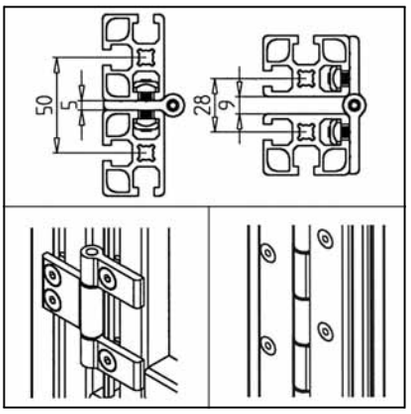
- Use fixing kit from supply schedule
- For fixing directly on panel elements or on profile surfaces we deliver hinge 45 without fixing element **Part N° 21.1096/2**
- 1: lift removable
- 2: non lift removable

HINGE L 19/19

Part. N° 21.1373/0







TECH. DATA / ITEM SUPPLIED	
- Aluminium, natural anodized with steel cylinder	
- Fixing kit	
- Weight	0,089 kg
- Load max.	400 N

APPLICATIONS

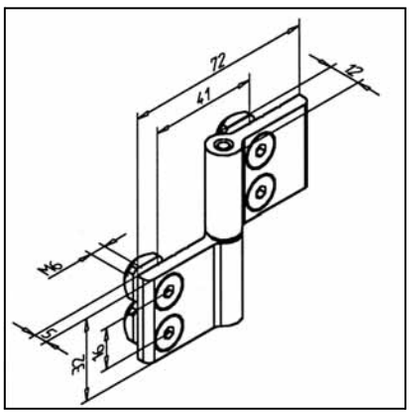
- Doors, lids, moveable attachments at profiles 19 and 32
- Attachment of guards
- Mount in reversed orientation for non lift removable or horizontal applications
- Connection of profiles 19 at various angles

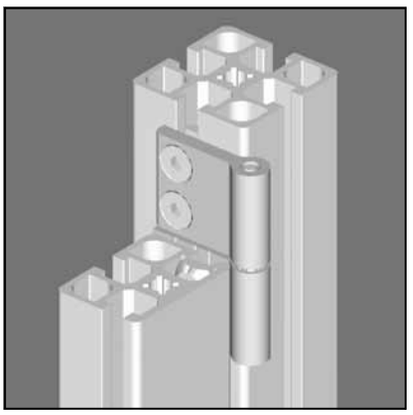
MONTAGE

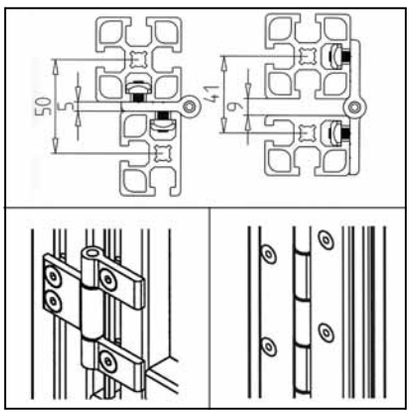
- Use fixing kit from supply schedule
- For production of hinges at various length or piano-hinges is hinge-profile 5, **Part N° 20.1076/0** available

HINGE L 19/45

Part. N° 21.1375/0







TECHN. DATA / ITEM SUPPLIED

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

APPLICATIONS

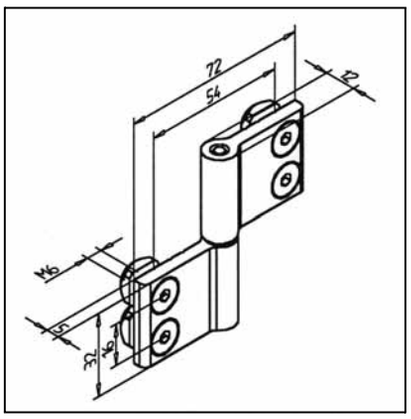
- Doors, lids, moveable attachments at profiles 19, 32 and 45
- Mounting of guards
- Mount in reversed orientation for non lift removable or horizontal applications
- Connection of profiles 19,32 and 45 at various angles

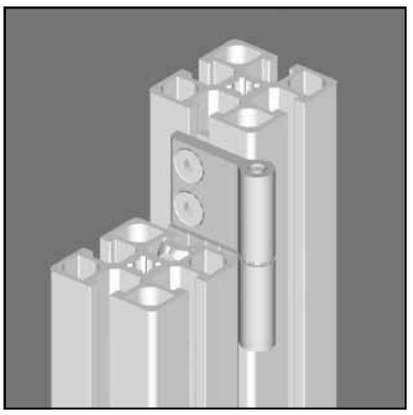
ASSEMBLY

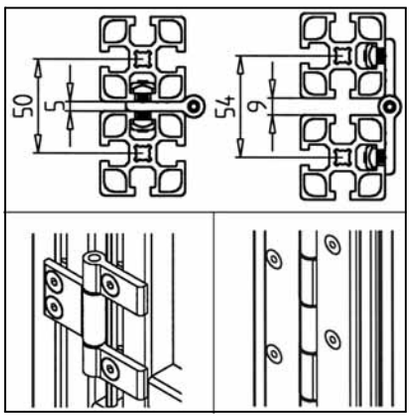
- Use fixing kit from supply schedule
- For production of hinges at various length or piano-hinges is hinge-profile 5, **Part N° 20.1076/0** available

HINGE L 45/45

Part. N° 21.1378/0







TECHN. DATA / ITEM SUPPLIED

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

APPLICATIONS

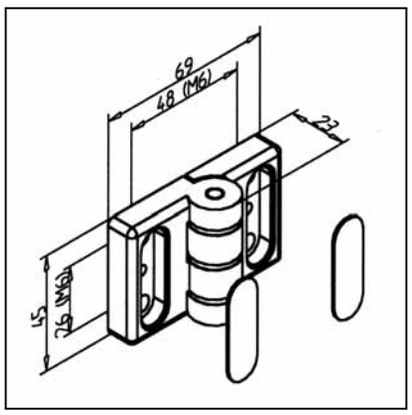
- Doors, lids, moveable attachments at profiles 45
- Mounting of guards
- Mount in reversed orientation for non lift removable or horizontal applications
- Connection of profiles 45 at various angles

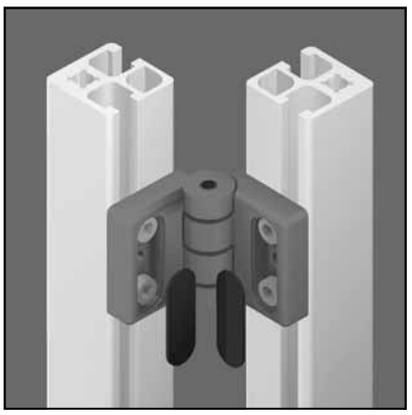
ASSEMBLY

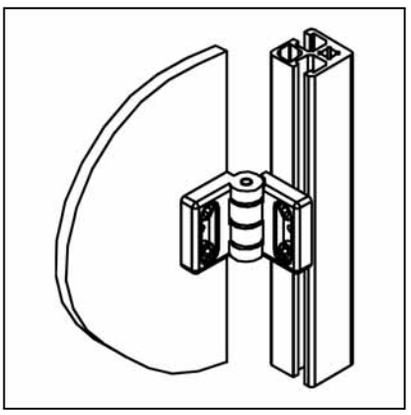
- Use fixing kit from supply schedule
- For production of hinges at various length or piano-hinges is hinge-profile 5, **Part N° 20.1076/0** available

HINGE 19 S

Part. N° 21.1044/0







TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Without fixing kit
- with end caps
- Weight 0,100 kg
- Load max. 600 N

APPLICATIONS

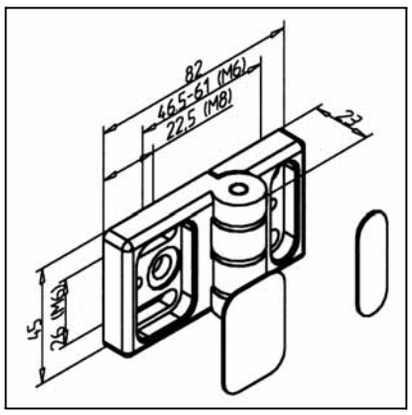
- Suitable for large doors and flaps of profile type 19 or 32
- Guard units
- Connection of profiles 19 and 32 at any angle

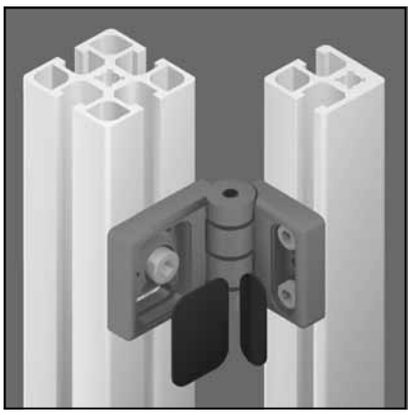
ASSEMBLY

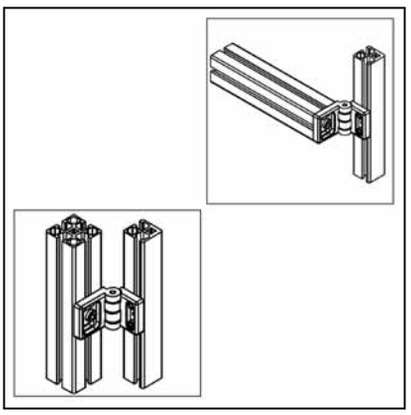
- Fasten hinge with 4 M6 x 20 bolts and 4 square nuts on the profile groove, or with screws corresponding to the material thickness directly on the panel elements
- For heavy-duty applications use multiple hinges

HINGE 32 S

Part. N° 21.1055/0







TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder-coated, grey
- Without fixing kit
- with end caps
- Weight 0,105 kg
- Load max. 600 N

APPLICATIONS

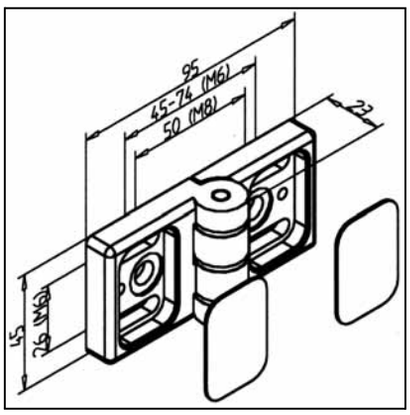
- Suitable for large doors and flaps
- Guard units
- Connection of profiles 19, 32 and 45 at any angles

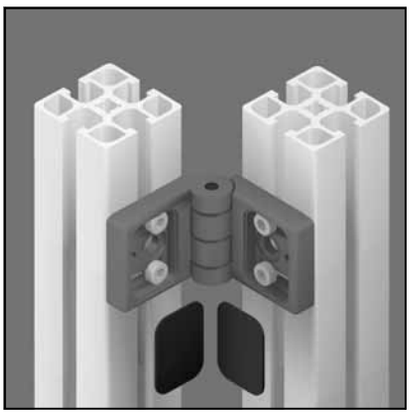
ASSEMBLY

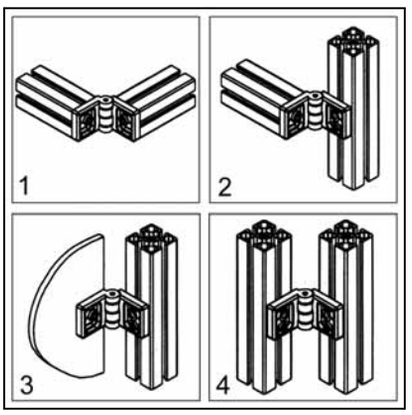
- Fasten hinge with 4 M6 x 20 bolts and 4 square nuts on the profile groove or with screws corresponding to the material thickness directly on the panel elements
- Fasten hinge with M8 x 30 bolt on the 45 x 45 profile face side; fasten the other hinge half with M6 x 20 bots and square nuts on the profile groove or with M6 bolts corresponding to the material thicknes
- For heavy-duty applications use multiple hinges

HINGE 45 S

Part. N° 21.1098/1







TECHN. DATA / ITEMS SUPPLIED	
- Aluminium GD, powder-coated, grey	
- Without fixing kit	
- With End caps	
- Weight	0,100 kg
- Load max.	600 N

APPLICATIONS

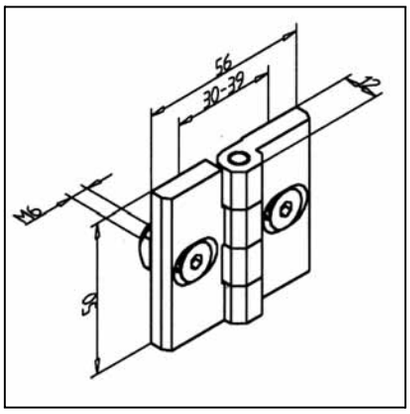
- Suitable for large doors and flaps
- Guard units
- Connection of profiles at various angles
- For higher loads use more hinges

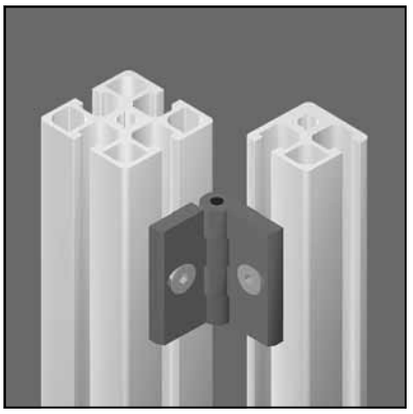
ASSEMBLY

- 1: 2 screws M8 x 30
- 2: 2 screws M6 x 20, square nuts M6, 1 screw M8 x 30
- 3: 2 screws M6 x 20, 2 square nuts M6, 2 screws M6 for panel element according to material
- 4: 4 screws M6 x 20, 4square nuts M6

HINGE 32 GD

Part. N° 21.1131/0





TECHN. DATA / ITEMS SUPPLIED	
- GD Zn, powder coated, black	
- Fixing kit	
- Weight	0,132 kg
- Load max.	400 N

APPLICATIONS

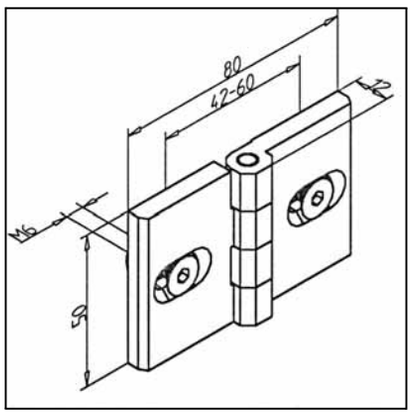
- For profiles 32 x 32 and 32 x 45
- Heavy doors and lids
- Connection of profiles at various angles

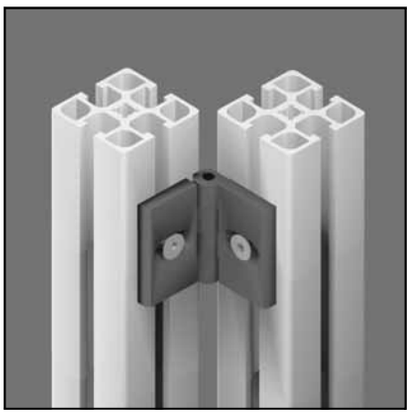
ASSEMBLY

- Use fixing kit from supply schedule

HINGE 45 GD

Part. N° 21.1130/0





TECHN. DATA / ITEMS SUPPLIED	
- GD Zn, powder coated, black	
- Fixing kit	
- Weight	0,167 kg
- Load max.	400 N

APPLICATIONS

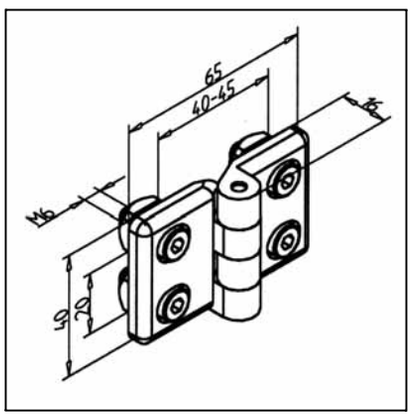
- For profiles 45 and 90
- Heavy doors and lids
- Connection of profiles at various angles

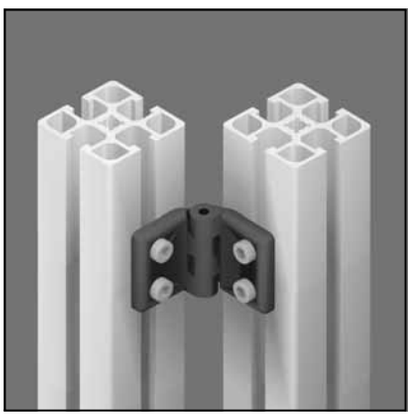
ASSEMBLY

- Use fixing kit from supply schedule

HINGE 45 M6

Part. N° 21.1175/0





TECHN. DATA / ITEMS SUPPLIED	
- ABS, grey	
- Fixing kit	
- Weight	0,061 kg
- Load max.	160 N

APPLICATIONS

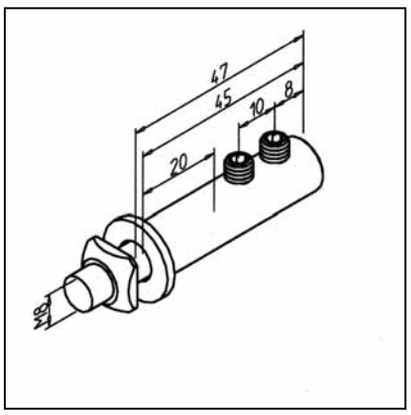
- Suitable for light doors and lids
- Guard units
- Connection of profiles at various angles

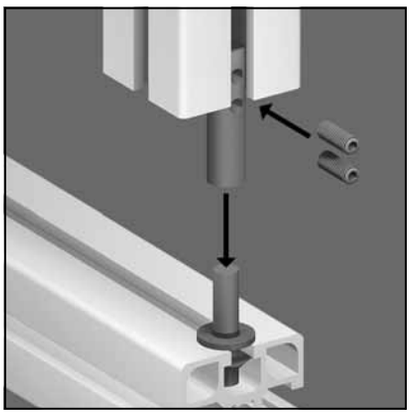
ASSEMBLY

- Use fixing kit from supply schedule

INTERAL HINGE AL

Part. N° 21.1142/0





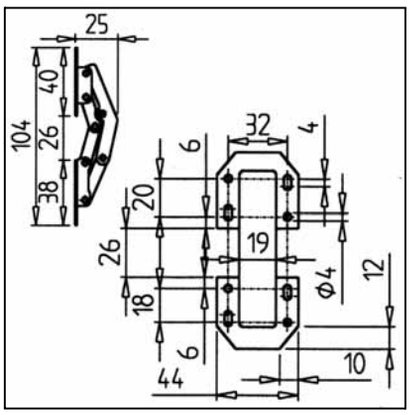
TECHN. DATA / ITEMS SUPPLIED	
- Aluminium, natural	
- Fixing kit	
- Weight	0,020 kg
- Load max.	250 N

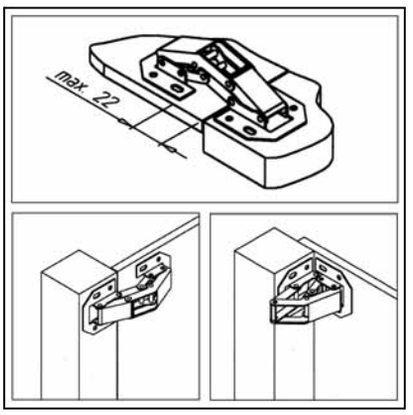
APPLICATIONS
- Doors
- Lids
- Movable elements
- Subsequent fitting of doors

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
- See page 99

SWING-OUT HINGE

Part. N° 21.1187/0





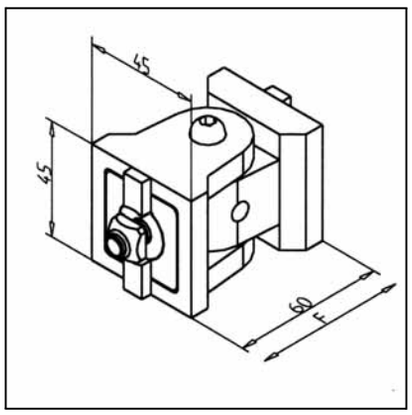
TECHN. DATA / ITEMS SUPPLIED	
- Steel zinc-plated	
- Without fixing kit	
- Weight	0,082 kg
- Load max.	50 N

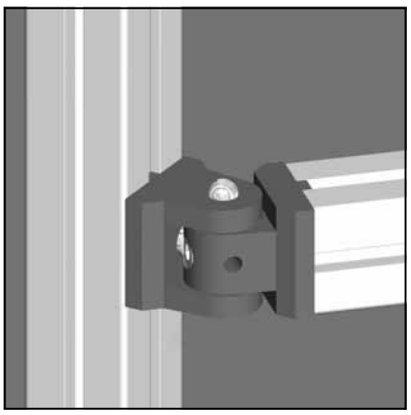
APPLICATIONS
- Light doors
- Show cases, Fair equipment, guards
- Doors close without gap, bearing on the outside or fluh on the inside

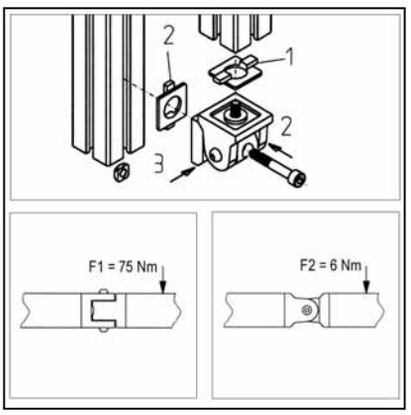
ASSEMBLY
- On profile grooves with screws M4 x 16 and square nut M4
- Direct fastening on panel elements; screwlength according to material thickness
- Direct fastening on profile surface

LINK

Part. N° 21.2030/0







TECHN. DATA / ITEMS SUPPLIED

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

APPLICATIONS

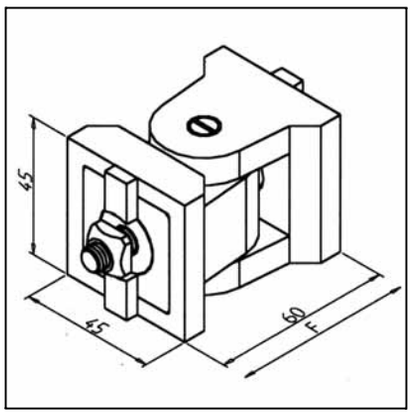
- Connection of profiles at any angle
- Braces
- Reinforcement of frame constructions
- Not to be used as a hinge

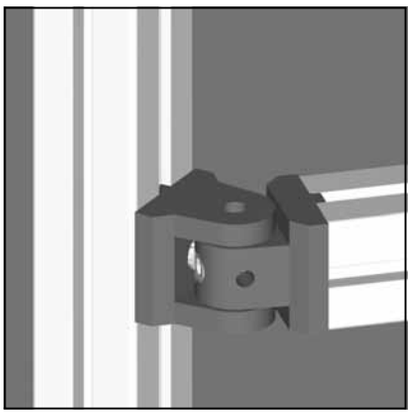
ASSEMBLY

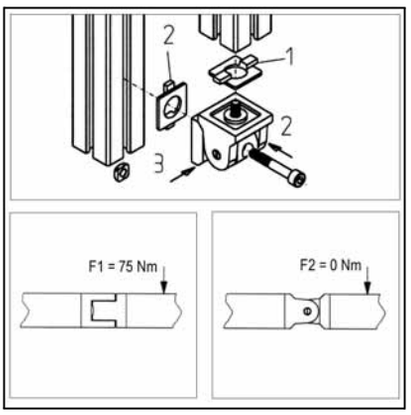
- 1: Mount the hinge half 1 on the desired position (with key SA/F through bore in hinge half 2)
- 2: Insert screw M8 x 50 and fix hinge half 2
- 3: Tighten lateral connecting screws

ANGLE BRACKET

Part. N° 21.2020/0







TECHN. DATA / ITEMS SUPPLIED

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

APPLICATIONS

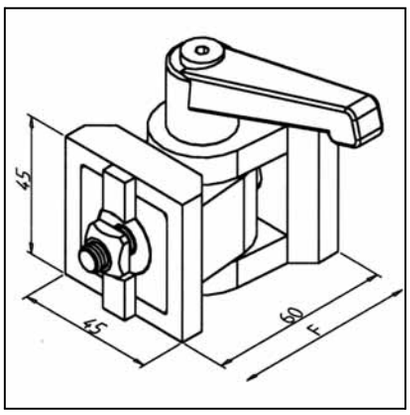
- Heavy swivel doors, bearing assembly of movable add-on pieces
- Not lockable
- For heavy-duty loads use multiple hinges

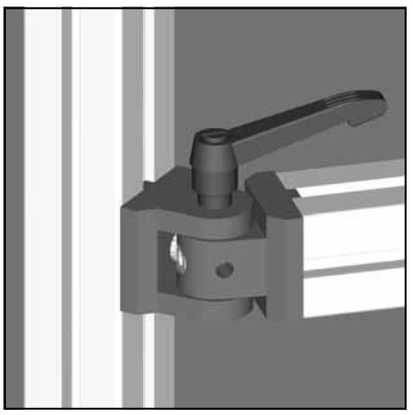
ASSEMBLY

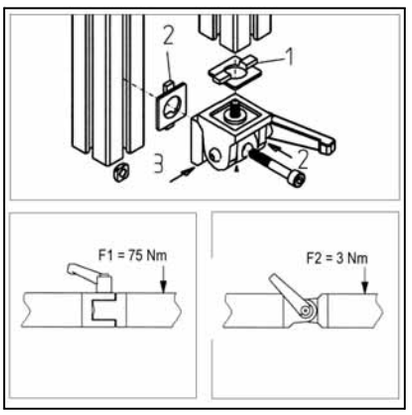
- 1: Mount the hinge half 1 on the desired position (with key SA/F through bore in hinge half 2)
- 2: Insert screw M8 x 50 and fix hinge half 2

ANGLE BRACKET FIXABLE

Part. N° 21.2010/0







TECHN. DATA / ITEMS SUPPLIED

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

APPLICATIONS

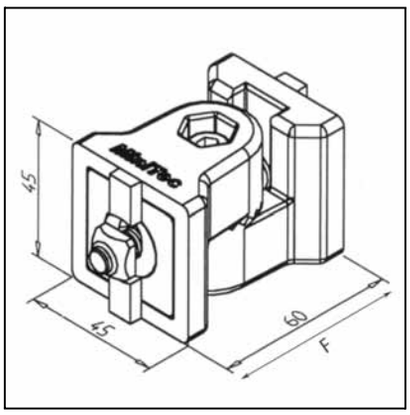
- Heavy swivel doors, bearing assembly of movable add-on pieces
- Clamping lever for positioning of add-on parts
- Fixing of pieces such as measuring devices that need to be adjusted quickly
- For heavy-duty loads use multiple hinges

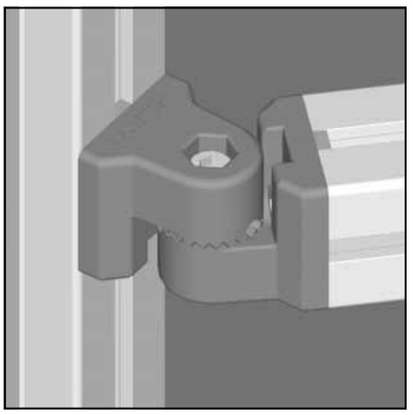
ASSEMBLY

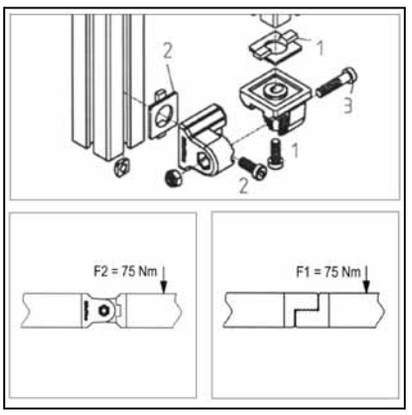
- 1: Mount the hinge half 1 on the desired position (with key SA/F through bore in hinge half 2)
- 2: Insert screw M8 x 50 and fix hinge half 2
- 3: Tighten clamping lever

ANGLE BRACKET R

Part. N° 21.2041/0







TECHN. DATA / ITEMS SUPPLIED

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

APPLICATIONS

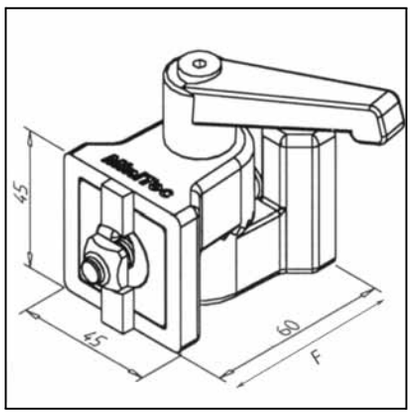
- Setting angle 180° in steps of 15°
- Adjustale fixing of add-on parts such as grip-boxes, beams or monitors

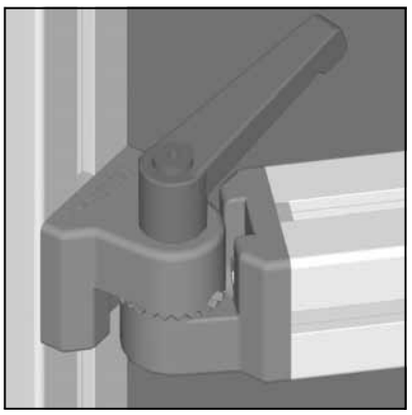
ASSEMBLY

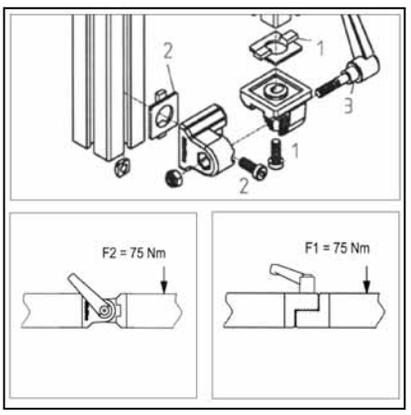
- 1: Place locking device and screw first half of the bracket
- 2: Fix second half
- 3: Connect the 2 halves in desired angle and tighten

ANGLE BRACKET R FIXABLE

Part. N° 21.2040/0







TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fixing kit
- Locking device against rotation AL GD
- Load max. 5000 N
- Weight 0,332 kg

APPLICATIONS

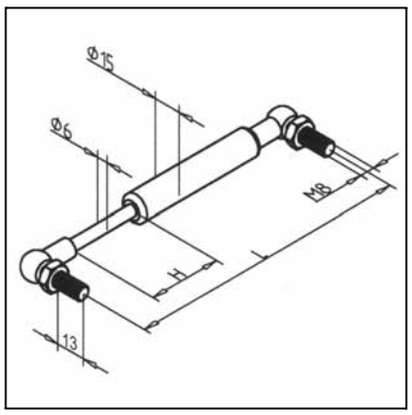
- Setting angle 180° in steps of 15°
- Adjustale fixing of add-on parts such as grip-boxes, beams or monitors

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. N° 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

- Fixing kit
- 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

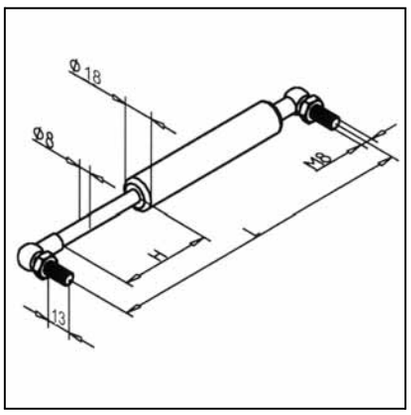
- Weight equalization for hinged elements
- Suitable for lift and swivel movements

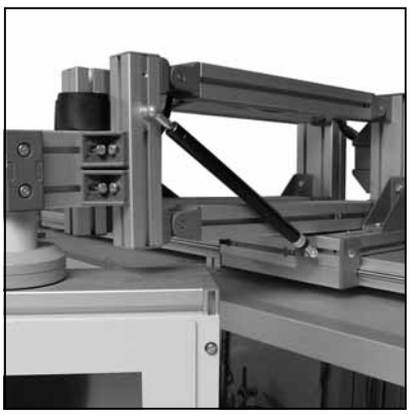
ASSEMBLY

- Use fixing kit from supply schedule

GAS SPRING 8/20

Part. N° 24.1127/0





H (mm)	L (mm)
57	206
80	244
100	286
120	326
140	366
160	405
180	446
200	485,5
220	527
250	585,5

TECHN. DATA / ITEMS SUPPLIED

- Fixing kit
- 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

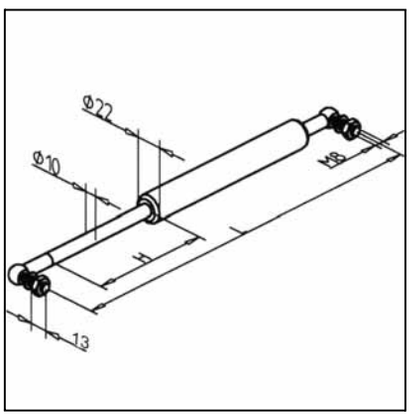
- Weight equalization for hinged elements
- Suitable for lift and swivel movements

ASSEMBLY

- Use fixing kit from supply schedule

GAS SPRING 10/22

Part. N° 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

- Fixing kit
- 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

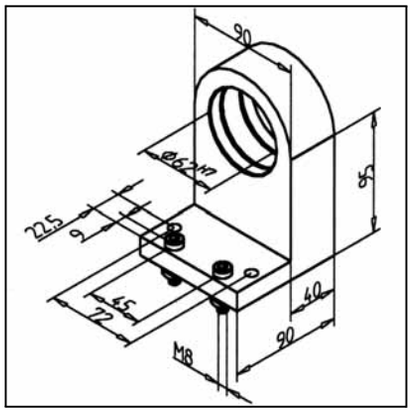
- Weight equalization for hinged elements
- Suitable for lift and swivel movements

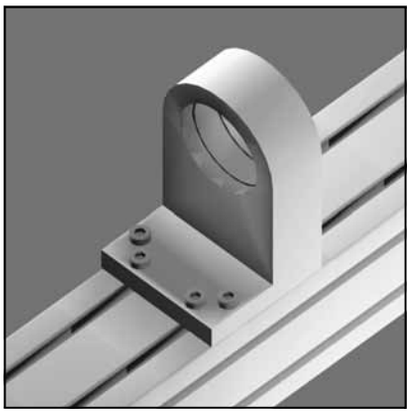
ASSEMBLY

- Use fixing kit from supply schedule

UPRIGHT BEARING

Part. N° 28.0158/0





TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural anodized
- Fixing kit
- Without ball bearing and locking rings
- Weight 1,31 kg

APPLICATIONS

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

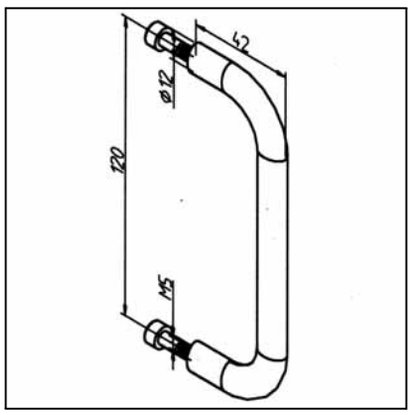
ASSEMBLY

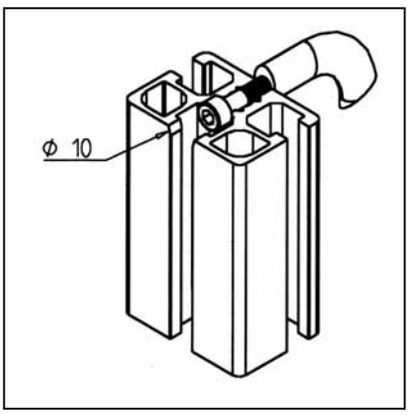
- Location hole fittting for radial ball bearing 6206 2RS **Part N° 50.0977/1**
- Use fixing kit from supply schedule

HANDLES, LOCKS, STOPS

HANDLE AL

Part. N° 21.1138/0

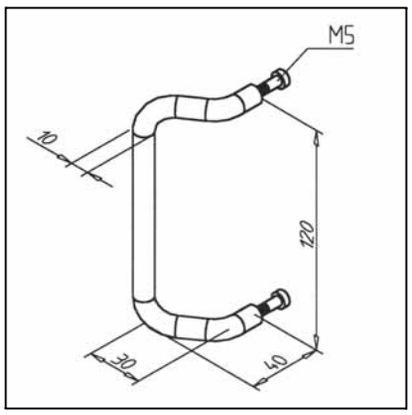


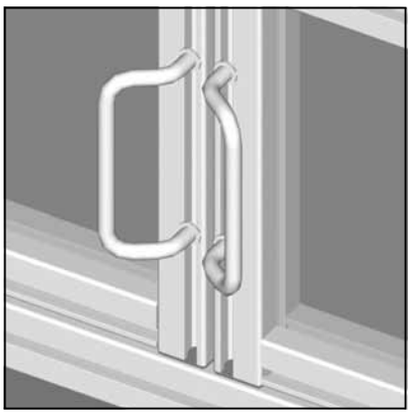


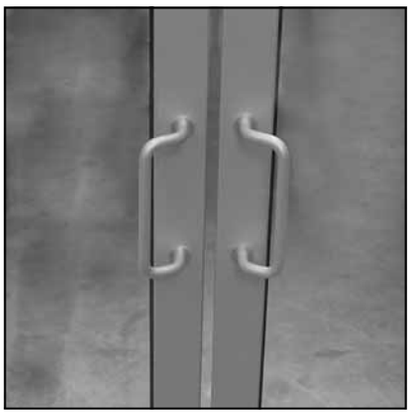
TECHN. DATA / ITEMS SUPPLIED	APPLICATIONS	ASSEMBLY
- Aluminium, natural anodized	- Show cases	- Use fixing kit from supply schedule
- Fixing kit	- Cabinets	- With step drilling Ø 10 mm x 5,5 mm respectively through hole Ø 5,5
- Weight 0,050 kg	- Light doors	

HANDLE AL ANGLED

Part. N° 21.1348/0



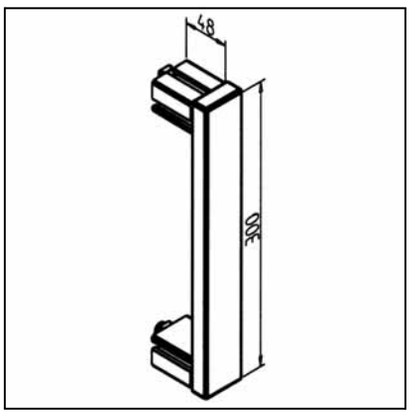


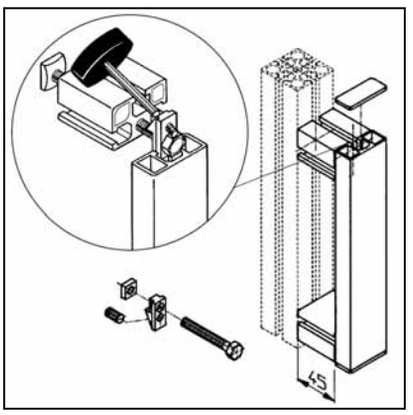


TECH. DATA / ITEMS SUPPLIED	APPLICATIONS	ASSEMBLY
- Aluminium natural, anodized	- Show cases	- Use fixing kit from supply schedule
- Fixing kit	- Cabinets	- 2 step drills Ø 10 mm x 5,5 mm or through-bores Ø 5,5 mm in 120 mm distance
- Weight 0,050 kg	- Light doors	

PROFILE HANDLE

Part. N° 21.1051/0





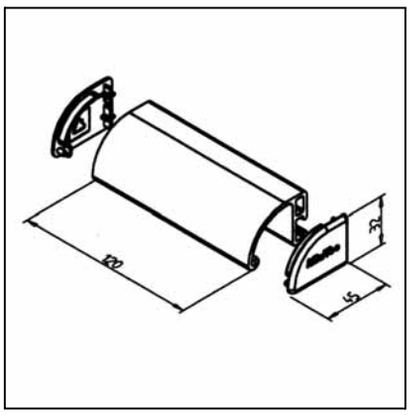
TECHN. DATA / ITEMS SUPPLIED	
- Assembly kit made from MiniTec aluminium profiles	
- Fixing kit	
- Weight	0,480 kg
- Length	300 mm
- **Other lengths on request**	

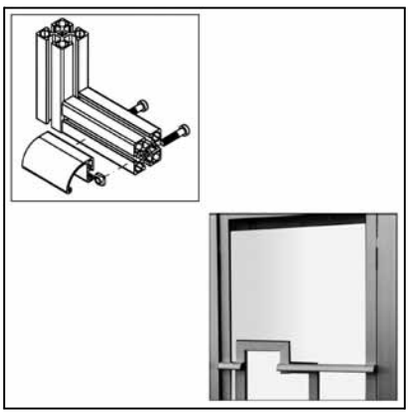
APPLICATIONS
- Handle for very large doors, lids, trolleys, removable panel elements

ASSEMBLY
- Put the screw with fastener through the bore of the distance piece
- Tighten power-lock fastener
- Clip on end caps

CLOSED PROTECTIVE HANDLE

Part. N° 21.1048/0





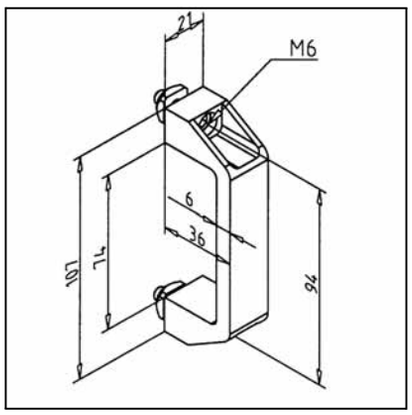
TECHN. DATA / ITEMS SUPPLIED	
- Aluminium anodized	
- End caps	
- Without fixing kit	
- Weight	0,113 kg
- Length	120 mm
- **Other lengths on request**	

APPLICATIONS
- For doors
- Lids
- Guards
- Furniture

ASSEMBLY
- On profile groove with 2 cap screws M6 x 20 and square nut M6
- Directly on panel element with cap screw M6, length according to material thicknes
- Assembly can also be carried out from the rear side; for this purpose insert square nut M6

HANDLE 90

Part. N° 21.1099/1



TECHN. DATA / ITEMS SUPPLIED

- PA 6.6, grey
- On request also deliverable in black **Part N° 21.1099/0**
- Fixing kit
- Weight 0,025 kg

APPLICATIONS

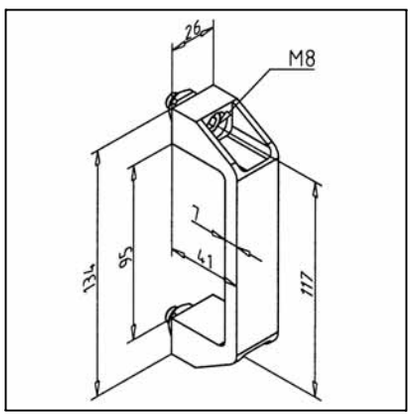
- For doors
- Lids
- Guards

ASSEMBLY

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

HANDLE 120

Part. N° 21.1092/1



TECHN. DATA / ITEMS SUPPLIED

- PA 6.6, grey
- On request also deliverable in black **Part N° 21.1092/0**
- Fixing kit
- Weight 0,074 kg

APPLICATIONS

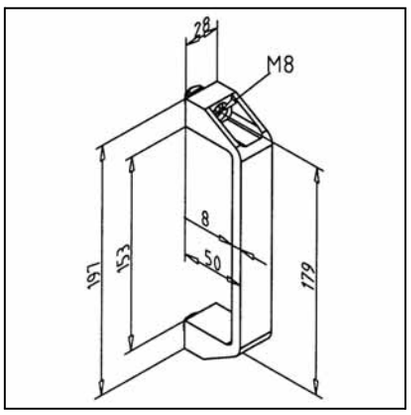
- For doors
- Lids
- Guards

ASSEMBLY

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

HANDLE 180

Part. N° 21.1094/1



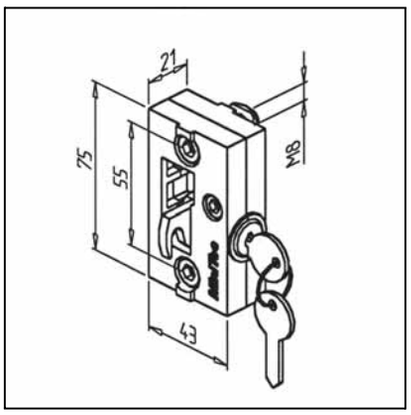
TECHN. DATA / ITEMS SUPPLIED	
- PA 6.6, grey	
- On request also deliverable in black **Part N° 21.1094/0**	
- Fixing kit	
- Weight	0,099 kg

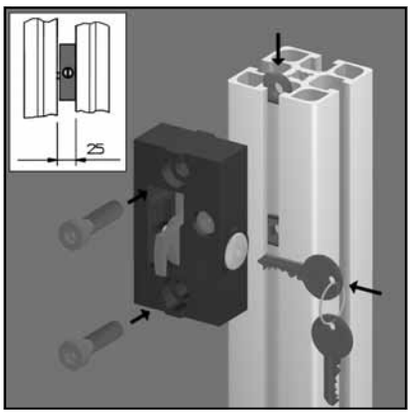
APPLICATIONS
- For doors
- Lids
- Guards

ASSEMBLY
- Use fixing kit from supply schedule
- Directly on panel element with cap screw M8, length according to material thickness
- Assembly can also be carried out from the rear side

DOOR LOCK

Part. N° 21.1750/5





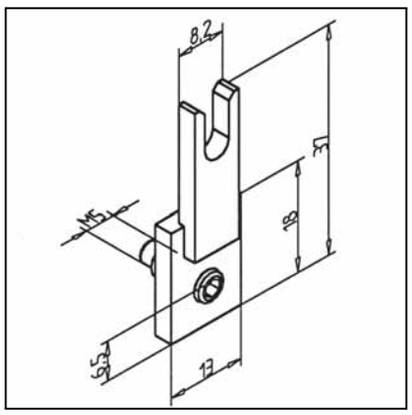
TECHN. DATA / ITEMS SUPPLIED	
- PA 6.6, grey	
- On request also deliverable in black **Part N° 21.1750/0**	
- Cylinder lock with 2 keys	
- Lock, steel, zinc-plated	
- Fixing kit	
- Weight	0,195 kg

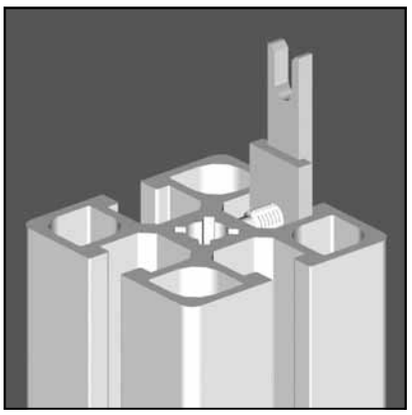
APPLICATIONS
- For doors
- Lids
- Guards

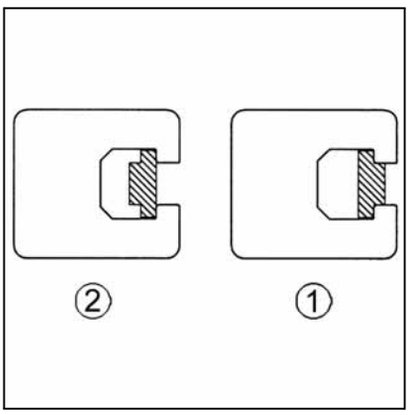
ASSEMBLY
- Use fixing kit from supply schedule
- Door lock meshes into groove of opposite profile
- Suitable for left and right hand mounting
- Suitably with lock 8 **Part N° 21.1715/0**

CATCH 8

Part. N° 21.1715/0







TECHN. DATA / ITEMS SUPPLIED

- Aluminium natural, anodized
- With set-screw
- Weight 0,015 kg

APPLICATIONS

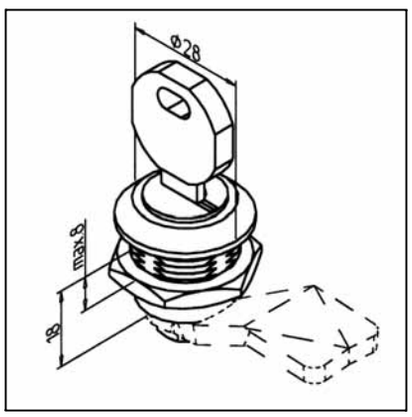
- Locking of slidin doors, swing doors with door lock

ASSEMBLY

- Slip the catch into profile groove
- 1) Catch open: for swing doors
- 2) Catch closed (as shown in the picture): for sliding doors
- Fix in desired position with set-screw

CYLINDER LOCK

Part. N° 21.1752/0



TECHN. DATA / ITEMS SUPPLIED

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

APPLICATIONS

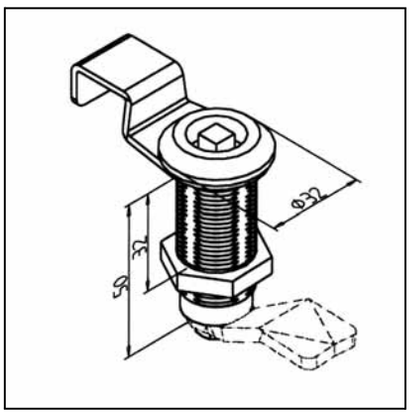
- Light doors from panel elements up to 8 mm thickness

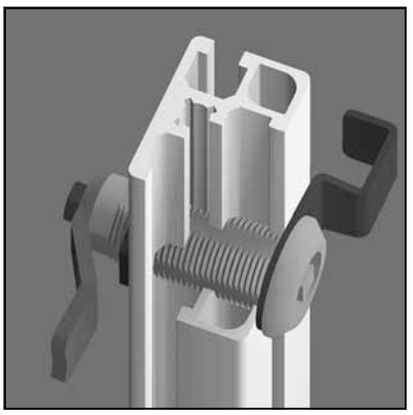
ASSEMBLY

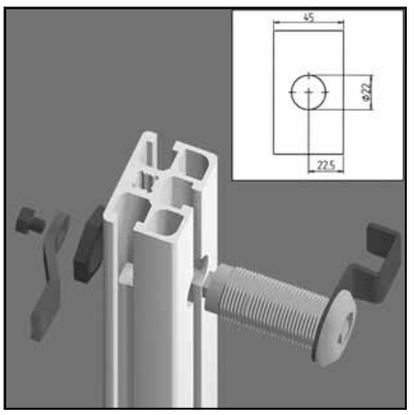
- Bore Ø 22 mm in panel element
- Position: 22 mm from edge in both directions
- Selection of locks see page 124

BOLT LOCK 32 FOR FOUR-FACED KEY

Part. N° 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

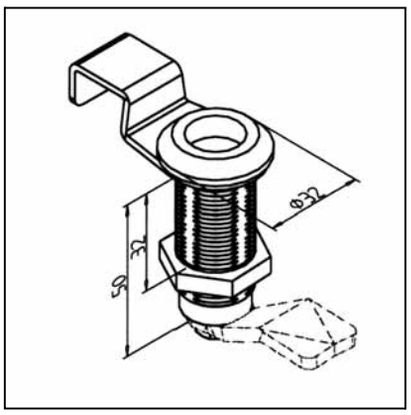
- For profiles 32
- Locking of doors and lids in guard units

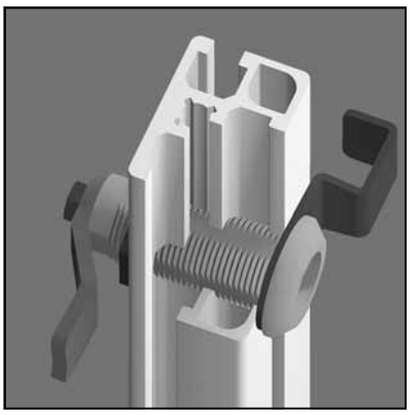
ASSEMBLY

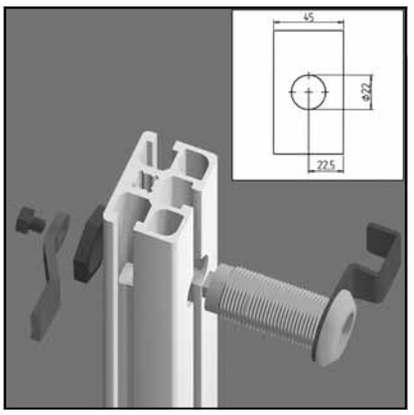
- Bore Ø 22 mm in the middle of the profile
- Tighten bolt lock from the rear with fixing nut
- Selection of locks see page 124

BOLT LOCK 32 SOCKET HEX HEAD WRENCH 10 A/F

Part. N° 21.1087/8







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 0,102 kg

APPLICATIONS

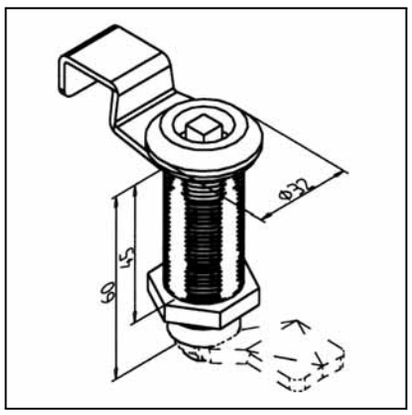
- For profiles 32
- Locking of doors and lids in guard units

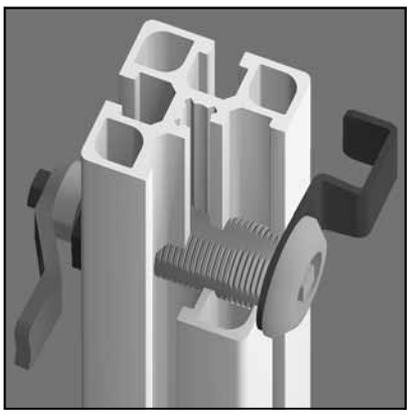
ASSEMBLY

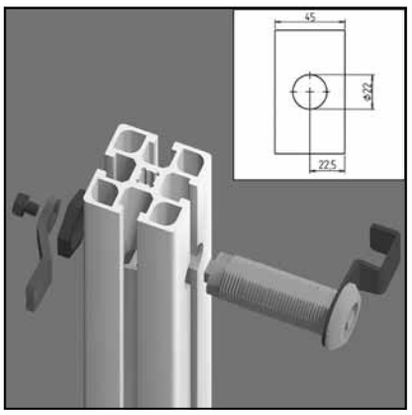
- Bore Ø 22 mm in the middle of the profile
- Tighten bolt lock from the rear with fixing nut
- Selection of locks see page 124

BOLT LOCK 45 FOR-FACED KEY

Part. N° 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

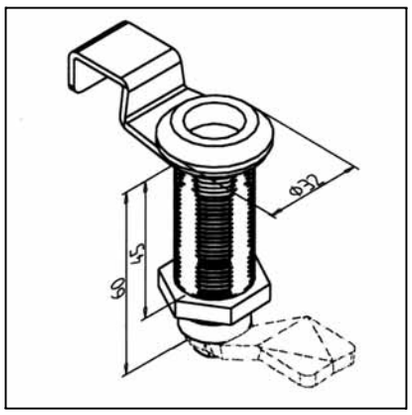
- For profiles 45
- Locking of doors and lids in guard units

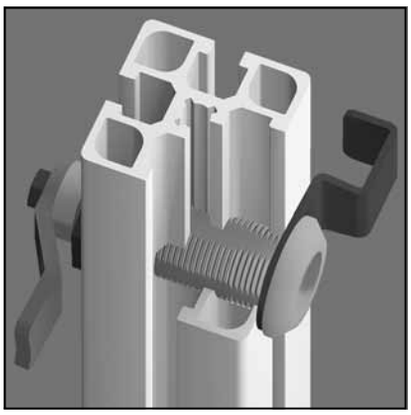
ASSEMBLY

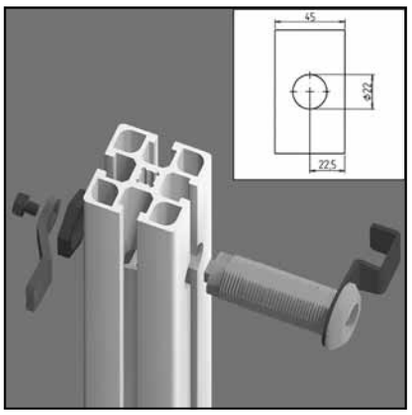
- Bore Ø 22 mm in the middle of the profile
- Tighten bolt lock from the rear with fixing nut
- Selection of locks see page 124

BOLT LOCK 45 HEX HEAD WRENCH 10 A/F

Part. N° 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

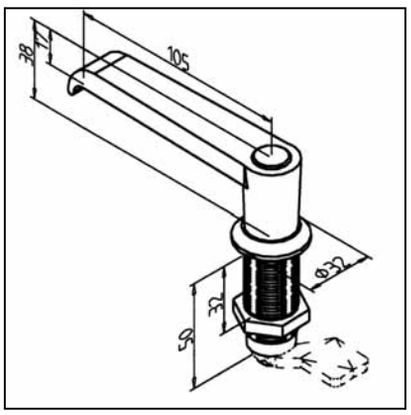
- For profiles 45
- Locking of doors and lids in guard units

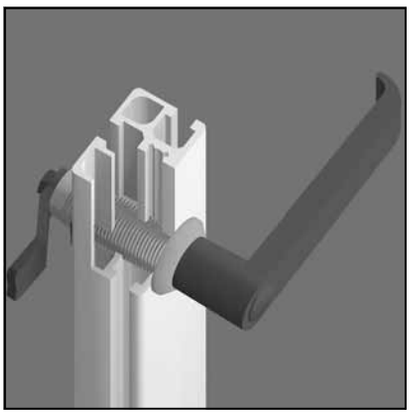
ASSEMBLY

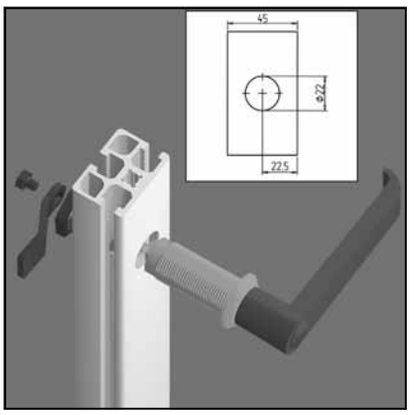
- Bore Ø 22 mm in the middle of the profile
- Tighten bolt lock from the rear with fixing nut
- Selection of locks see page 124

HANDLE 32 WITHOUT PROFILE CYLINDER LOCK

Part. N° 21.1087/4







TECHN. DATA / ITEMS SUPPLIED	
- Housing PA/GD Zn, grey	
- On request also deliverable in black **Part N° 21.1087/2**	
- Fixing nut, steel, zinc-plated	
- Without lock	
- Weight	0,172 kg

APPLICATIONS

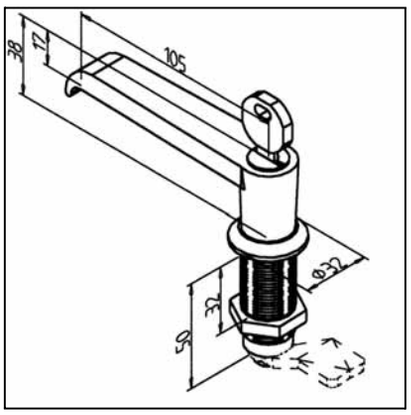
- For profiles 32
- Locking of doors and lids in guard units

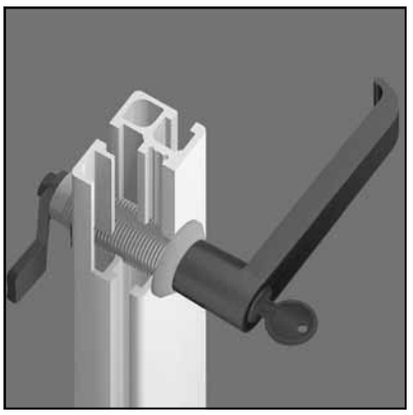
ASSEMBLY

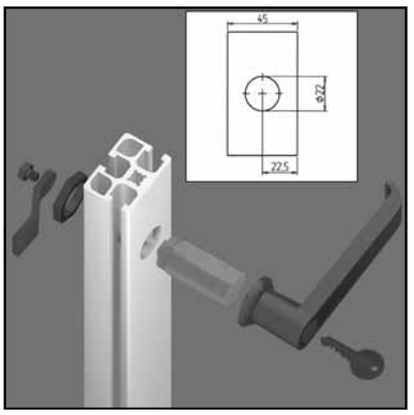
- Bore Ø 22 mm in the middle of the profile
- Tighten bolt lock from the rear with fixing nut
- Selection of locks see page 124

HANDLE 32 WITH PROFILE CYLINDER LOCK

Part. N° 21.1091/4







TECHN. DATA / ITEMS SUPPLIED	
- Housing PA/GD Zn, grey	
- On request also deliverable in black **Part N° 21.1091/2**	
- Fixing nut, steel, zinc-plated	
- Without lock	
- Weight	0,211 kg

APPLICATIONS

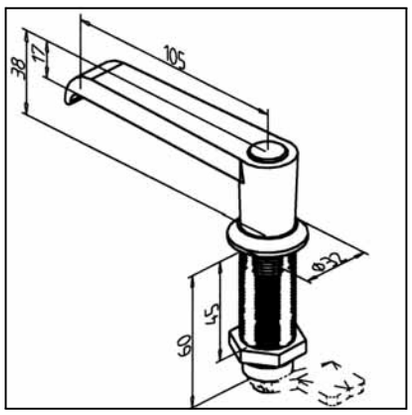
- For profiles 32
- Locking of doors and lids in guard units

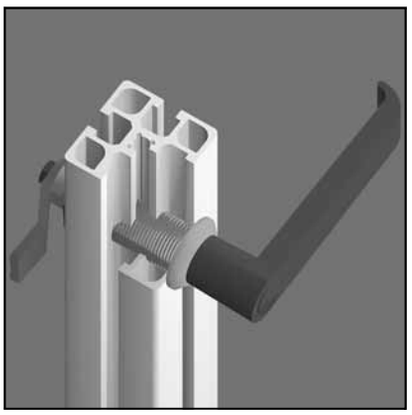
ASSEMBLY

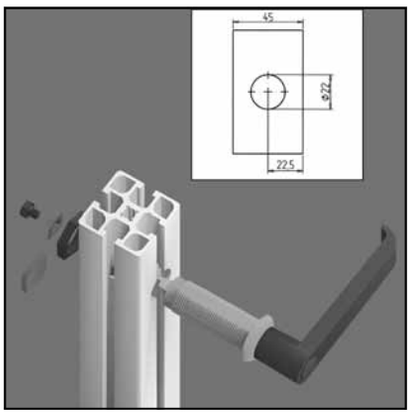
- Bore Ø 22 mm in the middle of the profile
- Tighten handle lock from the rear with fixing nut
- Selection of locks see page 124

HANDLE 45 WITHOUT PROFILE CYLINDER LOCK

Part. N° 21.1087/3







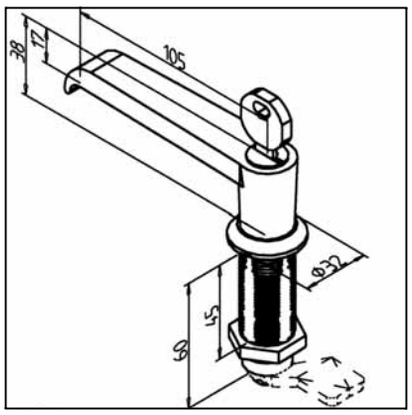
TECHN. DATA / ITEMS SUPPLIED	
- Housing PA/GD Zn, grey	
- On request also deliverable in black **Part N° 21.1087/1**	
- Fixing nut, steel, zinc-plated	
- Without lock	
- Weight	0,195 kg

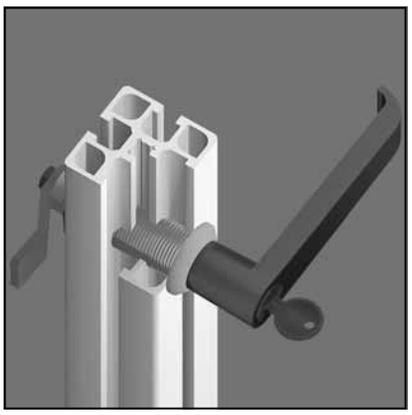
APPLICATIONS
- For profiles 45
- Locking of doors and lids in guard units

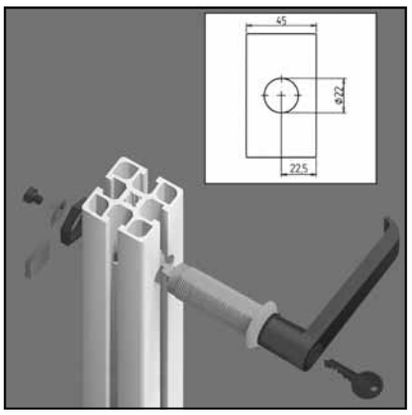
ASSEMBLY
- Bore Ø 22 mm in the middle of the profile
- Tighten handle lock from the rear with fixing nut
- Selection of locks see page 124

HANDLE 45 WITH PROFILE CYLINDER LOCK

Part. N° 21.1091/3







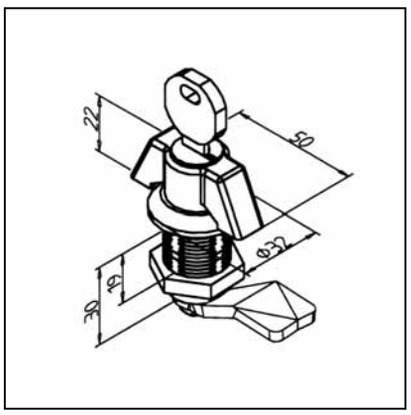
TECHN. DATA / ITEMS SUPPLIED	
- Housing PA/GD Zn, grey	
- On request also deliverable in black **Part N° 21.1091/1**	
- Fixing nut, steel, zinc-plated	
- Without lock	
- Weight	0,230 kg

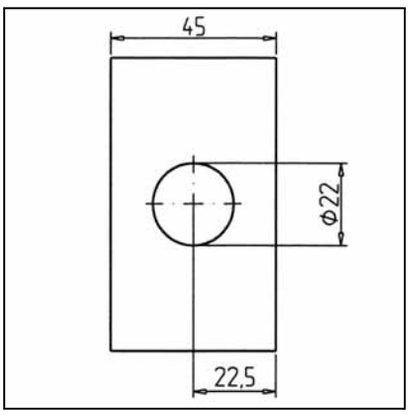
APPLICATIONS
- For profiles 45
- Locking of doors and lids in guard units

ASSEMBLY
- Bore Ø 22 mm in the middle of the profile
- Tighten handle lock from the rear with fixing nut
- Selection of locks see page 124

T-HANDLE 19

Part. N° 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

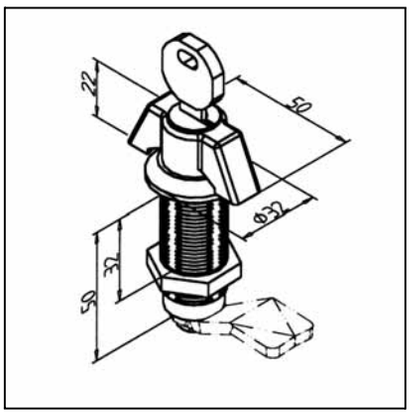
- For profiles 19
- Locking of doors and lids in guard units

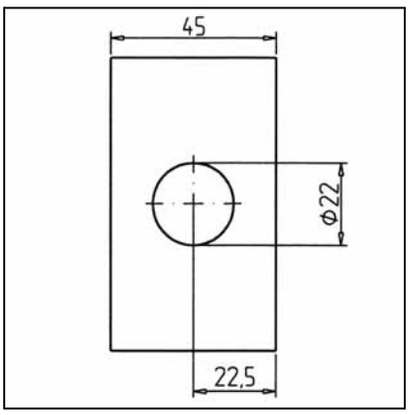
ASSEMBLY

- Bore Ø 22 mm in the middle of the profile
- Tighten T-handle lock from the rear with fixing nut
- Selection of locks see page 124

T-HANDLE 32

Part. N° 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

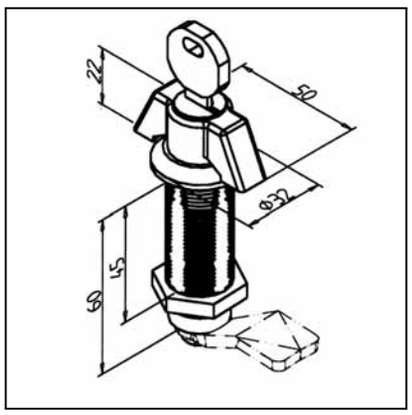
- For profiles 32
- Locking of doors and lids in guard units

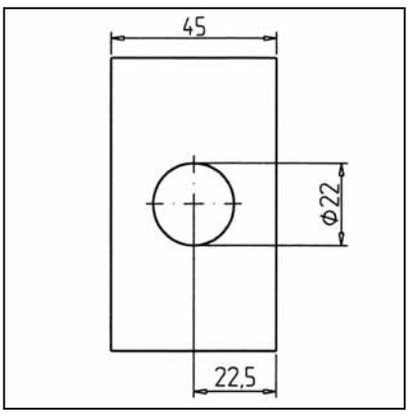
ASSEMBLY

- Bore Ø 22 mm in the middle of the profile
- Tighten T-handle lock from the rear with fixing nut
- Selection of locks see page 124

T-HANDLE 45

Part. N° 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

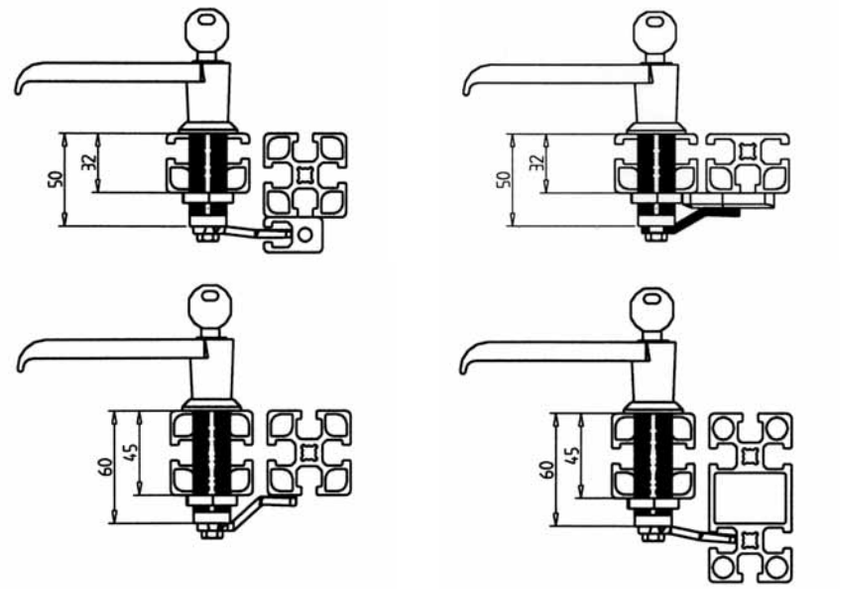
- For profiles 45
- Locking of doors and lids in guard units

ASSEMBLY

- Bore Ø 22 mm in the middle of the profile
- Tighten T-handle lock from the rear with fixing nut
- Selection of locks see page 124

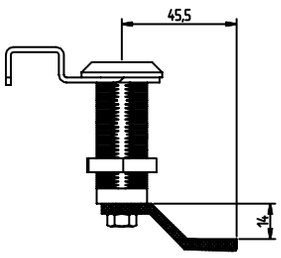
LOCKS

Fitting principles

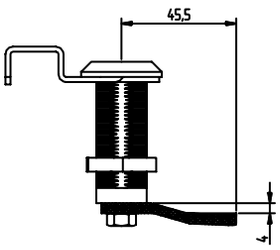


Selection of locks

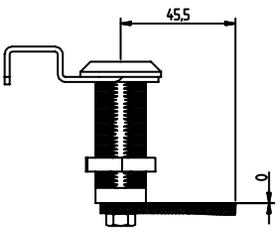
Door profile / Lock / Frame profile	45 x 45 mm handle 45 or bolt lock 45	32 x 45 mm handle 32 or bolt lock 32	19 x 45 mm handle 32 or bolt lock 32	Panel elements 4-8 mm cylinder lock
	Part number of locks			
90 x 45	21.1093/1	21.1093/0	21.1093/0	21.1093/2
45 x 45	21.1093/5	21.1093/3	21.1093/3	21.1093/2
with catch 19	21.1093/4	21.1093/2	21.1093/2	-----
with door stop S	21.1093/3	-----	-----	-----
32 x 45	-----	21.1093/5	21.1093/5	21.1093/5
with catch 19	-----	21.1093/4	21.1093/4	-----



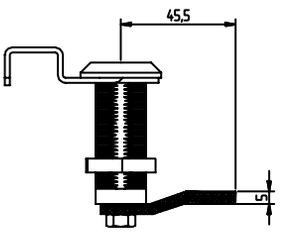
Part no. 21.1093/0



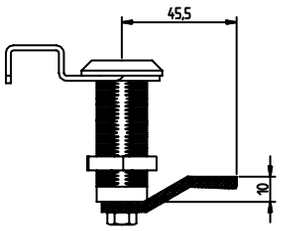
Part no. 21.1093/1



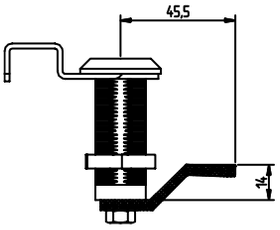
Part no. 21.1093/2



Part no. 21.1093/3

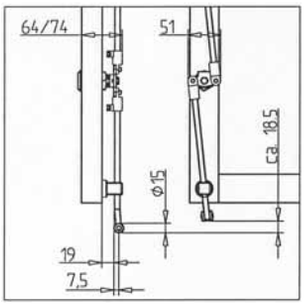


Part no. 21.1093/4



Part no. 21.1093/5

ROD LOCK



Items supplied

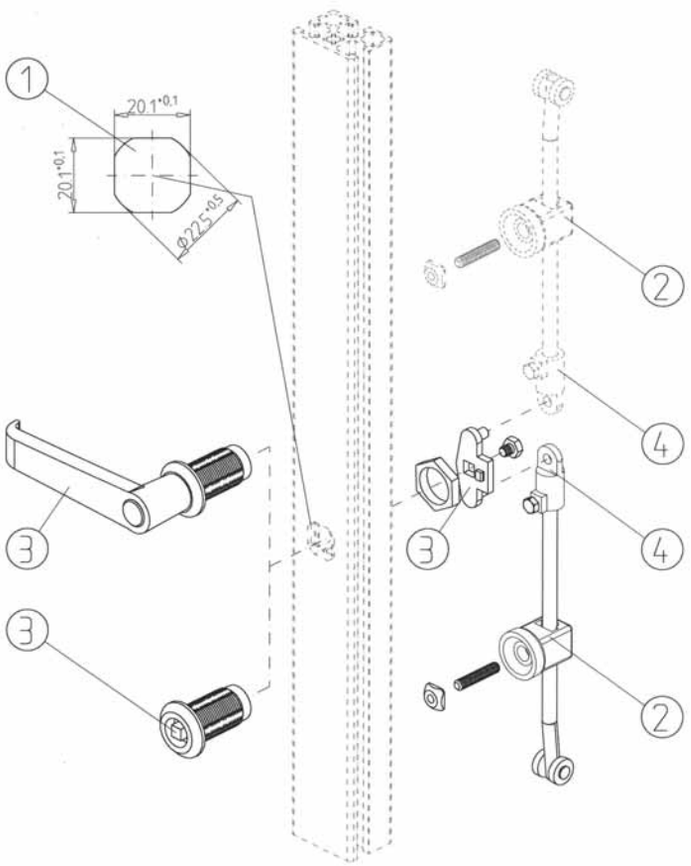
- Bolt lock, steel with square key
- Optional: handle or handle with cylinder lock
- Latch with rod connections, steel, galvanized
- Latch with rollers (l = 1100 mm), steel, galvanized
- Rod guiding element, PA with nut M6

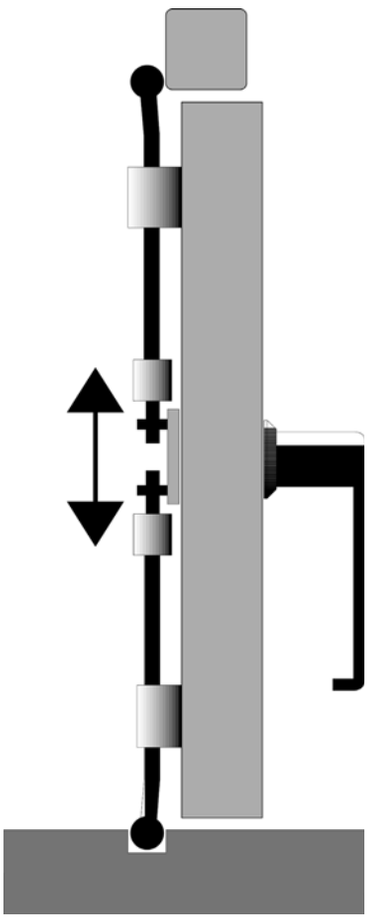
Applications

- 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

Assembly

1) Mill bore Ø 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.





	Bolt lock		Handle without lock		Handle with cylinder lock	
Profile	1 rod	2 rods	1rod	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

ROD LOCK WITH SPRING RETENTION

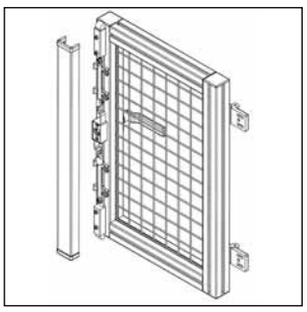
Part N° 21.1490/0

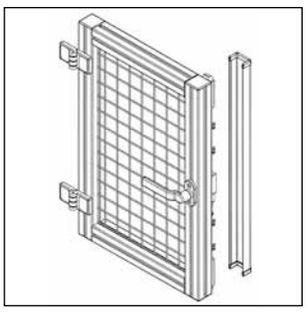
Items supplied

- 1: 1 Lock
- 2: 1 Handle
- 3: 2 spring retentions
- 4: Adaptors for rods
- 5: Rod with lug (Lmax = 1200)

Optional:

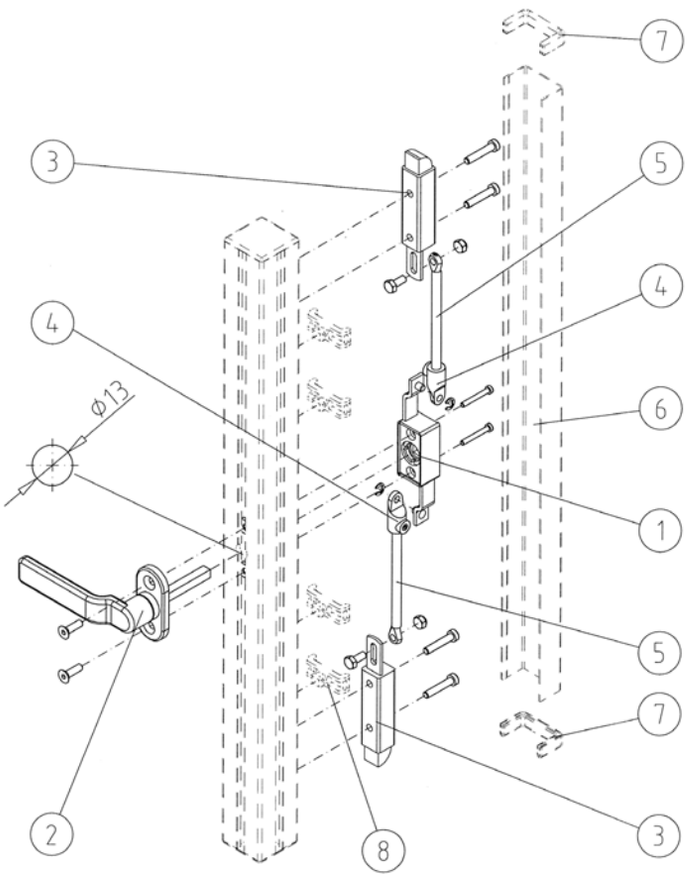
- 6: Cable channel 45 Al
- 7: Protecting cap for cable channel
- 8: Cable clip 45





Applications

- For locking doors at upper and lower beam
- Especially suited for doors in frames
- Max. door height 2760 mm



Assembly

a) Bore Ø 13 in vertical door profile

b) Screw lock and spring retentions at door profile, clip cable clips for conduit 45 a appropriate positions

c) Cut rods according to your door-size. Mount adaptors at rod-ends. Link rods with lock and spring retentions

d) Insert handle and fix

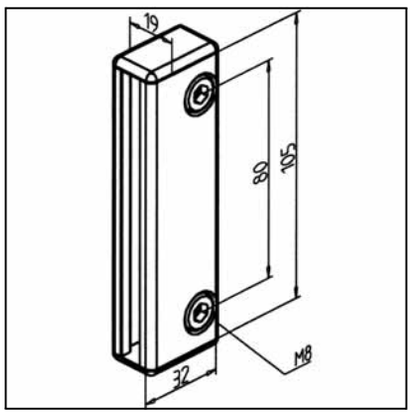
e) Adjust slam-lock

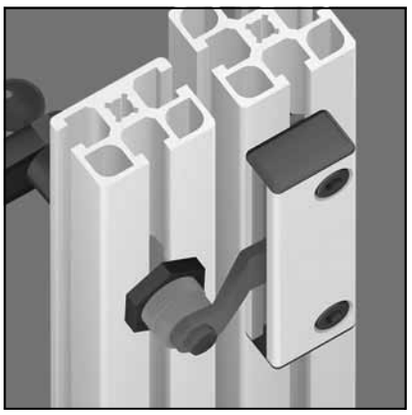
f) Assemle optional cable channel

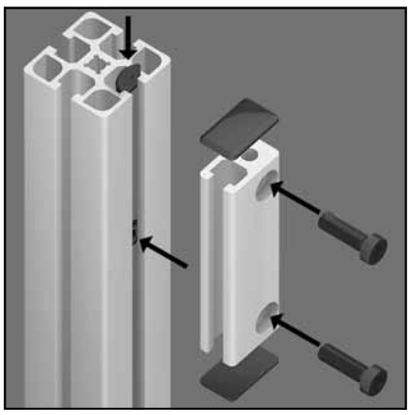
Choose door hinges for slam-bolts according to mounting situation.

CATCH 19

Part. N° 21.1755/0







TECHN. DATA / ITEMS SUPPLIED

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

APPLICATIONS

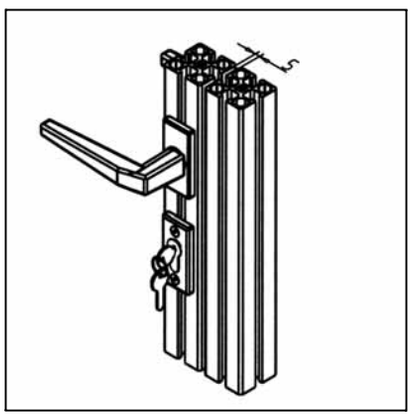
- Locking of doors and lids in connection with handles and bolt locks

ASSEMBLY

- Use fixing kit from supply schedule
- Selection of locks see page 124

DOOR HANDLE

Part. N° 21.1748/0



TECHN. DATA / ITEMS SUPPLIED

- Lock housing steel, zinc plated, fitted into profile 45 x 45
- Fittings, aluminium, anodized
- Profile cylinder with 3 keys, mounted
- Weight 0,850 kg
- Weight + 1,950 kg/m
- **When ordering, please indicate the required profile length**

APPLICATIONS

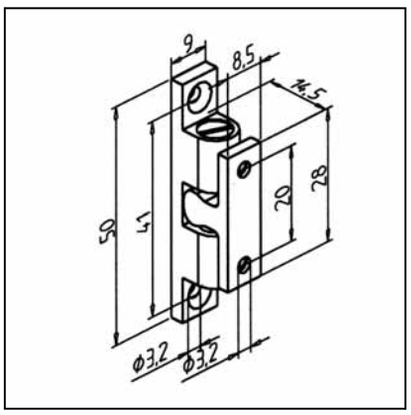
- Swing doors for guard units

ASSEMBLY

- Allow 5 mm space between door and frame
- Door lock meshes into groove of opposite profile
- Position horizontal profile offside lock area or use counter sunk screw M8 x 25

BALL LATCH 50

Part. N° 21.1763/0



TECHN. DATA / ITEMS SUPPLIED

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

APPLICATIONS

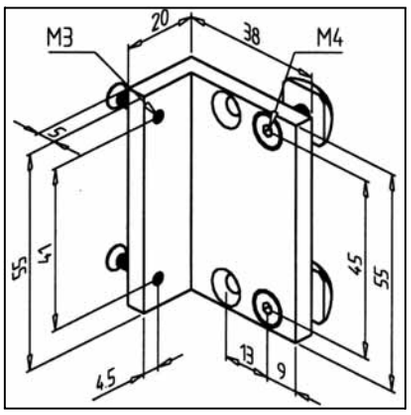
- Stop and catch for swing- and sliding doors
- The latch housin fits into profile groove. This allows gap-free closing of sliding doors
- Doors, lids, removable panel elements

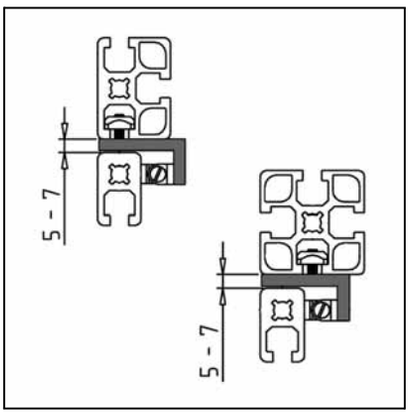
ASSEMBLY

- Use fixing kit from supply schedule
- Holding plate on profile surface with self-tapping screws

BALL LATCH SUPPORT 50

Part. N° 21.1139/0





TECHN. DATA / ITEMS SUPPLIED

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

APPLICATIONS

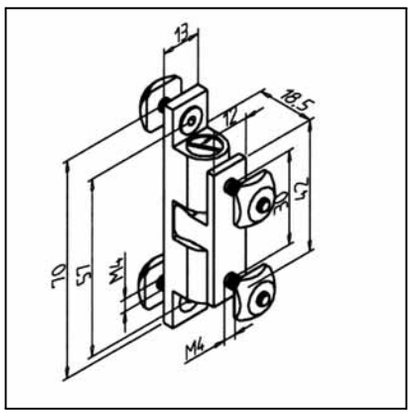
- Attachment of ball latch 50 in doors, lids
- Removable panel elements
- Door stop

ASSEMBLY

- Use fixing kit from supply schedule

BALL LATCH 70

Part. N° 21.1757/0



TECHN. DATA / ITEMS SUPPLIED

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

APPLICATIONS

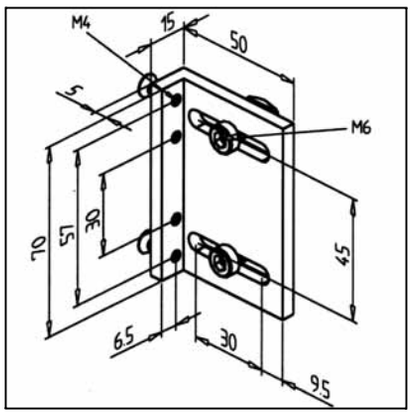
- Quick attachment of easy to remove panel elements
- Stop and catch for sliding doors, swing doors, lids

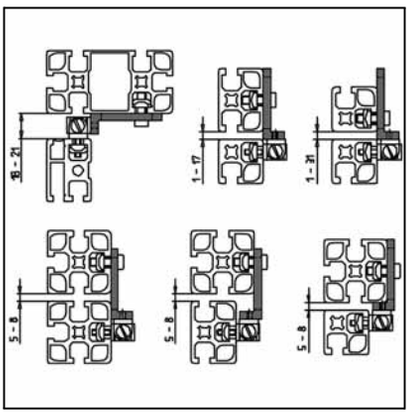
ASSEMBLY

- Use fixing kit from supply schedule

BALL LATCH SUPPORT 70

Part. N° 21.1137/0





TECHN. DATA / ITEMS SUPPLIED

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

APPLICATIONS

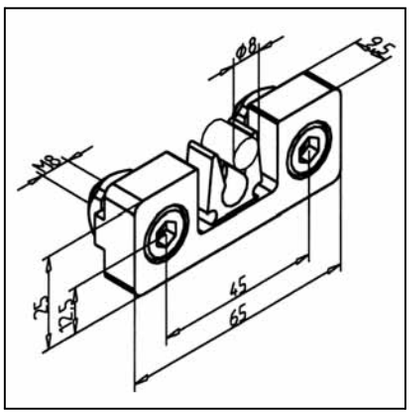
- Attachment of ball latch 70 in doors, lids, removable panel elements
- Door stop
- If using profile 32, ball latch support has to be shortened

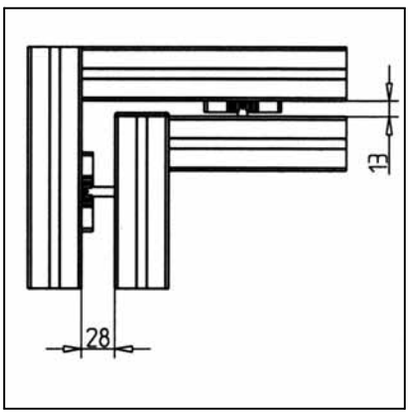
ASSEMBLY

- Use fixing kit from supply schedule

DOOR CATCH

Part. N° 21.1756/1





TECHN. DATA / ITEMS SUPPLIED

- PA 6, grey
- On request also deliverable in black **Part N° 21.1756/0**
- Fixing kit
- Weight 0,041 kg
- Holding force between 50 - 70 N

APPLICATIONS

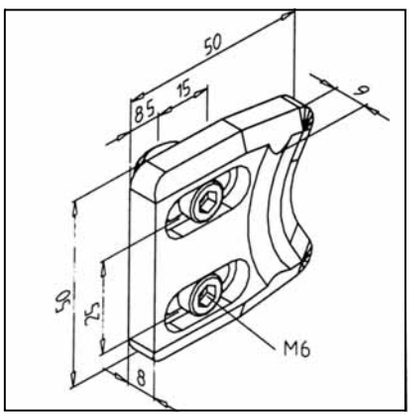
- Quick catch of doors and lids
- Function in connection with snap bolt
- Roller carrier for transport rollers

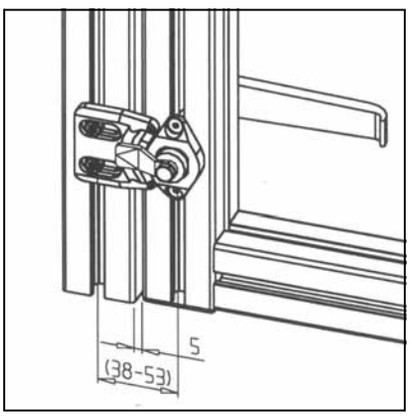
ASSEMBLY

- Mount on all profiles with fixing kit from supply schedule
- Alternative use of snoap bolt 25 or 40

DOOR STOP S

Part. N° 21.1767/0





TECHN. DATA / ITEMS SUPPLIED

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

APPLICATIONS

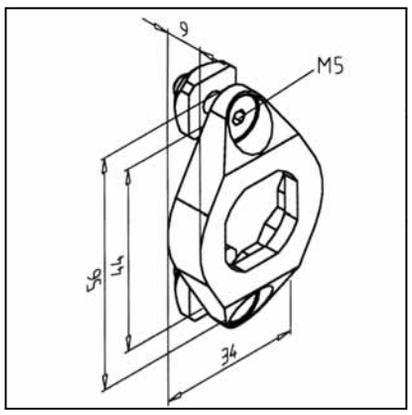
- Adjustable stop for swing-doors
- Especially designed for use in combination with handles, bolt-locks or t-handles
- Also door catch

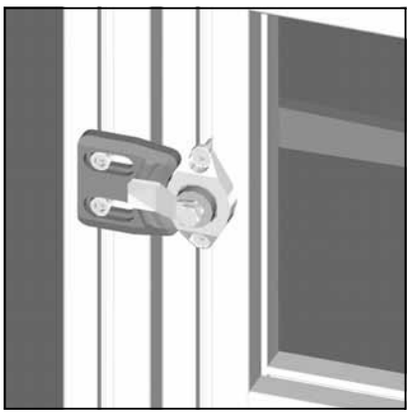
ASSEMBLY

- Screw with fixing kit on door-frame
- See page 124

TWIST-STOP

Part. N° 21.1768/0





TECHN. DATA / ITEMS SUPPLIED

- GD Zn, black
- Fixing kit
- Weight 0,04 kg

APPLICATIONS

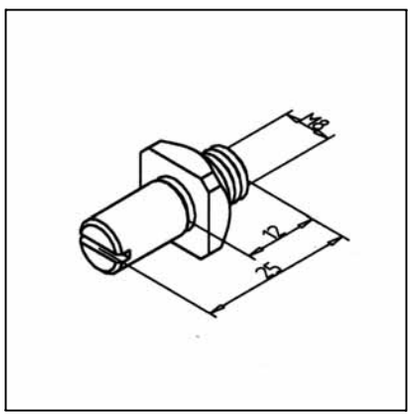
- Protection of bolt-locks, handles and T-handles against unwanted loosening or overturning
- In particular fitting in combination with Door Stop S **Part N° 21.1767/0**

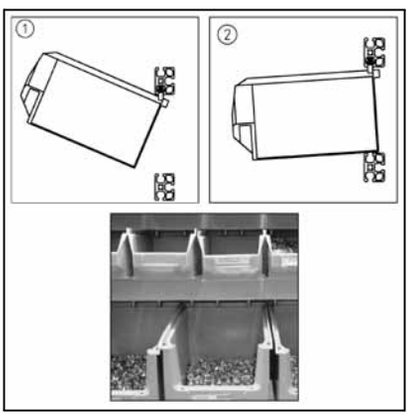
ASSEMBLY

- Mount handle or bolt-lock as usual
- Fix Twist-Stop using fixing kit
- Mount lock

SNAP BOLT 25

Part. N° 21.1758/0





TECHN. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- With square nut, zinc plated
- Weight 0,010 kg

APPLICATIONS

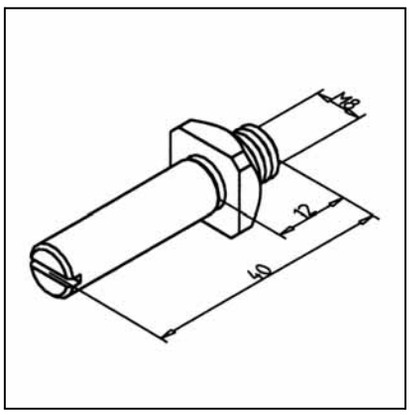
- Door catches
- Attachment of grab trays in work benches between 2 profiles
- Supports

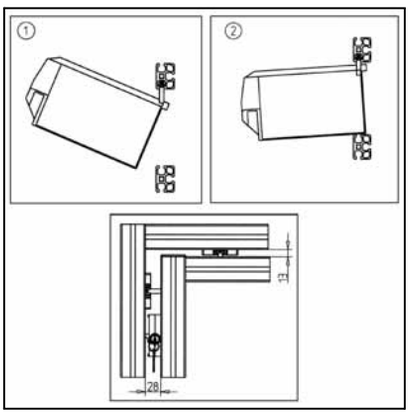
ASSEMBLY

- Use fixing kit from supply schedule

SNAP BOLT 40

Part. N° 21.1760/0





TECHN. DATA / ITEMS SUPPLIED	
- Steel, zinc plated	
- With square nut, zinc plated	
- Weight	0,020 kg

APPLICATIONS

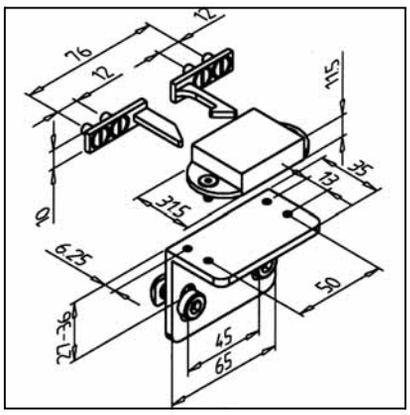
- Door catches
- Attachment of grab trays in work benches between 2 profiles
- Supports

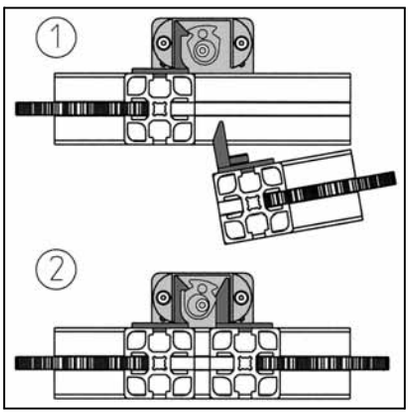
ASSEMBLY

- Screw with square nut in profile groove

LOCK FOR DOUBLE DOOR

Part. N° 21.0990/0





TECHN. DATA / ITEMS SUPPLIED	
- GD Zn, chrome plated	
- 2 locks	
- Holding angel	
- Fixing kit	
- Weight	0,145 kg

APPLICATIONS

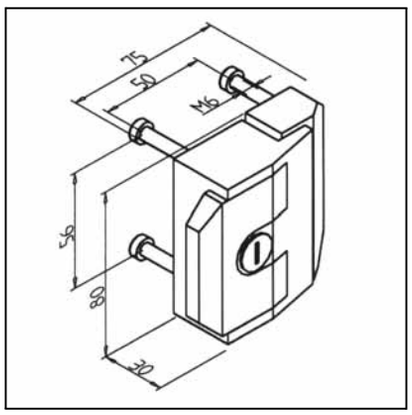
- Locking of double doors with only one profile cylinder lock
- After Insertion of the second tongue, the first door cannot be opened. A lockin mechanism on the second door suffice for bolting

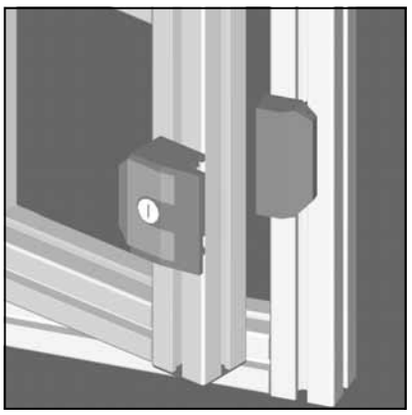
ASSEMBLY

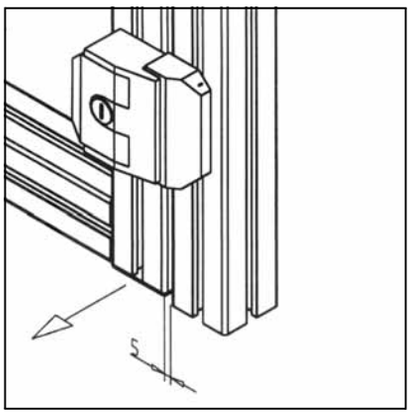
- Fix lock angle upper or lower frame, position at door folding, Select the threads according to the profiles used for the doors
- Screw catches on door-wings and adjust to lock

TRUNK-LOCK

Part. N° 21.1764/0







TECHN. DATA / ITEMS SUPPLIED	
- GD Zn, black	
- Lock with 2 keys	
- Fixing kit	
- Weight	0,55 kg

APPLICATIONS

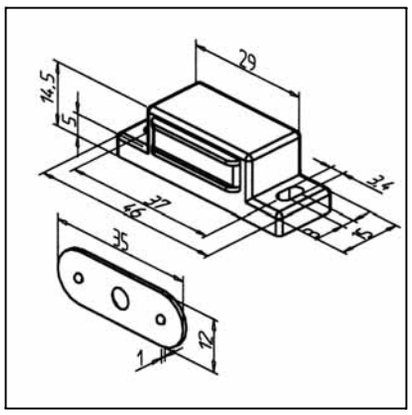
- Locking of door or lids
- No additional door-stop necessary
- Useable for frameless doors

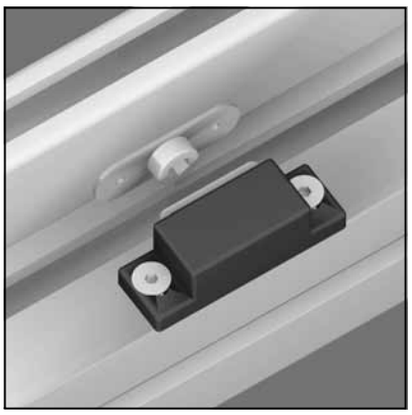
ASSEMBLY

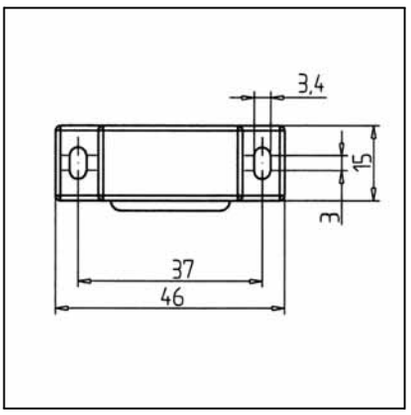
- Insert screws of fixing kit in lock and stop
- Drill trough-holes Ø 6,5 mm in door and post with a distance of 56 mm
- Screw both parts from backside

MAGNETIC CATCH

Part. N° 21.1753/0







TECHN. DATA / ITEMS SUPPLIED	
- Housing PA 6, black	
- Holding plate, steel, zinc plated	
- Fixing kit	
- Weight	0,021 kg

APPLICATIONS

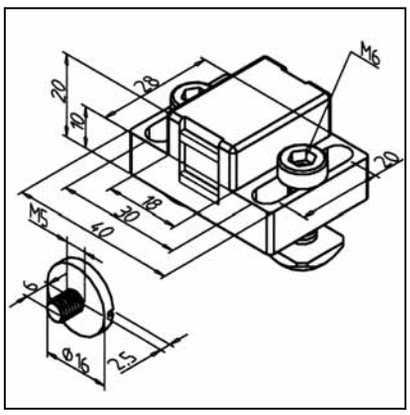
- Quick catch for swing-doors
- Attachment of light panel elements

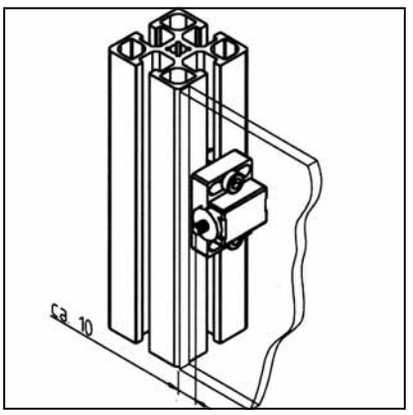
ASSEMBLY

- Mount with fixing kit on profile surface

MAGNETIC CATCH N

Part. N° 21.1741/0





TECHN. DATA / ITEMS SUPPLIED

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

APPLICATIONS

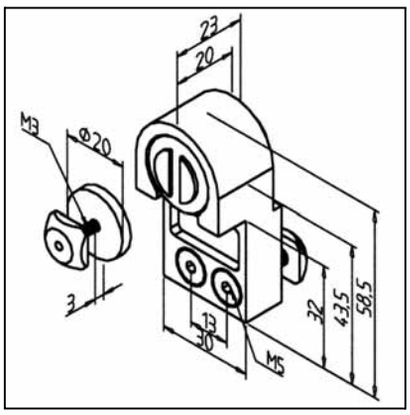
- Stop and quick catch for swing doors
- Fastening of light panel elements

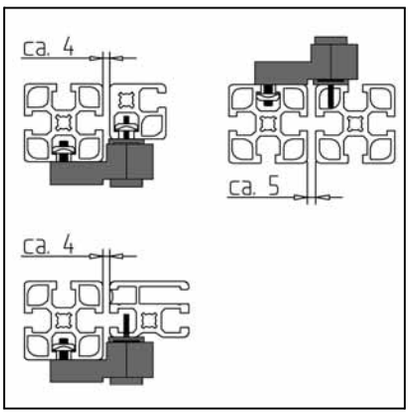
ASSEMBLY

- Use fixing kit from supply schedule
- Opposite plate directly on profile surface or panel element; thread M5 required

MAGNETIC CATCH S

Part. N° 21.1740/0





TECHN. DATA / ITEMS SUPPLIED

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

APPLICATIONS

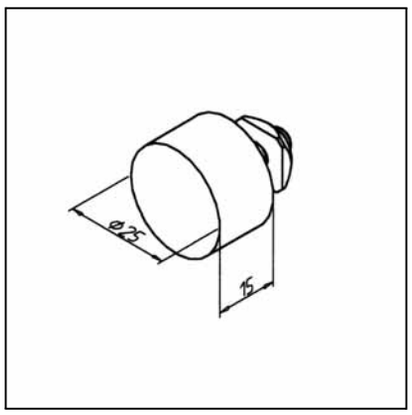
- Stop and quick catch for swing doors
- Fastening of light panel elements

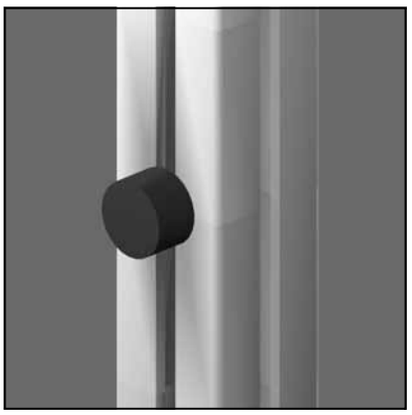
ASSEMBLY

- Use fixing kit from supply schedule
- Opposite plate directly on profile surface or panel element; thread M3 required

STOPPER 25

Part. N° 21.1759/0





TECHN. DATA / ITEMS SUPPLIED

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

APPLICATIONS

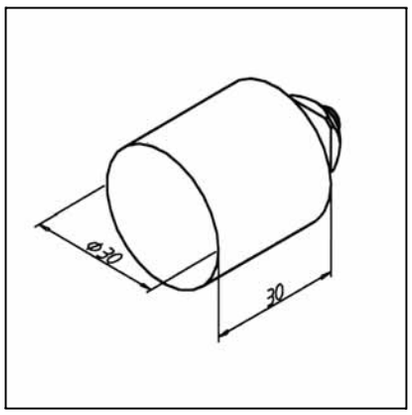
- Stop for doors, linear guides

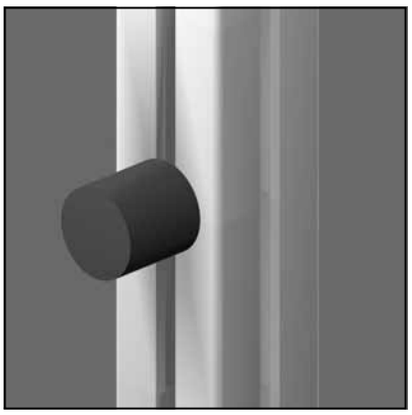
ASSEMBLY

- Fix with square nut M6 in profile groove

STOPPER 30

Part. N° 21.1759/1





TECHN. DATA / ITEMS SUPPLIED

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

APPLICATIONS

- Stop for heavy doors, linear gudes

ASSEMBLY

- Fix with square nut M8 in profile groove

FEET, WHEELS, FLOOR FASTENINGS, SUPPORTS

BASE AND TRANSPORT PLATE 45 X 90

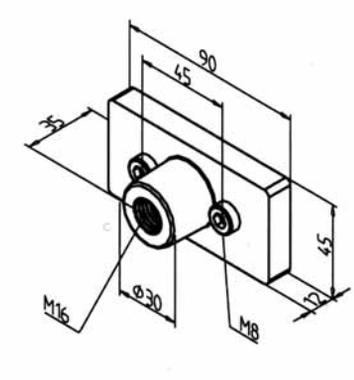
Items supplied
- Aluminium, powder-coated, grey
- With fixing kit

Applications
- Mounting of adjustable feet or wheels on profiles 45 x 90

Assembly
- Connection with fixing kit from supply schedule 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 PLATE 45 X 90 GD



Items supplied
- Aluminium, powder-coated, grey
- With fixing kit

Applications
- Mounting of adjustable feet or add-on pieces on profile face with thread M16 for profile 90 x 45

Assembly
- Connection with fixing kit from supply schedule on profile face

Thread	Thickness	Weight	Part no.
M16	15 mm	0.135 kg	21.1136/0

BASE AND TRANSPORT PLATE 90 R 90°

Items supplied
- Aluminium, powder-coated, grey
- With fixing kit

Applications
- Mounting of adjustable feet or wheels on profiles 90 R 90°

Assembly
- Connection with fixing kit from supply schedule 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

BASE AND TRANSPORT PLATE 90 X 90

Items supplied
- Aluminium, powder-coated, grey
- With fixing kit

Applications
- Mounting of adjustable feet or wheels on profiles 90 x 90

Assembly
- Connection with fixing kit from supply schedule on profile face

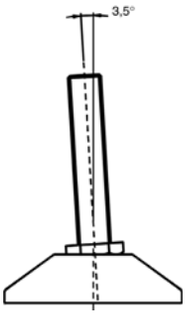
Thread	Thickness	Weight	Part no.
M10	15 mm	0,332 kg	21.1041/0
M12	15 mm	0,330 kg	21.1042/0
M16	15 mm	0,345 kg	21.1043/0
M20	15 mm	0,290 kg	21.1057/0

FEET PA

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

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

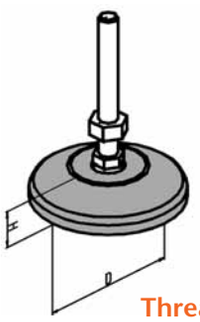
Assembly
- Directly on core boring of profiles, reborable up to M12
- On larger threads use base and transport plate
- For profiles 45 x 90 und 90 x 90 a base and transport plate is required, if the feet are to be positioned centrally.

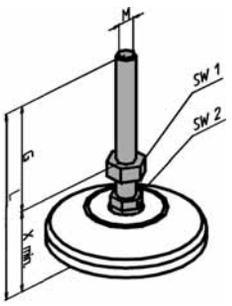


threaded bolt	Plate Ø 30	Ø 45	Ø 60	Ø 80
M8	21.1851/0	21.1871/0	21.1881/0	21.1891/0
M10	21.1852/0	21.1872/0	21.1882/0	21.1892/0
M12	----	21.1873/0	21.1883/0	21.1893/0
M16	----	21.1874/0	21.1884/0	21.1894/0

Plate

D mm	H mm	max. load
30	20	300 kg
45	20	500 kg
60	20	1000 kg
80	20	1000 kg



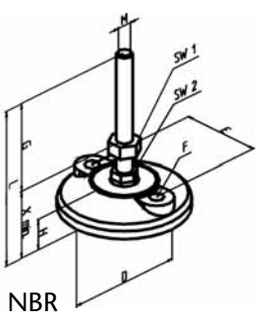


Threaded bolt

M	G	X	SW1	SW2	L
M8	33.5	38.5	13	14	72
M10	37	40	17	14	77
M12	140	42	19	14	182
M16	137	45	24	17	182

FEET PA WITH ATTACHMENT BORES

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



Part no.	Colour	M	G	X	SW1	SW2	L	E	F	D	Load
21.1846/0	grey	M10	82	40	17	14	122	74	Ø 9	100	1000 kg
21.1847/0	grey	M12	140	42	19	14	182	74	Ø 9	100	1000 kg
21.1848/0	grey	M16	137	45	24	17	182	74	Ø 9	100	1000 kg
21.1141/0	black	M16	132	58	24	24	190	74	Ø 12.5	100	1800 kg
21.1075/0	black	M20	129	61	30	24	190	74	Ø 12.5	100	1800 kg

FEET GD

Items supplied
- Plate, aluminium, pressure die casting, powder-coated, grey
- Anti skid insert NBR
- Threaded bolt, steel, galvanized
- Locknut, steel, galvanized
- All bolts are suitable for all plates

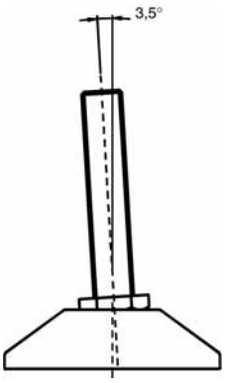
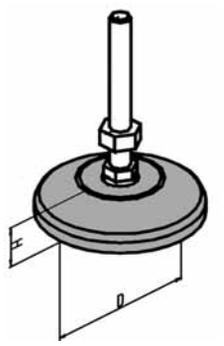
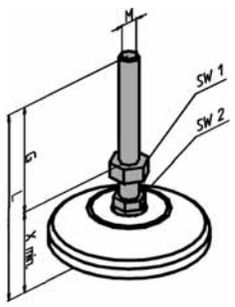


	Plate	
Spindle	Ø 45	Ø 90
M10	21.1842/0	21.1862/0
M12	21.1843/0	21.1863/0
M16	21.1844/0	21.1864/0





Plate

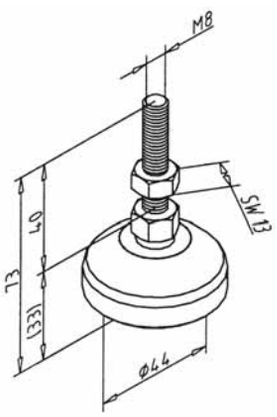
D mm	H mm	Load capacity
45	25	3000 kg
90	27	4000 kg

Threaded bolt

M	G	X	SW1	SW2	L
M10	52.6	37.5	17	17	89.5
M12	50.5	41	19	19	91.2
M16	68	45.6	24	24	112.6

FOOT VA

Part. N° 21.1865/0



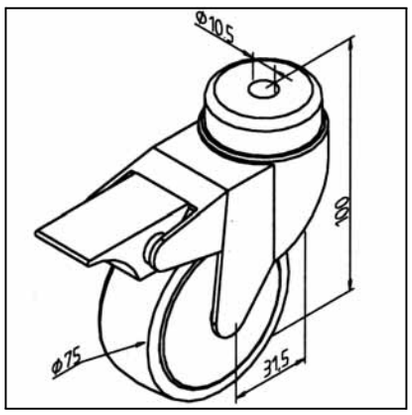
Items supplied
- Plate: stainless steel
- Threaded bolt: stainless steel
- Locknut: stainless steel
- Anti-skid insert: hard rubber

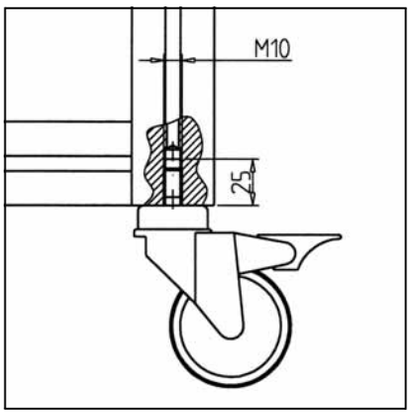
Applications
- Levelling of machine bases or constructions
- Guards, tables, show cases
- Conveying systems, workstations

Assembly
- Directly on core boring of profiles

WHEEL SWIVEL TYPE WITH BRAKE

Part. N° 21.1120/0





TECHN. DATA / ITEMS SUPPLIED	
- Steel, zinc plated	
- Tire, rubber, grey	
- Fixing kit	
- Weight	0,250 kg
- Load max.	50 kg
- **Further constructions on demand**	

APPLICATIONS

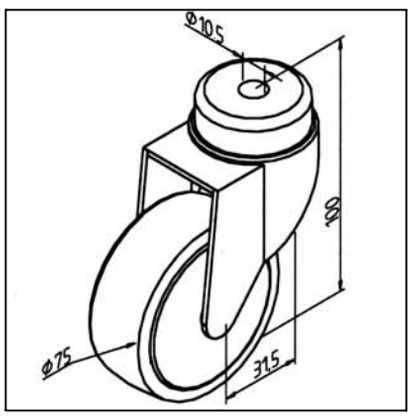
- Movable tables
- Material-pillars
- Show cases etc.

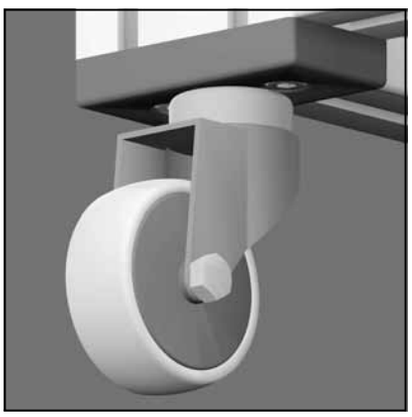
ASSEMBLY

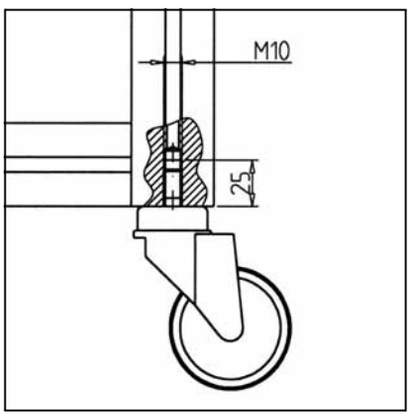
- Directly on central bore of the vertical profile; thread M10 required
- With profiles 45 x 45 or bigger use base plate M10

WHEEL SWIVEL TYPE WITHOUT BRAKE

Part. N° 21.1118/0







TECHN. DATA / ITEMS SUPPLIED	
- Steel, zinc plated	
- Tire, rubber, grey	
- Fixing kit	
- Weight	0,372 kg
- Load max.	50 kg
- **Further constructions on demand**	

APPLICATIONS

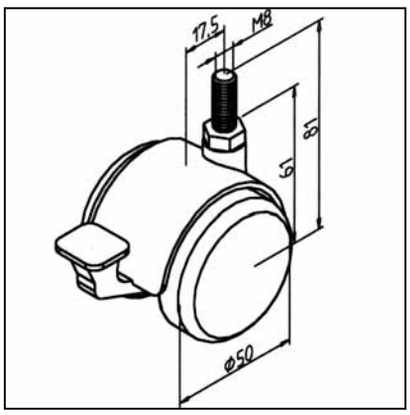
- Movable tables
- Material-pillars
- Show cases etc.

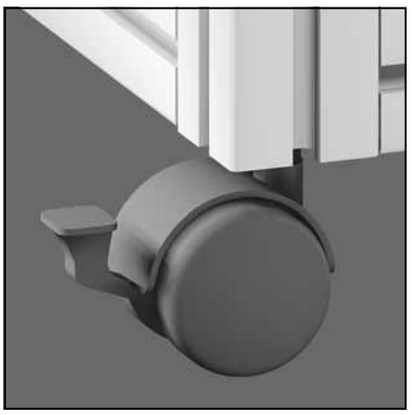
ASSEMBLY

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

FURNITURE WHEEL WITH LOCKING DEVICE

Part. N° 21.1153/0





TECHN. DATA / ITEMS SUPPLIED

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

APPLICATIONS

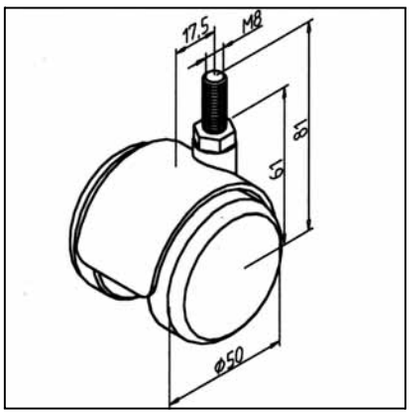
- Light movable tables
- Movable file box
- Office furniture, Tool boxes

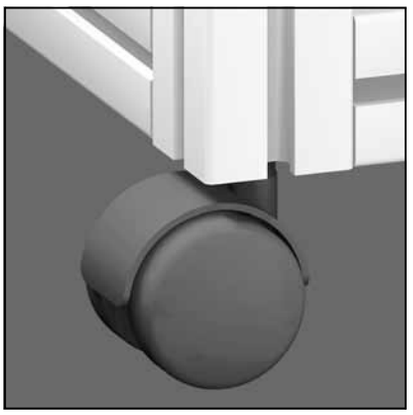
ASSEMBLY

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

FURNITURE WHEEL WITHOUT LOCKING DEVICE

Part. N° 21.1105/0





TECHN. DATA / ITEMS SUPPLIED

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

APPLICATIONS

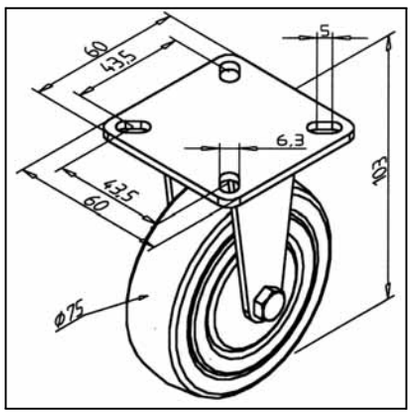
- Light movable tables
- Movable file box
- Office furniture, Tool boxes

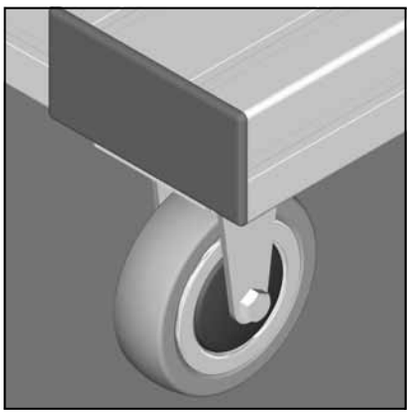
ASSEMBLY

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

WHEEL Ø 75 X 100 RIGID TYPE

Part. N° 21.1475/0





TECHN. DATA / ITEMS SUPPLIED	
- Housing, steel	
- Tire, rubber, grey	
- Fixing kit	
- Weight	0,350 kg
- Load max.	50 kg
- **Further constructions on demand**	

APPLICATIONS

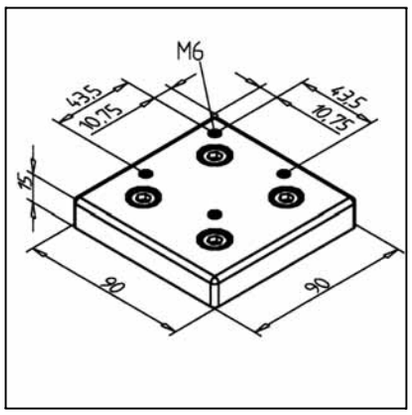
- Material-pillars
- Frames
- Movable tables

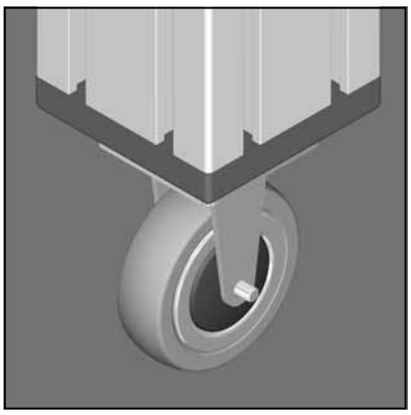
ASSEMBLY

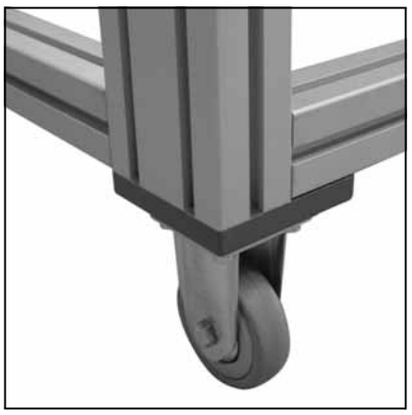
- With fixing kit from supply schedule directly on profile groove or
- With fixing plate for wheel rigid type **Part N° 21.1476/0** on profile

FIXING PLATE FOR WHEEL RIGID TYPE

Part. N° 21.1476/0







TECHN. DATA / ITEMS SUPPLIED	
- Aluminium GD, powder coated, grey	
- Fixing kit	
- Weight	0,330 kg

APPLICATIONS

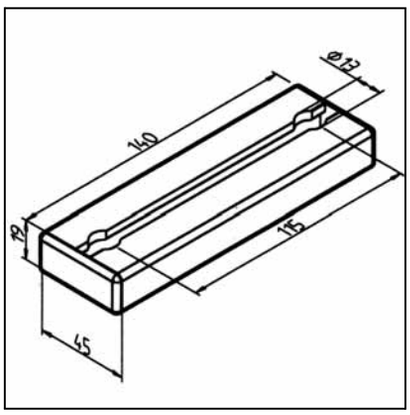
- For fastening of wheel Ø 75 x 100 rigid type **Part N° 21.1475/0** on profile face 90 x 90

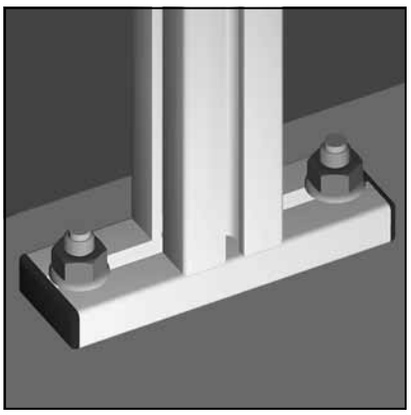
ASSEMBLY

- Use fixing kit from supply schedule

FLOOR MOUNTING PLATE 45

Part. N° 21.1730/0





TECHN. DATA / ITEMS SUPPLIED

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

APPLICATIONS

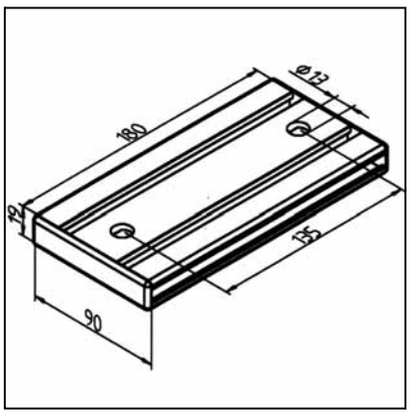
- Floor mounting of stand-profiles 45 x 45

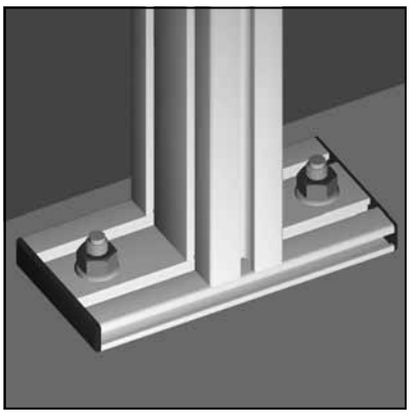
ASSEMBLY

- On profile side: MiniTec power-lock fastener
- On floor side: 2 floor anchors 10 **Part N° 21.1082/0**

FLOOR MOUNTING PLATE 45 / 90

Part. N° 21.1732/0





TECHN. DATA / ITEMS SUPPLIED

- Profile 90 x 19
- End caps, grey
- Without fixing kit
- Weight 0,330 kg

APPLICATIONS

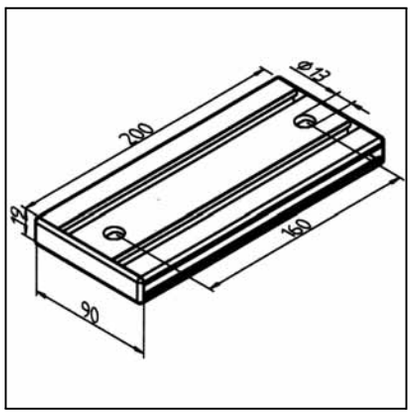
- Floor mounting of stand-profiles 45 x 45 or 45 x 90 transversal

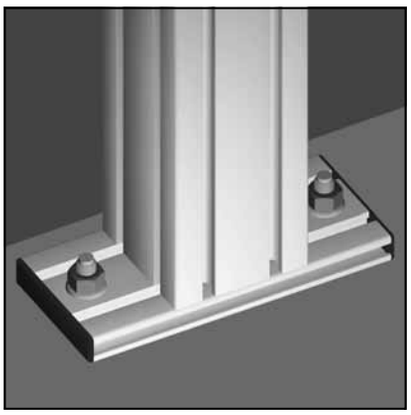
ASSEMBLY

- On profile side: 1 or 2 MiniTec power-lock fasteners
- On floor side: 2 floor anchors 10 **Part N° 21.1082/0**

FLOOR MOUNTING PLATE 90

Part. N° 21.1733/0





TECHN. DATA / ITEMS SUPPLIED

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

APPLICATIONS

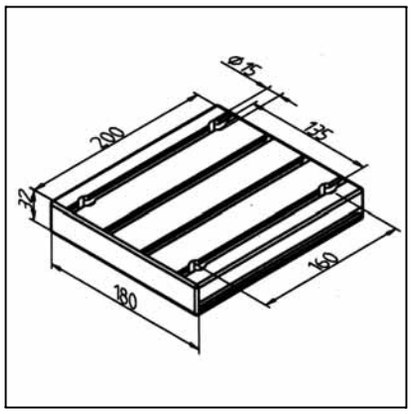
- Floor mounting of stand-profiles 45 x 90 lengthwise or 90 x 90

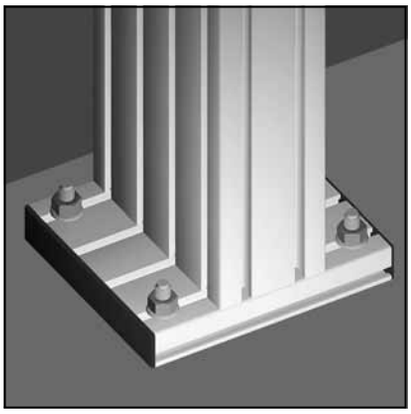
ASSEMBLY

- On profile side: 2 or 4 MiniTec power-lock fasteners
- On floor side: 4 floor anchors 10 **Part N° 21.1082/0**

FLOOR MOUNTING PLATE 90 X 180

Part. N° 21.1734/0





TECHN. DATA / ITEMS SUPPLIED

- Profile 32 x 180
- End caps, grey
- Without fixing kit
- Weight 2,030 kg

APPLICATIONS

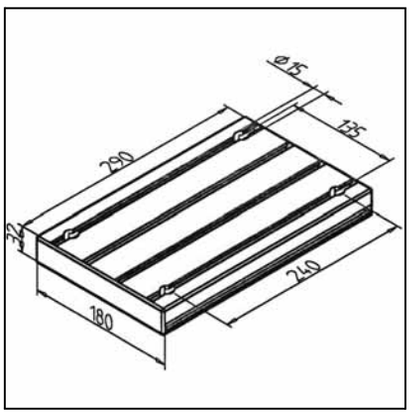
- Floor mounting of stand-profiles 90 x 90 or 90 x 180 transversal

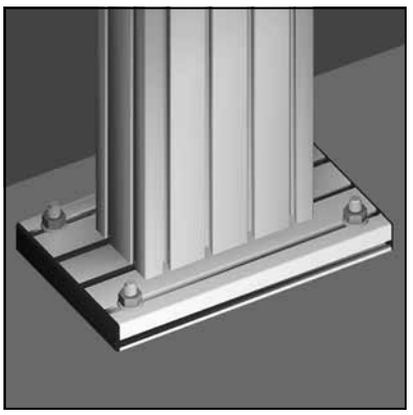
ASSEMBLY

- On profile side: 4 MiniTec power-lock fasteners
- On floor side: 4 floor anchors 12 **Part N° 21.1115/0**

FLOOR MOUNTING PLATE 180

Part. N° 21.1735/0





TECHN. DATA / ITEMS SUPPLIED

- Profile 32 x 180
- End caps, grey
- Without fixing kit
- Weight 2,800 kg

APPLICATIONS

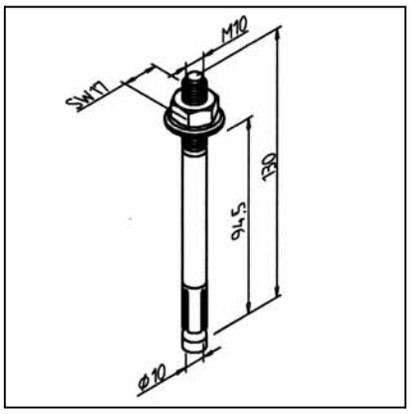
- Floor mounting of stand-profiles 90 x 180 lengthwise

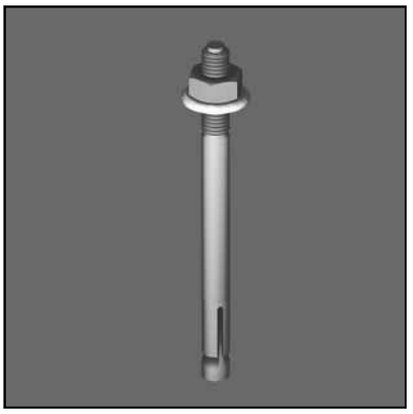
ASSEMBLY

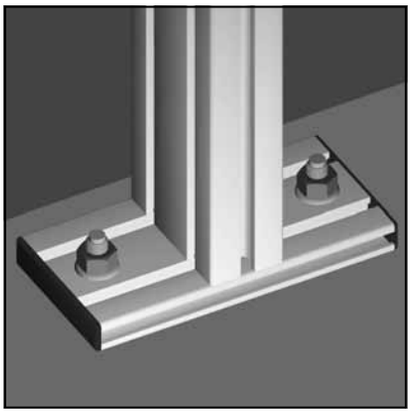
- On profile side: 4 MiniTec power-lock fasteners
- On floor side: 4 floor anchors 16 **Part N° 21.1115/0**

FLOOR ANCHOR 10

Part. N° 21.1082/0







TECHN. DATA / ITEMS SUPPLIED

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

APPLICATIONS

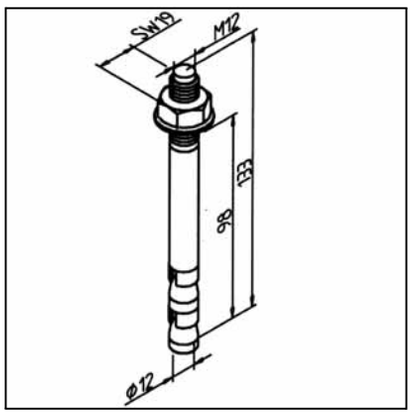
- Attachment of stand-profiles to floor or wall. To be used together with angle bracket for floor fastening, levelling plate or floor mounting plate

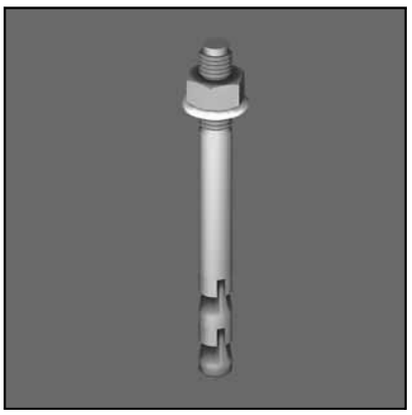
ASSEMBLY

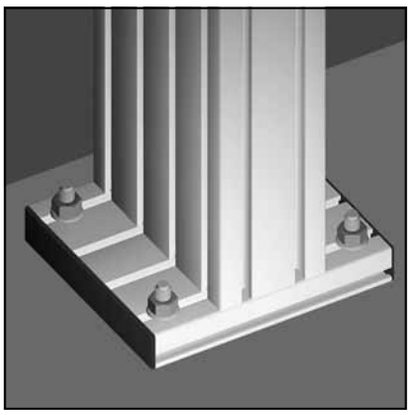
- Fit bore in the bottom
- Screw floor anchor in connection with angle, levelling plate or floor mounting plate

FLOOR ANCHOR 12

Part. N° 21.1115/0







TECHN. DATA / ITEMS SUPPLIED

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

APPLICATIONS

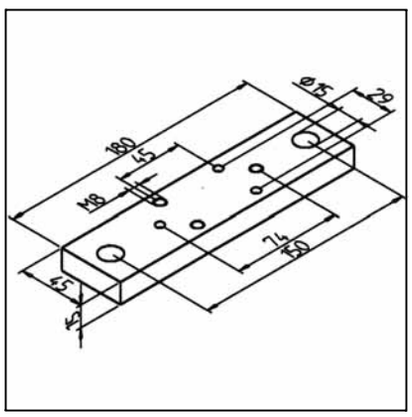
- Attachment of stand-profiles to floor or wall. To be used together with angle bracket for floor fastening, levelling plate or floor mounting plate

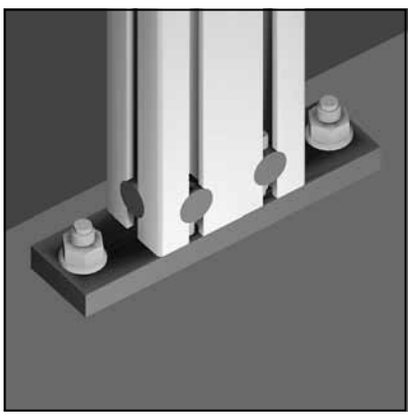
ASSEMBLY

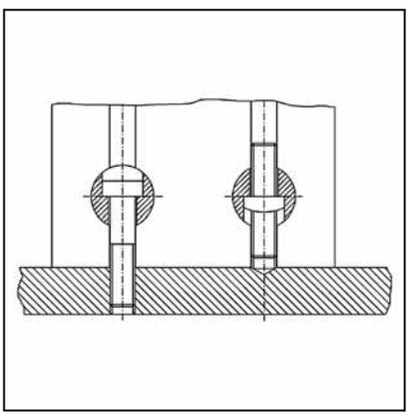
- Fit bore in the bottom
- Screw floor anchor in connection with angle, levelling plate or floor mounting plate

LEVELLING PLATE 45

Part. N° 21.1053/0







TECHN. DATA / ITEMS SUPPLIED

- Aluminium, completely processed
- Without fixing kit
- Without levelling elements
- Weight 0,150 kg

APPLICATIONS

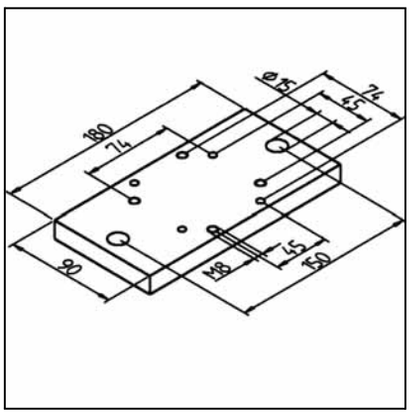
- Precise levelling of stand-profiles 45 x 90 in profile constructions
- Particularly suitable for vertical sliding doors

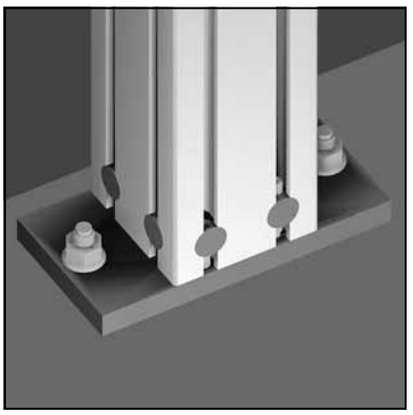
ASSEMBLY

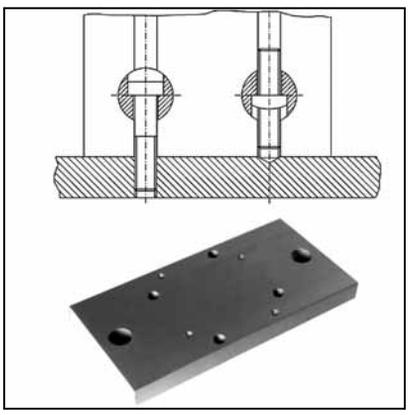
- Fasten levelling plate with floor anchor on floor or wall
- Insert bolt-fasteners for levelling plate **Part N° 21.1049/0** into the step bores of the profile and pretighten the bolt-fasteners
- Insert the levelling elements **Part N° 21.1054/0** and correct the vertical position of the profile by screwing the levelling elements

LEVELLING PLATE 90

Part. N° 21.1052/0







TECHN. DATA / ITEMS SUPPLIED

- Aluminium, completely processed
- Without fixing kit
- Without levelling elements
- Weight 0,300 kg

APPLICATIONS

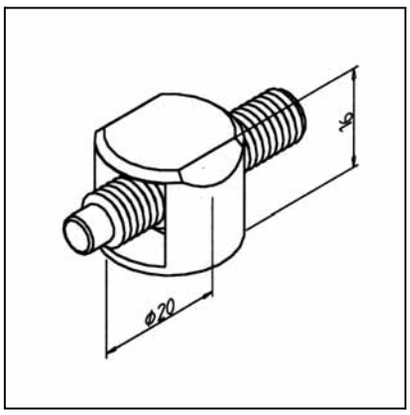
- Precise levelling of stand-profiles 90 x 90 in profile constructions; particularly suitable for vertical sliding doors
- Particularly suitable for vertical sliding doors

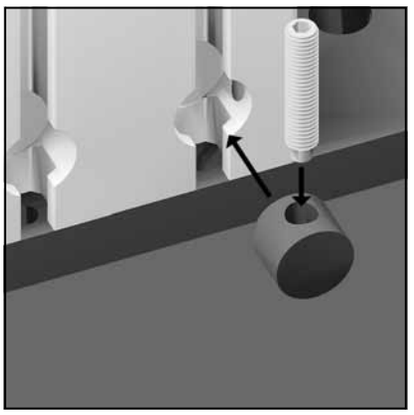
ASSEMBLY

- Fasten levelling plate with floor anchor on floor or wall
- Insert bolt-fasteners for levelling plate **Part N° 21.1049/0** into the step bores of the profile and pretighten the bolt-fasteners
- Insert the levelling elements **Part N° 21.1054/0** and correct the vertical position of the profile by screwing the levelling elements

LEVELLING ELEMENT

Part. N° 21.1054/0





TECHN. DATA / ITEMS SUPPLIED

- GD-Zn
- Square nut M8
- Set-screw M8 x 40, 4 A/F
- Weight 0,027 kg

APPLICATIONS

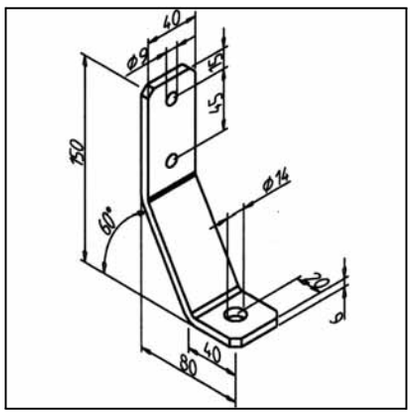
- Alignment of profile constructions in connection with levelling plate

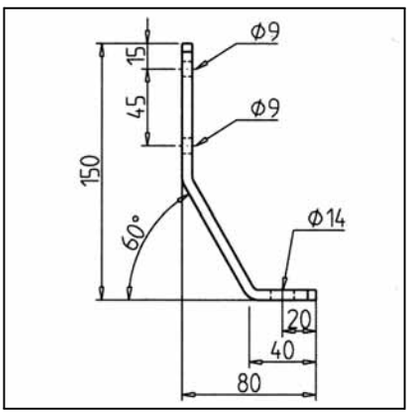
ASSEMBLY

- Same processing as for bolt-fasteners
- The set-screw M8 x 40 meshes into the centering bore on the levelling plate

ANGLE BRACKET FOR FLOOR FASTENING

Part. N° 21.1112/0





TECHN. DATA / ITEMS SUPPLIED

- Steel, powder coated, grey
- Without fixing kit
- Weight 0,360 kg

APPLICATIONS

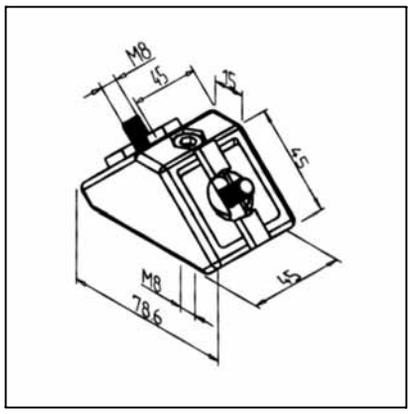
- Securing and fastening of constructions on floor or wall

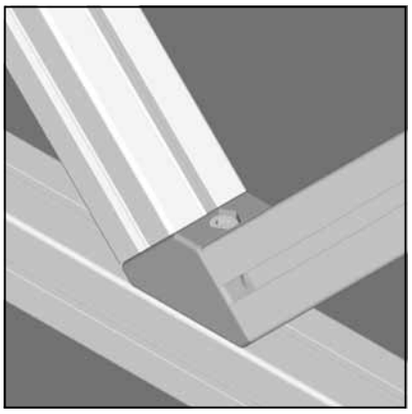
ASSEMBLY

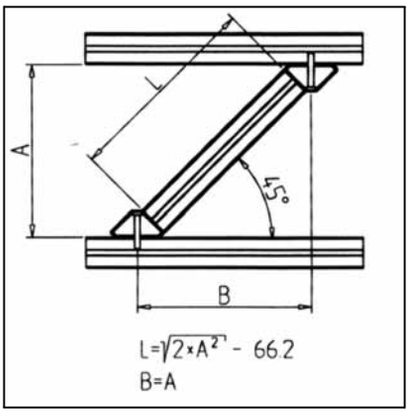
- On profile side: Use hex socket cap screws M8 x 20 5 A/F
- On floor side: Use floor anchor 12 **Part N° 21.1115/0**
- Also suitable for subsequent mounting

BRACE SOCKET 45 GD

Part. N° 21.1729/0







TECHN. DATA / ITEMS SUPPLIED

- GD Zn, powder coated, grey
- End caps, Fixing kit
- Weight 0,261 kg

APPLICATIONS

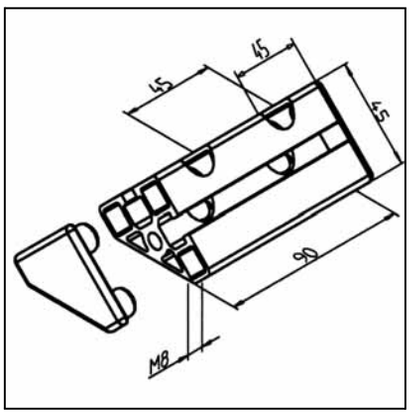
- Support in half-timbered constructions

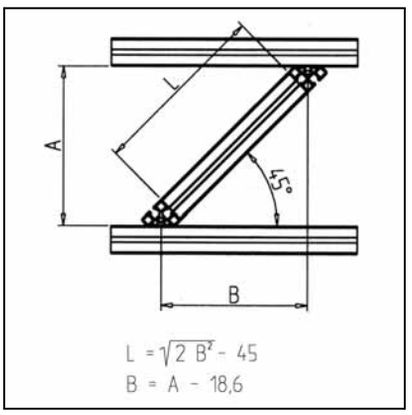
ASSEMBLY

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

BRACE SOCKET 45° / 90

Part. N° 21.1727/0





TECHN. DATA / ITEMS SUPPLIED	
- Aluminium profile 45/45°	
- End caps, grey	
- Fixing kit	
- Weight	0,175 kg

APPLICATIONS

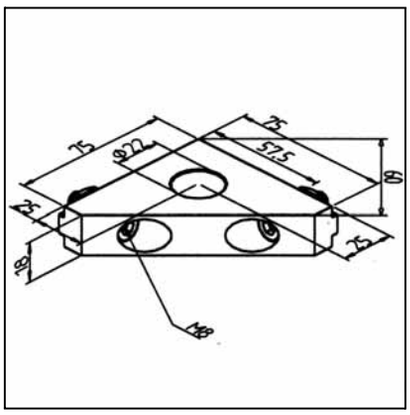
- Support in half-timbered constructions

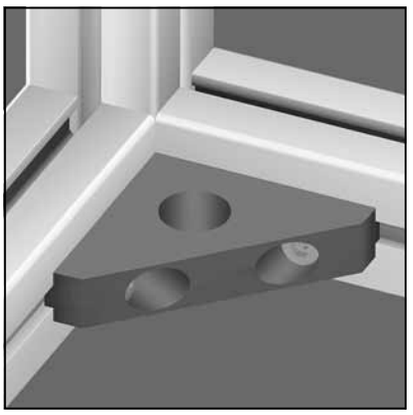
ASSEMBLY

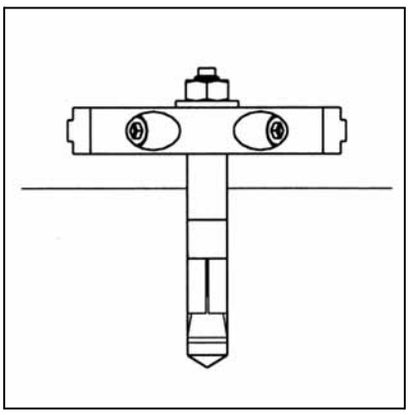
- Screw brace socket onto the frame
- Insert supports by means of MiniTec power-lock fasteners and tighten
- Fix end caps

CORNER 90

Part. N° 21.1783/0







TECHN. DATA / ITEMS SUPPLIED	
- Aluminium, natural anodized	
- Fixing kit	
- Weight	0,170 kg

APPLICATIONS

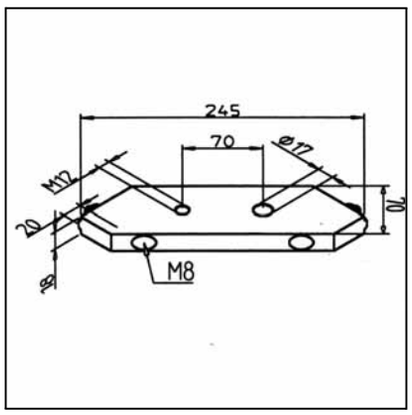
- Strengthening of constructions
- Attachment of interal feet
- Floor mounting and levelling of frames

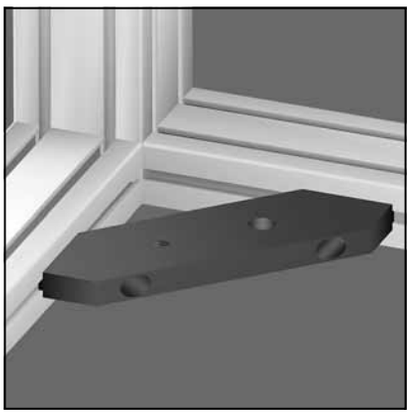
ASSEMBLY

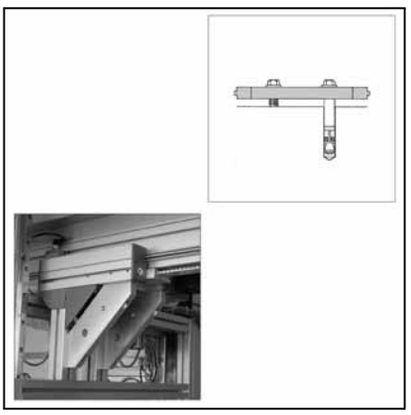
- On profile side with fixing kit
- On floor side fasten with floor anchor

CORNER 180

Part. N° 21.1784/0







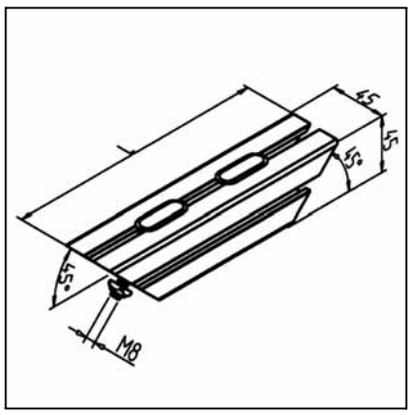
TECHN. DATA / ITEMS SUPPLIED	
- Aluminium, natural anodized	
- Fixing kit	
- Weight	0,690 kg

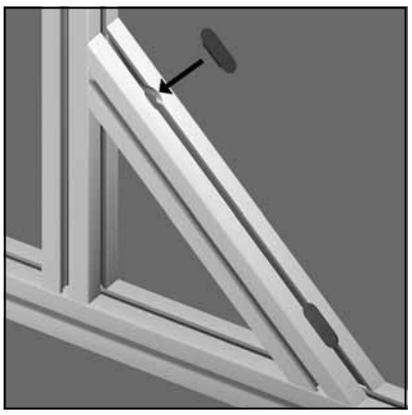
APPLICATIONS
- Strengthening of heavy constructions
- Attachment of internal feet
- Floor mounting and levelling of frames

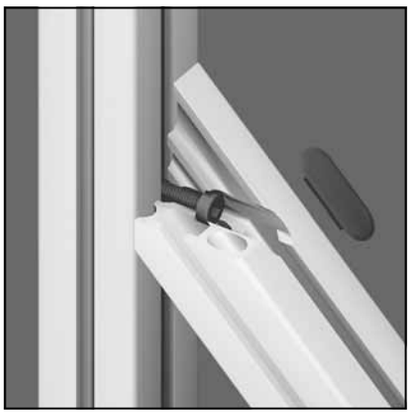
ASSEMBLY
- On profile side with fixing kit
- On floor side fasten with floor anchor and levelling screw M12

STRENGTHENING ELEMENT 45

Part. N° 21.1761/0







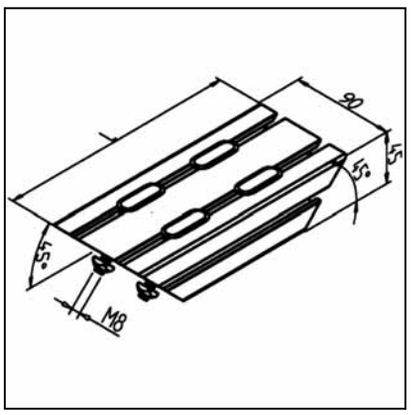
TECHN. DATA / ITEMS SUPPLIED	
- Profile 45 x 45, ready for use	
- Both ends cut at 45° with counter-bores for fixing kit	
- Fixing kit	
- Weight	0,870 kg
- Length	360 mm

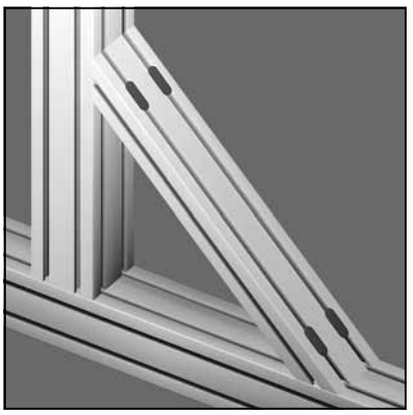
APPLICATIONS
- Reinforcement of constructions in half-timbered principle

ASSEMBLY
- Screw onto profile groove use the fixing kit

STRENGTHENING ELEMENT 90

Part. N° 21.1762/0





TECHN. DATA / ITEMS SUPPLIED

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

APPLICATIONS

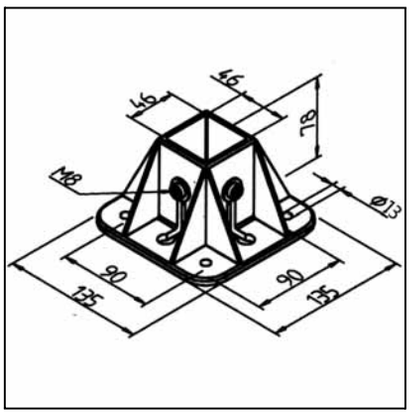
- Reinforcement of constructions in half-timbered principle

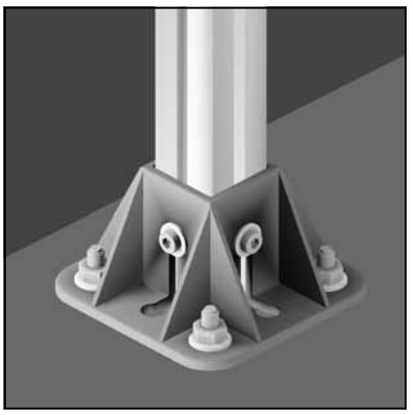
ASSEMBLY

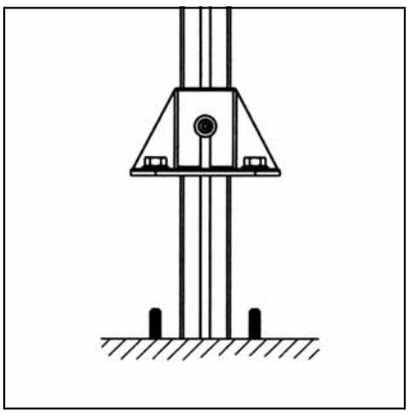
- Screw onto profile groove use the fixing kit

FOOT 45 GD

Part. N° 21.1731/0







TECHN. DATA / ITEMS SUPPLIED

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

APPLICATIONS

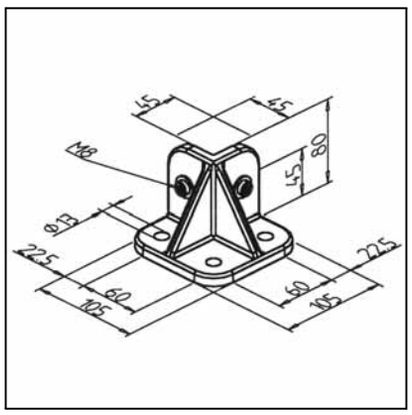
- Suitable for profiles up to dimension 45 x 45
- Floor mounting of guard units, information plates and frames
- As connection element for wall attachment; can be used for both sides

ASSEMBLY

- Insert profile into foot
- Insert the square nut with spring steel sheet into the profile groove; insert 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 fixing screws

FOOT 45 GD S

Part. N° 21.1723/0



TECHN. DATA / ITEMS SUPPLIED	
- Aluminium GD, powder coated, grey	
- Fixing kit for profile	
- Weight	0,499 kg

APPLICATIONS

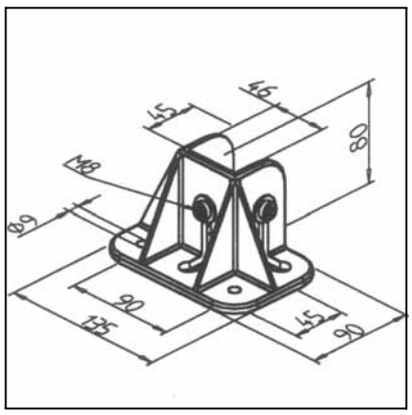
- Suitable for all profiles
- Floor mounting of guard units, information plates and frames
- As connection element for wall attachment; can be used for both sides

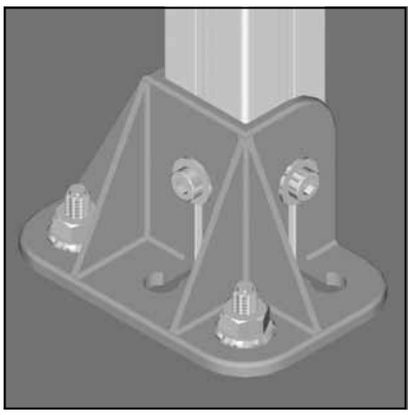
ASSEMBLY

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

FOOT 45 GD OPEN

Part. N° 21.1738/0





TECHN. DATA / ITEMS SUPPLIED	
- Aluminium GD, powder coated, grey	
- Fixing kit for profile	
- Weight	0,356 kg

APPLICATIONS

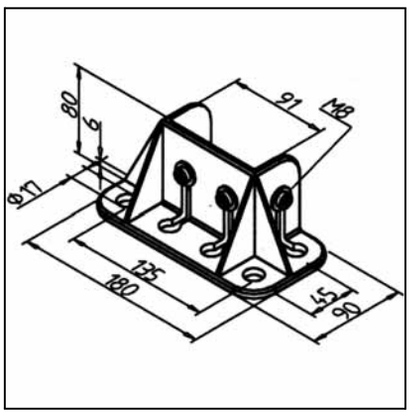
- Floor mounting of guard units, information plates and frames
- As connection element for wall attachment; can be used for both sides

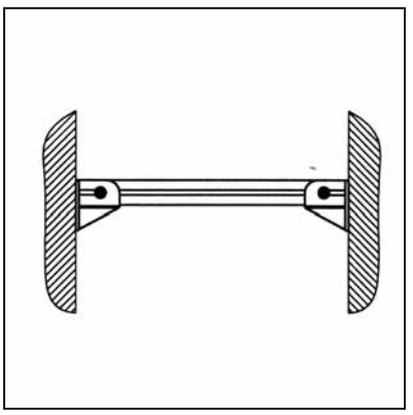
ASSEMBLY

- Insert profile into foot
- Insert the square nut with spring steel sheet into the profile groove; insert 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 fixing screws

FOOT 90 GD

Part. N° 21.1737/0





TECHN. DATA / ITEMS SUPPLIED

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

APPLICATIONS

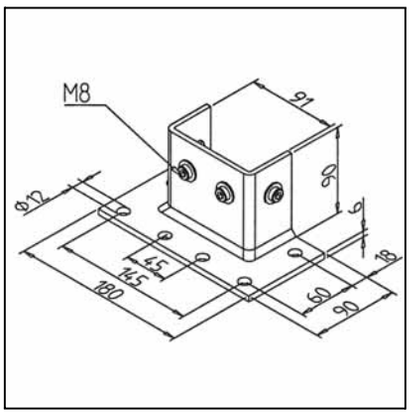
- Suitable for profiles up to dimension 45 x 90, 90 x 90 and 90 x 180
- Floor fastening of guard units, information plates and frames
- Connection element for wall attachment; can be used for both sides

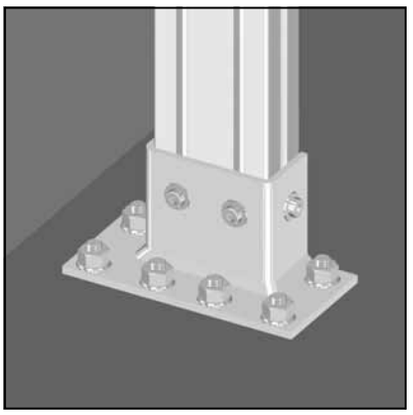
ASSEMBLY

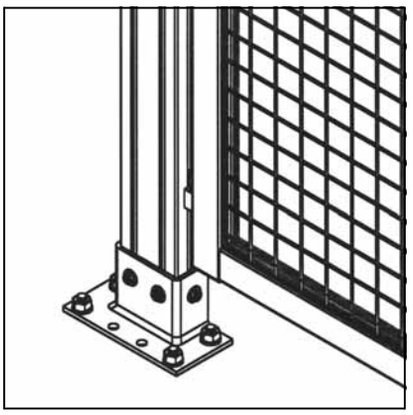
- Insert profile into foot
- Insert the square nut with spring steel sheet into the profile groove; insert the screws
- Fix the foot on the floor or on the wall; for this purpose use high-performance anchors or universal dowels with hexagon screws
- Tighten the fixing screws

FOOT 90 S

Part. N° 21.1707/0







TECHN. DATA / ITEMS SUPPLIED

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

APPLICATIONS

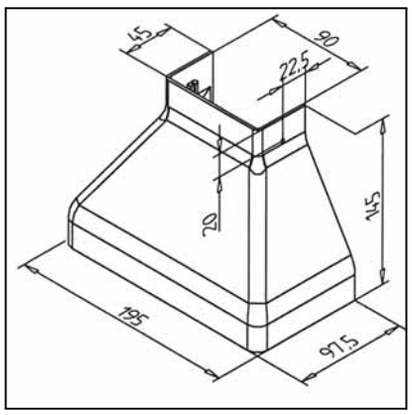
- Suitable for profiles up to dimension 45 x 90, 90 x 90 and 90 x 180
- Floor mounting of guard units, information plates and frames
- Connection element for wall attachment; can be used for both sides

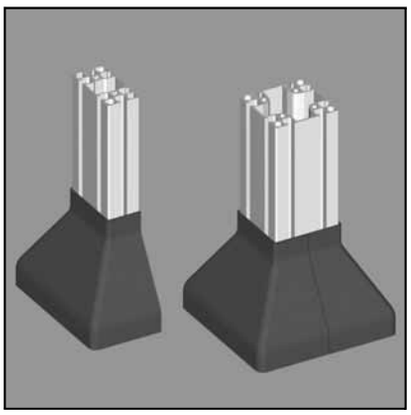
ASSEMBLY

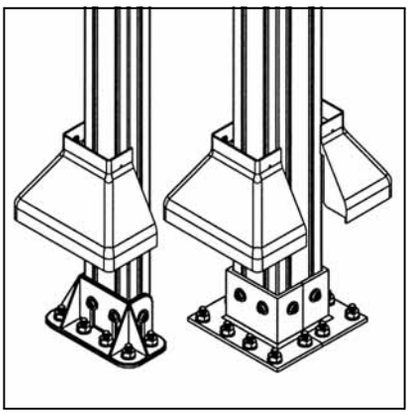
- Insert spring-loaded square nuts in profile grooves and slide to fixing position
- Fix the foot on the floor or on the wall; for floor mounting use high performance anchors 12 mm or universal dowels with hexagon screws M12
- Tighten the screws on profile

COVER FOOT GD

Part. N° 22.1025/1







TECHN. DATA / ITEM 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 Ø 2,5 on the marked place

FITTING OF PANEL ELEMENTS, ASSEMBLY POSSIBILITIES

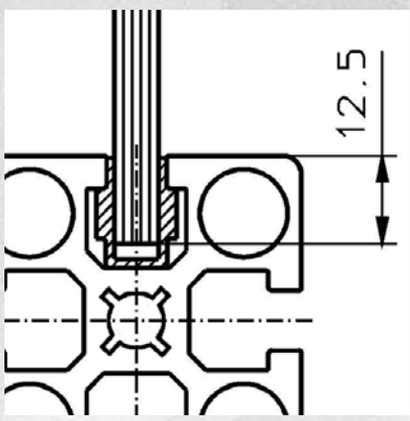
FITTING OF PANEL ELEMENTS

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 recommendable 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.

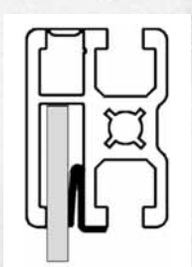
Subsequent mounting of panel elements is easier to perform and causes less damage.

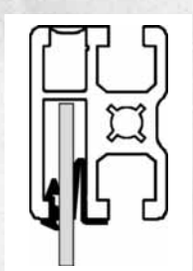
Mounting elements into the profile groove

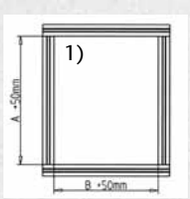


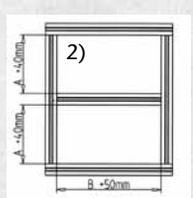
Cover profiles

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:
+25 mm







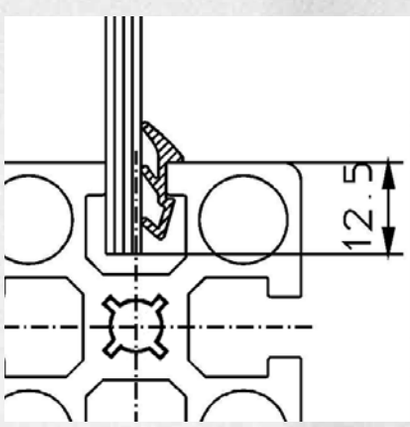


Clamp profile 45 x 32

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:

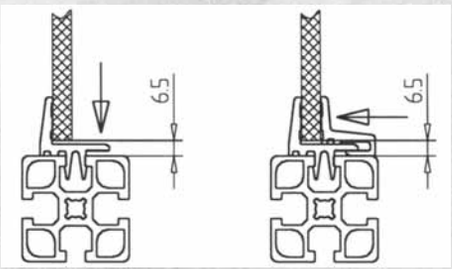
1) Simple frames: +50 mm
2) Frames with intermediate brackets: +40 mm



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.
For mounting of sheets < 2 mm use insert seals from both sides of the panel.
Allow an enlargement of panel elements in x and y direction of:
+25 mm

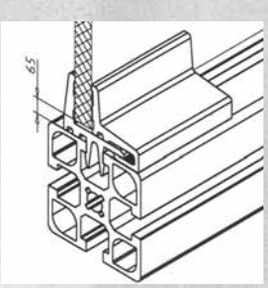
Fitting of panels into existing frames



Clamp profiles PVC

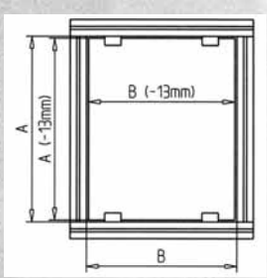
For easy fitting of panel elements of all kinds into existing frames without free space between frame and panel.
Suitable for panel elements of max. 8 mm, also for corrugated mesh.

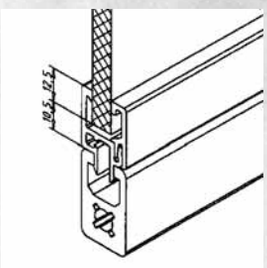
For the panel element allow a min of 13 mm reduction in x- and y-direction.



Panel holder

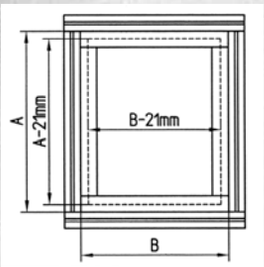
For easy and economic fitting of panel elements into existing frames. The panel holders are of two elements. Best suited for all panel elements of max. 8 mm thickness, except for corrugated mesh.
For the panel element allow a min. of 13 mm reduction in x- and y- direction. (6,5 free space between profile surface and panel)

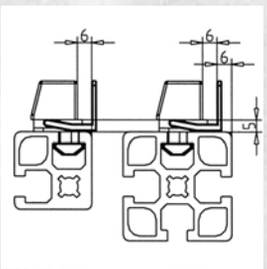




Panel clamp profile

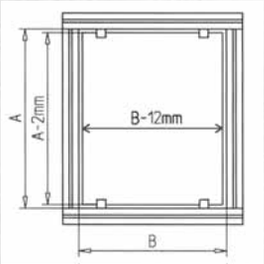
For an easy and cost efficient assembling of panel elments (also for subsequent assembling). No mitre cuts necessary. Suitable for panel elements up to a thikness of 8 mm. For a thight fastening of panel elemnts < 8 mm use insert seal.

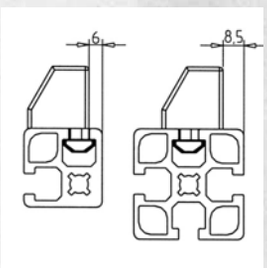




Clamp block

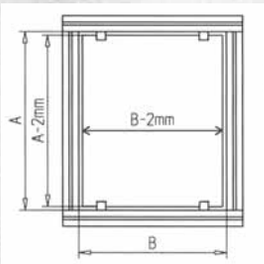
Simple and economical fixing of panel elements. The clamp block consists of block and clip. Suitable for all panel elements from 2 - 6 mm thickness. Not for mesh.
For the panel element allow a reduction of 12 mm in x- and y- direction (6 mm free space between profile surface and panel)

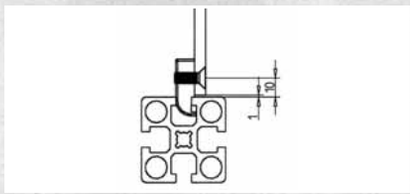


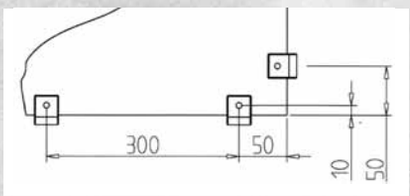


Screw block

Suitable for all kind of panel elements up to 6 mm thickness, except mesh.
For the panel element allow a reduction of 2 mm in x- and y- direction (1 mm free space between profile surface and panel)

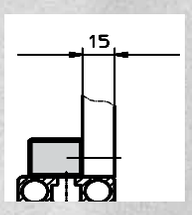


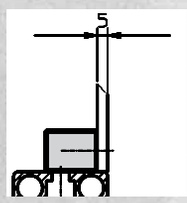


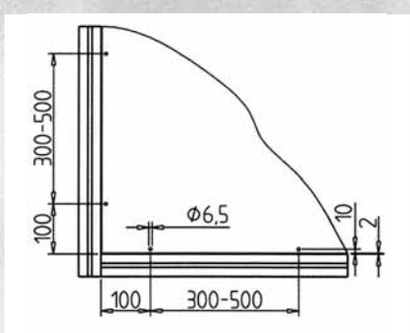


Thread socket

Secure and easy fixing of panel elements of all kinds, except for corrugared mesh. Insert the socket into profile grooves in 300 mm grid. Select screw form and length appropriate to thickness and type of panel element.
For the panel element allow a min. of 2 mm reduction in x- and y-direction.

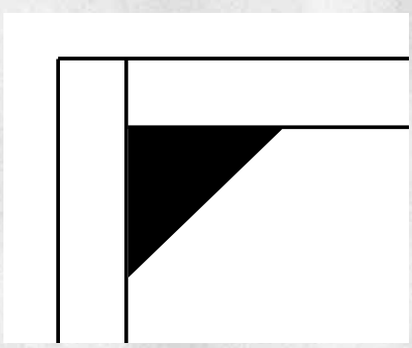






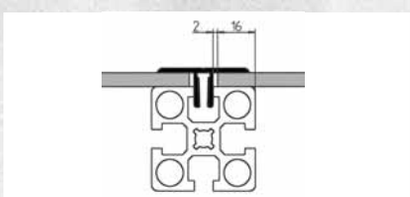
Multiblock

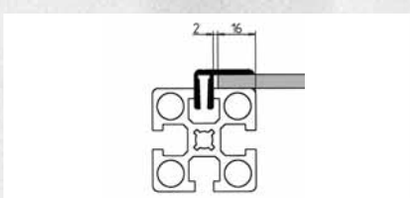
The multiblocks are installed in the clear space of the frame construction at a spacing of approx. 300 mm using cylinder-head screws M6 and rhombus nuts.
Best suited for compound sheet materials. Material of 5-15 mm can be attached bundled. Select screw form and length appropriate to type and thickness 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.
For the panel element, allow a min. of 4 mm reduction in the x- and y-direction (– 2 mm space on all sides).



Angles

Fixing of on-lying panel elements for tables, consoles. See also Page 65





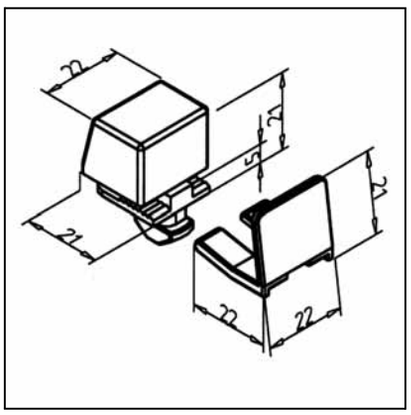
Panel- clamping profile

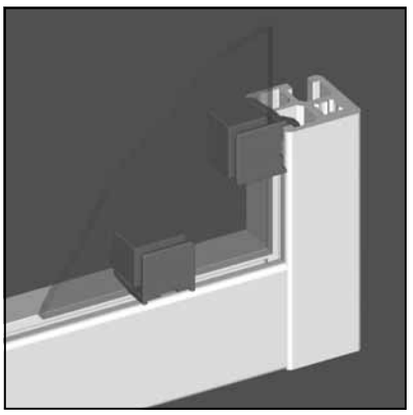
Suitable for panel elements from 2 to 10 mm.
Insert fixing bores Ø 5,5 mm for set screw M5 in ~250 mm grid. Press into profile groove and fix with set screw M5 x 16.

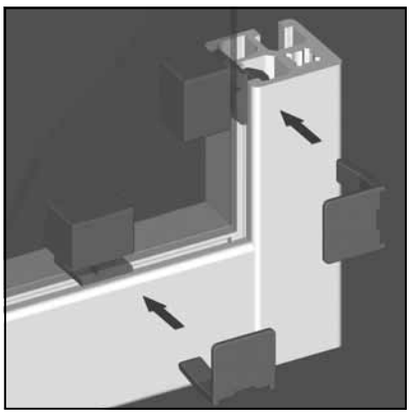
Best suited for panels, corrugated mesh and press mesh.

PANEL CLAMP BLOCK 32

Part. N° 22.1110/1







TECH. DATA / ITEMS SUPPLIED

- PA, grey
- Weight 0,010 kg

APPLICATIONS

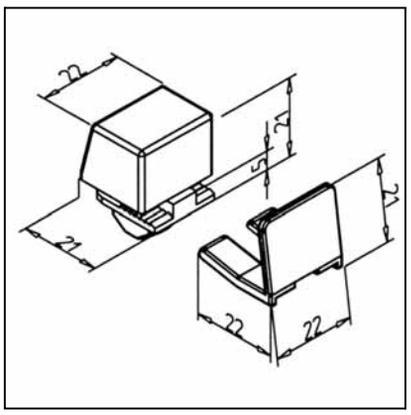
- Suitable for all profiles > 32
- Subsequent fitting of panel elements from 2 to 6 mm thickness; For the panel element allow a min. of 12 mm reduction in x- and y-direction

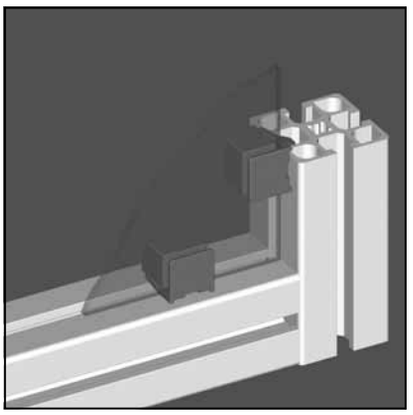
ASSEMBLY

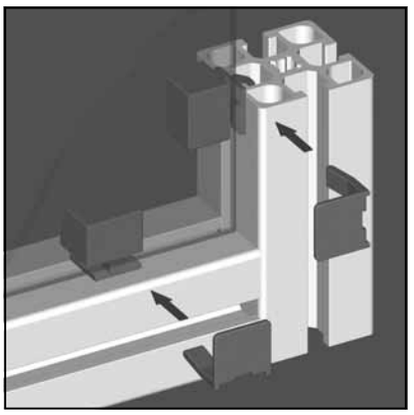
- Insert socket into profile groove
- Insert panel elements
- Press on clip
- Disassembly: lift clip with a screwdriver
- See page 158

PANEL CLAMP BLOCK 45

Part. N° 22.1111/1







TECH. DATA / ITEMS SUPPLIED

- PA, grey
- Weight 0,010 kg

APPLICATIONS

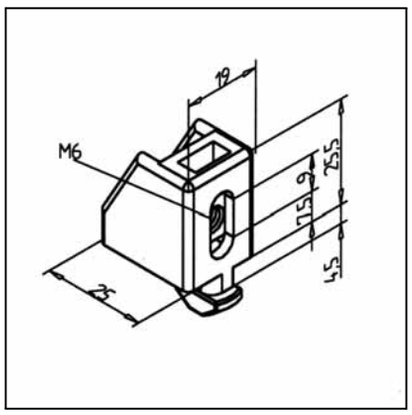
- Suitable for all profiles > 45
- Subsequent fitting of panel elements from 2 to 6 mm thickness; For the panel element allow a min. of 12 mm reduction in x- and y-direction

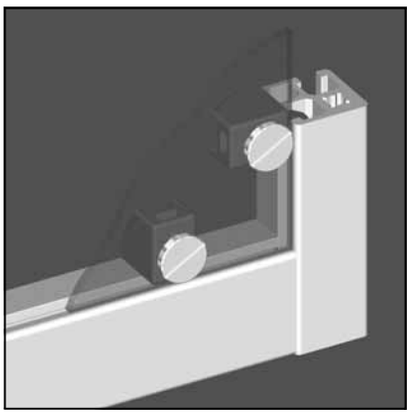
ASSEMBLY

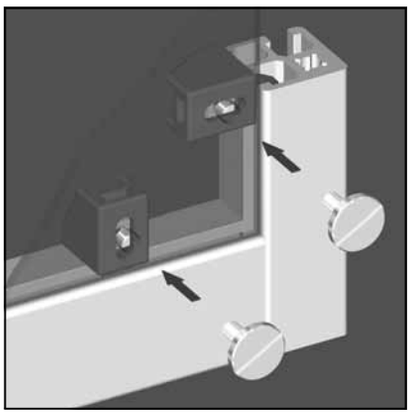
- Insert socket into profile groove
- Insert panel elements
- Press on clip
- Disassembly: lift clip with a screwdriver
- See page 158

SCREW BLOCK 32

Part. N° 22.1112/1







TECH. DATA / ITEMS SUPPLIED

- PA, grey
- Weight 0,010 kg

APPLICATIONS

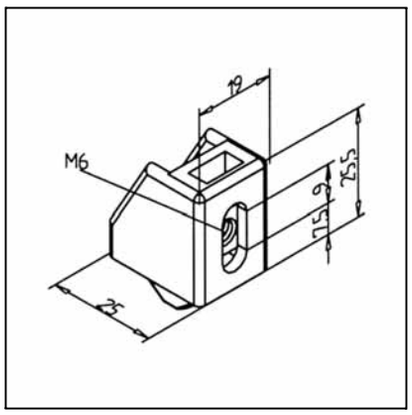
- Suitable for all profiles > 32
- Subsequent fitting of panel elements from 2 to 6 mm thickness; a reduction in x- or y-direction of maximum 1 mm is requested

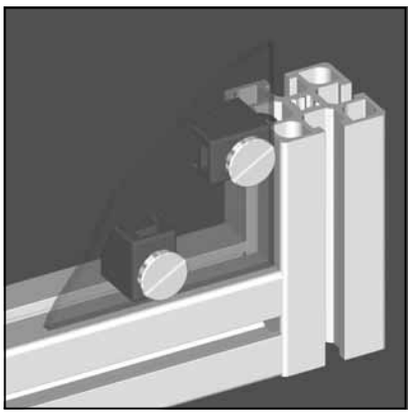
ASSEMBLY

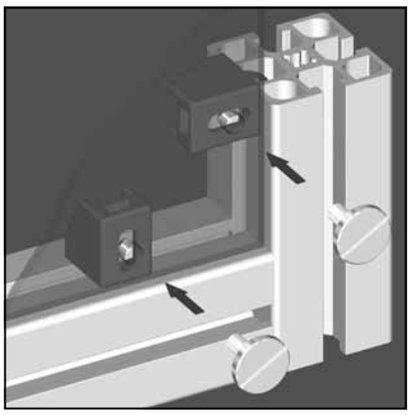
- Insert socket into profile groove
- Insert bored panel elements
- Screw with suited screws M6 (recommed: pan head screw 16 **Part N° 21.1246/0**)
- See page 158

SCREW BLOCK 45

Part. N° 22.1113/1







TECH. DATA / ITEMS SUPPLIED

- PA, grey
- Weight 0,010 kg

APPLICATIONS

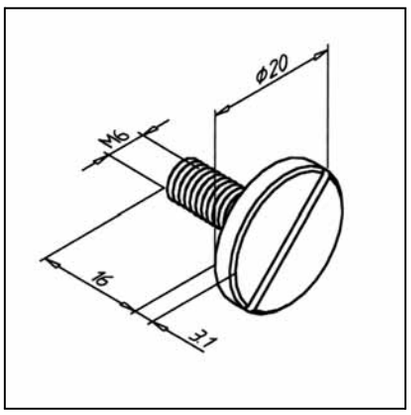
- Suitable for all profiles > 45
- Subsequent fitting of panel elements from 2 to 6 mm thickness; a reduction in x- or y-direction of maximum 1 mm is requested

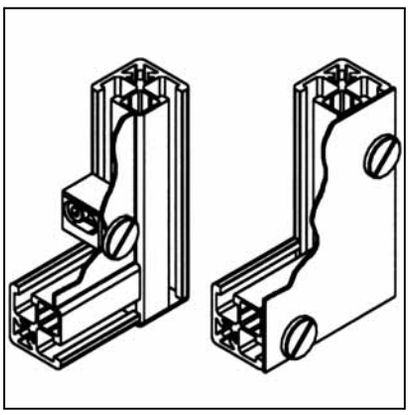
ASSEMBLY

- Insert socket into profile groove
- Insert bored panel elements
- Screw with suited screws M6 (recommed: pan head screw 16 **Part N° 21.1246/0**)
- See page 158

PAN HEAD SCREW 16

Part. N° 21.1246/0





TECH. DATA / ITEMS SUPPLIED	
- Steel, zinc-plated	
- Screw head: Ø 20	
- M6 x 16	
- Weight	0,010 kg

APPLICATIONS

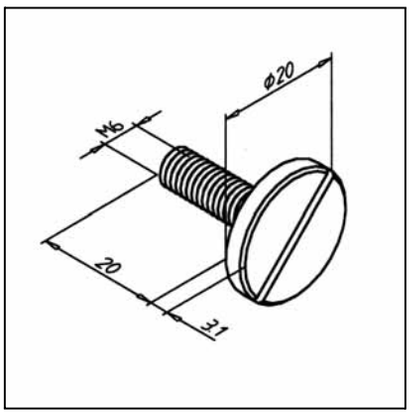
- Mounting of panel elements directly on profile groove or
- In connection with screw block 32 **Part N° 22.1112/0** or multiblock **Part N° 21.1355/0**

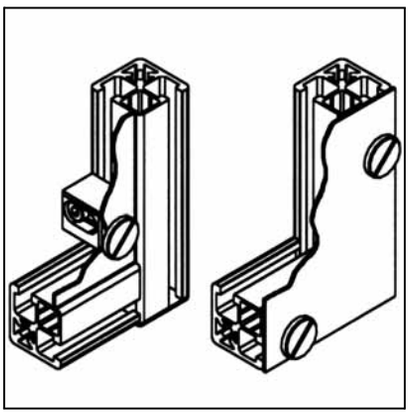
ASSEMBLY

- Predrill panel elements: Ø 6,5 mm
- Recommed grid dimension: ca. 150 mm
- Edge distance: see screw block 32 and multiblock

PAN HEAD SCREW 20

Part. N° 21.1246/1





TECH. DATA / ITEMS SUPPLIED	
- Steel, zinc-plated	
- Screw head: Ø 20	
- M6 x 20	
- Weight	0,010 kg

APPLICATIONS

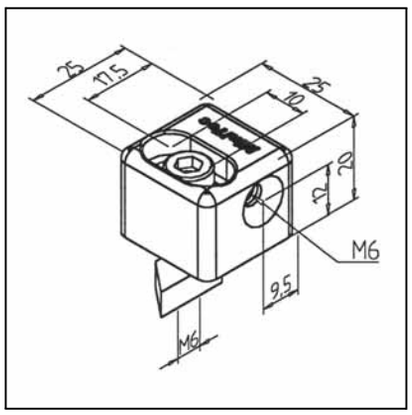
- Mounting of panel elements directly on profile groove or
- In connection with screw block 32 **Part N° 22.1112/0** or multiblock **Part N° 21.1355/0**

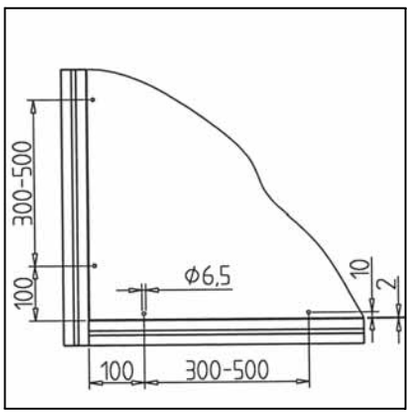
ASSEMBLY

- Predrill panel elements: Ø 6,5 mm
- Recommed grid dimension: ca. 150 mm
- Edge distance: see screw block 32 and multiblock

MULTIBLOCK GD

Part. N° 21.1355/0





TECH. DATA / ITEMS SUPPLIED

- AL GD, powder coated, grey
- Fixing kit
- Without pan head screw
- Weight 0,035 kg/m

APPLICATIONS

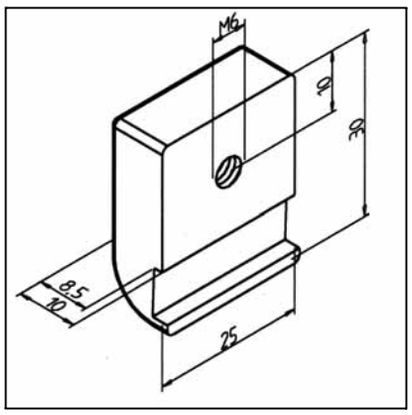
- Subsequent fiting of panel- and add-on elements
- Flush installation of panels, thickness 5 to 15 mm

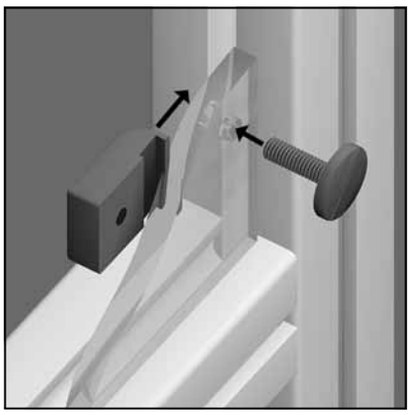
ASSEMBLY

- For all profile grooves
- Subsequent fastening of panel elements with screws M6 or pan head screw
- Calculation of the panel element dimension: see page 159
- Fixing bores Ø 6,5 for screws M6, 8 mm from edge of the panel element

THREAD SOCKET GD

Part. N° 21.1117/1





TECH. DATA / ITEMS SUPPLIED

- Aluminium GD
- Without pan head screw
- Weight 0,018 kg/m

APPLICATIONS

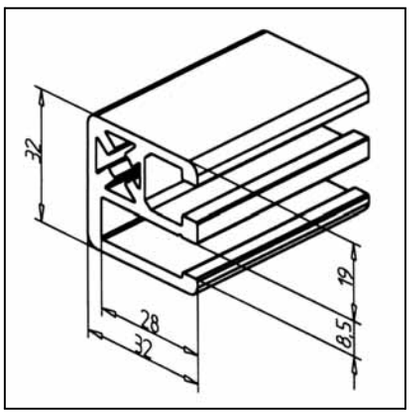
- Fastening of panel elements in profile frames
- Table tops

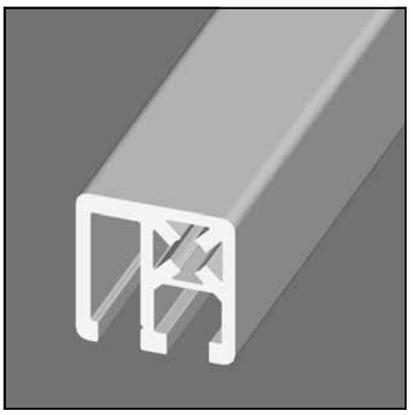
ASSEMBLY

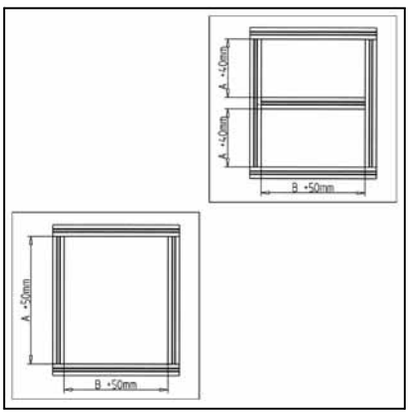
- Insert the thread socket into profile groove
- Screw the element with screws M6 or with pan head screw
- Edge distance: 10 mm
- Calculation of the panel element dimension: see page 159

CLAMP PROFILE 32 X 32

Part. N° 20.1070/0







TECHN. DATA / ITEMS SUPPLIED	
- Ix =	5,024 cm⁴
- Iy =	4,418 cm⁴
- wx =	3,041 cm³
- wy =	2,398 cm³
- Weight	1,211 kg/m
- Length	6 m
- Packing unit	48 m

APPLICATIONS

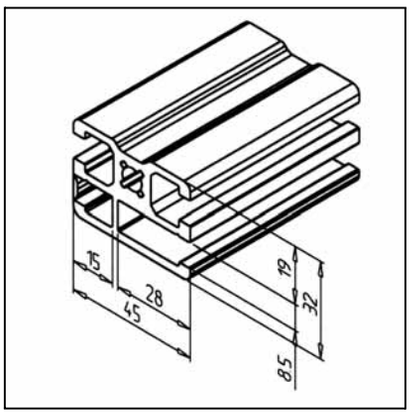
- All types of safety equipment
- For clamping surface elements such as wire mesh, panes, and plates up to a thickness of 8 mm
- Additional struts from clamping profile 45 x 32 must be used for larger safety fields to ensure sufficient protection against the surface elements pushing out; seperate out covering strips for profile 45 x32

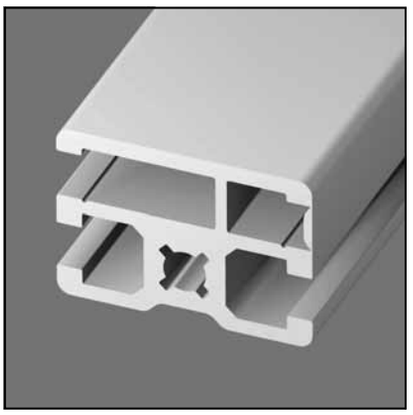
ASSEMBLY

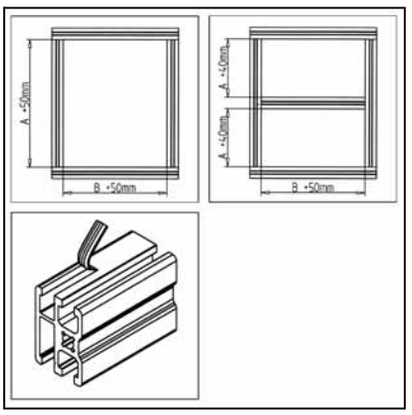
- MiniTec profile connector; no drilling required
- No cut-outs in surface elements required
- Preassemble the framework on three sides with the closed side outwards
- Insert surface element and last profile strut
- Push i distance profile on the inside or knock in with a flat tool
- Also mount appropriate seal for surface elements < 4 mm

CLAMP PROFILE 45 X 32

Part. N° 20.1053/0







TECHN. DATA / ITEMS SUPPLIED	
- Ix =	6,465 cm⁴
- Iy =	9,521 cm⁴
- wx =	3,999 cm³
- wy =	4,119 cm³
- Weight	1,615 kg/m
- Length	6 m
- Packing unit	48 m

APPLICATIONS

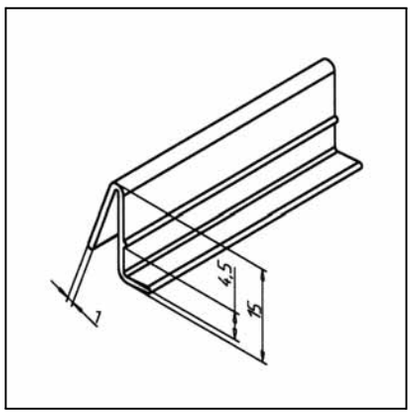
- All kinds of guard units
- Clamping of corrugated mesh or panel elements of all kinds up to 8 mm thickness
- For larger guards we propose to mount an additional brace to guarantee sufficient security
- After open the cover, the second groove is accessible
- See page 157

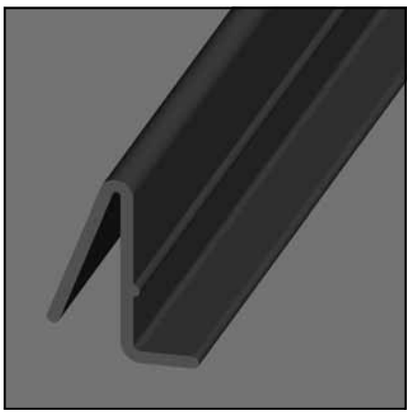
ASSEMBLY

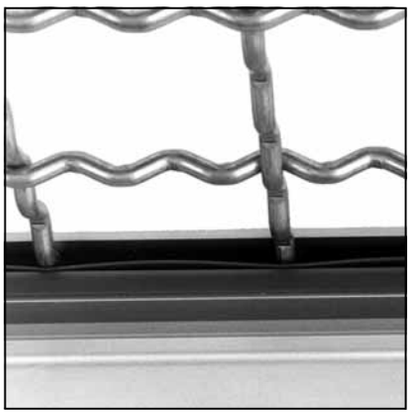
- MiniTec power-lock fastener; no bores necessary
- No cut-outs in panel elements for fastering elements necessary
- Premount 3 sides of the frame, the eve side of the profile outwards
- Insert surface element and mount last profile brace
- Depress the distance profile on the inner side or hit it with a flat tool
- For panel elements < 4 mm mount an additional insert seal

DISTANCE PROFILE

Part. N° 22.1039/0







TECHN. DATA / ITEMS SUPPLIED

- ABS, gray	
- Weight	0,055 kg/m
- Length	2 m

APPLICATIONS

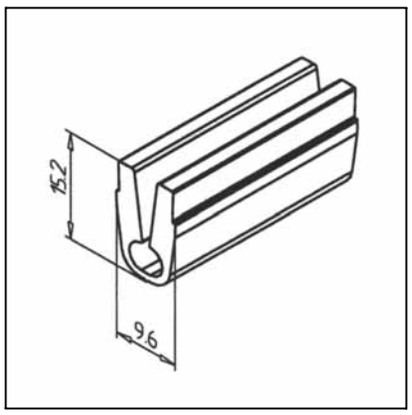
- Spacing element to use with clamp profile 45 x 32 **Part N° 20.1053/0** and clamp profile 32 x 32 **Part N° 20.1070/0** to fix corrugated mesh or panel elements
- Also for use with all other profiles to fix panel elements

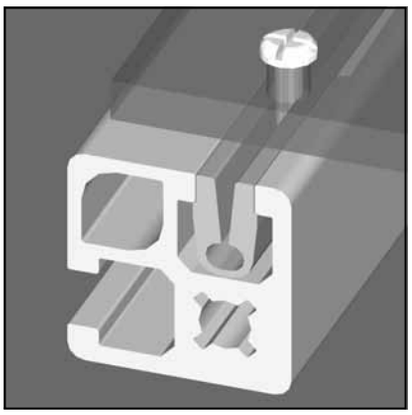
ASSEMBLY

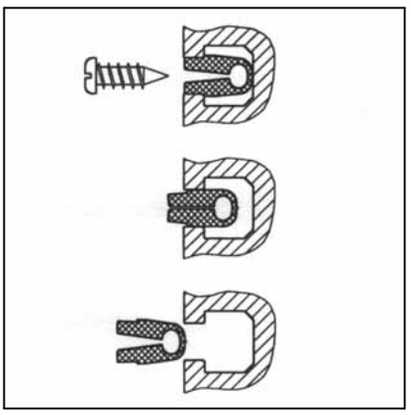
- Mount frame and panel elements
- Press in with suitable tool in space between panel element and clamp profile

SCREW-IN STRIP

Part. N° 22.1076/0







TECH. DATA / ITEMS SUPPLIED

- PVC, grey RAL 7012	
- Weight	0,118 kg/m
- Length	2 m

APPLICATIONS

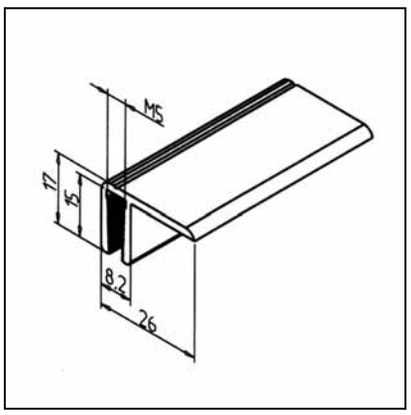
- Easy fixing of panels or panel elements at any point

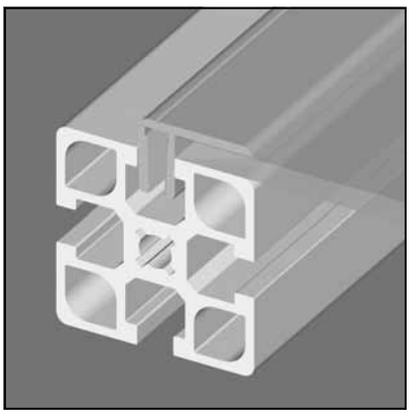
ASSEMBLY

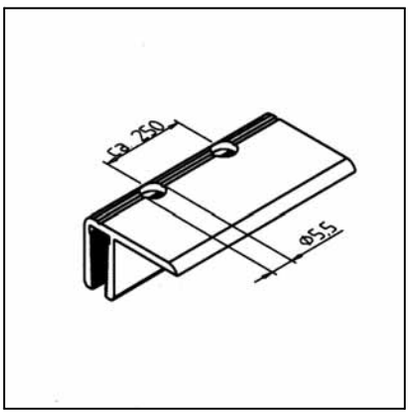
- Clip profile into groove
- Fix element with commercial-type selftapping screws Ø 4-5 mm, Length min: 16 mm
- For material 1-6 mm, use self tapping screw 3,5 x 16 mm **Part N° 21.1365/0**

PANEL CLAMPING PROFILE

Part. N° 20.1025/0







TECH. DATA / ITEMS SUPPLIED	
- Aluminium, anodized E6/EV1	
- Weight	0,260 kg/m
- Length	6 m

APPLICATIONS

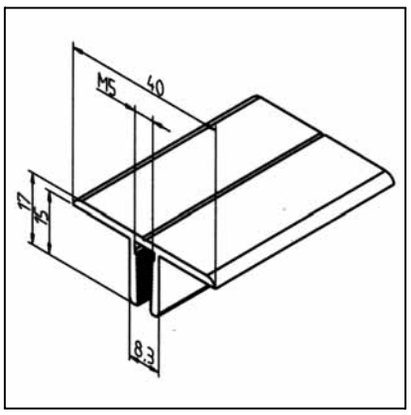
- Fastening of panel elements
- Subsequent fitting of panels on facade side
- Subsequent fitting of panel elements of max. 10 mm thickness

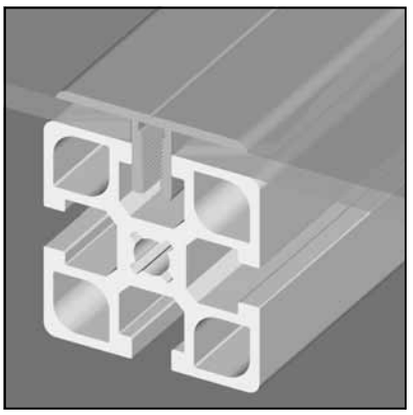
ASSEMBLY

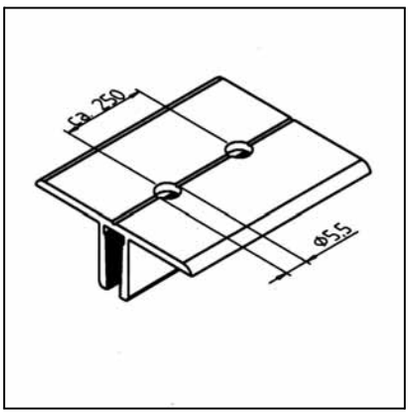
- Drill bores Ø 5,5 mm for set-screw M5 in grid dimension of 250 mm
- Press into profile groove and clamp with set-screw M5 x 12
- Calculation of the panel element dimension: see page 159

DOUBLE PANEL CLAMPING PROFILE

Part. N° 20.1018/0







TECH. DATA / ITEMS SUPPLIED	
- Aluminium, anodized E6/EV1	
- Weight	0,375 kg/m
- Length	6 m

APPLICATIONS

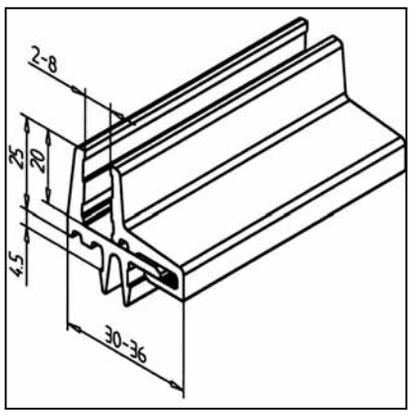
- Butt-joint fastening of panels
- Support of panel elements of a thickness up to 10 mm

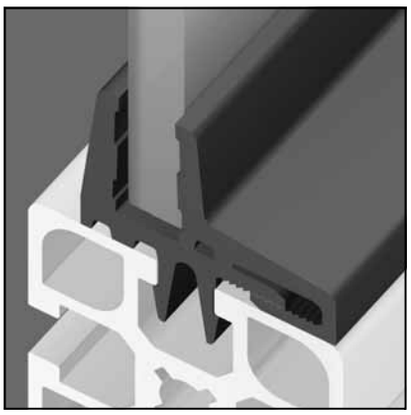
ASSEMBLY

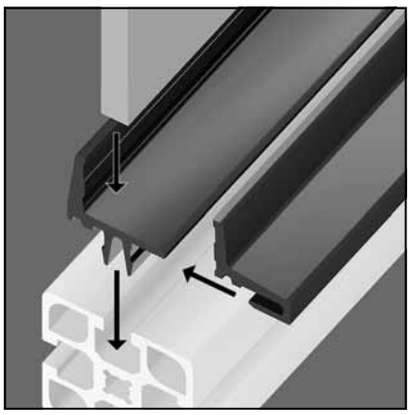
- Drill bores Ø 5,5 mm for set-screw M5 in grid dimension of 250 mm
- Press into profile groove and clamp with set-screw M5 x 12
- Also see panel clamping profile **Part N° 20.1025/0**
- Calculation of the panel element dimension: see page 159

CLAMP PROFILE PVC

Part. N° 22.1092/0







TECH. DATA / ITEMS SUPPLIED

- Hard PVC, grey
- On request also deliverable in black **Part N° 22.1080/0**
- Weight 0,230 kg/m
- Length 2 m

APPLICATIONS

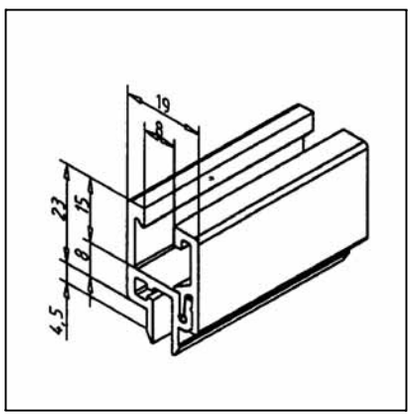
- Attachment of panel elements up to 8 mm
- If the panel elements are < 4 mm, a microcellular rubber has to be inserted
- Windows, door fillins
- No free space between profile and panel element
- Also suitable for corrugated mesh

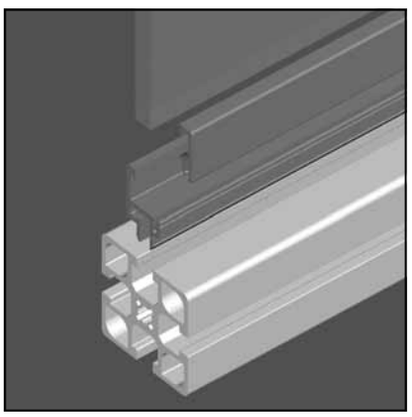
ASSEMBLY

- 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 158

PANEL CLAMP PROFILE

Part. N° 22.1107/1





TECHN. DATA / ITEMS SUPPLIED

- ABS, grey
- On request also deliverable in black
- Weight 0,158 kg/m
- Length 2 m

APPLICATIONS

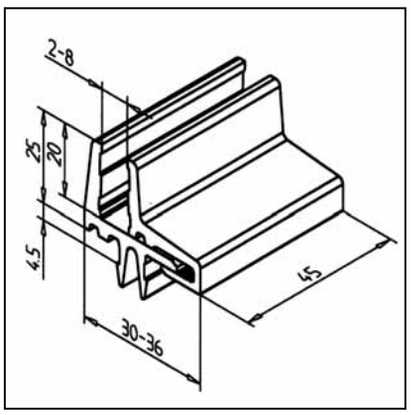
- Useful for subsequent fitting of profiles into existing profile frames
- Fitting of panel elements up to 8 mm
- For panels up to 8 mm use additional insert seal
- Windows, panels
- No air gap

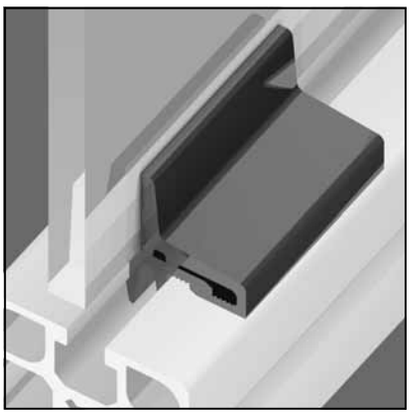
ASSEMBLY

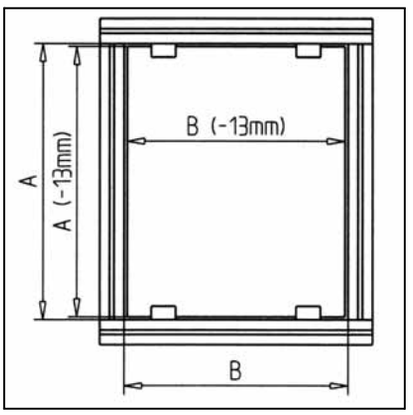
- Snap socket half into profile groove
- Insert the panel element
- Press clamping half firmly on socket half
- Calculation of the panel element dimension: see page 157
- No mitre cut necessary

PANEL HOLDER

Part. N° 22.1090/1







TECH. DATA / ITEMS SUPPLIED

- Hard PVC, grey
- On request also deliverable in black **Part N° 22.1090/0**
- Weight 0,011 kg

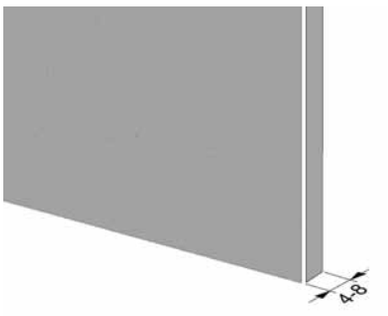
APPLICATIONS

- Attachment of panel elements up to 8 mm
- If the panel elements are < 4 mm, a microcellular rubber has to be inserted
- Windows, door fillins
- Not suitable for corrugated mesh

ASSEMBLY

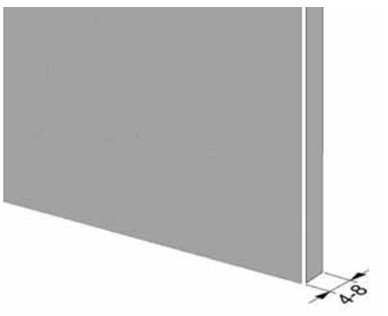
- Snap socket half into profile groove
- Insert the panel element
- Press clamping half firmly on socket half
- Calculation of the panel element dimension: see page 158

ACRYLIC



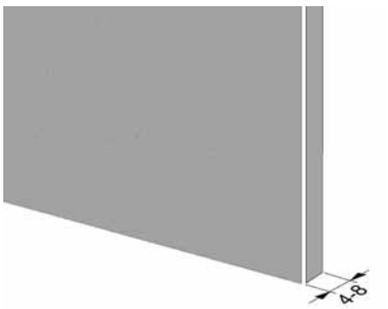
Part N°	Thickness	Colour	Weight	Dimension mm
21.1832/0	4 mm	tinted	4,76 kg/m²	2030 x 3050
21.1811/0	5 mm	tinted	5,95 kg/m²	2030 x 3050
21.1812/0	6 mm	tinted	7,14 kg/m²	2030 x 3050
21.1813/0	8 mm	tinted	9,52 kg/m²	2030 x 3050
21.1826/0	4 mm	clear	4,76 kg/m²	2050 x 3050
21.1836/0	5 mm	clear	5,95 kg/m²	2030 x 3050
21.1827/0	6 mm	clear	7,14 kg/m²	2050 x 3050
21.1828/0	8 mm	clear	9,52 kg/m²	2050 x 3050

POLYCARBONATE



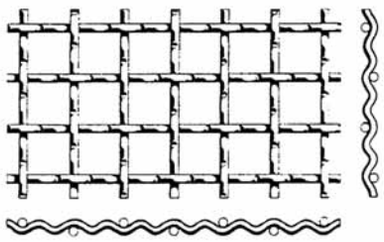
Part N°	Thickness	Colour	Weight	Dimension mm
21.1809/0	4 mm	tinted	4,80 kg/m²	2050 x 3050
21.1808/0	5 mm	rauch	5,95 kg/m²	2050 x 3050
21.1807/0	6 mm	tinted	7,20 kg/m²	2050 x 3050
21.1821/0	8 mm	tinted	9,78 kg/m²	2050 x 3050
21.1829/0	4 mm	clear	4,80 kg/m²	2050 x 3050
21.1833/0	5 mm	clear	5,95 kg/m²	2050 x 3050
21.1830/0	6 mm	clear	7,20 kg/m²	2050 x 3050
21.1831/0	8 mm	clear	9,78 kg/m²	2050 x 3050

PETG

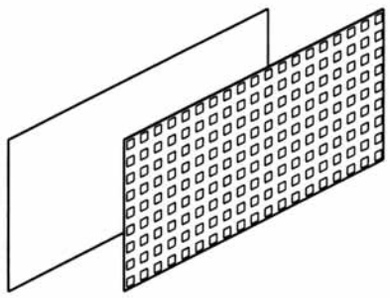


Part N°	Thickness	Colour	Weight	Dimension mm
21.1858/0	4 mm	clear	5,08 kg/m²	2050 x 3050
21.1859/0	5 mm	clear	6,35 kg/m²	2050 x 3050
21.1860/0	6 mm	clear	7,62 kg/m²	2050 x 3050
21.1861/0	8 mm	clear	10,16 kg/m²	2050 x 3050

CORRUGATED MESH



Part N°	Wire size	Mesh-size	Weight kg/m²	max. Size mm	Material
21.1803/0	4 mm	30 mm	6,2	2000 x 3000	St, zincpl.
21.1805/0	4 mm	40 mm	4,7	2000 x 2000	St, zincpl.
21.1818/2	4 mm	30 mm	2,14	2000 x 2000	AlMg3
21.1818/1	4 mm	40 mm	1,6	2000 x 2000	AlMg3

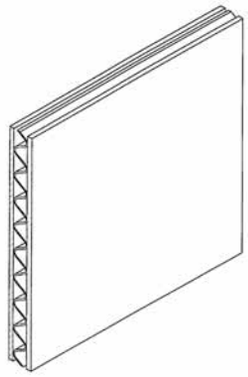


ON DEMAND

Aluminium-sheets, steel-plates,
perforated plates, laminated wood panels

CORRUGATED ALUMINIUM PANEL

Part N° 21.1816/0

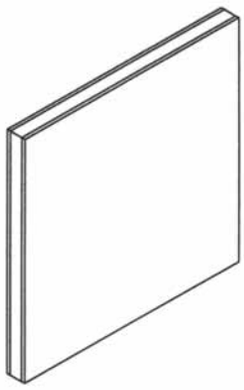


Front plate (anodized)	1	mm
Rear plate (natural)	0.3	mm
Interior corrugated plate (Al)	0.2	mm
Total thickness	5.5	mm
Weight	4.6	kg/m²
Panel size	1500 x 2500	mm

- Al material can be recycled!
- Suitable for painting and printing.

COMPOSITE PANEL

Part N° 21.1834/0

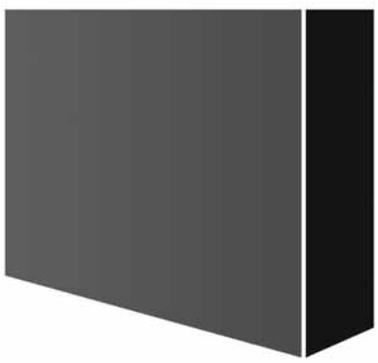


Material outside	Aluminium	(anodized)
Material inside	PE	
Total thickness	6	mm
Weight	7,3	kg/m²
Panel size	1500 x 3000	mm

- Suitable for painting and printing.

PVC-PLATE

Part N° 21.1817/0

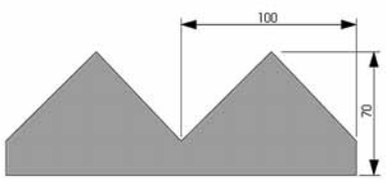


Thickness	20	mm
Colour	grey	7011 RAL
Weight	28	kg/m²
Panel size	1000 x 2000	mm

- Other colours and measurements as well as antistatic table plate upon request.

SOUND- PROOFING SHEET

Part N° 21.1819/0



Thickness	70	mm
Coefficient of thermal conduction	0.032 at	W/mK 0°C
Weight	28	kg/m³
Panel size	1000 x 1000	mm

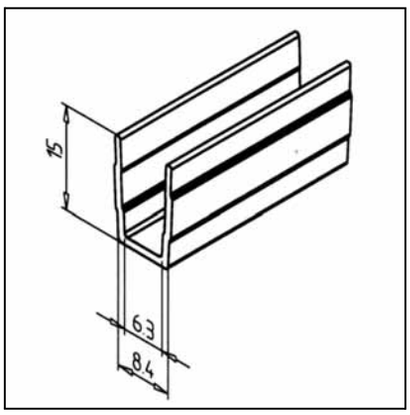
- Primary noise reduction by enclosing of noise sources
- Secondary noise protection in working rooms, offices
- Other sizes on demand

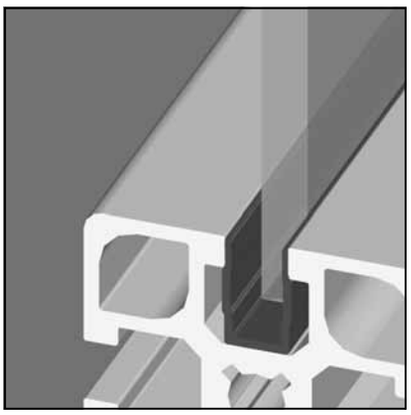
EDGE-, COVER-, SLIDE- AND SEALING PROFILES

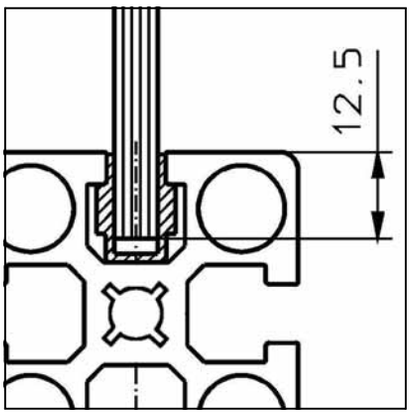
These profiles are used for groove covering or for reception of panel elements up to 6 mm. Covering of grooves is necessary if flush profile surfaces are required or for the installation of wiring and piping. With slide profiles simple and economic linear guides for drawers, sliding doors, jigs etc. can be realized. For sealing of enclosures against sound, water or dust insert-seals and frame-seals are available.

COVER PROFILE

Part. N° 22.1070/1







TECHN. DATA / ITEMS SUPPLIED

- Hard PVC, grey
- Deliverable in lightgrey **Part N° 22.1070/2**
- Deliverable in black **Part N° 22.1070/0**
- Deliverable in orange **Part N° 22.1071/0**
- Deliverable in blue **Part N° 22.1072/0**
- Deliverable in yellow **Part N° 22.1074/0**
- Weight 0,060 kg/m
- Length 2 m

APPLICATIONS

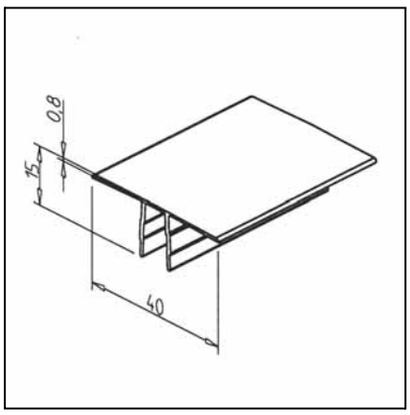
- Mounted with groove inwards: for covering of profile grooves
- Mounted with groove outwards: attachment of panel elements up to 6 mm; thickness compensation for thin panels with silicon or rubber string

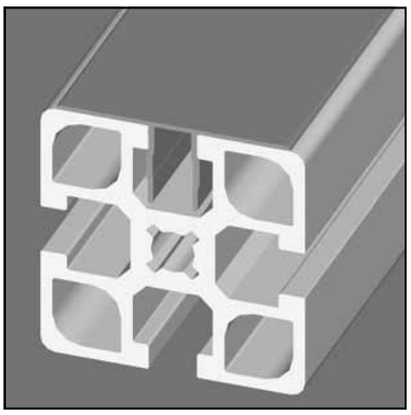
ASSEMBLY

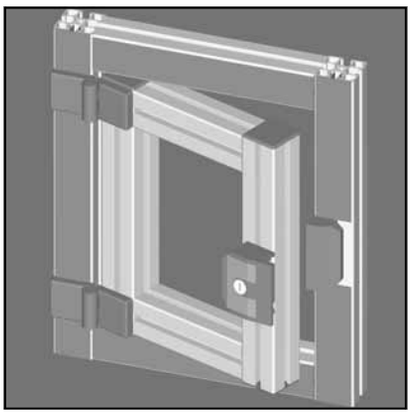
- Snap or slip into profile groove
- Allowance for the panel elements: see page 157

SIGNAL PROFLE

Part. N° 22.1097/2







TECHN. DATA / ITEMS SUPPLIED

- PVC, yellow-orange
- Deliverable in red **Part N° 22.1097/3**
- Deliverable in signal-yellow **Part N° 22.1097/4**
- Weight 0,090 kg/m
- Length 2 m

APPLICATIONS

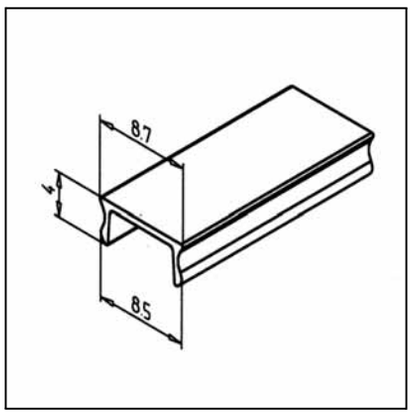
- Marking of safety-relevant construction units such as doors and risk zones
- Coloured organization of constructions or parts

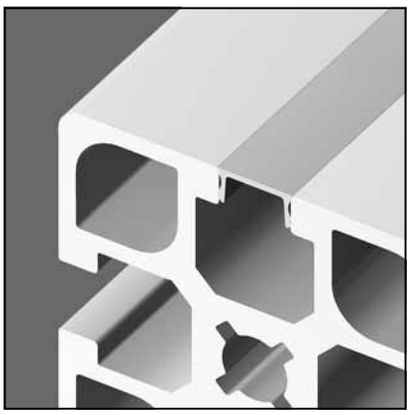
ASSEMBLY

- Clip in profile groove

COVER PROFILE L

Part. N° 20.1021/0





TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural
- Weight 0,030 kg/m
- Length 2 m
- **Also deliverable in aluminium anodized Part.-N° 20.1021/1**

APPLICATIONS

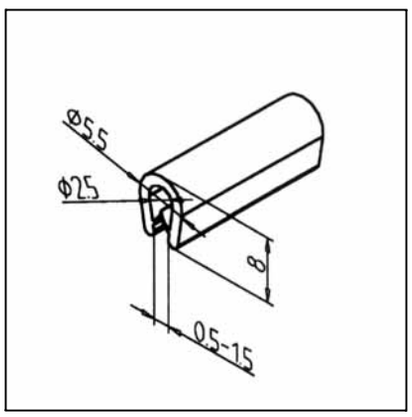
- Flush, dust-proof covering of profile grooves
- Groove cross-section usuable as installation conduit for wiring or piping
- Informations plates

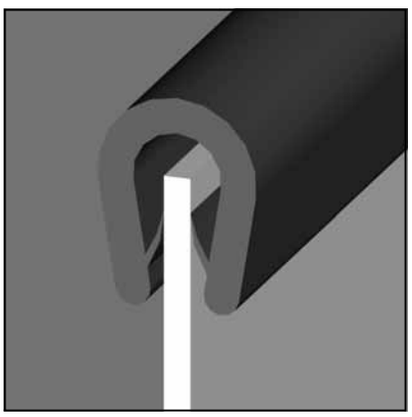
ASSEMBLY

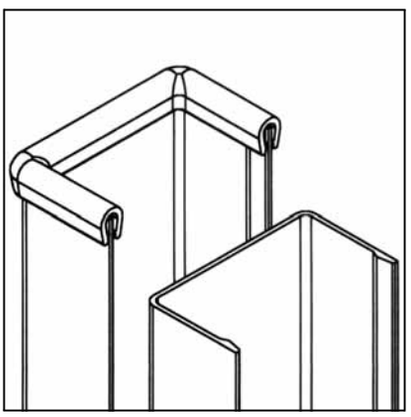
- Press by hand onto profile groove
- Cut of with metal-pliers

EDGE PROTECTION 0,5 -1,5

Part. N° 22.1029/0







TECHN. DATA / ITEMS SUPPLIED

- PVC, black, strengthened with steel sheet
- Weight 0,050 kg/m
- Length 100 m

APPLICATIONS

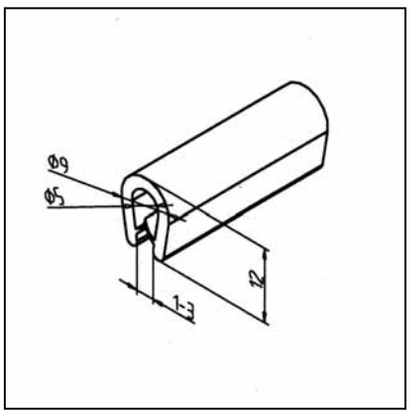
- Edge protection for panel elements
- Protection of MiniTec conduit
- Protection of bores and openings

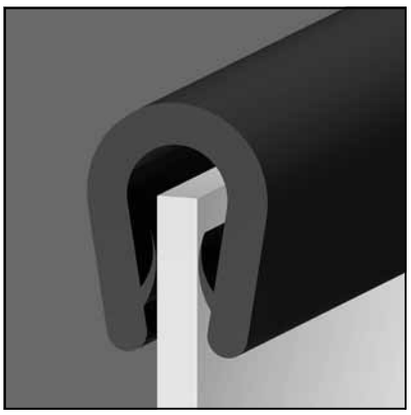
ASSEMBLY

- Slip on edge of the panel element

EDGE PROTECTION 1 - 3

Part. N° 22.1036/0





TECHN. DATA / ITEMS SUPPLIED	
- PVC, black, strengthened with steel sheet	
- Weight	0,120 kg/m
- Length	100 m

APPLICATIONS

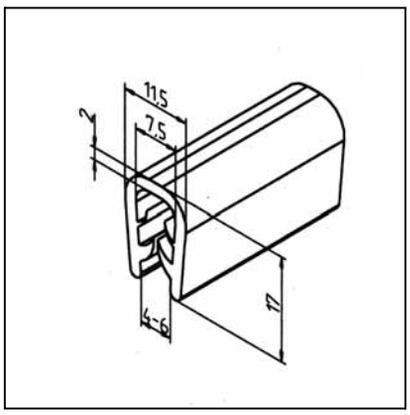
- Edge protection for panel elements

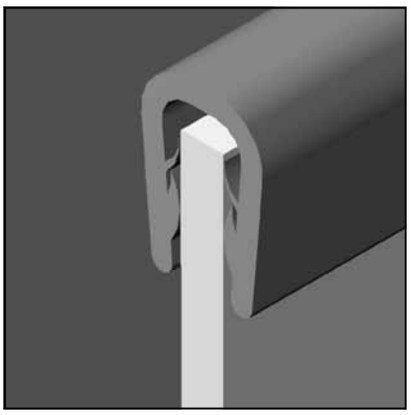
ASSEMBLY

- Slip on edge of the panel element

EDGE PROTECTION 4 - 6

Part. N° 22.1037/0





TECHN. DATA / ITEMS SUPPLIED	
- PVC, black, strengthened with steel sheet	
- Weight	0,190 kg/m
- Length	100 m

APPLICATIONS

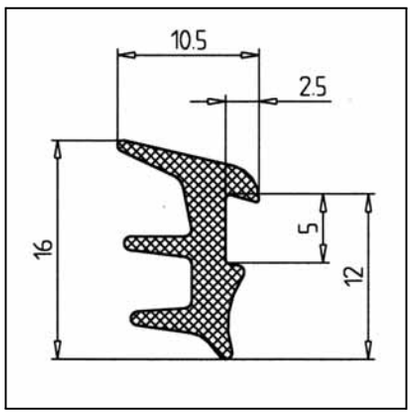
- Edge protection for panel elements

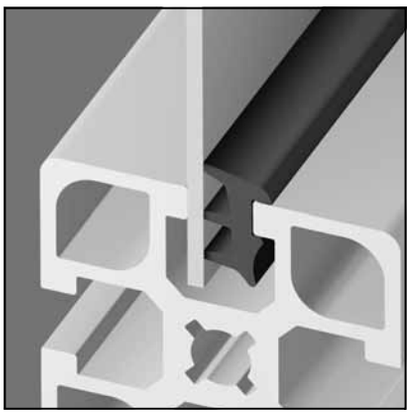
ASSEMBLY

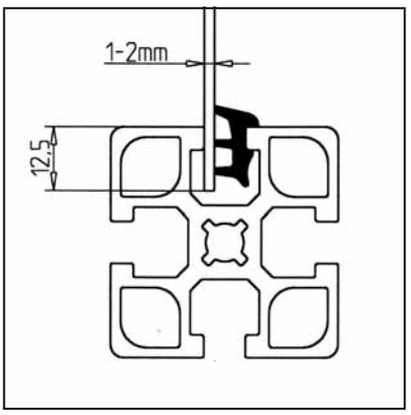
- Slip on edge of the panel element

INSERT SEAL 2

Part. N° 22.1083/0







TECHN. DATA / ITEMS SUPPLIED

- EPDM, black	
- Weight	0,096 kg/m
- Length	100 m

APPLICATIONS

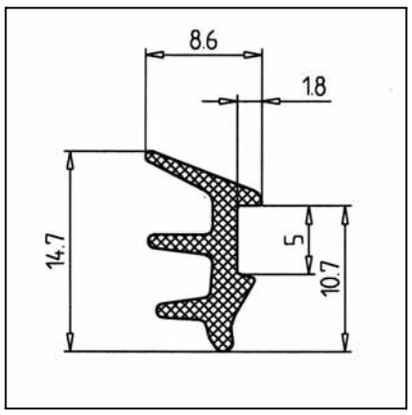
- Not suitable for acrylic plastic and polycarbonate
- Attachment and sealing of panel elements up to 2 mm thickness, directly in the profile groove

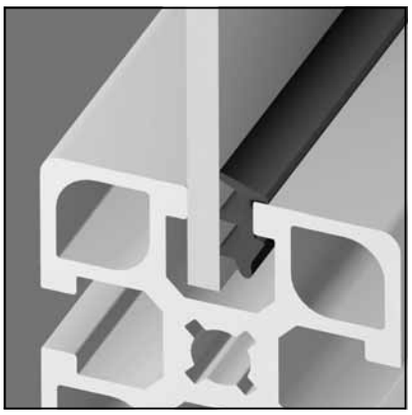
ASSEMBLY

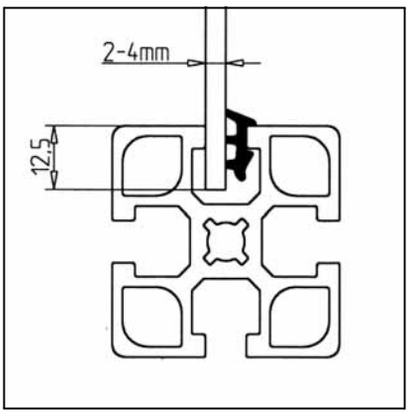
- Insert panel into profile groove
- Press insert seal subsequently into free space between panel element and profile groove with blunt tool made of wood or plastic
- Materials Ø 2 mm can be clamped by using insert seal 6 **Part N° 22.1086/1** on both sides
- Allowance for the panel elements: see page 157

INSERT SEAL 4

Part. N° 22.1081/0







TECHN. DATA / ITEMS SUPPLIED

- EPDM-AGV, black	
- Weight	0,070 kg/m
- Length	200 m

APPLICATIONS

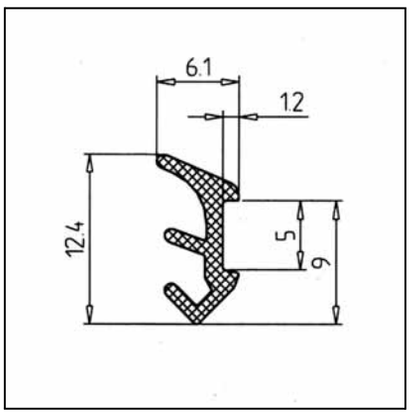
- Attachment and sealing of panel elements up to 2 - 4 mm in the profile groove
- Also suitable for acrylic plastic and polycarbonate

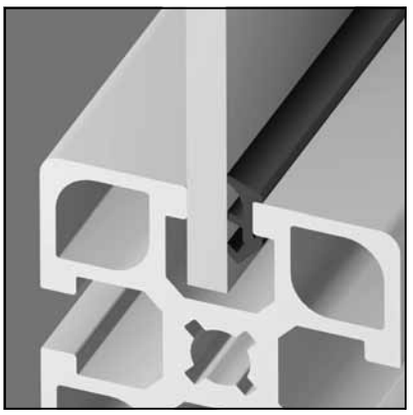
ASSEMBLY

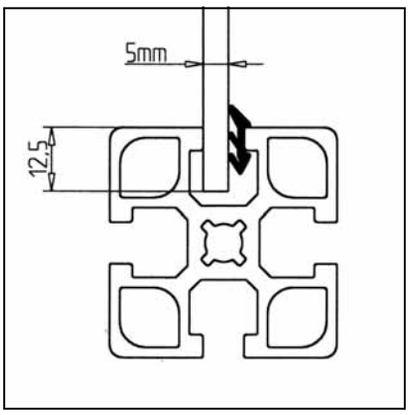
- Insert panel element into profile groove and press insert seal subsequently into free space between panel element and profile groove with blunt tool made of wood or plastic
- Allowance for the panel elements: see page 157

INSERT SEAL 5

Part. N° 22.1099/0







TECHN. DATA / ITEMS SUPPLIED	
- EPDM-AGV, black	
- Weight	0,040 kg/m
- Length	200 m

APPLICATIONS

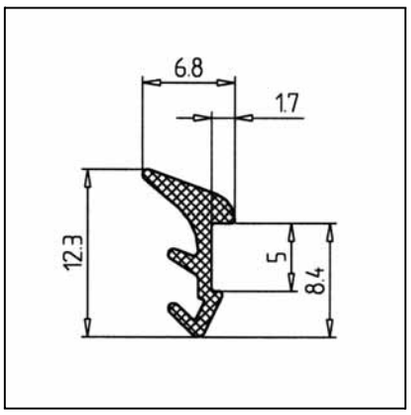
- Attachment and sealing of panel elements up to 5 mm thickness, directly in the profile groove
- Also suitable for acrylic plastic and polycarbonate

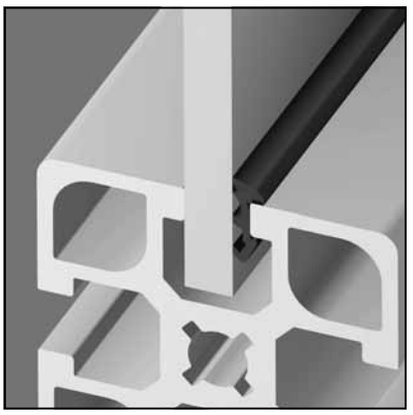
ASSEMBLY

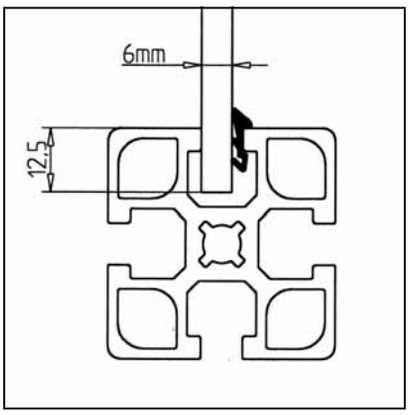
- Insert panel into profile groove
- Allowance for the panel elements: see page 157

INSERT SEAL 6

Part. N° 22.1086/1







TECHN. DATA / ITEMS SUPPLIED	
- EPDM-AGV, black	
- Weight	0,020 kg/m
- Length	200 m
- Oil-resistant execution, **Part. N° 22.1086/3**	

APPLICATIONS

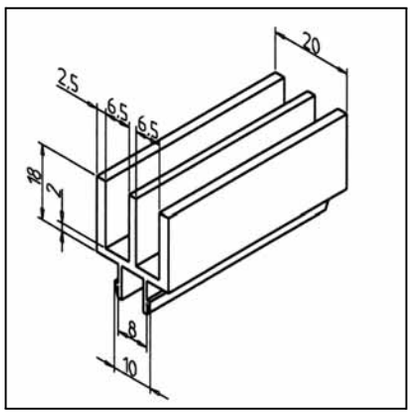
- Attachment and sealing of panel elements up to 6 mm thickness, directly in the profile groove
- Also suitable for acrylic plastic and polycarbonate

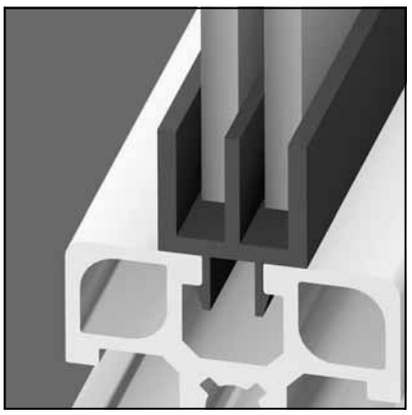
ASSEMBLY

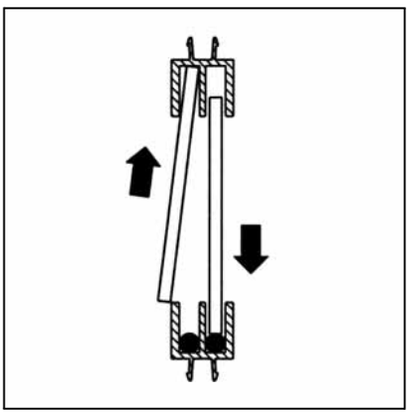
- Insert panel into profile groove
- Materials Ø 2 mm can be clamped by using insert seal 6 on both sides
- Allowance for the panel elements: see page 157

GUIDE PROFILE 2

Part. N° 22.1073/1







TECHN. DATA / ITEMS SUPPLIED

- Hard, PVC, grey
- On request also deliverable in black **Part N° 22.1073/0**
- Weight 0,270 kg/m
- Length 2 m

APPLICATIONS

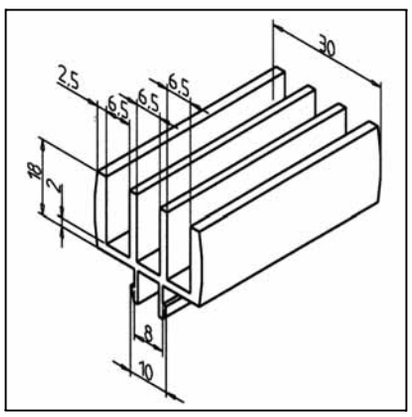
- 2-fold sliding doors made of panel elements of max. 6 mm

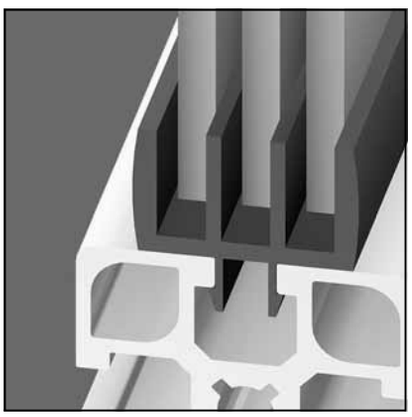
ASSEMBLY

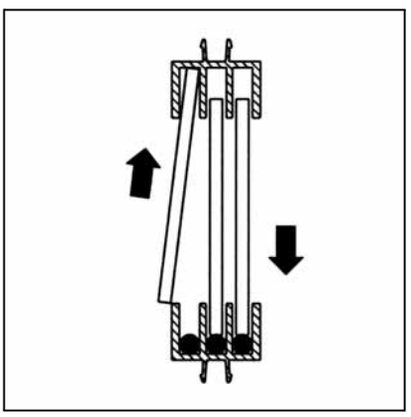
- Snap into profile groove
- Suitable for subsequent mounting
- For subsequent mounting of panel elements PVC-bars **Part N° 22.1077/0** are to be inserted into grooves of the lower guide profile
- For the panel element allow a min. of 20 mm reduction in y-direction, for direct fitting without PVC-bars allow a min. of 10 mm reduction in y-direction

GUIDE PROFILE 3

Part. N° 22.1075/1







TECHN. DATA / ITEMS SUPPLIED

- Hard, PVC, grey
- On request also deliverable in black **Part N° 22.1075/0**
- Weight 0,342 kg/m
- Length 2 m

APPLICATIONS

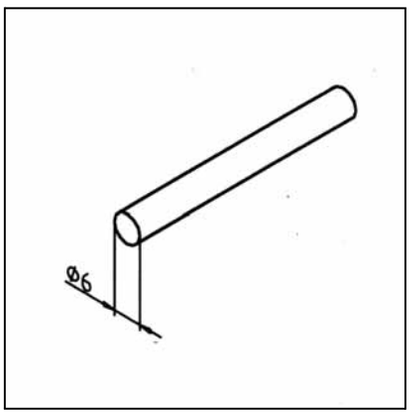
- 3-fold sliding doors, made of panel elements of max. 6 mm

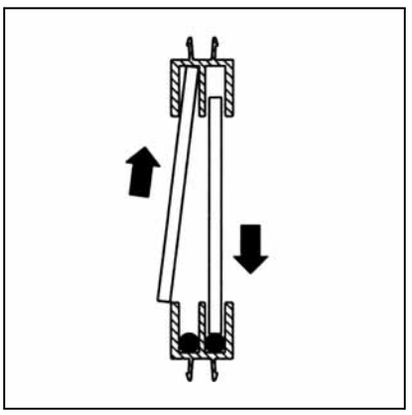
ASSEMBLY

- Snap into profile groove
- Suitable for subsequent mounting
- For subsequent mounting of panel elements PVC-bars **Part N° 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. N° 22.1077/0





TECHN. DATA / ITEMS SUPPLIED	
- Hard PVC, natural	
- Ø 6 mm	
- Weight	0,040 kg/m
- Length	3 m

APPLICATION

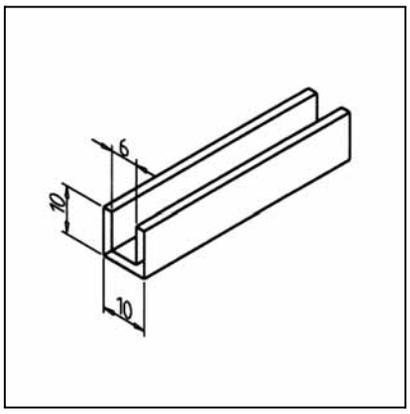
- For guiding of windows or doors in guide profiles

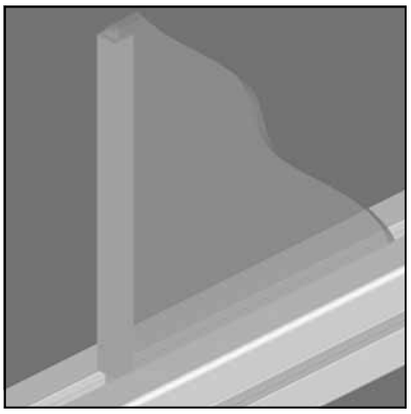
ASSEMBLY

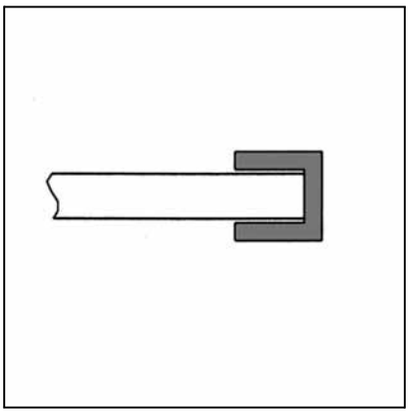
- Insert in the lower grooves of guide profiles 2 and 3

U-PROFILE

Part. N° 21.1002/0







TECHN. DATA / ITEMS SUPPLIED	
- Aluminium, anodized E6/EV1	
- Weight	0,150 kg/m
- Length	6 m

APPLICATIONS

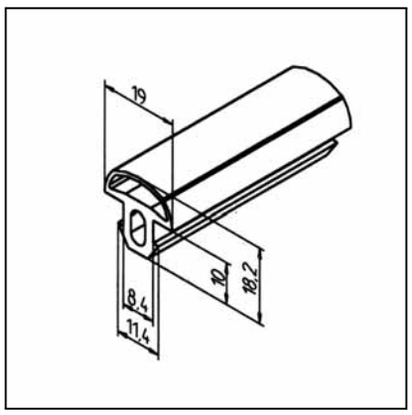
- Frame for screens of max. 5 mm

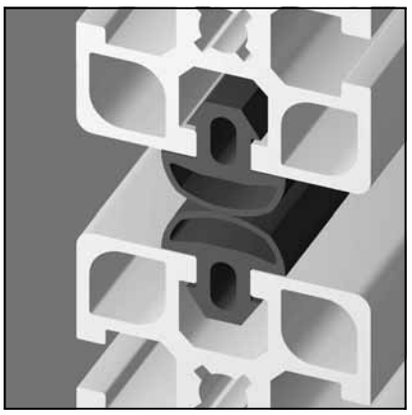
ASSEMBLY

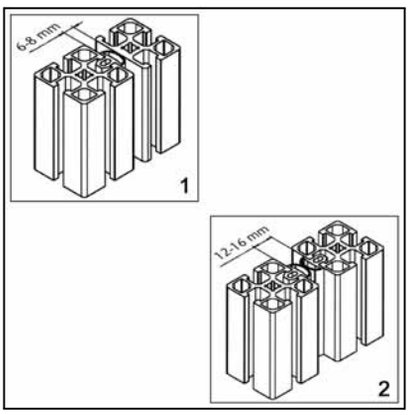
- Glue on edges of panel elements with suitable adhesive

SEALING LEDGE

Part. N° 22.1078/0







TECHN. DATA / ITEMS SUPPLIED	
- NBR, black	
- Hardness (Shore A)	70°
- Weight	0,175 kg/m
- Length	200 m

APPLICATIONS

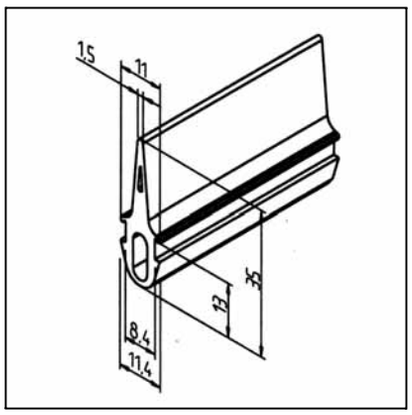
- Sealing of doors, lids and other constructions against dust, water, noise etc.

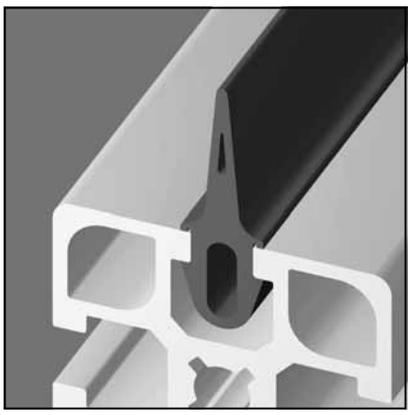
ASSEMBLY

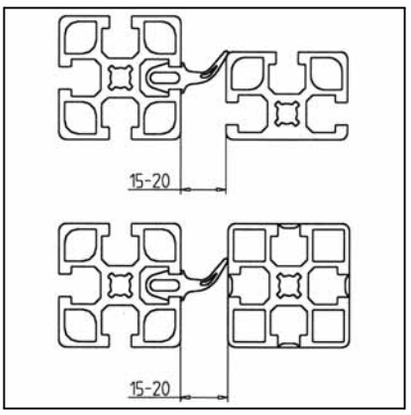
- Press into profile groove
- 1) Sealing of one side: gap width = 6 - 8 mm
- 2) Sealing of both sides: gap width = 12 - 16 mm

SEALING LIP PROFILE

Part. N° 22.1038/0







TECHN. DATA / ITEMS SUPPLIED	
- NBR, black	
- Hardness (Shore A)	60°
- Weight	0,245 kg/m
- Length	75 m

APPLICATIONS

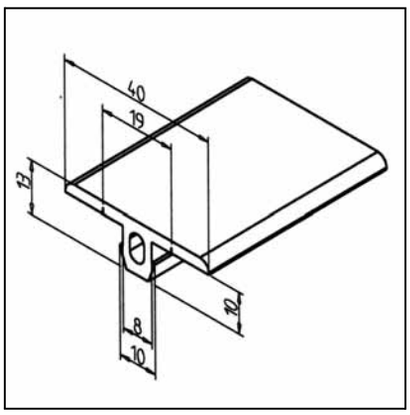
- Sealing of doors, lids and other constructions against dust, water, noise, light etc.

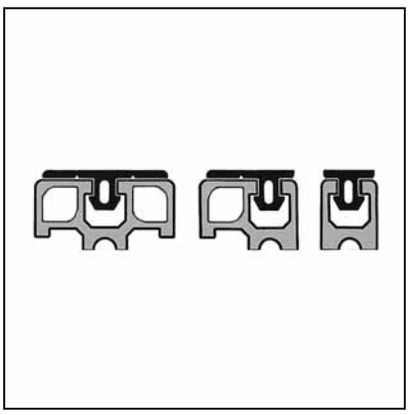
ASSEMBLY

- Press into profile groove

COVER PROFILE NBR

Part. N° 22.1098/0





TECHN. DATA / ITEMS SUPPLIED	
- NBR, black	
- Weight	0,230 kg/m
- Length	20 m

APPLICATIONS

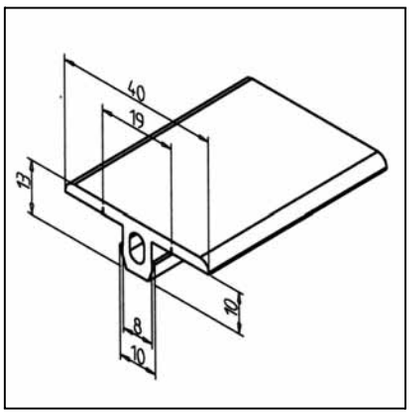
- Edge Protection
- Buffer strip
- Ladder rungs
- Buffer for sliding doors

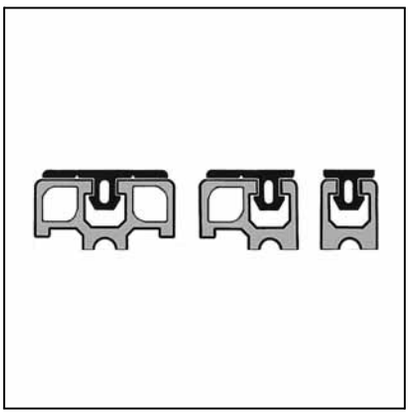
ASSEMBLY

- Press into profile groove
- The lower side of the profile has 2 tear-off notches for adjustment of width to the aluminium profile

COVER PROFILE EPDM

Part. N° 22.1098/1





TECHN. DATA / ITEMS SUPPLIED	
- EPDM, grey	
- Weight	0,230 kg/m
- Length	20 m

APPLICATIONS

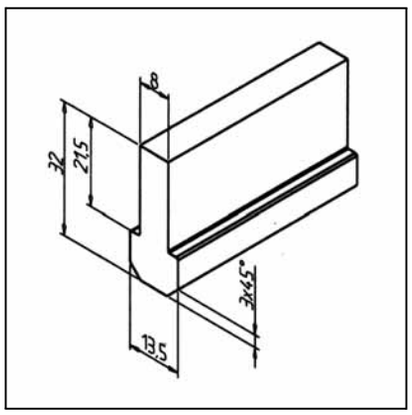
- Edge Protection
- Buffer strip
- Ladder rungs
- Buffer for sliding doors

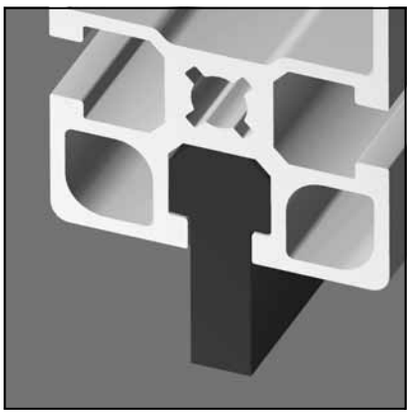
ASSEMBLY

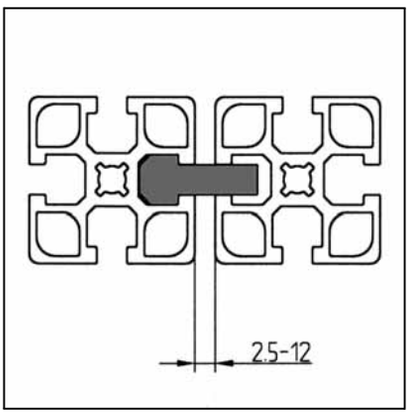
- Press into profile groove
- The lower side of the profile has 2 tear-off notches for adjustment of width to the aluminium profile

SLIDE BAR 8N

Part. N° 22.1085/0







TECHN. DATA / ITEMS SUPPLIED	
- Hard plastic, black	
- Extremely wear-resistant	
- Weight	0,300 kg/m
- Length	2 m

APPLICATIONS

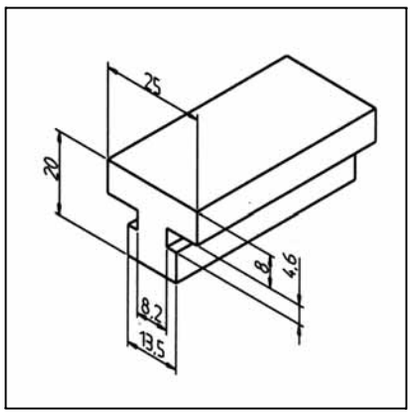
- Guiding device for sliding doors and other sliding elements
- Lateral guide for conveyors

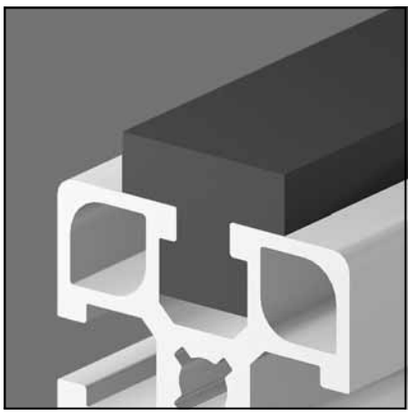
ASSEMBLY

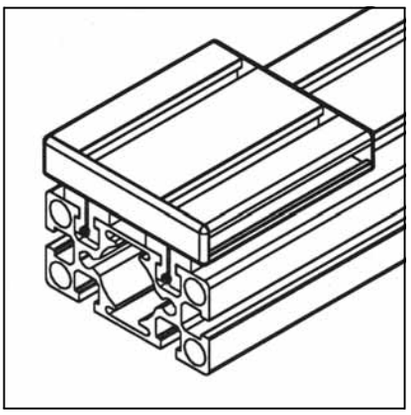
- Slide into profile groove

SLIDE BAR 8

Part. N° 22.1088/0







TECHN. DATA / ITEMS SUPPLIED	
- Hard plastic, black	
- Extremely wear-resistant	
- Weight	0,311 kg/m
- Length	2 m

APPLICATIONS

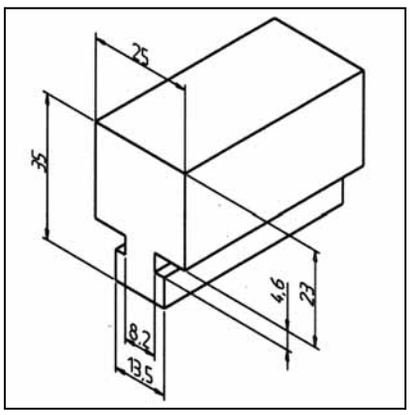
- Sliding support
- Work-piece slide
- Guide for lifting doors
- Slides

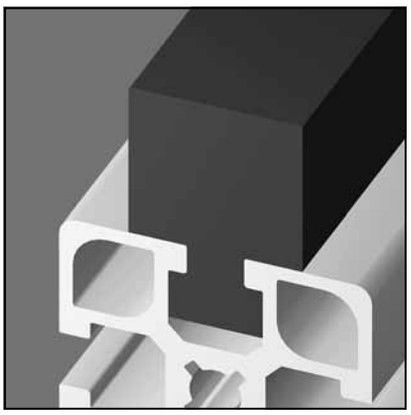
ASSEMBLY

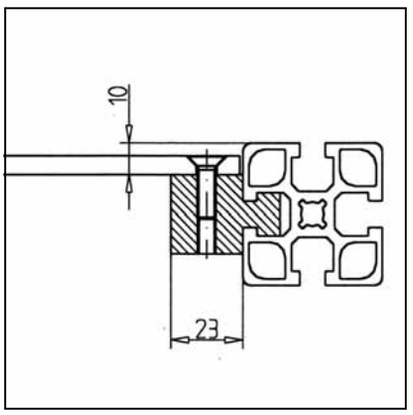
- Slide into profile groove

SLIDE BAR 23

Part. N° 22.1089/0







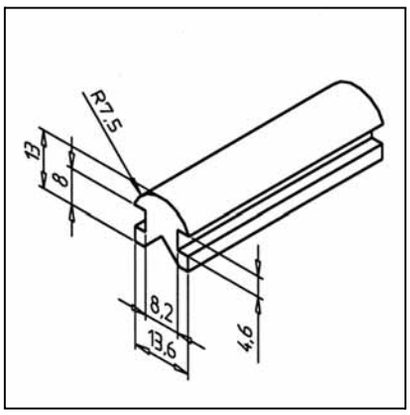
TECHN. DATA / ITEMS SUPPLIED	
- Hard plastic, black	
- Extremely wear-resistant	
- Weight	0,673 kg/m
- Length	2 m

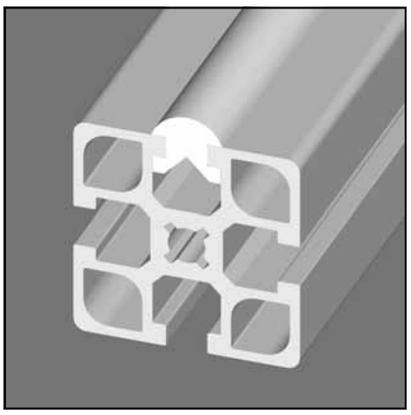
APPLICATIONS
- Sliding support
- Work-piece slide
- Customer processing possible by additional machining allowance

ASSEMBLY
- Slide into profile groove

SLIDE BAR R

Part. N° 22.1104/0





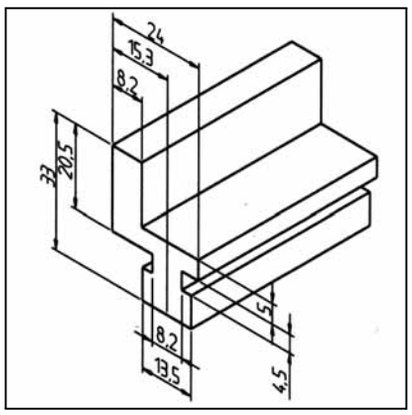
TECHN. DATA / ITEMS SUPPLIED	
- PE, white	
- Extremely wear-resistant	
- Weight	0,115 kg/m
- Length	2 m

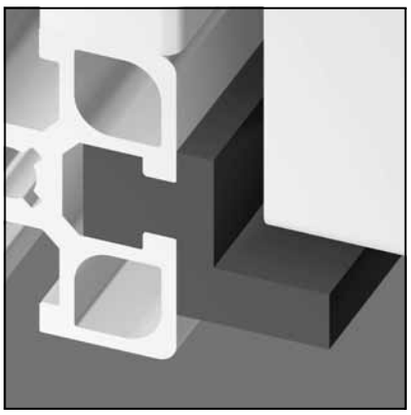
APPLICATIONS
- Lateral guides
- Slide ways
- Kan-Ban racks
- Protective surface and supporting plates

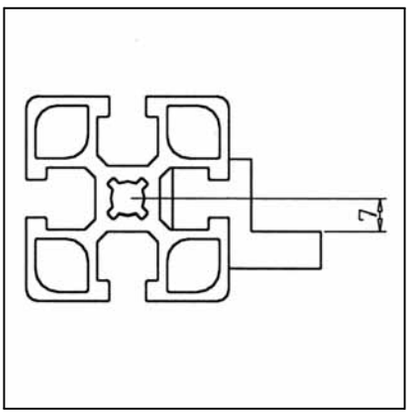
ASSEMBLY
- Slide into profile groove
- Suitable for all profiles

ANGULAR SLIDE BAR

Part. N° 22.1040/0







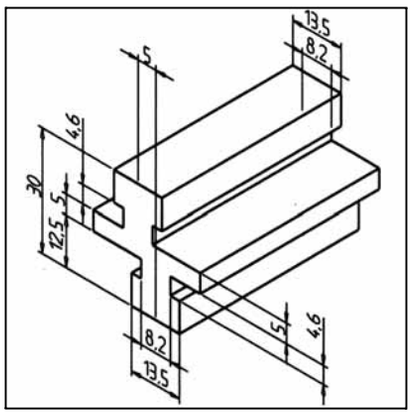
TECHN. DATA / ITEMS SUPPLIED	
- Hard plastic, black	
- Extremely wear-resistant	
- Weight	0,48 kg/m
- Length	2 m

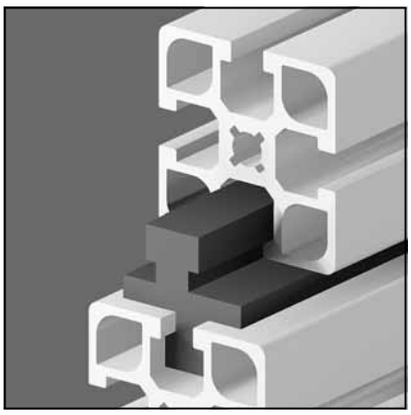
APPLICATIONS
- Conveying systems
- Belt conveyors
- Lateral guides

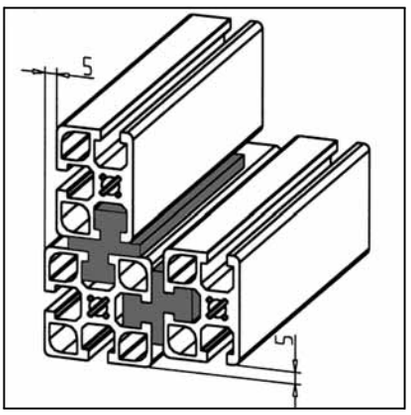
ASSEMBLY
- Slide into profile groove

DOUBLE SLIDE BAR

Part. N° 22.1087/0







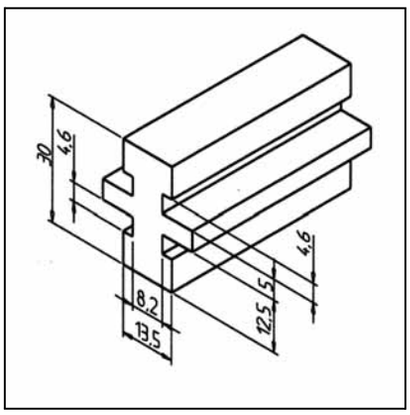
TECHN. DATA / ITEMS SUPPLIED	
- Hard plastic, black	
- Extremely wear-resistant	
- Weight	0,420 kg/m
- Length	2 m

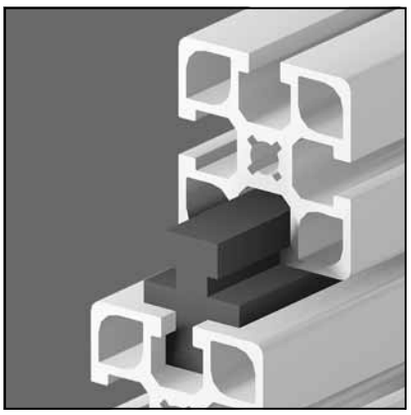
APPLICATIONS
- Simple Work-piece slides
- Guide for drawers

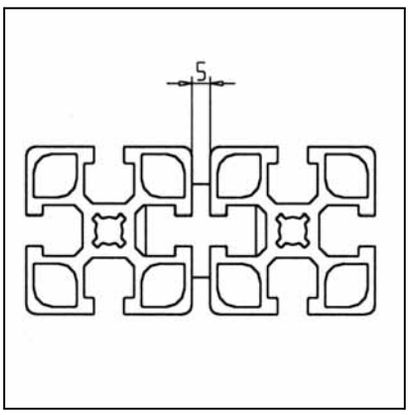
ASSEMBLY
- Slide the double slide unit into profile groove of frame and sliding element
- Secure the sliding element at both ends with screws M8 x 16

PARALLEL SLIDE BAR

Part. N° 22.1041/0







TECHN. DATA / ITEMS SUPPLIED

- Hard plastic, black
- Extremely 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

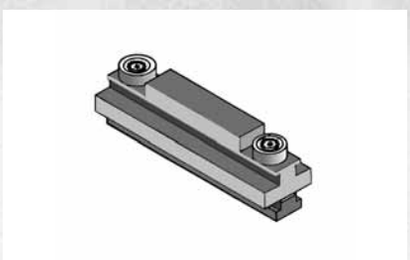
PREASSEMBLED ELEMENTS FOR LIFTING AND SLIDING DOORS

These elements are preassembled from our standard products ready for use. They are easily fixed to our profiles by using our fastening elements. For you stock of parts is not necessary and planing and assembly time can be reduced significantly.

PREASSEMBLED ELEMENTS FOR LIFTING AND SLIDING DOORS

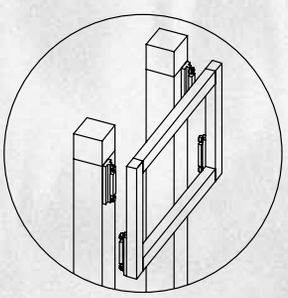
All elements are preassembled from our standard products ready for use. They are easily fixed to our profiles by using our fastening elements. You do not need stock of parts is not necessary and planning and assembly time can be reduced significantly.

Slide-roll element

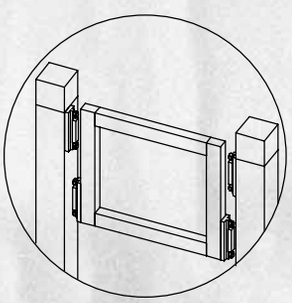


For one door four elements are necessary:
One each to be fixed at end positions of guiding profiles.
One each to be fixed at door element.
Length of sliding profile:
desired stroke + 180 mm min.

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.

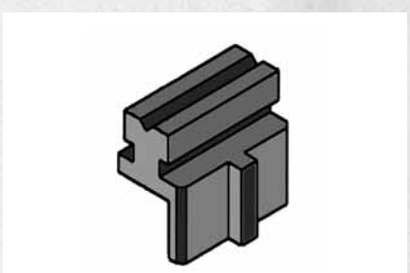


Assembly in front of stand profiles



Assembly between stand profiles

Guide for sliding-door

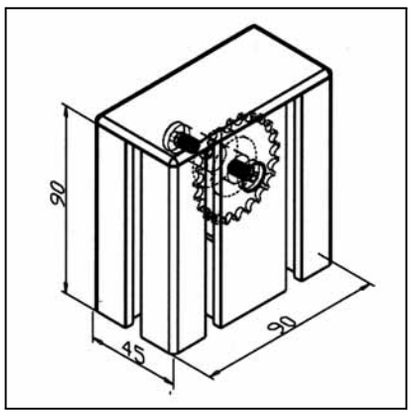


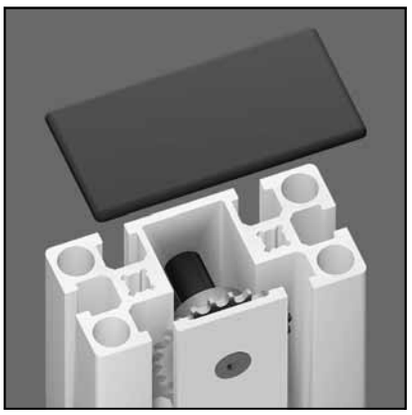
For a simultaneous guidance of two elements in one profile groove.
Subsequent mounting of sliding-doors into existing constructions possible.
For one door element 4 guides are necessary.

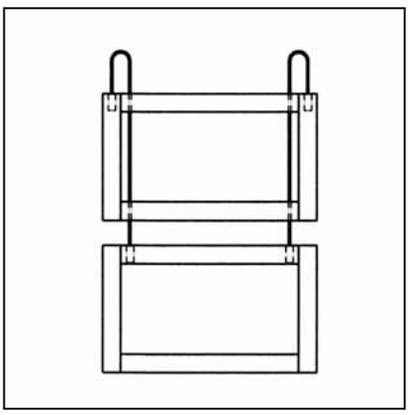
Allow for door elements:
Height: Clearance of the opening minus 11 mm
Width for 2 elements: $\frac{\text{Clear width of the opening} + 55}{2}$

SYNCHRONOUS PULLEY 45

Part. N° 21.1792/0







TECH. DATA / ITEMS SUPPLIED

- Housing made of profile 45 x 90
- Chain wheel, steel, preassembled for installation on broad sid of the profile
- Weight 0,343 kg
- Load max. 34 kg

APPLICATIONS

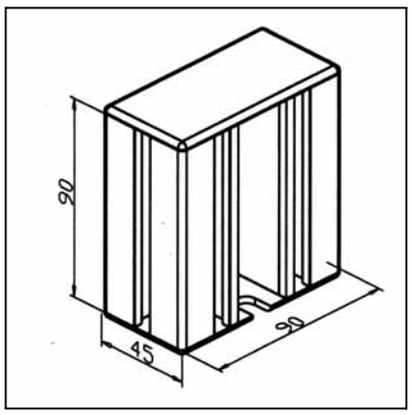
- Simultaneous opening and closing of two lifting doors running in the operate direction; doors are of similar weight
- The chain is guided in the profile groove, thus no hand-protection is required

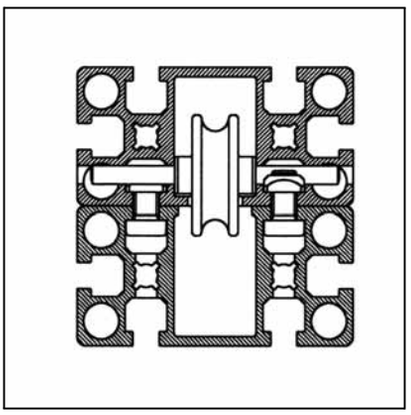
ASSEMBLY

- Attachment on vertical profile with 2 T-slot bars 90 **Part N° 21.1029/0**
- Insert chain **Part N° 21.1713/0** in pulley; fasten it with the door chain clamping device **Part N° 21.1712/0** on both doors and insert it in the vertical profiles

END BLOCK

Part. N° 21.1780/0





TECH. DATA / ITEMS SUPPLIED

- Profile 45 x 90
- End caps 45 x 90, one of them with slot for cable passage
- Fixing kit
- Weight 0,290 kg
- Lenght 90 mm

APPLICATIONS

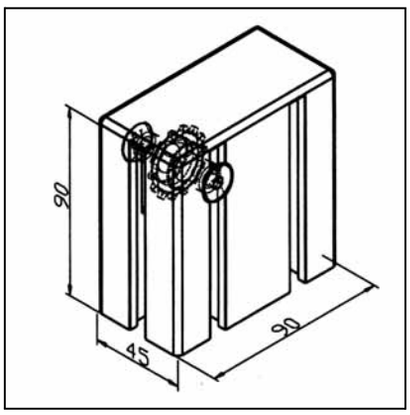
- Safety device for cable pulleys
- Chain pulley 90

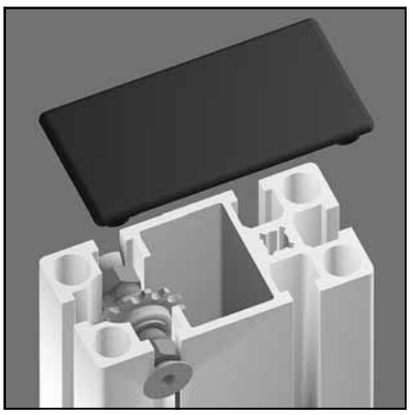
ASSEMBLY

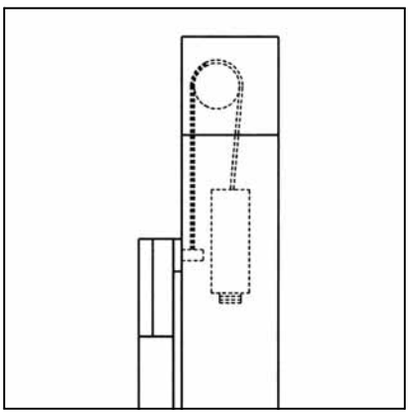
- Use fixing kit from supply schedule

CHAIN PULLEY 32

Part. N° 21.1774/0







TECH. DATA / ITEMS SUPPLIED

- Housing made of profile 45 x 90
- Chain wheel, steel, zinc-plated, preassembled, for small profile side
- End cap
- Weight 0,372 kg
- Load max. 50 kg

APPLICATIONS

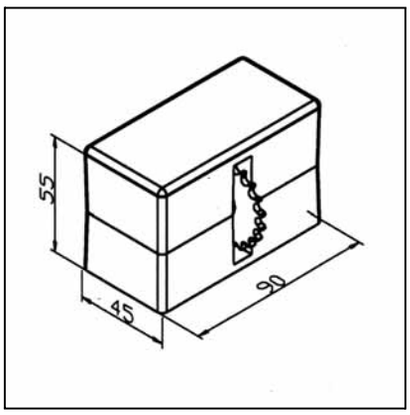
- Chain reverse for counterweights in lifting doors; for inner balancing weight in profiles 45 x 90 F or 45 x 90 G
- The cable is guided in the profile groove, thus no hand-protection is required

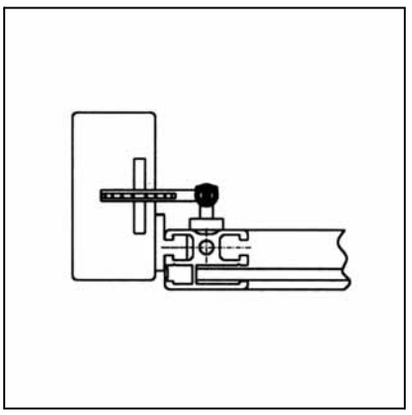
ASSEMBLY

- Attachment on vertical profiles with 2 slot-bars 90 **Part N° 21.1029/0**
- Application of chain **Part N°. 21.1713/0** with door chain clamping device **Part N° 21.1712/0** and weight chain clamping device **Part N° 21.1711/0**

CHAIN PULLEY 45 A

Part. N° 21.1838/0





TECH. DATA / ITEMS SUPPLIED

- Housing aluminium GD, powder coated, grey
- Chain wheel, steel, zinc-plated, preassembled
- End cap
- Fixing kit
- Weight 0,347 kg
- Load max. 50 kg

APPLICATIONS

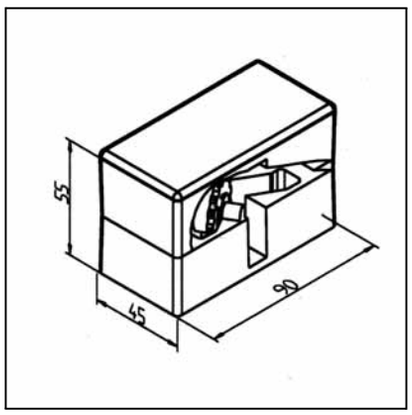
- Chain reverse of counterweights for lifting doors for inner counterweight in profile 45 x 90 L or 45 X 90 G
- Chain runs on the outer profile side and in the middle of te broad side; if required covered with hand-protection **Part N° 21.1780/0**

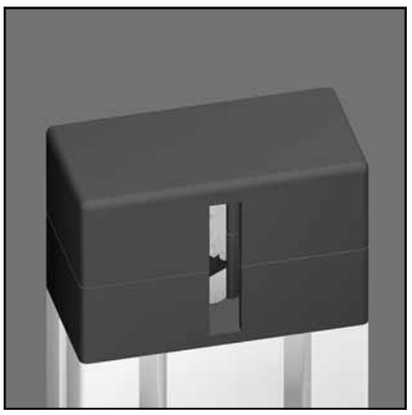
ASSEMBLY

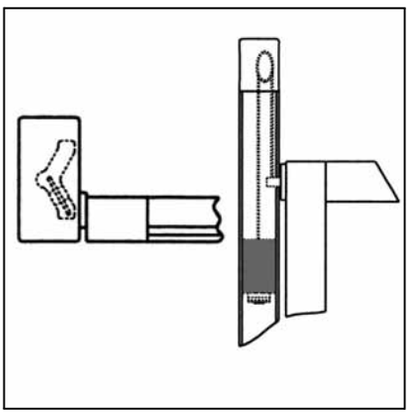
- Attachment with fixing kit from supply schedule; thread M8 in vertical profile required
- Use of chain **Part N°. 21.1713/0** with door chain clamping device **Part N° 21.1712/0** and weight chain clamping device **Part N° 21.1711/0**

CHAIN PULLEY 45 I

Part. N° 21.1840/0







TECH. DATA / ITEMS SUPPLIED

- Housing aluminium GD, powder coated, grey
- Chain wheel, steel, zinc plated, preassembled
- End cap
- Fixing kit
- Weight 0,347 kg
- Load max. 50 kg

APPLICATIONS

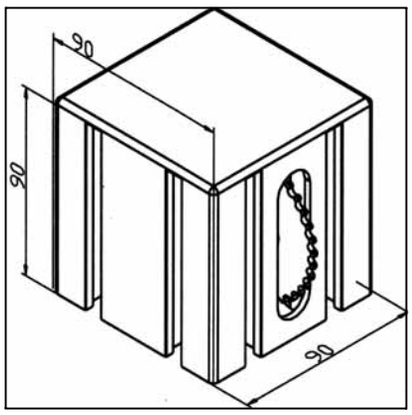
- Chain reverse of counterweights for lifting doors for inner counterweight in profile 45 x 90 L or 45 X 90 G
- Chain runs on the broad side of the profile in the right or left profile groove (adjustable chain wheel) no handprotection required

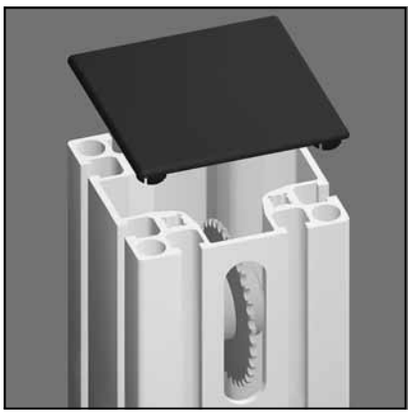
ASSEMBLY

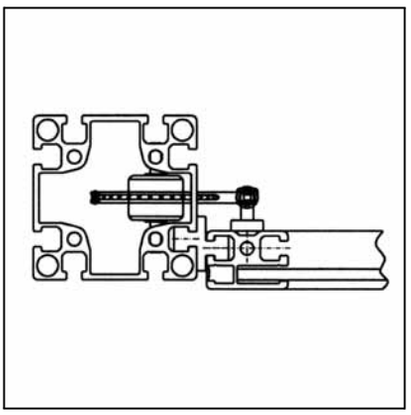
- Attachment with fixing kit from supply schedule; thread M8 in vertical profile required
- Use of chain **Part N°. 21.1713/0** with door chain clamping device **Part N° 21.1712/0** and weight chain clamping device **Part N° 21.1711/0**

CHAIN PULLEY 90

Part. N° 21.1839/0







TECH. 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

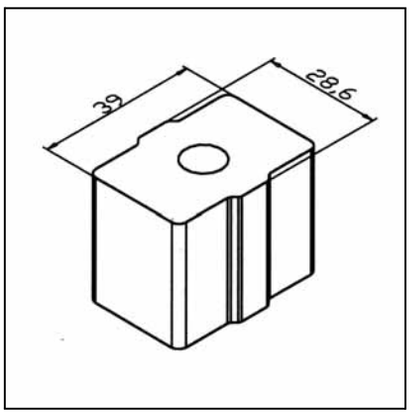
- Chain reverse for counterweights for lifting doors, for inner balancing weight in profile 90 x 90 L
- The chain is guided on the outside and in the middle of the profile surface; cover with hand-protection **Part N° 21.1780/0**

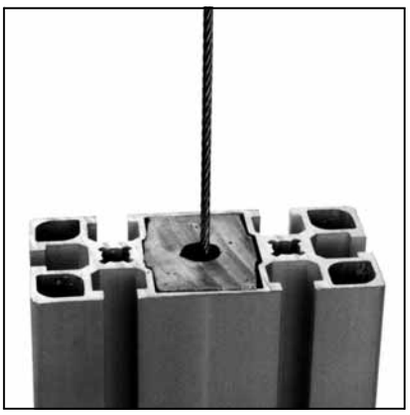
ASSEMBLY

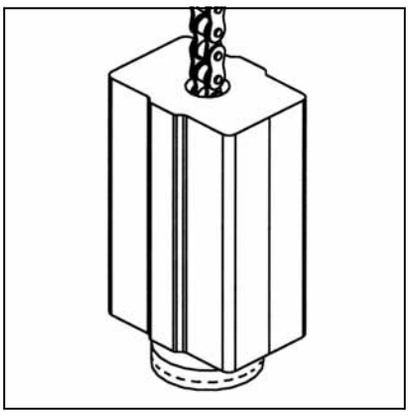
- Attachment on vertical profiles with 4 slot-bars **Part N° 21.1029/0**
- Use of chain **Part N°. 21.1713/0** with door chain clamping device **Part N° 21.1712/0** and weight chain clamping device **Part N° 21.1711/0**

COUNTERWEIGHT 45

Part. N° 21.1772/0







TECH. DATA / ITEMS SUPPLIED	
- Pb cast, special hard	
- For profiles 45 x 90 L or 45 x 90 G	
- Weight	0,10 kg/m
- Length	33 cm
- **On request also other length available Part N° 21.1772/1**	

APPLICATIONS

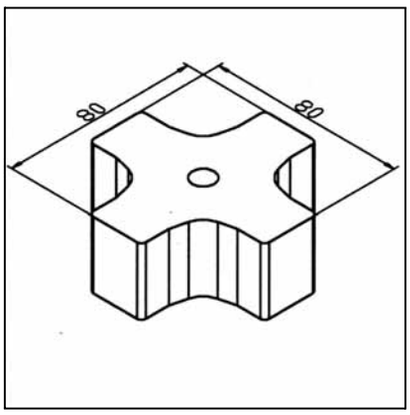
- Counterweight for large lifting doors
- For cable and chain

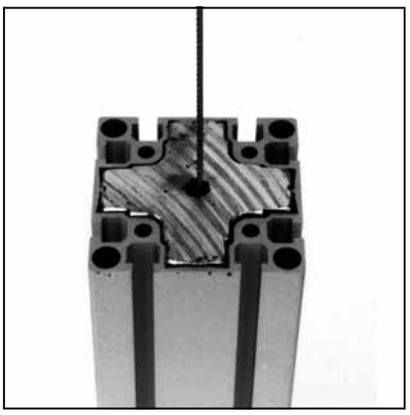
ASSEMBLY

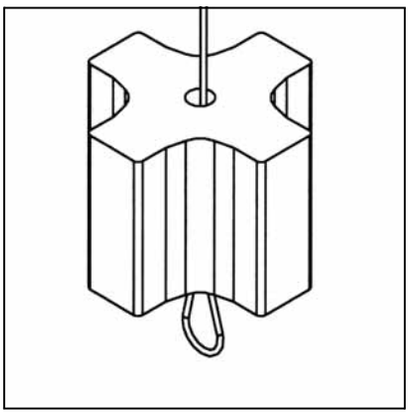
- Insert the counterweight into the profile
- Fasten the steel cable **Part N° 21.1777/0** with cable clamping device **Part N° 21.1797/0** on the lifting door
- Fasten chain **Part N° 21.1713/0** with weight chain clamping device **Part N° 21.1711/0** and with door chain clamping device **Part N° 21.1712/0** on the door

COUNTERWEIGHT 90

Part. N° 21.1778/0







TECH. DATA / ITEMS SUPPLIED	
- Pb cast, special hard	
- For profiles 90 x 90 L or 90 x 90 G	
- Weight	0,385 kg/m
- Length	26 cm
- **On request also other length available Part N° 21.1778/1**	

APPLICATIONS

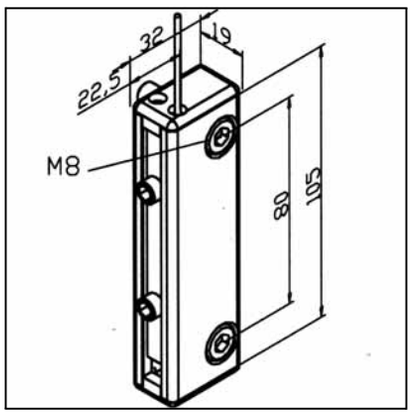
- Counterweight for large lifting doors

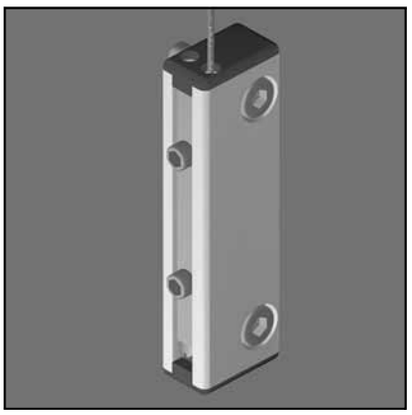
ASSEMBLY

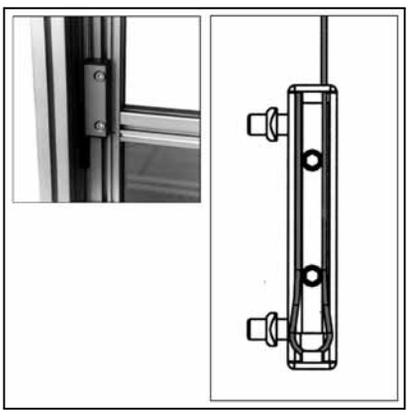
- Insert the counterweight into the profile
- Fasten the steel cable **Part N° 21.1777/0** with cable clamping device **Part N° 21.1797/0** on the lifting door
- Fasten chain **Part N° 21.1713/0** with weight chain clamping device **Part N° 21.1711/0** and with door chain clamping device **Part N° 21.1712/0** on the door

ROPE CLAMP

Part. N° 21.1797/0







TECH. DATA / ITEMS SUPPLIED

- Profie 19 x 32
- 1 Clamping plate
- 2 hex socket cap screws M8 x 25 with square nuts M8
- 2 End caps, one with throughbore
- Weight 0,149 kg

APPLICATIONS

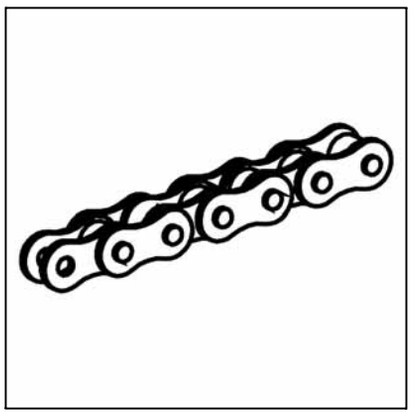
- Connection of counterweight and door element in lifting doors

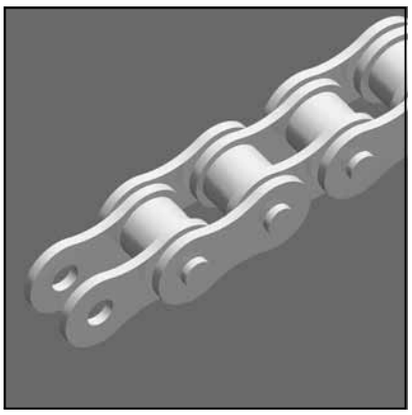
ASSEMBLY

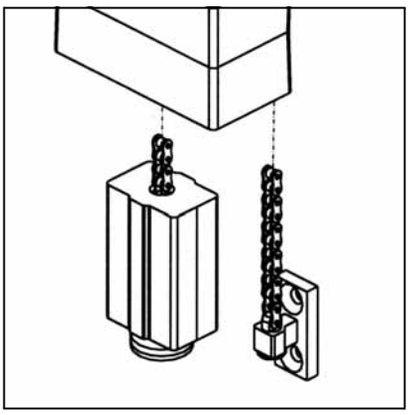
- Remove lower end cap and unscrew set-screw
- Attach rope clamp with fastening set at the top of te door element
- Pull the rope through the bore of the upper end cap
- Put the counterweight in desired position (test in upper and lower end position of the door element)
- Lay rope end in loop around clamping plate, slide into the slot and fix the two set screws
- If necessary cut cable end
  Fix lower end cap

CHAIN

Part. N° 21.1713/0







TECH. DATA / ITEMS SUPPLIED

- Roller chain, steel
- Size 4
- Weight 0,120 kg/m
- Breacking load min. 3000 N
- **Please indicate desired length**

APPLICATIONS

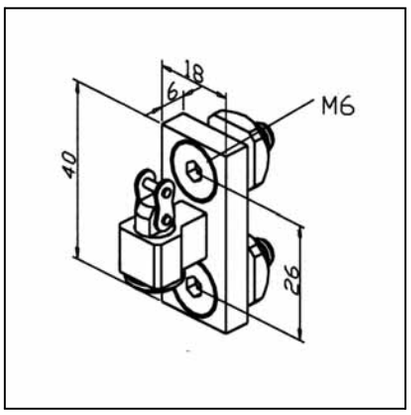
- Use in connection wie counterweight 45 or 90 and chain pulleys
- Door chain clamping device
  Part N° 21.1712/0 for fastening the chain on the door
- Weight chain clamping device
  Part N° 21.1711/0 for fastening the chain on the side of the counterweight

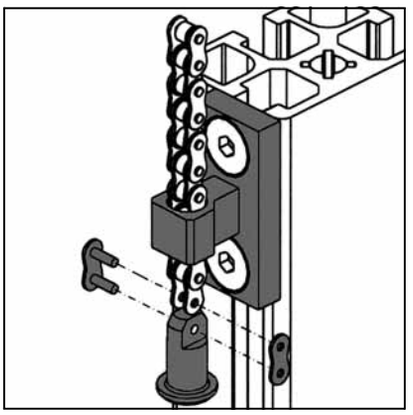
ASSEMBLY

- Lead the chain through the counterweight and through the fixing kit for chain (counterweight side)
  Part N° 21.1711/0 mount link for chain
- For mounting on door lead chain through fixing kit for chain (door side)
  Part N° 21.1712/0

DOOR CHAIN CLAMPING DEVICE

Part. N° 21.1712/0





TECH. DATA / ITEM SUPPLIED

- Steel zinc plated
- Fixing kit
- Weight 0,060 kg

APPLICATIONS

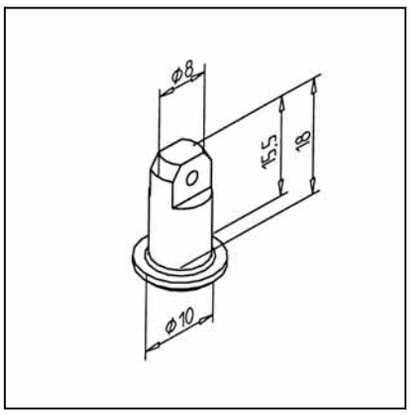
- Use in connection with counterweight 45 or 90 and pulleys
- Use in connection with chain **Part N° 21.1713/0** for fastening on door side

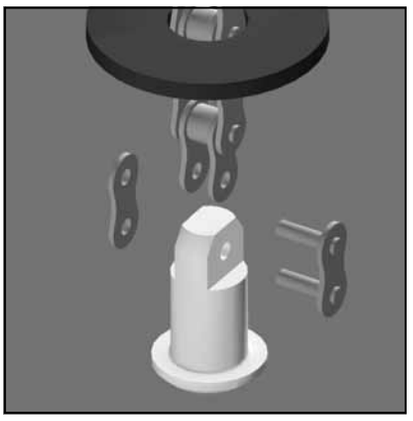
ASSEMBLY

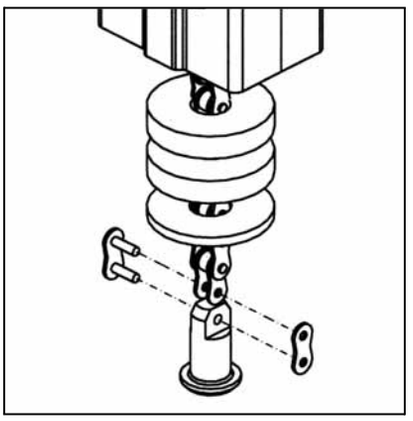
- Lead the chain through the counterweight and through the fixing kit for chain (counterweight side) **Part N° 21.1711/0** mount link for chain
- For mounting on door lead chain through fixing kit for chain (door side) **Part N° 21.1712/0** and mount bolt with link for chain

FIXING KIT FOR CHAIN (COUNTERWEIGHT SIDE)

Part. N° 21.1711/0







TECH. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- Rubber-ring
- Link for chain
- Weight 0,015 kg

APPLICATIONS

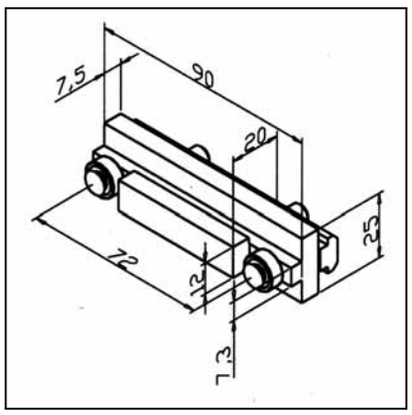
- Use in connection with counterweight 45 or 90 and pulleys
- Use in connection with chain **Part N° 21.1713/0**

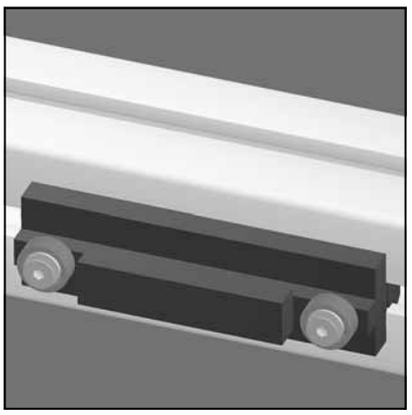
ASSEMBLY

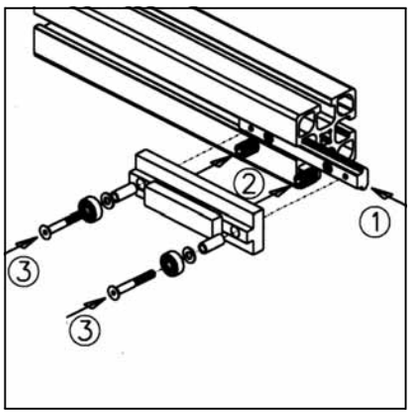
- Lead the chain through the counterweight and through the fixing kit for chain (counterweight side) **Part N° 21.1711/0** mount link for chain
- For mounting on door lead chain through fixing kit for chain (door side) **Part N° 21.1712/0**

SLIDE-ROLL ELEMENT

Part. N° 21.1796/0







TECH. DATA / ITEMS SUPPLIED	
- Hard plastic black, Extremely wear resistant	
- 1 T-slot bar, steel, zinc plated	
- 2 ball-bearings, premounted	
- Weight	0,093 kg
- Load max.	200 N

APPLICATIONS

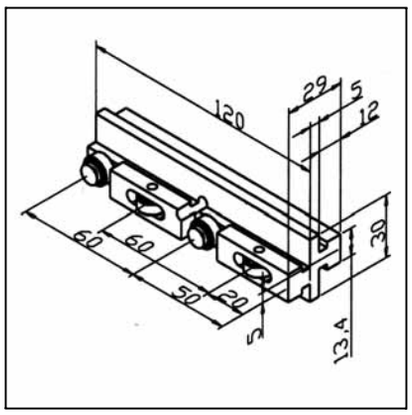
- Guide for lifting doors in the groove of the vertical profile
- Light linear slides
- Workpiece-slides,drawers

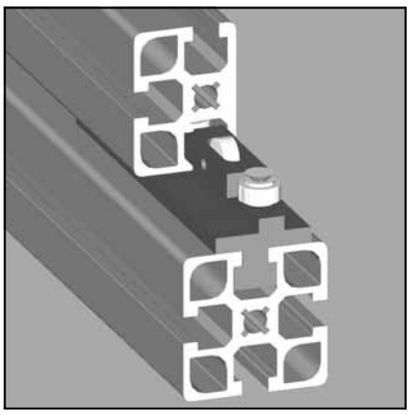
ASSEMBLY

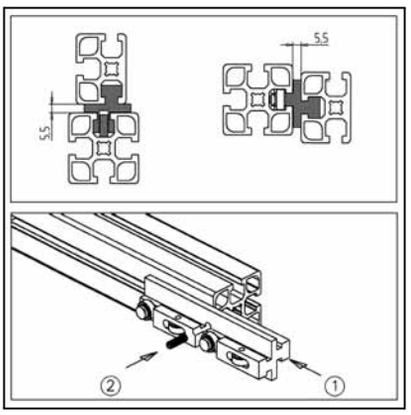
- 1: Disassemble the bearings from the element
- 2: Insert t-slot bar into profile groove and lock at desired position
- 3: Reassemble the slide and the bearings with t-slot bar, secure with suitable glue

GLIDE-ROLL ELEMENT

Part. N° 21.1799/0







TECH. 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

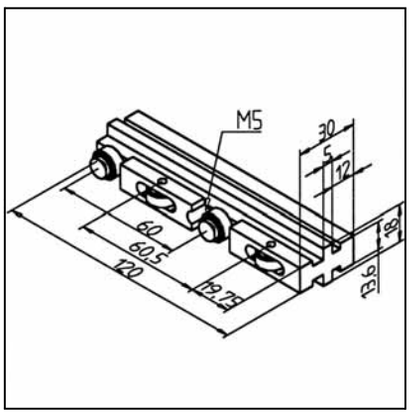
- Guide for sliding-doors, lifting-doors, workpiece-slides, light linear guides
- The element provides 5 mm eccentricity for the construction of sliding-doors with 2 casements or guides with 5 mm ground clearance

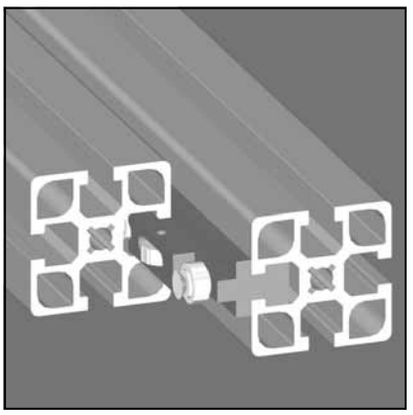
ASSEMBLY

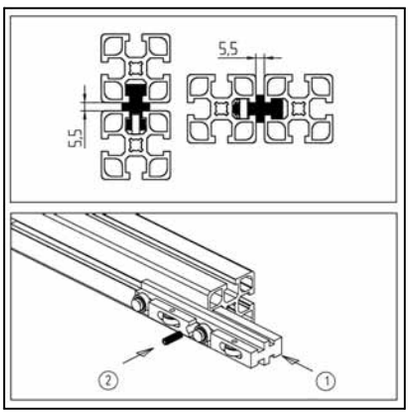
- 1: Insert the element with screw side into profile groove of moveable construction part
- 2: Tighten the screw
- Slide the completely mounted moveable part into the grooves of the guiding profiles

GLIDE-ROLL ELEMENT PARALLEL

Part. N° 21.1714/0







TECH. DATA / ITEM 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

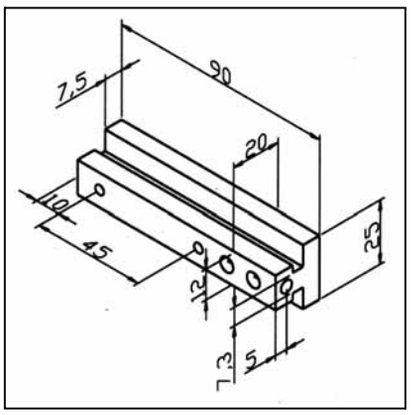
- Guide for sliding-doors, lifting-doors, workpiece-slides, light linear guides
- Both slots are parallel to each other for construction of flushing sliding-doors

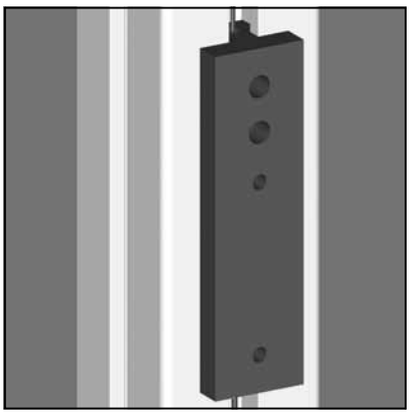
ASSEMBLY

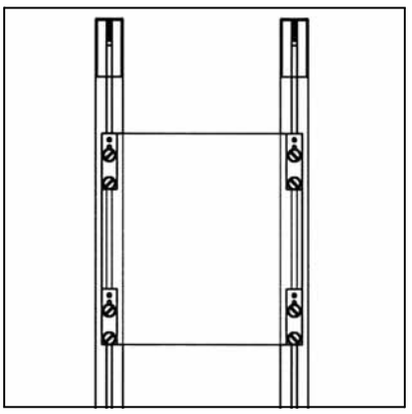
- 1: Insert the element with screw side into profile groove of moveable construction part
- 2: Tighten the screw
- 3: Slide the completely mounted moveable part into the grooves of the guiding profiles. Secure the moveable part against falling out with screws at both ends

SLIDE ELEMENT

Part. N° 21.1795/0







TECH. DATA / ITEMS SUPPLIED

- Hard plastic black, Extremely wear resistant
- Ready for use wih rope-bore and clamp
- Weight 0,029 kg

APPLICATIONS

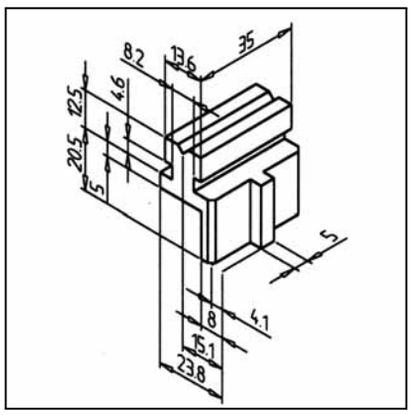
- Guide for light lifting doors and in same function connection of door element and counterweight
- Especially suitable for direct attachment on panel elements without frame

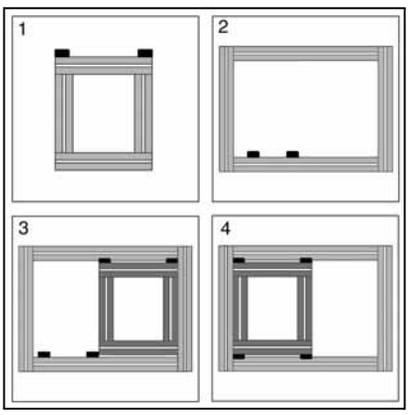
ASSEMBLY

- Connect the cable of the counterweight with slide element
- Secure cable end with clamp
- Screw into the groove of the vertical profile
- Screw panel element

GUIDE FOR SLIDING DOOR

Part. N° 22.1079/0





TECH. DATA / ITEMS SUPPLIED

- Plastic PA 6.6, black
- 1 screw
- For 1 door element 4 guides are necessary
- Weight 0,029 kg

APPLICATIONS

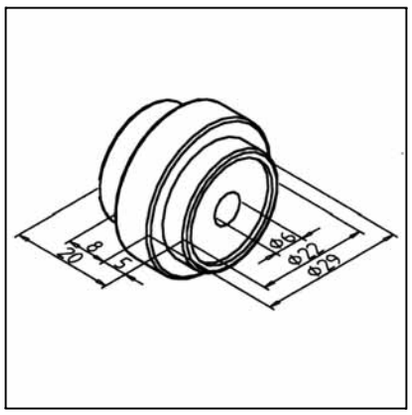
- Sliding doors
- Sliding elements
- Workpiece-slides,drawers
- For a simultaneous guidance of 2 elements in 1 profile groove
- Subsequent mounting of sliding-doors into existing constructions possible

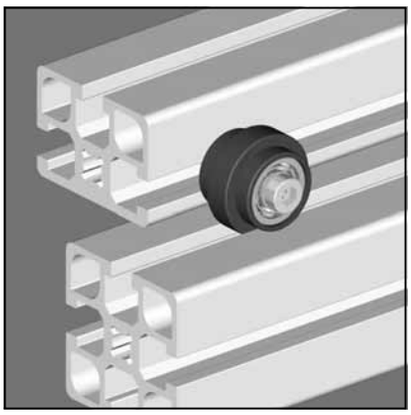
ASSEMBLY

- 1: Fix the upper guide at 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 scure at desired position
- Mount second door element
- Allowance: see page 186

ROLLER ELEMENT

Part. N° 21.1782/0





TECH. DATA / ITEMS SUPPLIED

- ABS, grey
- With 2 ball-bearings 626 ZZ
- Weight 0,033 kg
- Load max. 20 kg

APPLICATIONS

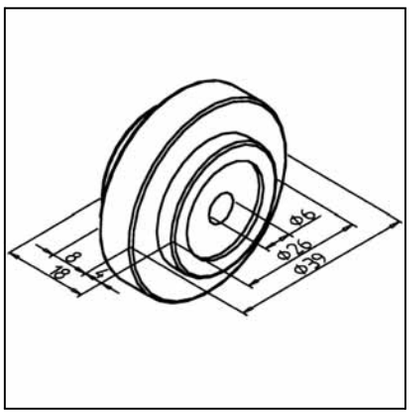
- Guide for sliding doors, lifting doors and drawers

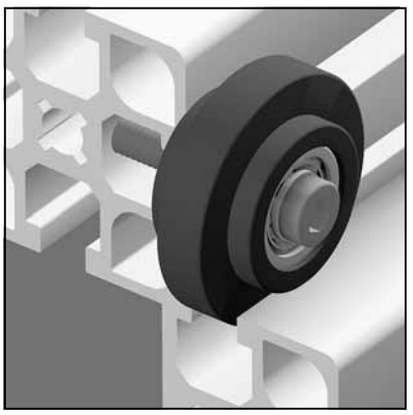
ASSEMBLY

- Attachment with hex socket cap screws M6 x 35 and square nut M6 on profile grooves or directly on the panel element

ROLLER ELEMENT S

Part. N° 21.1781/0





TECH. DATA / ITEMS SUPPLIED

- ABS, grey	
- With 2 ball-bearings 626 ZZ	
- Weight	0,044 kg
- Load max. (roller)	20 kg

APPLICATIONS

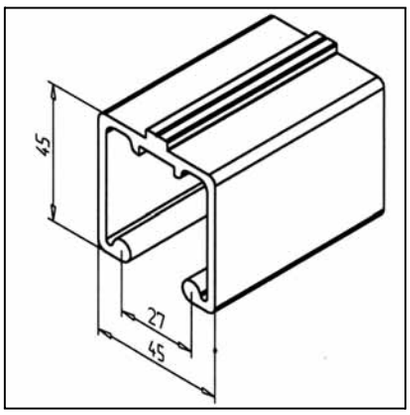
- Guide for sliding doors, lifting doors and drawers

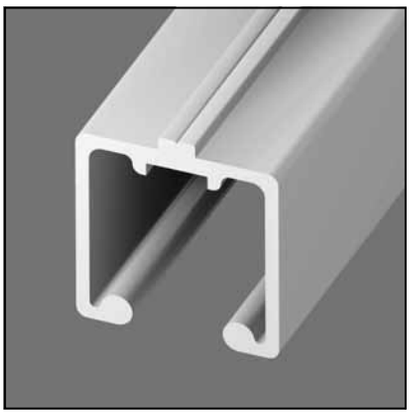
ASSEMBLY

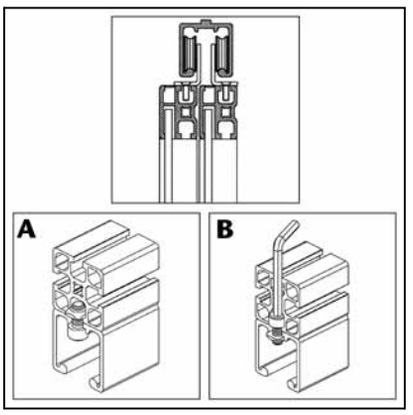
- Attachment with hex socket cap screws M6 x 35 and square nut M6 on profile grooves or directly on the panel element

SLIDING DOOR PROFILE

Part. N° 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	5 m
- Packing unit	40 m

APPLICATIONS

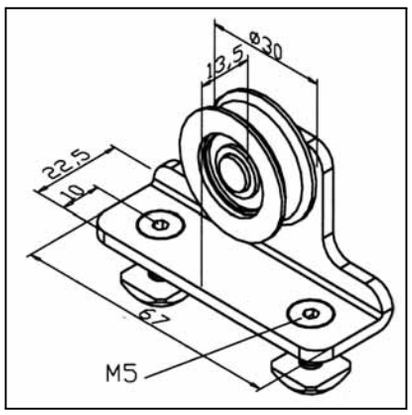
- Two wing sliding doors
- One wing sliding doors

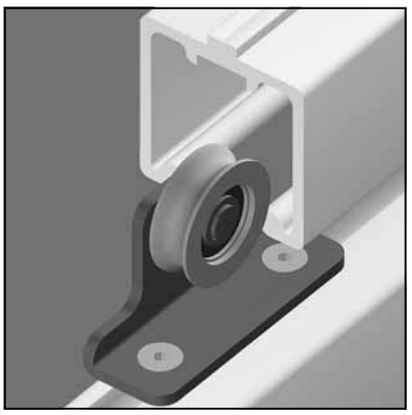
ASSEMBLY

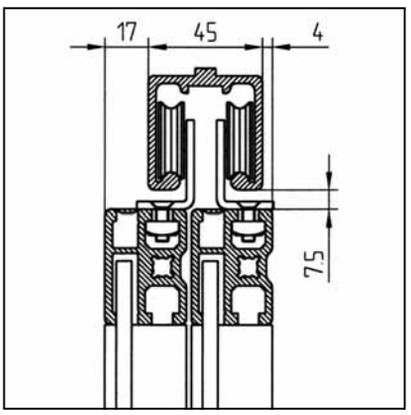
- Drill Ø 5 mm holes in centering groove; bore pitch: 250 - 400 mm depending on the load
- A) Position M8 F square nuts in the supporting profile and fasten the sliding rail profile with M8 x 25 cap screw
- B) Drill holes or step holes in the supporting profile and insert the square nuts in the sliding profile; the nuts are secured against torsion

ROLLER ELEMENT FOR SLIDING DOOR

Part. N° 21.2000/0







TECH. DATA / ITEMS SUPPLIED

- Plastic rolleer with ball- bearing
- Zinc plated steel support
- Fixing kit
- Weight 0,080 kg
- Load max. (roller) 60 kg

APPLICATIONS

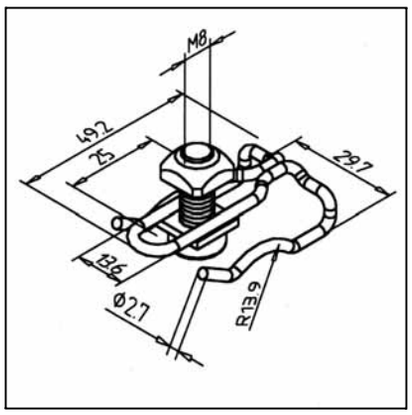
- Easy-running, multi-wing sliding doors in guard units, exhibition stands, testing units, etc.

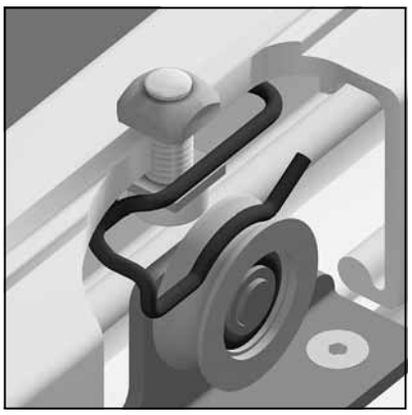
ASSEMBLY

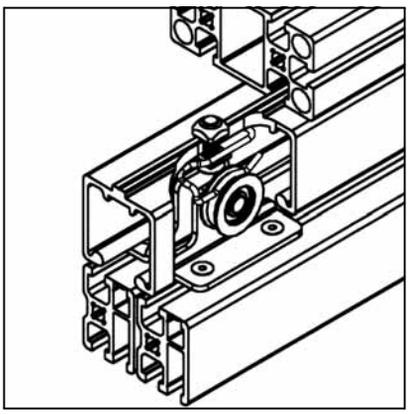
- Fasten the roller elements on profile groove; use fixing kit from supply schedule
- Insert the doors in the sliding rail profile and gently swing out the doors at their bottom end
- Secure the sliding door at the bottom with locking pins, sliding rails 8N **Part N° 22.1085/0** or U-Profile **Part N° 21.2002/0** against swinging

STOP FOR SLIDING DOOR

Part. N° 21.2001/0







TECH. DATA / ITEMS SUPPLIED

- Spring steel wire
- Fixing kit
- Weight 0,010 kg

APPLICATIONS

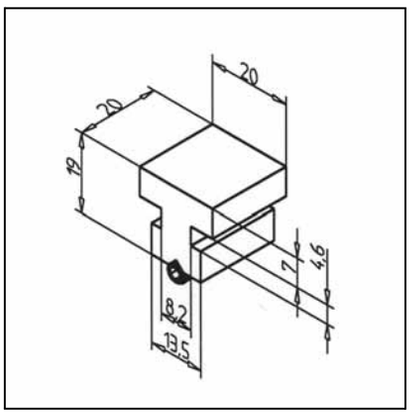
- Stop for sliding doors in their end positions (open / closed)

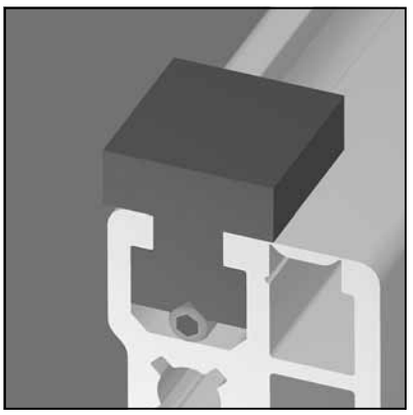
ASSEMBLY

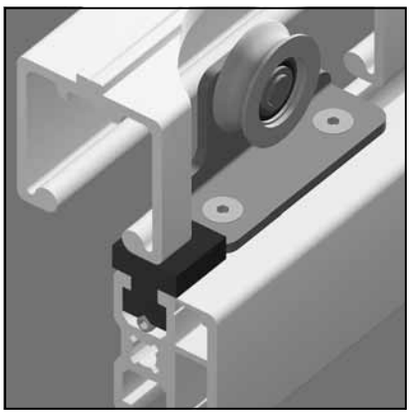
- Mark end position of the wheel
- Bore drill Ø 8,5 m in sliding door profile
- Use fixing kit from supply schedule

ANTI LIFT FOR SLIDING DOOR

Part. N° 21.2003/0







TECH. DATA / ITEMS SUPPLIED

- Hard plastic, black
- Fixing kit
- Weight 0,009 kg

APPLICATIONS

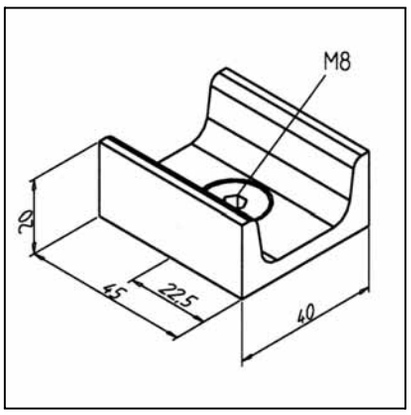
- Securing of sliding doors against lift off
- Reduction of pendulum motion

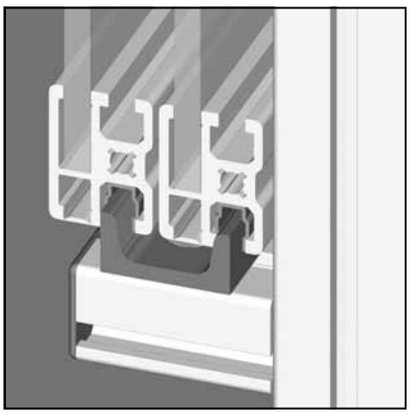
ASSEMBLY

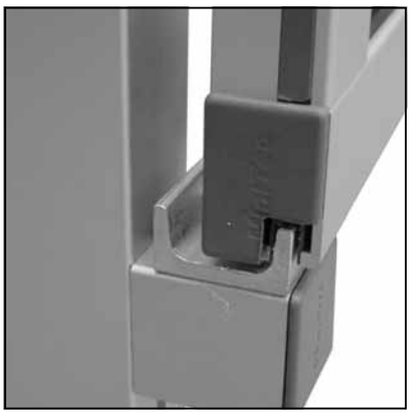
- Slip lift for sliding door in upper profile-groove of the door-element
- Secure the position by screwing the included set-screw horizontally in profile groove underneath antilift
- Fix end cap

U-BAR FOR SLIDING DOOR

Part. N° 21.2002/0







TECH. DATA / ITEMS SUPPLIED

- Steel, zinc plated
- Fixing kit
- Weight 0,012 kg

APPLICATIONS

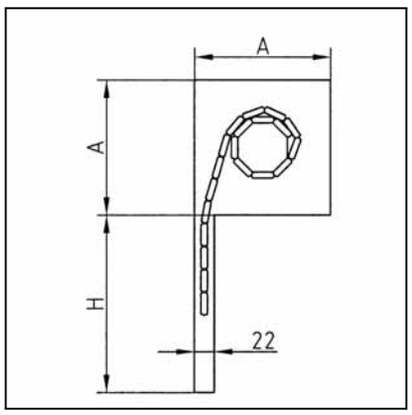
- Securing of sliding doors against lateral swinging

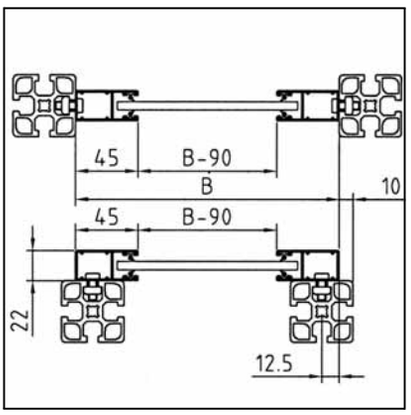
ASSEMBLY

- 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. N° 29.0402/0





TECH. 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 stroke H**

APPLICATIONS

- Cupboard for instruments
- Tools boxes
- Computer racks
- Counters
- Machine guards

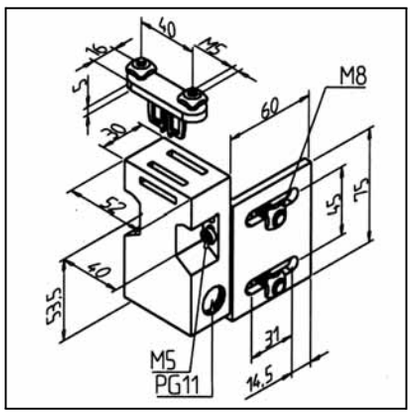
ASSEMBLY

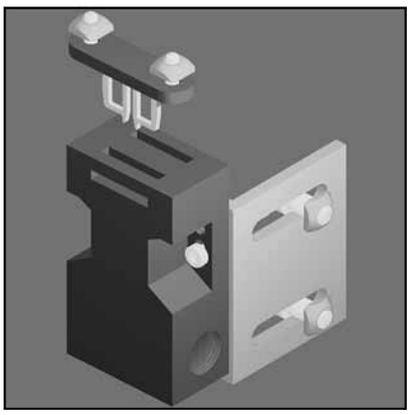
- Assemble lateral guides with housing
- Fix guides and housing in frame
- **Housing A = 152, stroke H up to 1,60 m, Part N° 29.0402/0**
- **Housing A = 167,5, stroke H up to 2,35 m, Part N° 29.0403/0**
- **Housing A = 181, stroke H up to 2,70 m, Part N° 29.0404/0**

ELECTRICAL INSTALLATION

SECURITY SWITCH AZ 16 ZVR

Part. N° 21.1110/0





TECHN. DATA / ITEMS SUPPLIED

- Security switch, complete with switching pad, type B1, standard
- Fastening angle, aluminium, natural anodized
- Fixing kit
- Weight 0,343 kg

APPLICATIONS

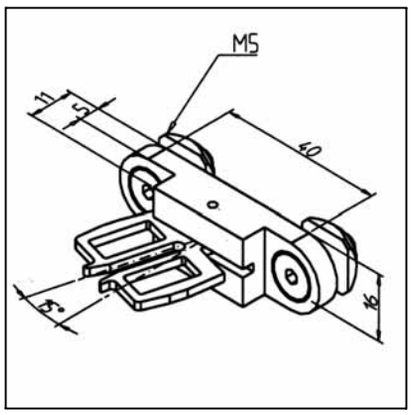
- Electrical securing of swing-doors, sliding-doors, windows
- Suitable for all profiles

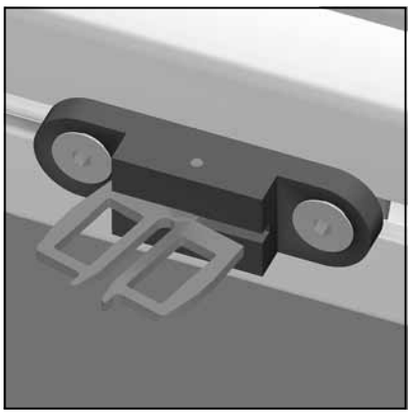
ASSEMBLY

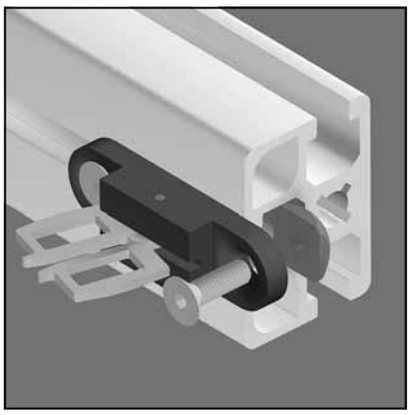
- Use fixing kit from upply schedule
- Easy adjustment in x-, y- and z-axis by means of long holes in the angle-bracket
- For small radii use actuating bow B2 **Part N° 21.1110/2** or B3 **Part N° 21.1110/3**

ACTUATING BOW FOR SECURITY SWITCH B2

Part. N° 21.1110/2







TECHN. DATA / ITEMS SUPPLIED

- Switching pad, type b2, for particularly small actuating radii over the broad side of the bow
- Fixing kit
- Weight 0,032 kg

APPLICATIONS

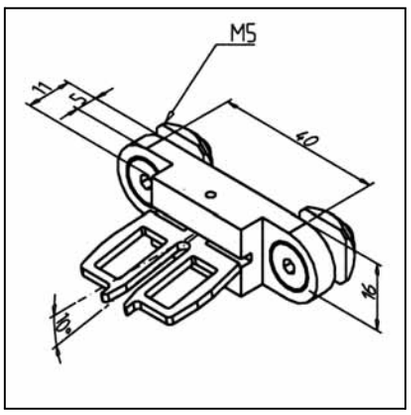
- Actuating bow for small actuating radii in connection with security switch **Part N° 21.1110/0** replaces standard bow

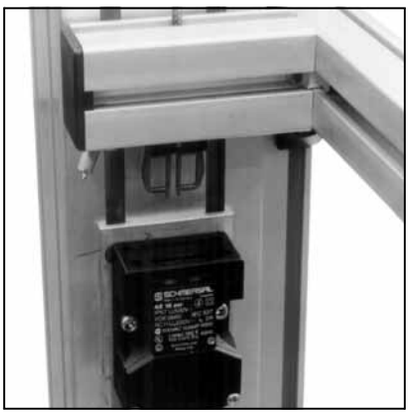
ASSEMBLY

- Fix with fixing kit on profile groove
- Directly in panel element with countersunk screw M5 according to the material thickness

ACTUATING BOW FOR SECURITY SWITCH B3

Part. N° 21.1110/3





TECHN. DATA / ITEMS SUPPLIED

- Switching pad, type B3, for particularly small actuating radii over the small side of the bow
- Fixing kit
- Weight 0,032 kg

APPLICATIONS

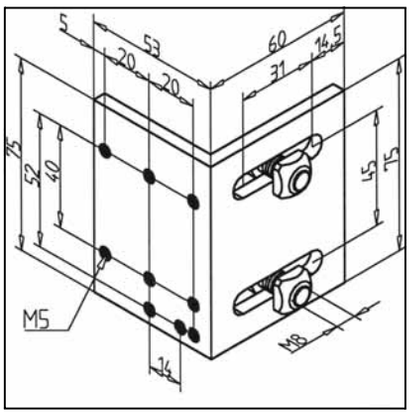
- Actuating bow for small actuating radii in connection with security switch **Part N° 21.1110/0** replaces standard bow

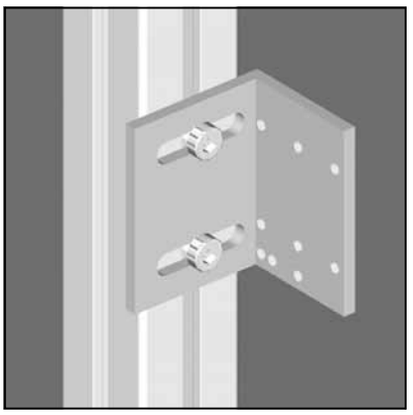
ASSEMBLY

- Fix with fixing kit on profile groove
- Directly in panel element with countersunk screw M5 according to the material thickness

ANGLE-BRACKET FOR SECURITY SWITCH

Part. N° 21.1359/0





TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural, anodized
- Fixing kit
- Weight 0,128 kg

APPLICATIONS

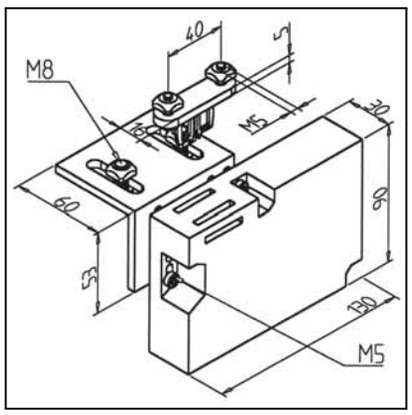
- For security switches DIN EN 50041
- Fitting to all standard types, facilitated adjustment of the switch in x-, y- and z-axis

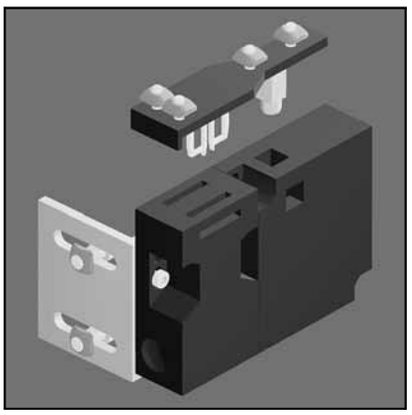
ASSEMBLY

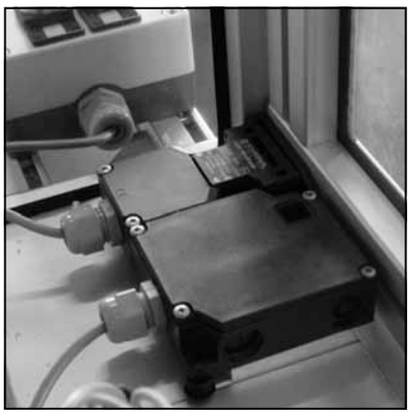
- Fix with fixing kit on profile groove

SECURITY SWITCH WITH LOCK

Part. N° 21.1766/0







TECHN. DATA / ITEMS SUPPLIED

- Switch, type AZM 161SK-24RK-024
- Housing thermoplast, black, self-extinguishing
- Protective system IP65, nominal operating current 10 A (220 V), driving voltage 24 V AC/DC, power consumption 10 W
- Fixing kit
- Optionally with actuating bow 110 V AC or 230 V AC
- Weight 0,475 kg

APPLICATIONS

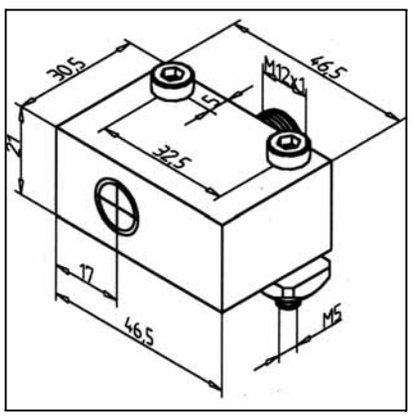
- Protective gears with high requirements to security

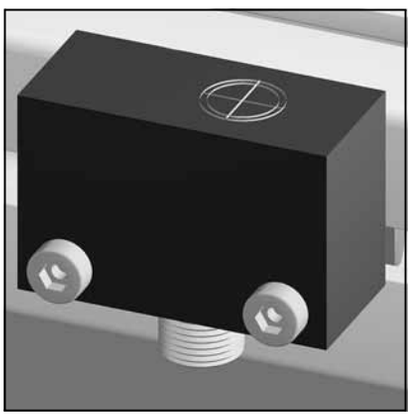
ASSEMBLY

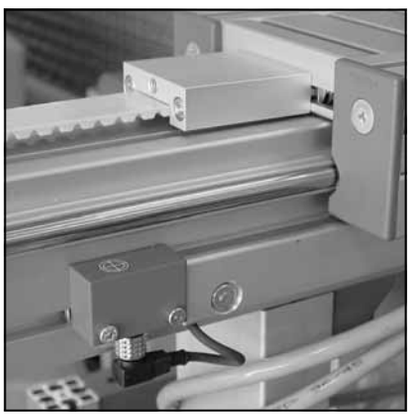
- Screw onto profile groove with fixing kit from supply schedule

PROXIMITY SWITCH PNP (NORMALLY OPEN CONTACT)

Part. N° 33.0403/0







TECHN. DATA / ITEMS SUPPLIED

- PNP-normally open contact
- Housing polyamide with GF
- Protective system Ip 67
- Ambient temperature -25 to +75 °C
- Nom. Working distance 0 - 4,8 mm
- Nom. Switch distance 6 mm
- Current max. 200 mA

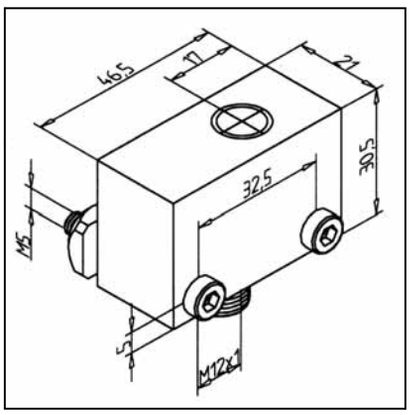
APPLICATIONS

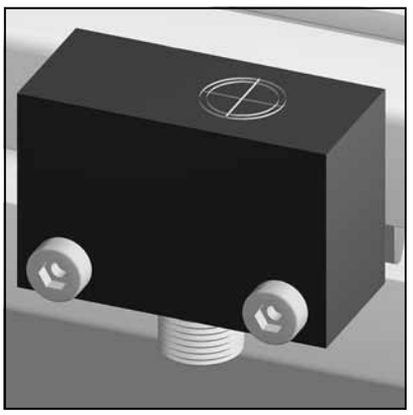
- Proximity switch of position or reference for MiniTec LR-system
- Actuating distance suitable for MiniTec system

ASSEMBLY

- Use fixing kit from upply schedule
- Suitable cable **Part N° 33.0401/0** L = 5 m

PROXIMITY SWITCH PNP (NORMALLY CLOSED CONTACT) Part. N° 33.0404/0





TECHN. DATA / ITEMS SUPPLIED

- PNP-normally closed contact
- Housing polyamide with GF
- Protective system Ip 67
- Ambient temperature -25 to +75 °C
- Nom. Working distance 0 - 4,8 mm
- Nom. Switch distance 6 mm
- Current max. 200 mA

APPLICATIONS

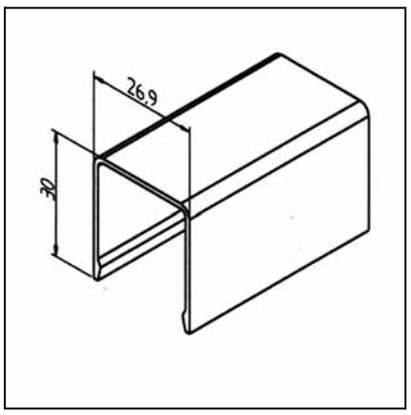
- Proximity switch of position or reference for MiniTec LR-system
- Actuating distance suitable for MiniTec system

ASSEMBLY

- Use fixing kit from upply schedule
- Suitable cable **Part N° 33.0401/0** L = 5 m

CONDUIT AL

Part. N° 20.1051/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural, anodized
- Weight 0,280 kg/m
- Length 6 m

APPLICATIONS

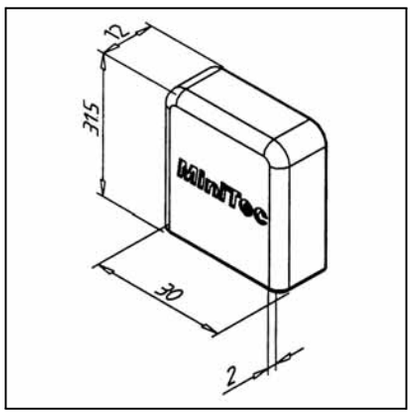
- Cover for cables and pneumatic hoses on all MiniTec aluminium profiles

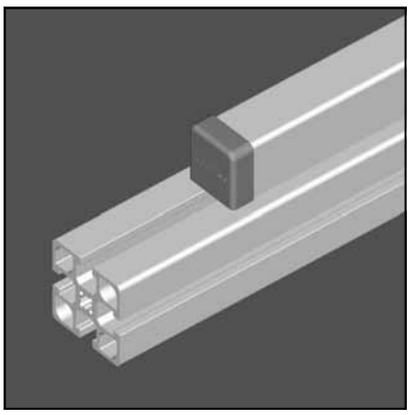
ASSEMBLY

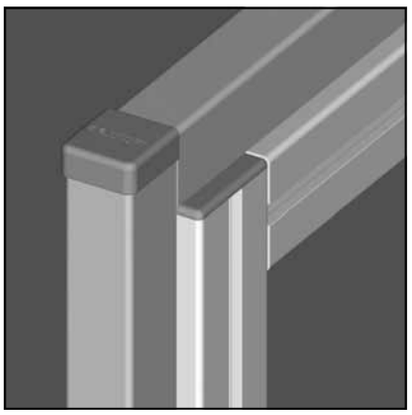
- Clip on cable clips **Part N°22.1204/0**

CABLE DUCT END CAP AL

Part. N° 22.1119/1







TECHN. DATA / ITEMS SUPPLIED	
- ABS, grey RAL 7012	
- Weight	0,004 kg

APPLICATIONS

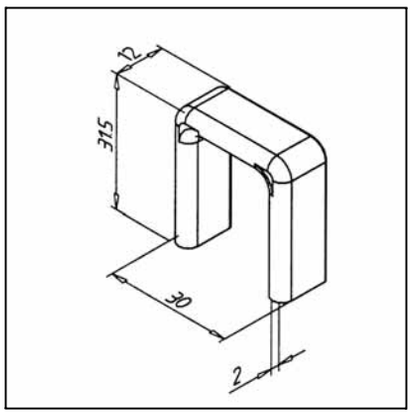
- Connection of cable duct AL
- Fabrication of external angle with cable duct AL

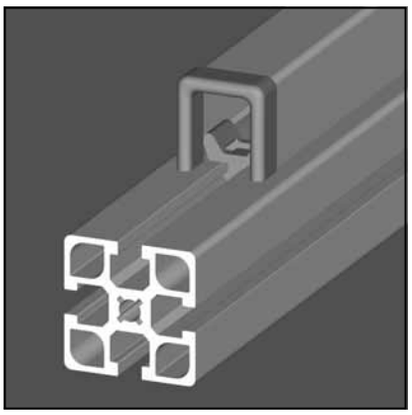
ASSEMBLY

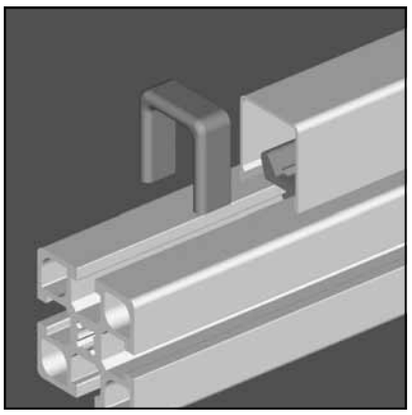
- Simply push onto the end of the duct

PROTECTIVE CAP FOR CABLE DUCT AL

Part. N° 22.1120/1







TECHN. DATA / ITEMS SUPPLIED	
- ABS, grey RAL 7012	
- Weight	0,003 kg

APPLICATIONS

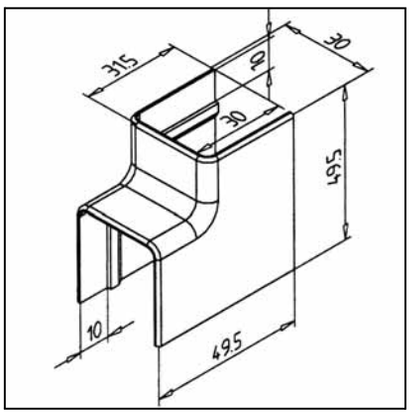
- Edge protection for cable duct AL

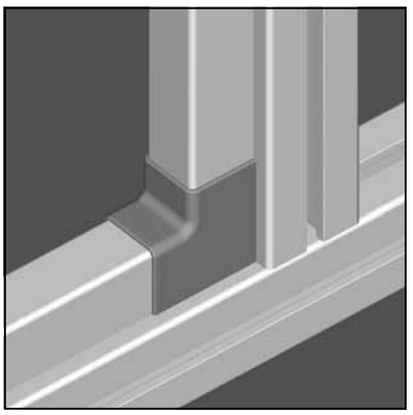
ASSEMBLY

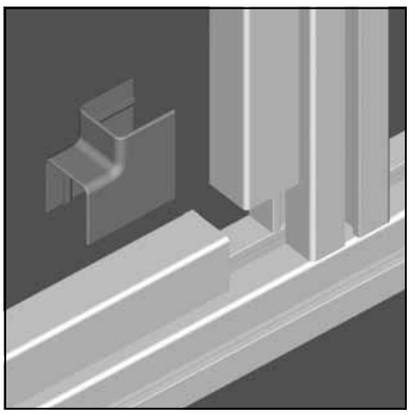
- Simply push onto the end of the duct

INTERNAL ANGLE BRACKET OF CABLE DUCT AL

Part. N° 22.1121/1







TECHN. DATA / ITEMS SUPPLIED

- ABS, grey RAL 7012
- Weight 0,01 kg

APPLICATIONS

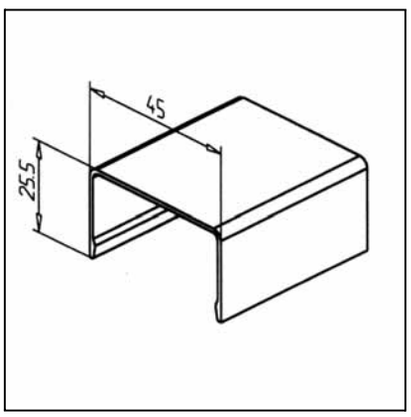
- Connection of cable duct AL to internal angle bracket

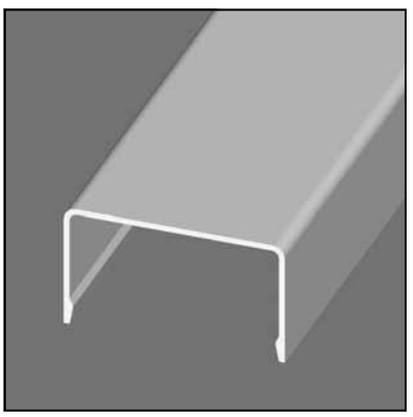
ASSEMBLY

- 1) Click the first side of the cable duct to collar clamps. Distance to corner: 39.5 mm
- 2) Insert angle bracket
- 3) Click on the second side of the cable duct and slide along as far as the stop

CONDUIT 45 AL

Part. N° 20.1071/0





TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural, anodized
- Weight 0,301 kg/m
- Length 6 m

APPLICATIONS

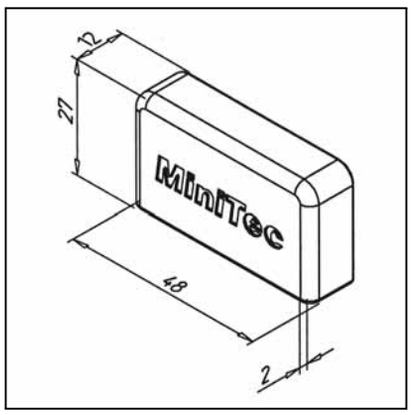
- Cover for cables and pneumatic hoses

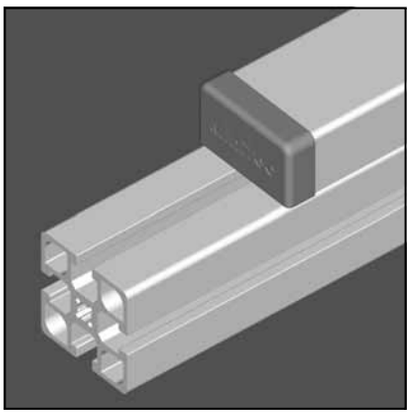
ASSEMBLY

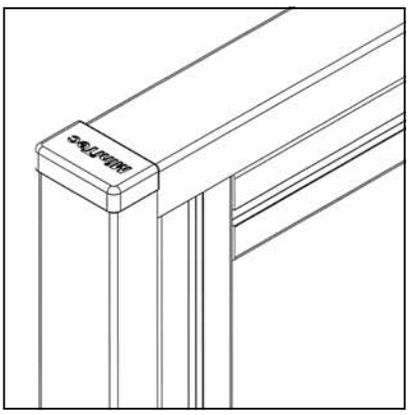
- Clip on cable clips **Part N°22.1210/0**

END COVER FOR CONDUIT 45

Part. N° 22.1116/1







TECHN. DATA/ITEMS SUPPLIED	
- ABS, grey RAL 7012	
- Weight	0,006 kg

APPLICATIONS

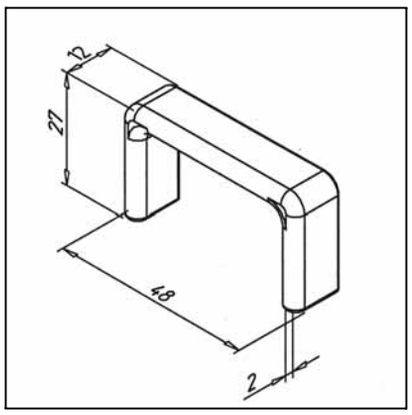
- End cover for conduit 45
- Construction of corners on outside face

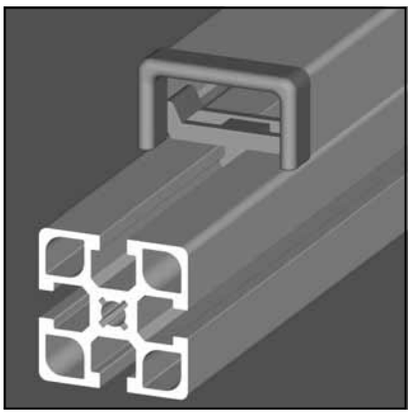
ASSEMBLY

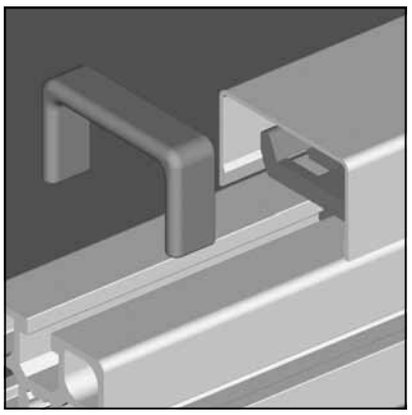
- Clip onto end of conduit 45

EDGE PROTECTION FOR CONDUIT 45

Part. N° 22.1117/1







TECHN. DATA/ITEMS SUPPLIED	
- ABS, grey RAL 7012	
- Weight	0,005 kg

APPLICATIONS

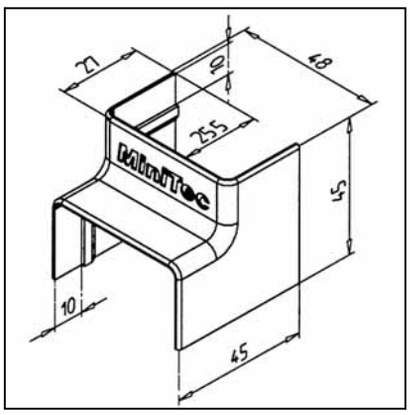
- Edge protection for conduit 45

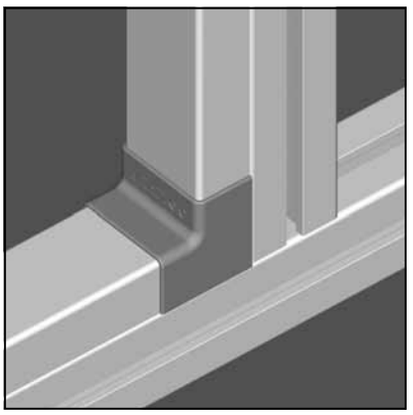
ASSEMBLY

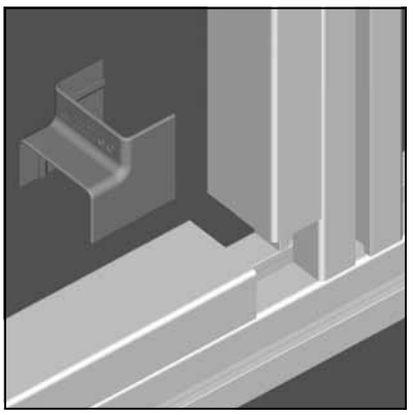
- Clip onto end of conduit 45

INTERNAL ANGLE FOR CONDUIT 45

Part. N° 22.1118/1







TECHN. DATA/ITEMS SUPPLIED

- ABS, grey RAL 7012
- Weight 0,010 kg

APPLICATIONS

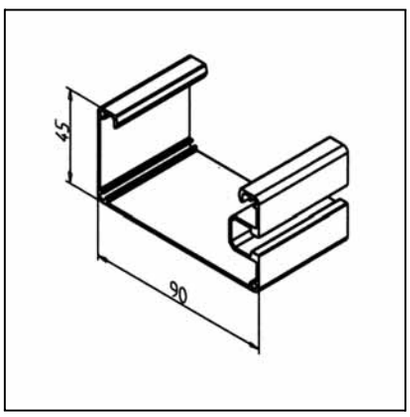
- Connection of conduit 45 to internal angle

ASSEMBLY

- 1) Clip conduit 1 onto cable clips. Distance for the edge 36 mm
- 2) Insert the angle
- 3) Clip on conduit 2 and push to tight fit

CONDUIT 90 AL

Part. N° 20.1056/0



TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural, anodized
- Weight 0,970 kg/m
- Length 6 m

APPLICATIONS

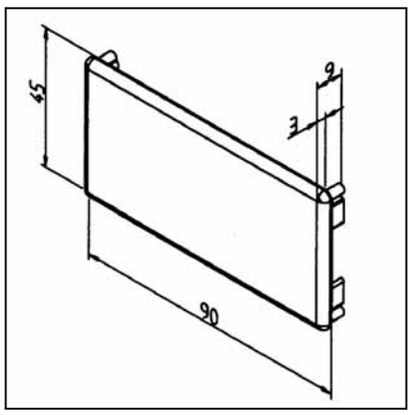
- Cover for cables and pneumatic hoses
- Suitable for MiniTec profiles, grid dimension: 90
- Can also be swung open, when used with hinges
- End ledges with integrated energy supply

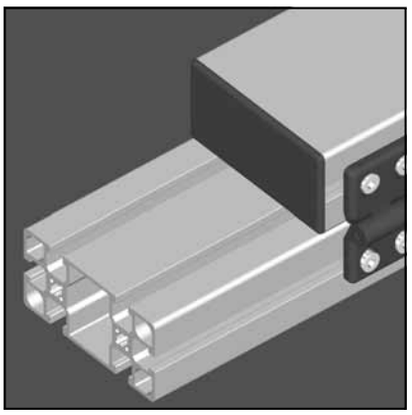
ASSEMBLY

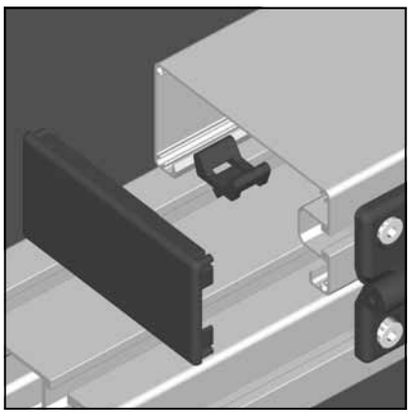
- Clip on cable clips **Part N°22.1204/0**
- Endcaps **Part N° 22.1045/0**

END COVER FOR CONDUIT 90 AL

Part. N° 22.1045/0







TECHN. DATA/ITEMS SUPPLIED	
- ABS, grey RAL 7012	
- Weight	0,011 kg

APPLICATIONS

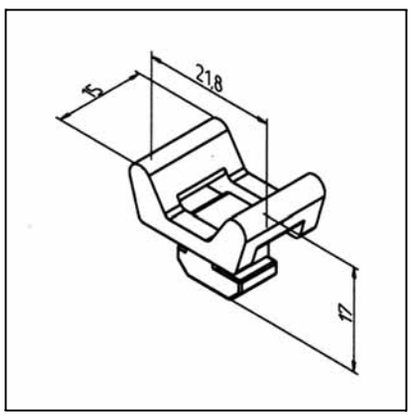
- End cover for conduit 90
- Constructions of corners on outside face

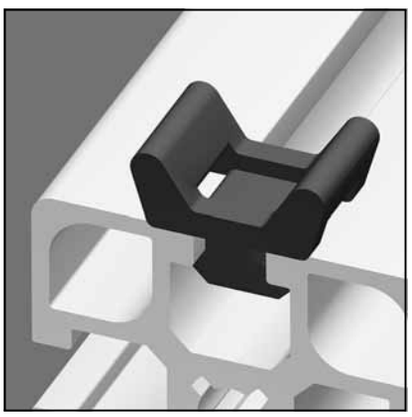
ASSEMBLY

- Clip onto end of conduit 90

CABLE CLIP

Part. N° 22.1204/0





TECHN. DATA / ITEMS SUPPLIED	
- PA 6, grey	
- Weight	0,002 kg

APPLICATIONS

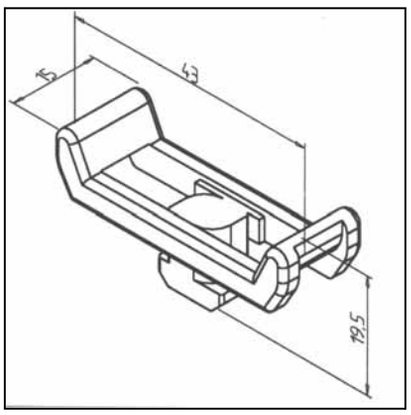
- Simple and rational fastening of cables and pneumatic hoses
- Suitable for conduit 45 Al and conduit 90 AL

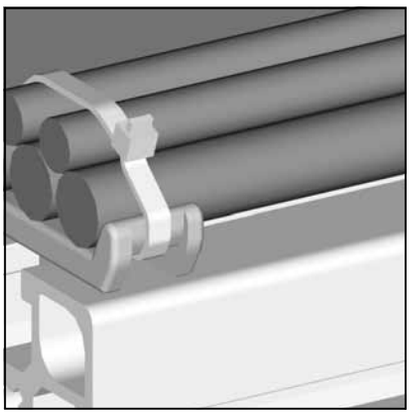
ASSEMBLY

- Insert in 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. N° 22.1210/0





TECHN. DATA / ITEMS SUPPLIED

- PA 6, grey
- Weight 0,004 kg

APPLICATIONS

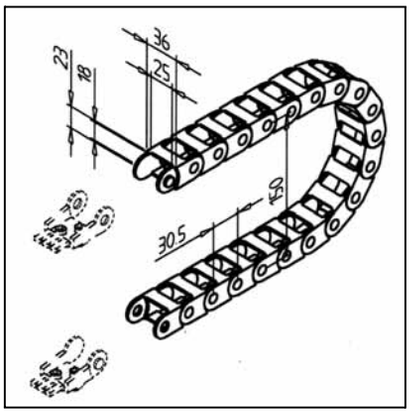
- Simple and rational fastening of cables and pneumatic hoses
- Suitable for conduit 45 Al

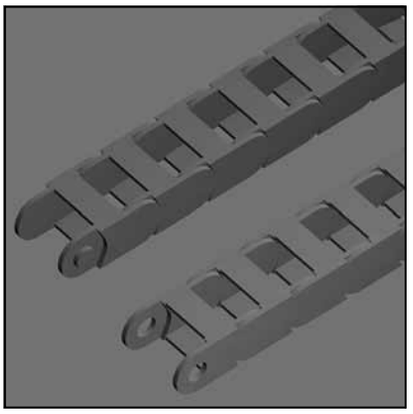
ASSEMBLY

- Insert in 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

ENERGIE CHAIN R

Part. N° 33.0410/0





TECHN. DATA / ITEMS SUPPLIED

- Plastic, black
- Without fifing kit
- Weight 0,341 kg/m

APPLICATIONS

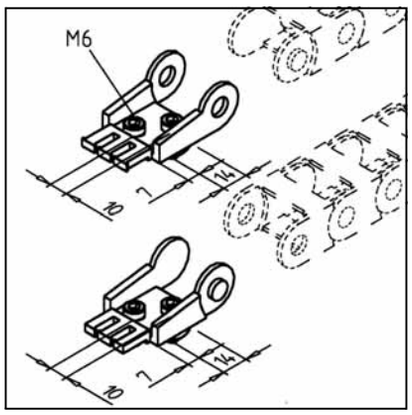
- Energy chain to bind cables and hoses on slides and movable elements

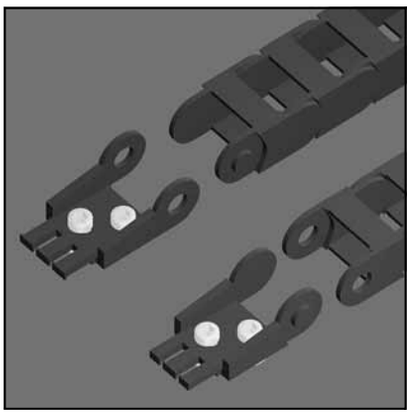
ASSEMBLY

- Fastening of the energy chain by means of mounting brackets **Part N° 33.0411/0**

MOUNTING BRACKETS FOR ENERGY CHAIN R

Part. N° 33.0411/0





TECHN. DATA / ITEMS SUPPLIED

- 1 bracket each left or right
- Plastic, schwarz
- Fixing kit
- Weight 0,058 kg

APPLICATIONS

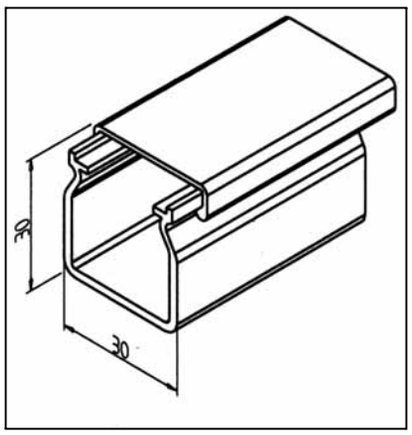
- For fastening energy chain R **Part N° 33.0410/0** on profile constructions

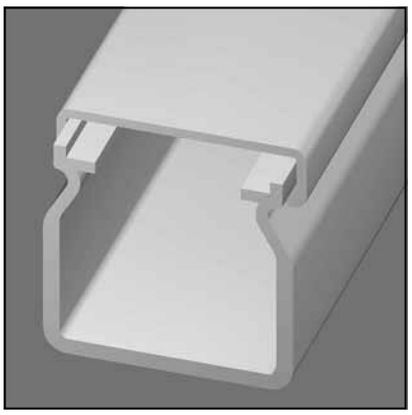
ASSEMBLY

- Use fixing kit from upply schedule
- Use cable tie band to fix cables and hoses

CONDUIT 32

Part. N° 22.1082/0





TECHN. DATA / ITEMS SUPPLIED

- Hard PVC, grey
- Snap-cover
- Cross-section: 660 mm²
- Weight 0,323 kg/m
- Length 2 m

APPLICATIONS

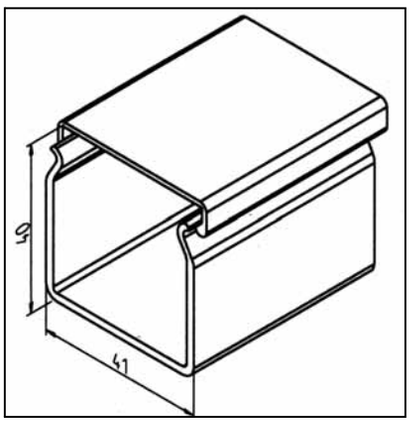
- Installation of cables or tubings in all kinds of constructions

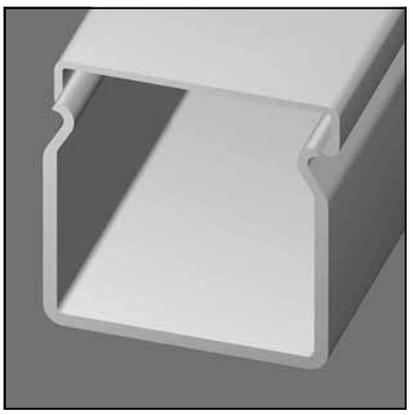
ASSEMBLY

- Fastening with screws M6 x 12 and rhombus-nut M6

CONDUIT 45

Part. N° 22.1084/0





TECHN. DATA / ITEMS SUPPLIED

- Hard PVC, grey
- Snap-cover
- Cross-section: 1584 mm²
- Weight 0,523 kg/m
- Length 2 m

APPLICATIONS

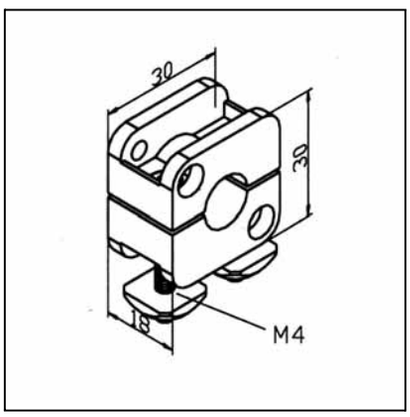
- Installation of cables or tubings in all kinds of constructions

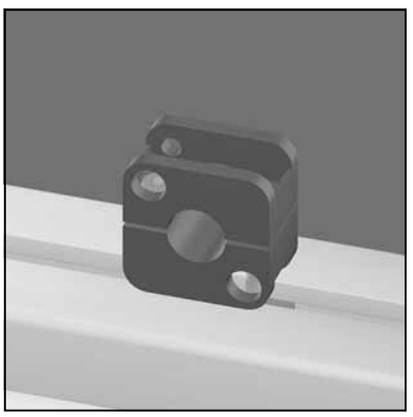
ASSEMBLY

- Fastening with screws M6 x 12 and rhombus-nut M6

PROXIMITY SWITCH HOLDER 12

Part. N° 28.0120/0





TECHN. DATA / ITEMS SUPPLIED

- Hard plastic, black
- Ø 12
- Fixing kit
- Weight 0,040 kg

APPLICATIONS

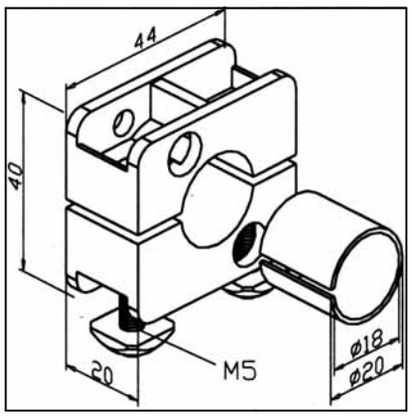
- Fixing of proximity switches Ø 12 in profile constructions and linear guides

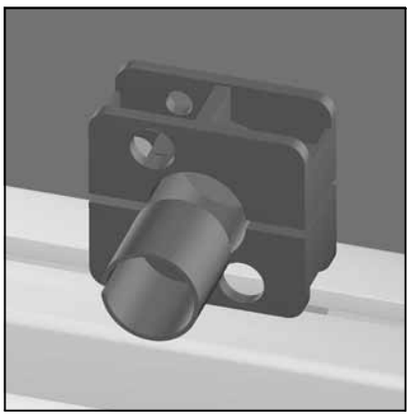
ASSEMBLY

- On profile groove with fixing kit from supply schedule

PROXIMITY SWITCH HOLDER 18

Part. N° 28.0121/0





TECHN. DATA / ITEMS SUPPLIED

- Hard plastic, black
- Ø 18
- Ø 20
- Fixing kit
- Weight 0,050 kg

APPLICATIONS

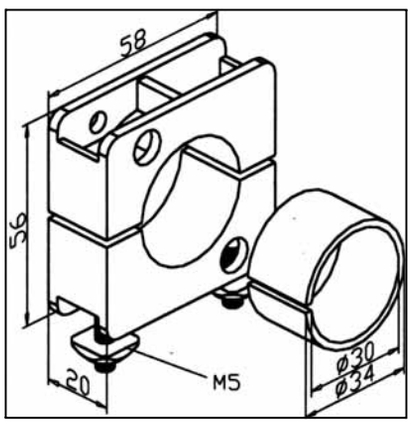
- Fixing of proximity switches Ø 18 and Ø 20 in profile constructions and linear guides

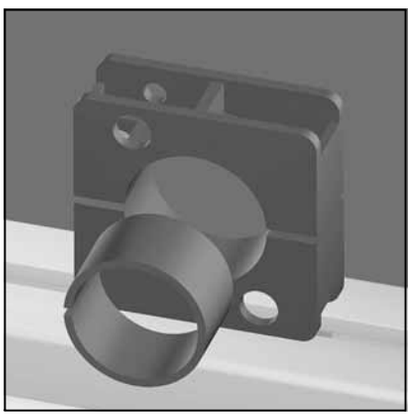
ASSEMBLY

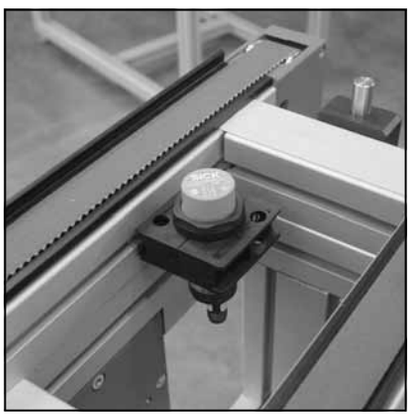
- On profile groove with fixing kit from supply schedule

PROXIMITY SWITCH HOLDER 30

Part. N° 28.0122/0







TECHN. DATA / ITEMS SUPPLIED

- Hard plastic, black
- Ø 30
- Ø 34
- Fixing kit
- Weight 0,060 kg

APPLICATIONS

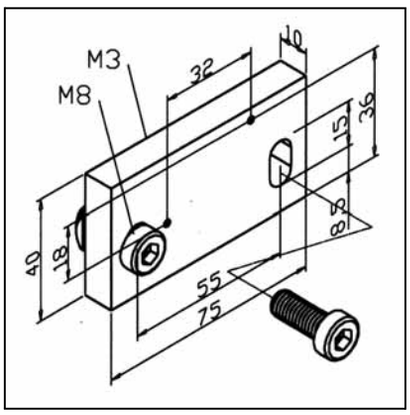
- Fixing of proximity switches Ø 30 and Ø 34 in profile constructions and linear guides

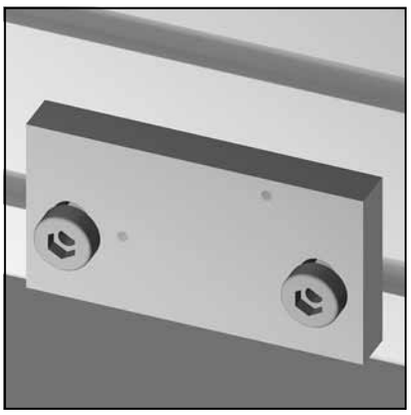
ASSEMBLY

- On profile groove with fixing kit from supply schedule

PROXIMITY SWITCH HOLDER AL

Part. N° 28.0117/0





TECHN. DATA / ITEMS SUPPLIED

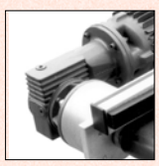
- Aluminium, natural
- Fixing kit
- Weight 0,120 kg

APPLICATIONS

- Fixing of limit stops switches for standard constructions; cuboid form (40 mm x 26 mm x 12 mm) in profile constructions and linear guides

ASSEMBLY

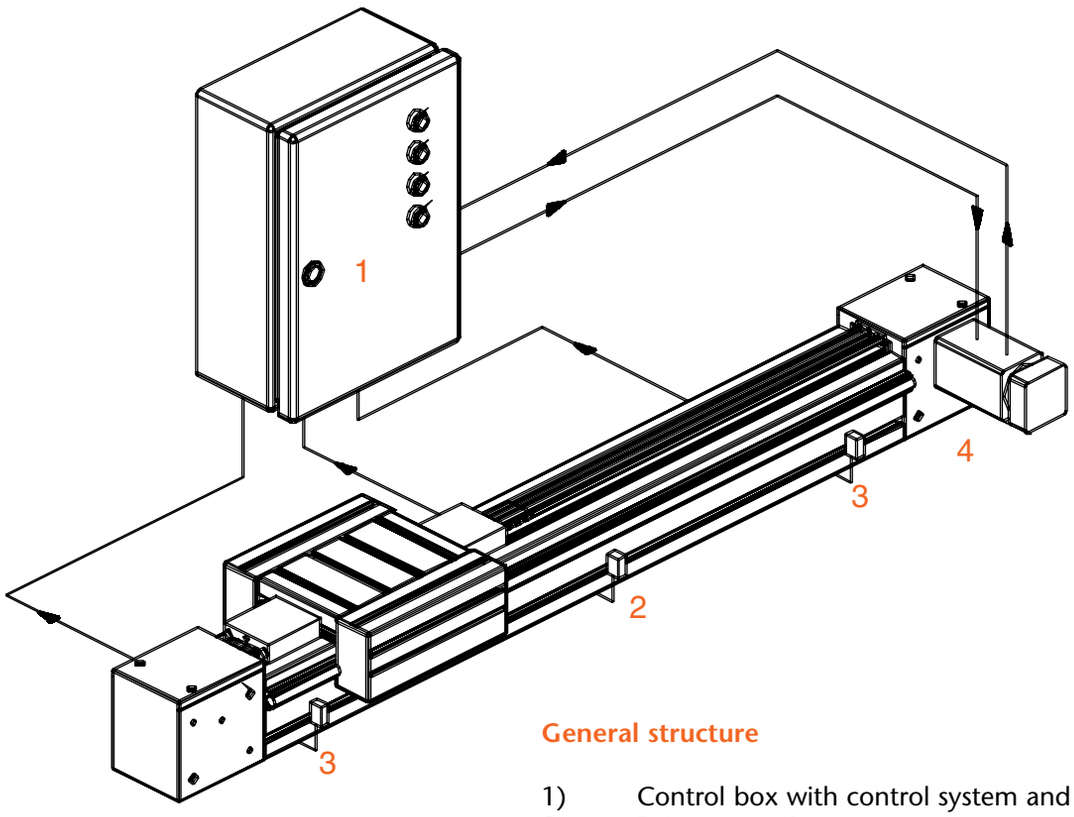
- On profile groove with fixing kit from supply schedule
- Adjust exact distance



DRIVE UNITS AND CONTROL SYSTEM

With the MiniTec standard program you have got the possibility to choose between several drive units. They offer economic solutions for all applications of normal operation.
It is a pleasure for us to help you finding out the type of construction that is the most economic for you. Would you please indicate the necessary data, e. g. for travelling speed, acceleration, positioning and repeating accuracy, strengths and moments, conditions of application and process

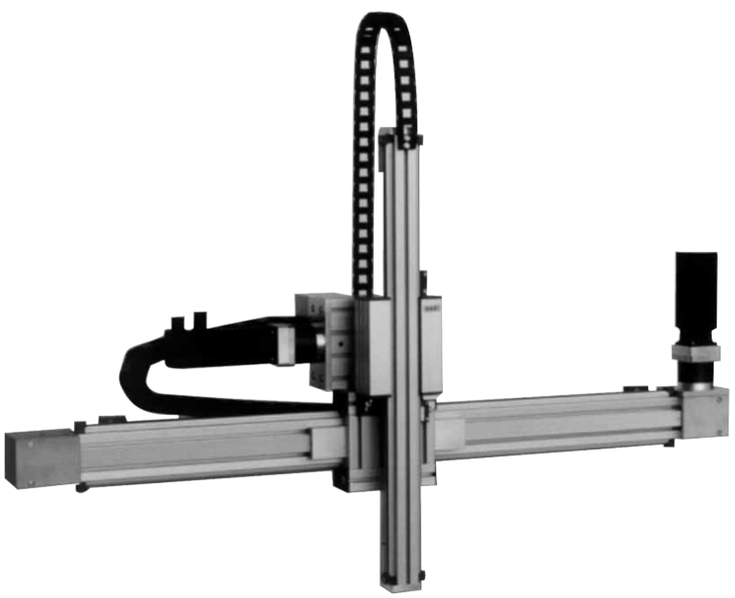
ONE-AXIS OR MULTIPLE-AXIS LINEAR SYSTEMS



General structure

1) Control box with control system and servo control
2) Reference switch
3) Position limit switch
4) Servo motor with integrated incremental encoder

Multiple-axis systems designed for carrying out complex tasks like loading and unloading systems, palettizers, milling machines, drilling machines, engraving machines, etc. Can be implemented with the same driving components as for single-axis system. Control-unit only must be adapted to the individual demands of the system.



DRIVE AND CONTROL TECHNOLOGY

Comprehensive Solutions All in One Place

Comprehensive solutions ranging from problem analysis to implementation are applied effectively and in a targeted manner by experienced, professional staff and resources. Together with our experienced team of professionals, we also design and implement individual overall concepts for materials flow and installation engineering featuring tried and tested components for general plant construction and automation technology.

All solutions are based on a flexible, modular, section-based construction system featuring linear execution and elements ensuring ergonomic workplace design. These are supplemented by pneumatic and control technology components, as well as conveyors, work piece conveyor systems and drives. Using these components, experienced professionals design modules which are later consolidated into overall automation solutions for quite unique performance requirements.

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, professional follow-up from initial design to final implementation.

Control technology

All hardware selection is dictated solely by job requirements and cost-effectiveness, using only top-quality products from well-known manufacturers with worldwide client service, for example Siemens, Beckhoff or Berger Lahr.

SPS

The preferred control concept is modular, with decentralized peripherals and on-the-spot intelligence. Either Profibus CAN-Bus or Asi-Bus may be used, at the election of the client and based on job requirements and/or client specifications.

Profibus DP and ECOFAST (Energy and Communication Field Installation System) have proven themselves cost-effective solutions; ECOFAST offers numerous advantages in planning and assembly, as well as during operation, not to mention considerable cost savings potential. The use of plug-in technology and standardized plug-in connections ensures error-free wiring for both data and energy transmission. And the pre-finished conduits considerably accelerate installation.

Reliability is further enhanced by extensive trouble-shooting possibilities and facility of parts replacement during maintenance or repair, eliminating the need for most additional precautions.

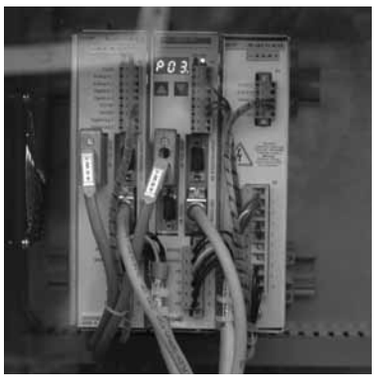
DRIVE AND CONTROL TECHNOLOGY

PC-based control

PC-based control is available for a comprehensive solution coupled with a data bank or data transmission, for example a superimposed ERP system with distance maintenance.

The PC-controls are programmed using ordinary vendor-independent CoDe-Sys interfaces according to IEC standards.

The PC-controls are constructed based on the same decentralized principle as SPS control, with the same options as the desired Bus-System.



Drive technology

Our specialists take over the interpretation of the drives with full consideration of cost-effectiveness and mechanics. For demanding positioning or automation tasks, we use the latest drive technology, with digital axial control and AC servotechnology.

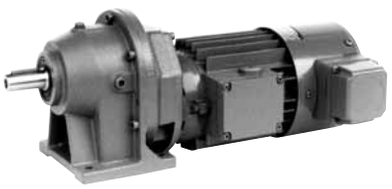
For especially cost optimized or simpler solutions, multiphase motors can also be used.

Your partner for perfect design:

- Advice
- Planning
- Mechanical planning
- Drive
- Programming and control
- Activation
- Execution and documentation in compliance with all EU standards

SPURE WHEEL BACK-GEARED MOTOR

Type CB, B3



Item supplied

- Foot design without flange
- Nominal voltage 230 / 400 V
- 50 Hz
- Protective system IP 44
- Weight 11 - 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 N°**	Power W	Min. output speed (for output torque)		Max. output speed (for output torque)	
DGM 120-00	**33.0050/0**	120	20 1/min	(59 Nm)	462 1/min	(2.5 Nm)
DGM 120-0	**33.0060/0**	120	17.4 1/min	(69 Nm)	41 1/min	(27 Nm)
DGM 180-00	**33.0051/0**	180	26.6 1/min	(63 Nm)	466 1/min	(3.6 Nm)
DGM 180-0	**33.0061/0**	180	26.5 1/min	(63 Nm)	64.4 1/min	(26 Nm)
DGM 250-00	**33.0052/0**	250	39.4 1/min	(57 Nm)	476 1/min	(5 Nm)
DGM 250-0	**33.0062/0**	250	20.2 1/min	(111 Nm)	88.6 1/min	(28 Nm)
DGM 370-00	**33.0053/0**	370	73.6 1/min	(48 Nm)	476 1/min	(7.5 Nm)
DGM 370-0	**33.0063/0**	370	27 1/min	(120 Nm)	177 1/min	(20 Nm)
DGM 550-00	**33.0054/0**	550	108 1/min	(50 Nm)	618 1/min	(8.5 Nm)
DGM 550-0	**33.0064/0**	550	42.7 1/min	(128 Nm)	618 1/min	(8.5 Nm)
DGM 750-00	**33.0055/0**	750	201 1/min	(26 Nm)	482 1/min	(11 Nm)
DGM 750-0	**33.0065/0**	750	95 1/min	(60 Nm)	616 1/min	(8.5 Nm)

SPURE WHEEL BACK-GEARED MOTOR

Type CB, B5

Item supplied

Flange design without recess installation on the motor kit Ø 16 (Typ-00F) or Ø 20 (Typ-0F)
- Nominal voltage 230 / 400 V
- 50 Hz
- Protective system IP 44
- Weight 11 - 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 N°**	Power W	Min. output speed (for output torque)		Max. output speed (for output torque)	
DGM 120-00F	**33.0050/1**	120	20 1/min	(59 Nm)	462 1/min	(2.5 Nm)
DGM 120-0F	**33.0060/1**	120	17.4 1/min	(69 Nm)	41 1/min	(27 Nm)
DGM 180-00F	**33.0051/1**	180	26.6 1/min	(63 Nm)	466 1/min	(3.6 Nm)
DGM 180-0F	**33.0061/1**	180	26.5 1/min	(63 Nm)	64.4 1/min	(26 Nm)
DGM 250-00F	**33.0052/1**	250	39.4 1/min	(57 Nm)	476 1/min	(5 Nm)
DGM 250-0F	**33.0062/1**	250	20.2 1/min	(111 Nm)	88.6 1/min	(28 Nm)
DGM 370-00F	**33.0053/1**	370	73.6 1/min	(48 Nm)	476 1/min	(7.5 Nm)
DGM 370-0F	**33.0063/1**	370	27 1/min	(120 Nm)	177 1/min	(20 Nm)

PLUG-ON MOTOR FOR CONVEYOR BELT SERIES 45

Type	Part N°	Power W	Gear reduction ratio	Rpm	Drive torgue
DSGM 120-60	**33.0070/0**	120	60	23 1/min	19 Nm
DSGM 120-40	**33.0071/0**	120	40	35 1/min	19 Nm
DSGM 120-30	**33.0072/0**	120	30	47 1/min	15 Nm
DSGM 180-20	**33.0073/0**	180	20	70 1/min	18 Nm
DSGM 180-15	**33.0074/0**	180	15	93 1/min	14 Nm
DSGM 180-10	**33.0075/0**	180	10	140 1/min	10 Nm
DSGM 180-7	**33.0076/0**	180	7	200 1/min	7 Nm

PLUG-ON MOTOR FOR CONVEYOR BELT SERIES 90*

Type	Part N°	Power W	Gear reduction ratio	Rpm	Drive torgue
DSGM 180-60	**33.0080/0**	180	60	15 1/min	49 Nm
DSGM 250-48	**33.0081/0**	250	48	27 1/min	45 Nm
DSGM 370-39	**33.0082/0**	370	39	35 1/min	63 Nm
DSGM 370-27	**33.0083/0**	370	27	50 1/min	49 Nm
DSGM 370-19	**33.0084/0**	370	19	71 1/min	39 Nm
DSGM 558-24	**33.0085/0**	550	24	110 1/min	36 Nm

* other performances and conversions on request

FREQUENCY TRANSFORMER FU 370 PP

Part N° 33.0124/1

- Built in On/Off key
- 1Q mode of operation
- Mains overvoltage/ undervoltage monitoring device
- Motor load monitoring
- Adjustable U/f current characteristic
- Short circuit monitoring phase/ phase
- Adjustable acceleration and deceleration ramp
- Adjustable voltage increase for low initial frequency
- 2 m mains cable with shock-proof plug
- 2 m OELFLEX 110 CY motor cable
- EMV-Filter Class A

Output motor	Power output	0,8 kVA
	Max. motor output	0,37 kW
	Nominal output current	2,1 A
	Output voltage	3 x 0...230 V
	Overload	150%/1min
Input mains	Nominal voltage	230 V
	Input current	5,2 A
	Mains frequency	50 - 60 Hz
General Data	Protective system	IP 54
	Ambient temperature	-10 - 40°C
	Cooling	Convection
	Max. cooling body temperature	70°C
	Power reduction	3%/°C > 40° C
	Weight	2,2 kg
	Dimensions	200 x 130 x 120 mm

MAGNETIC MEASURING SYSTEMS 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 lie primarily in the direct measurement procedure, the freedom from wear, 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.

Measuring display

Types deliverable:
- Mains voltage 24 V DC **33.0029/0**
- Battery operation (4 mignon cells) **33.0029/1**
- 230 V AC **33.0029/2**
- Measuring LED display, 6 places, with integrated evalution system, keys for reference, zero and reset
- Housing, protecting system IP 60

- Operating temperature -5 up to +45° C
- Travelling speed max. 5m/sec.
- Measuring tolerance ±0.1 mm/m

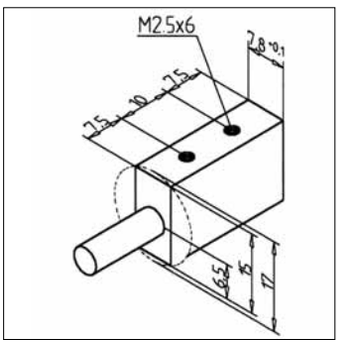
Magnetic sensor **33.0030/0**

- Measuring of magnetic signals
- in connection with the above imaged measuring display
- Magnetic sensor fitting for all MiniTec profiles, integrated cable (4 m) and D-sub plug (other cable length upon request max. 20 m)

Magnetic tape **33.0028/0**

Techn. data / items supplied

- Magnetic tape for installation on MiniTec profile surface, lenght max. 80 m, width 10 mm
  (optional: 5 mm tape width for sticking into the profile groove)



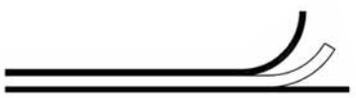
Application

- For all MiniTec linear guides with rails made from profiles
- Length measuring devices
- Material feeding

Assembly

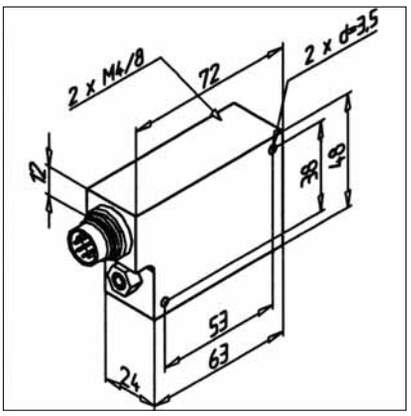
- Stick magnetic tape on profile surface
- Attach sensor on slide
- Distance to the magnetic tape: 1.1 ±0.9 mm

Please indicate desired measuring length



ELECTRONIC ANALYSING SYSTEM WITH INTEGRATED SENSOR

Part N° 33.0029/4



Techn. Data

- 2 x 90° phases DISPLACED output signals with reference signal
- Mains voltage 10-30 V
- Optionally with additional reference signal
- Suitable cable **Part N° 33.0029/5**

Please indicate desired cable length

Application

- Evaluation electronics for converting the magnetic signals into incremental encoder signals
- Suitable for ML magnetic measurement system with external control

PNEUMATIC CONNECTIONS

MiniTec profiles are designed for integrated air-piping. The use of the profile-cavities reduces the risk of pipe-leaks significantly. Standard-connectors g 1/4 and g 1/8 can be used.

PNEUMATIC SYSTEM

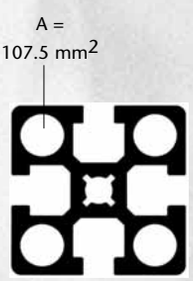
All standard pneumatic elements with thread G 1/8" und G 1/4" can be used with all standard MiniTec profiles. Fixing is possible at any desired point.

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 face-connection .

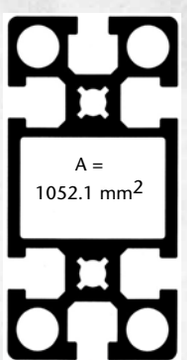
The Ø 11.7 mm bore in the standard profiles can be rebored to G 1/4" for fastening standard screw connecitons.

Max. pressure: for round chambers 20 bar; for others: 8 bar.

Useable air pipings



20.1006/0



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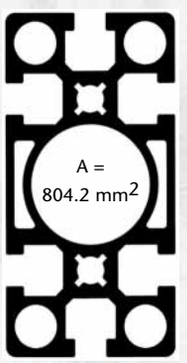

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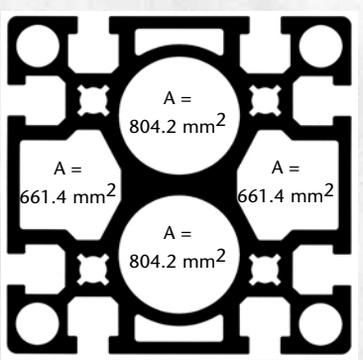

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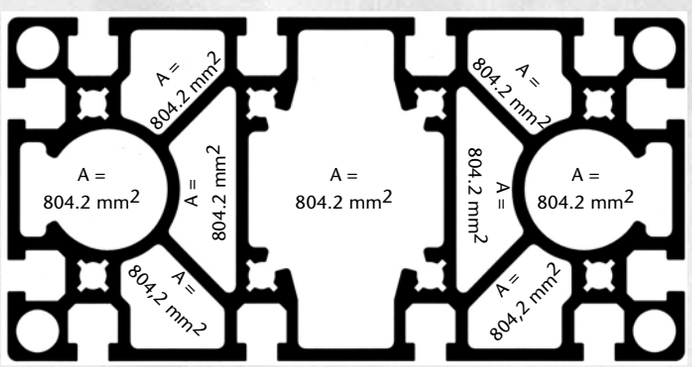

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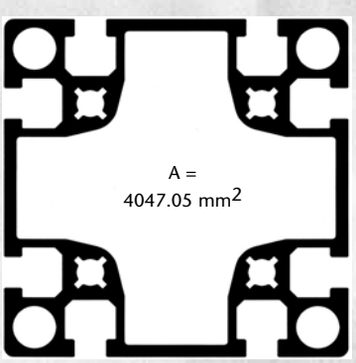

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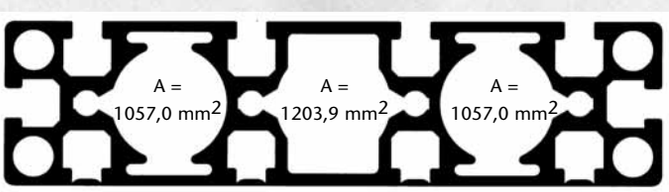
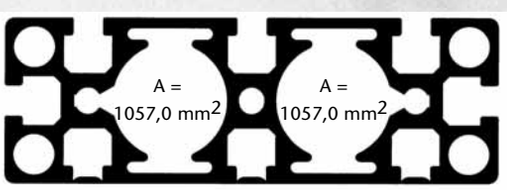
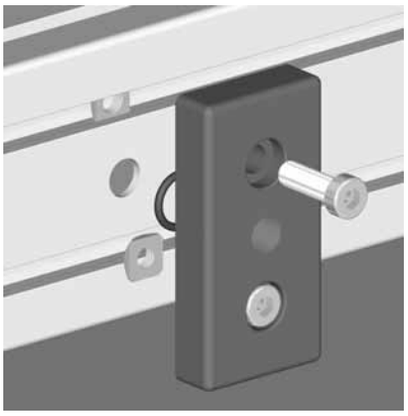


20.1079/0



20.1078/0

PNEUMATIC CONNECTION PLATE 45



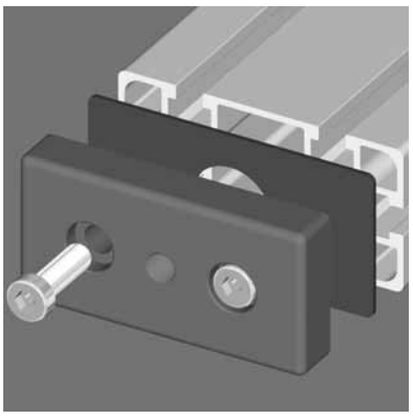
Technical data/ items supplied
- Aluminium pressure die casting, powder-coated, grey
- One O-ring
- With fixing kit

Applications
- Lateral connection of pneumatic connections at profiles 45 x 90 or lager

Assembly
- Attache at profile grooves with fixing kit
- Drill Ø 12 mm hole in the profile center.

Thread	Weight	Part no.
G 1/8"	0.170	**24.1107/0**
G 1/4"	0.168	**24.1107/2**
G 3/8"	0.165	**24.1107/3**

PNEUMATIC CONNECTION PLATE 45 X 90



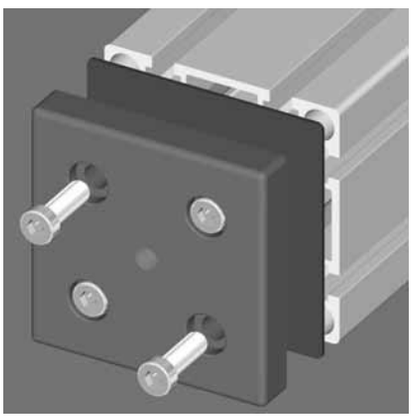
Technical data/ items supplied
- Aluminium pressure die casting, powder-coated, grey
- Sealing plate
- With fixing kit

Applications
- Closing of chambers of profiles 45 x 90 for connection of pneumatic couplings

Assembly
- Insert sealing plate
- Attach on 2 central bores Ø 7.5 mm with fixing kit

Thread	Weight	Part no.
G 1/8"	0.181	**24.1105/0**
G 1/4"	0.178	**24.1105/2**
G 3/8"	0.174	**24.1105/3**

PNEUMATIC CONNECTION PLATE 90



Technical data/ items supplied
- Aluminium pressure die casting, powder-coated, grey
- Sealing plate
- With fixing kit

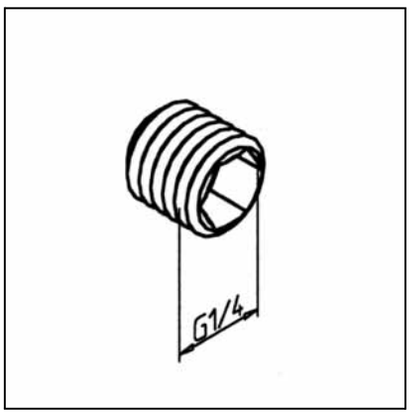
Applications
- Closing of chambers of profiles 90 x 90 for connection of pneumatic couplings

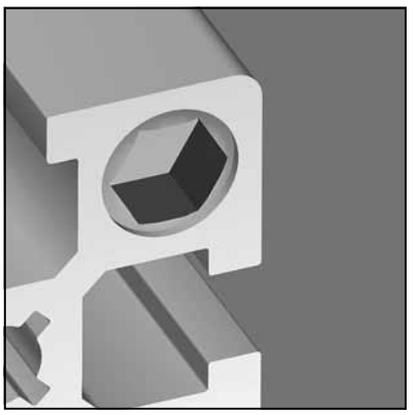
Assembly
- Insert sealing plate
- Attache on 4 central bores Ø 7.5 mm with fixing kit

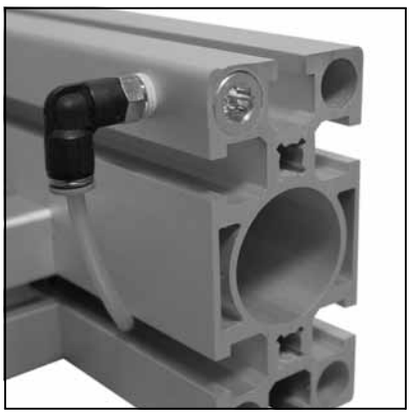
Thread	Weight	Part no.
G 1/8"	0.434	**24.1106/0**
G 1/4"	0.429	**24.1106/2**
G 3/8"	0.421	**24.1106/3**

PLUG

Part. N° 24.1104/0







TECHN. DATA / ITEMS SUPPLIED

- Brass
- Weight 0,006 kg

APPLICATIONS

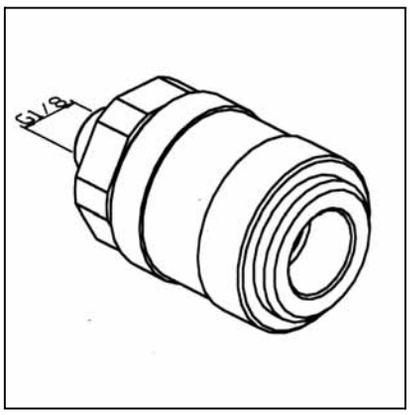
- Closure for profile chambers Ø 11,7 mm

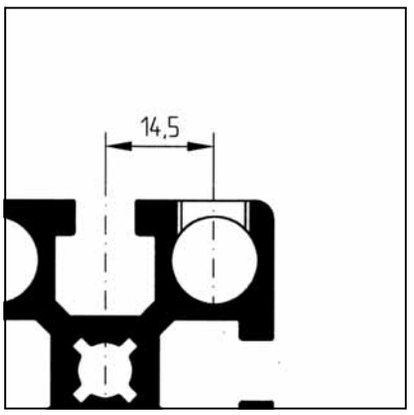
ASSEMBLY

- 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. N° 24.1109/0





TECHN. DATA / ITEMS SUPPLIED

- Brass, nickel plated, NW 7
- Connection G 1/8", Sw 22
- Weight 0,064 kg

APPLICATION

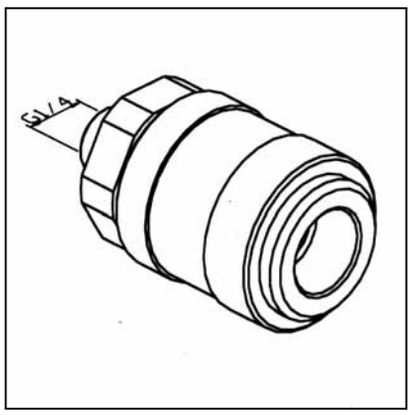
- Pressed air connection at any desired point on profile surface or faces, Ø 11,7 mm

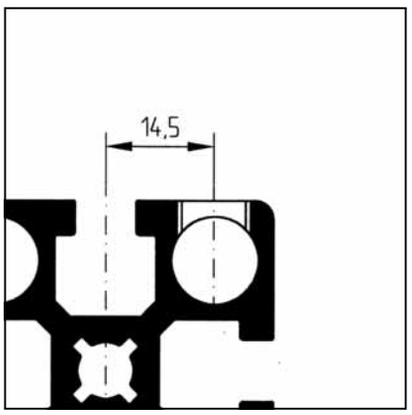
ASSEMBLY

- Bore thread G 1/8" in profile surface; distance from profile groove: 14,5 mm

QUICK COUPLING 1/4

Part. N° 24.1110/0





TECHN. DATA / ITEMS SUPPLIED

- Brass, nickel plated, NW 7
- Connection G 1/4", Sw 22
- Weight 0,065 kg

APPLICATIONS

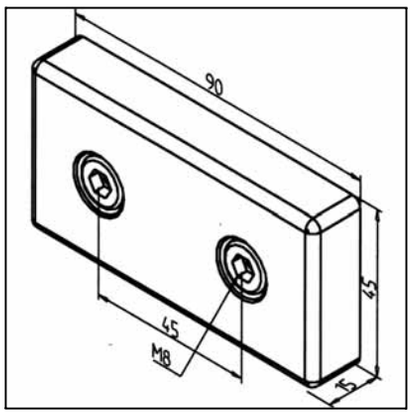
- Pressed air connection at any desired point on profile surface or faces, Ø 11,7 mm

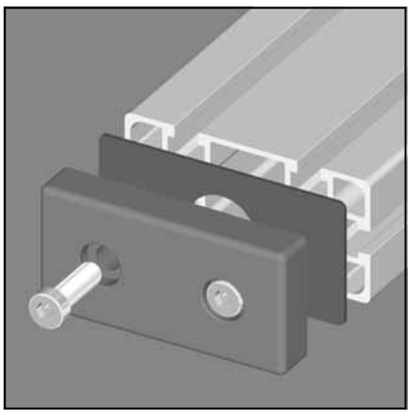
ASSEMBLY

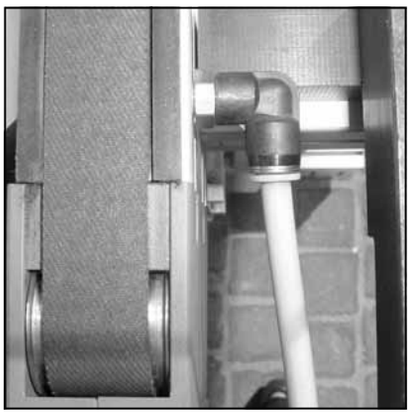
- Bore thread G 1/4" in profile surface; distance from profile groove: 14,5 mm

PNEUMATIC END PLATE 45 X 90

Part. N° 24.1105/7







TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Sealing plate
- Fixing kit
- Weight 0,181 kg

APPLICATION

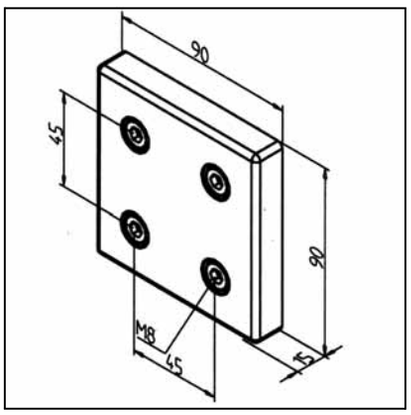
- Closing of chamber ends of profiles 45 x 90

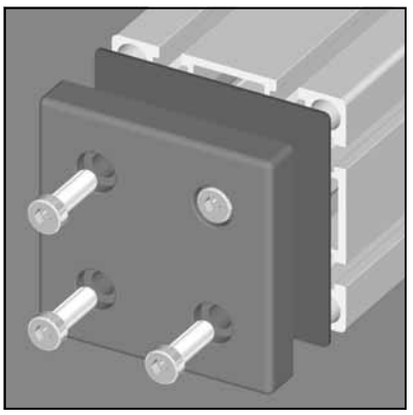
ASSEMBLY

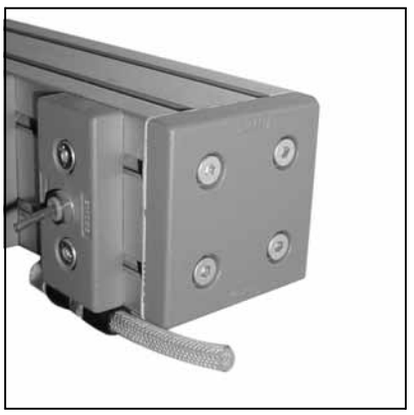
- Insert sealing plate
- Attachment on 2 central bores Ø 7,5 with fixing kit from supply schedule

PNEUMATIC END PLATE 90 X 90

Part. N° 24.1106/7







TECHN. DATA / ITEMS SUPPLIED	
- Aluminium GD, powder coated, grey	
- Sealing plate	
- Fixing kit	
- Weight	0,434 kg

APPLICATIONS

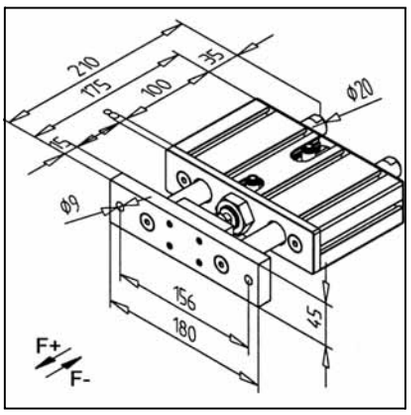
- Closing of chambers of profiles 90 x 90 for connection of pneumatic couplings

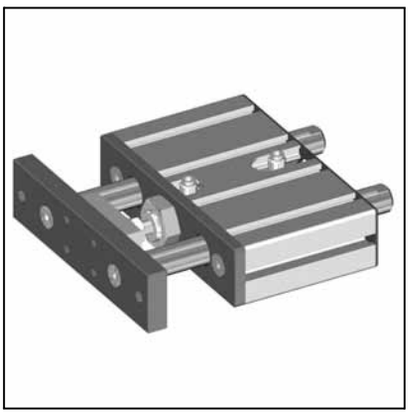
ASSEMBLY

- Insert sealing plate
- Attachment on 4 central bores Ø 7,5 with fixing kit from supply schedule

PNEUMATIC LIFTING UNIT 15

Part. N° 24.1201/0





TECHN. DATA / ITEMS SUPPLIED	
- Incorporated into section 45 x 180	
- Overall cylinder size Ø 25 mm	
- Guide shafts Ø 20 mm	
- F+ with 6 bar =	256 N
- F- with 6 bar =	220 N
- Hub =	15 mm
- Completely assembled with dual acting cylinder	
- Weight	3,405 kg

APPLICATIONS

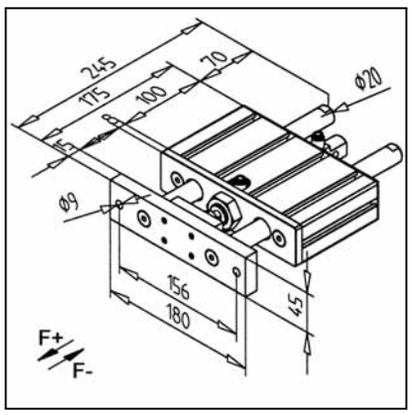
- Lifting and lowering of loads
- Attachment for gripper loc. Cit.
- Positioning of parts

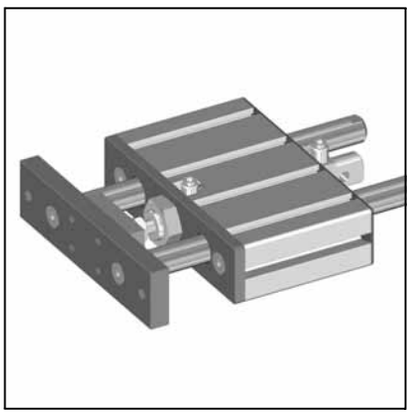
ASSEMBLY

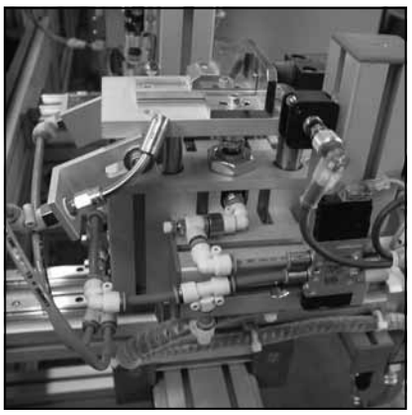
- With mounting angle on profile construction
- Other stroke lengths on request

PNEUMATIC LIFTING UNIT 50

Part. N° 24.1205/0







TECHN. DATA / ITEMS SUPPLIED	
- Incorporated into section 45 x 180	
- Cylinder Ø 25 mm	
- Guide shafts Ø 20 mm	
- F+ with 6 bar =	265 N
- F- with 6 bar =	220 N
- Hub =	50 mm
- Completely assembled with dual acting cylinder	
- Weight	3,45 kg

APPLICATIONS

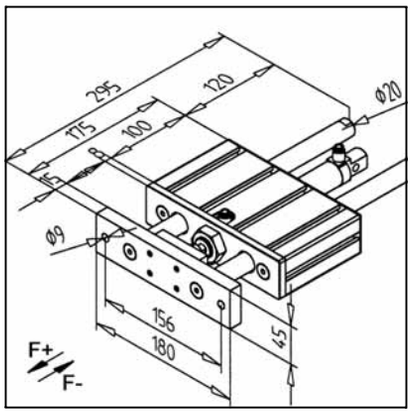
- Lifting and lowering of loads
- Attachment for gripper loc. Cit.
- Positioning of parts

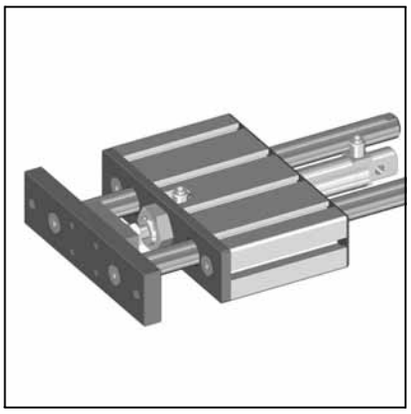
ASSEMBLY

- With mounting angle on profile construction
- Other stroke lengths on request

PNEUMATIC LIFTING UNIT 100

Part. N° 24.1210/0





TECHN. DATA / ITEMS SUPPLIED	
- Incorporated into section 45 x 180	
- Cylinder Ø 25 mm	
- Guide shafts Ø 20 mm	
- F+ with 6 bar =	265 N
- F- with 6 bar =	220 N
- Hub =	100 mm
- Completely assembled with dual acting cylinder	
- Weight	3,52 kg

APPLICATIONS

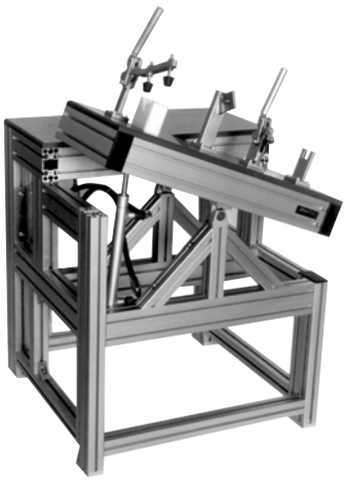
- Lifting and lowering of loads
- Attachment for gripper loc. Cit.
- Positioning of parts

ASSEMBLY

- With mounting angle on profile construction
- Other stroke lengths on request

HYDRAULIC VERTICAL ADJUSTMENT

HYDRAULIC VERTICAL ADJUSTMENT



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

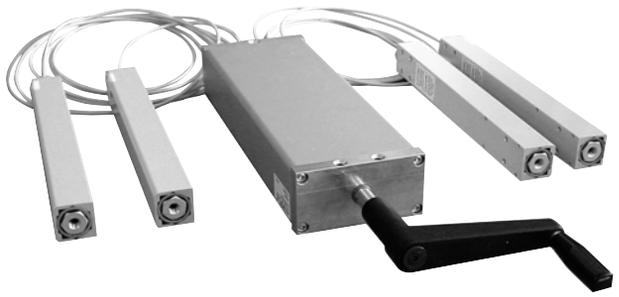
Applications
- Lifting and lowering of tables, work benches, terminals etc.

Assembly
- Screw pump at desired positon onto the profile groove with screws M6
- Fix cylinder in aluminium profile “S” with adaptor rings
- Attach cylinder onto profile groove with adaptor plate

Available special models and accessories
- System with hose coupling **Part Nr. 27.0003/0**, for decoupling the cylinder from the pump
- Angle connector **Part Nr. 27.0002/0** Angle 90°, for pump and cylinders
- Attachment parts for pumps according to customer request
- Attachment set 45 for add-in cylinder **Part Nr. 27.0005/0** for all profiles with bore 32 except for profile 90 x 90 S and 90 x 180 S. For these, please use attachment set 90, **Part Nr. 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.

COMPLETE SYSTEM WITH ADD-ON CYLINDER AZ

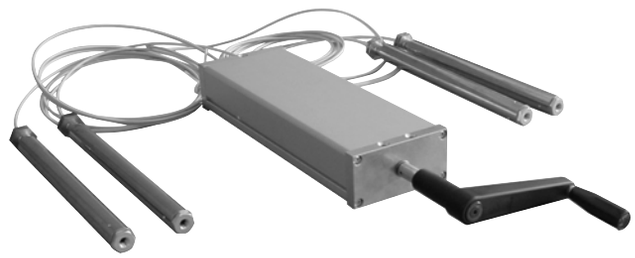


Item supplied
- Pump with folding crank
- Cylinder with 2.5 m hydraulic tube
- Completely assembled and inspected system

See the following pages for dimensions and data.

Pump system load	TB 150 kg	TB 300 kg	PB 350 kg			
No. of cylinders / Type (stoke)	1	2	3	4	5	6
AZ 150	27.0050/1	27.0050/2	27.0050/3	27.0050/4	27.0050/5	27.0050/6
AZ 200	27.0051/1	27.0051/2	27.0051/3	27.0051/4	27.0051/5	27.0051/6
AZ 300	27.0052/1	27.0052/2	27.0052/3	27.0052/4	27.0052/5	27.0052/6
AZ 400	27.0053/1	27.0053/2	27.0053/3	27.0053/4	27.0053/5	27.0053/6
AZ 500	27.0054/1	27.0054/2	27.0054/3	27.0054/4	27.0054/5	27.0054/6

COMPLETE SYSTEM WITH ADD-IN CYLINDER EZ

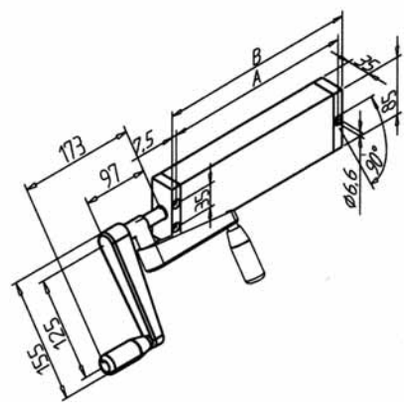


Item supplied
- Pump with folding crank
- Cylinder with 2.5 m hydraulic tube
- Completely assembled and inspected system

See the following pages for dimensions and data.

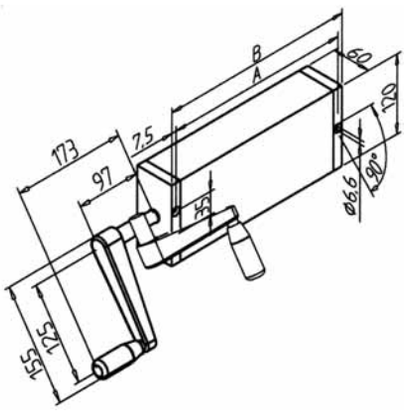
Pump system load	TB 150 kg	TB 300 kg	PB 350 kg			
No. of cylinders / Type (stoke)	1	2	3	4	5	6
EZ 150	27.0060/1	27.0060/2	27.0060/3	27.0060/4	27.0060/5	27.0060/6
EZ 200	27.0061/1	27.0061/2	27.0061/3	27.0061/4	27.0061/5	27.0061/6
EZ 300	27.0062/1	27.0062/2	27.0062/3	27.0062/4	27.0062/5	27.0062/6
EZ 400	27.0063/1	27.0063/2	27.0063/3	27.0063/4	27.0063/5	27.0063/6
EZ 500	27.0064/1	27.0064/2	27.0064/3	27.0064/4	27.0064/5	27.0064/6

HYDRAULIC PUMP TB FOR 1-2 CYLINDERS



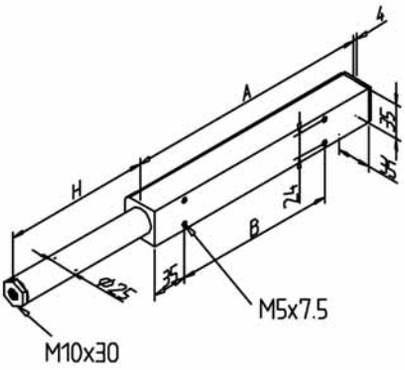
Type	Stroke H mm	Dimension A mm	Dimension B mm
Hydraulic pump TB 150	150	283,5	298,5
Hydraulic pump TB 200	200	343,5	358,5
Hydraulic pump TB 300	300	465,5	480,5
Hydraulic pump TB 400	400	585,5	600,5
Hydraulic pump TB 500	500	707,5	722,5

HYDRAULIC PUMP PB FOR 3-6 CYLINDERS



Type	Stroke H mm	Dimension A mm	Dimension B mm
Hydraulic pump PB 150	150	283,5	298,5
Hydraulic pump PB 200	200	343,5	358,5
Hydraulic pump PB 300	300	465,5	480,5
Hydraulic pump PB 400	400	585,5	600,5
Hydraulic pump PB 500	500	707,5	722,5

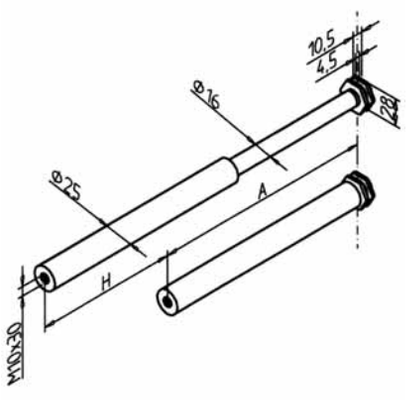
ADD-ON CYLINDER AZ



For attachment with adaptor plate.

Type	Stroke H mm	Length A mm	Length B mm	lateral load kg max.
AZ 150	150	252	165	130
AZ 200	200	317	240	97
AZ 300	300	442	340	65
AZ 400	400	542	340	48
AZ 500	500	667	450	29

ADD-IN CYLINDER EZ

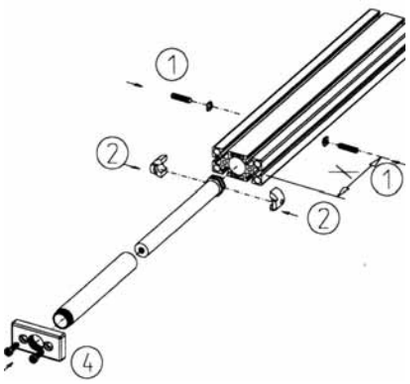


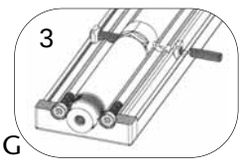
For installation in MiniTec profiles 45 x 90 S / 45 x 135 / 45 x 180 / 90 x 90 S / 90 x 180.
To install the cylinder, use attachment set "add-in cylinder" **Part N° 27.0005/0** or **Part N° 27.0006/0**.

Type	Stroke H mm	Length A mm	lateral load kg max.
EZ 150	150	235	130
EZ 200	200	300	97
EZ 300	300	425	65
EZ 400	400	525	48
EZ 500	500	650	29

ATTACHMENT SET 45 FOR ADD-IN CYLINDER

Part N° 27.0005/0





Applications
- Suitable for all stroke lengths
- For profile 45 x 90 S, 45 x 135 G and 45 x 180 G

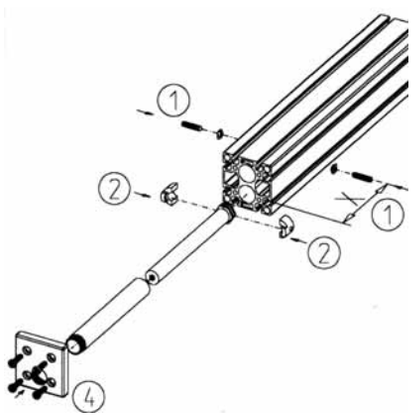
Installation
1) Bore Ø 8,5 mm in distance "X" from profile end
2) Place two holder pieces on cylinder and insert into the profile bore Ø 32 mm
3) Position holder pieces according to dimension table (below) and drill - fix with setscrew
4) Screw guide pipe into connection plate, insert into profile and tighten

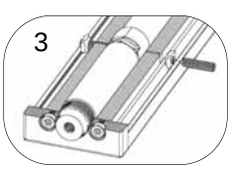
Table of Dimensions for Attachment Set 45 and 90

Cylinder	EZ 150	EZ 200	EZ 300	EZ 400	EZ 500
Distance X	224 mm	289 mm	414 mm	514 mm	639 mm

ATTACHMENT SET 90 FOR ADD-IN CYLINDER

Part N° 27.0006/0





Applications
- Suitable for all stroke lengths
- For profile 90 x 90 S, 90 x 180

Installation
1) Bore Ø 8,5 mm in distance "X" from profile end
2) Place two holder pieces on cylinder and insert into the profile bore Ø 32 mm
3) Position holder pieces according to dimension table (below) and drill - fix with setscrew
4) Screw guide pipe into connection plate, insert into profile and tighten

NOTES...

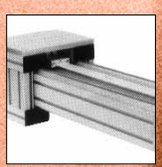
All MiniTec linear guides are constructed by using the profile system elements and thus are fully compatible with all system elements. The modular structure allows the designer to design his unit exactly according to the requirement of his application. The possibility to use the profiles both as construction elements and guide rails reduces the cost significantly. All MiniTec linear guides are extremely quick and easy to assemble. By exclusively using precision-guiding elements from our linear program the guides feature high travelling speed, optimal durability and high precision. The travel length of this system is virtually unlimited.

- LINEAR SYSTEM LR
  COMPONENTS LR
  READY FOR USE MODULS LR

- LINEAR SYSTEM LB
  COMPONENTS LB
  READY FOR USE MODULS LB

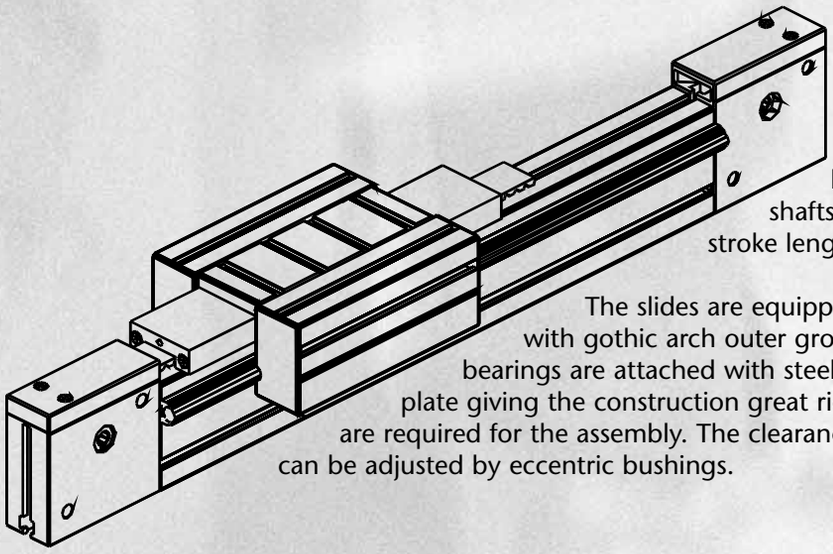
- LINEAR SYSTEM LG
  COMPONENTS LG
  READY FOR USE MODULS LG

2 LINEAR SYSTEMS



LINEAR SYSTEM LR

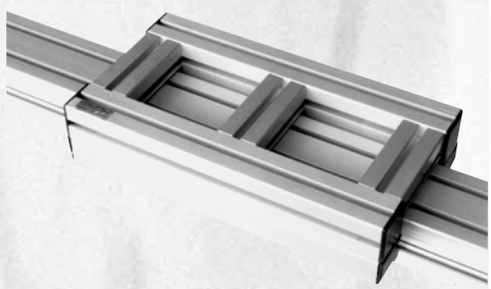
LINEAR SYSTEM LR

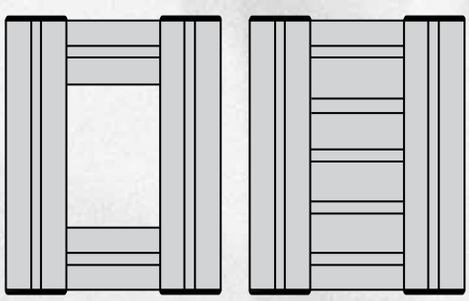


The profile system LR is based on double-row angular contact bearings made of bearing steel and hardened and ground precision shafts Ø 12 mm / Cf 53. Any required stroke length can be implemented.

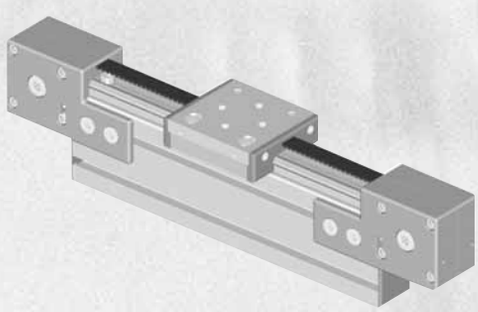
The slides are equipped with double-row roller bearings with gothic arch outer grooves. For very high loads multiple bearings are attached with steel-T-Slot bars directly to the slide-plate giving the construction great rigidity. No special bearing profiles are required for the assembly. The clearance between bearings and shafts can be adjusted by eccentric bushings.

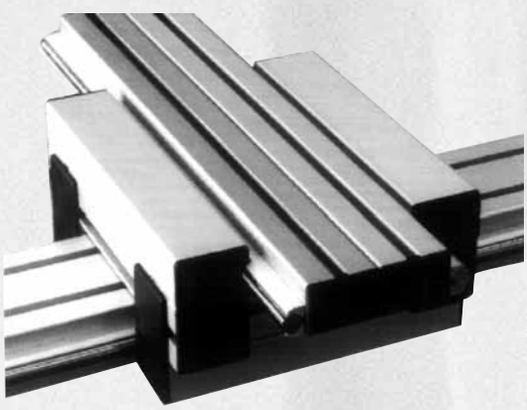
The slides are completely covered, lubrication felts are fitted in the endcaps which clean and grease the shafts. For maintenance purposes the felts can be exchanged quickly and easily without tools. This advantage is important for applications in rough working conditions





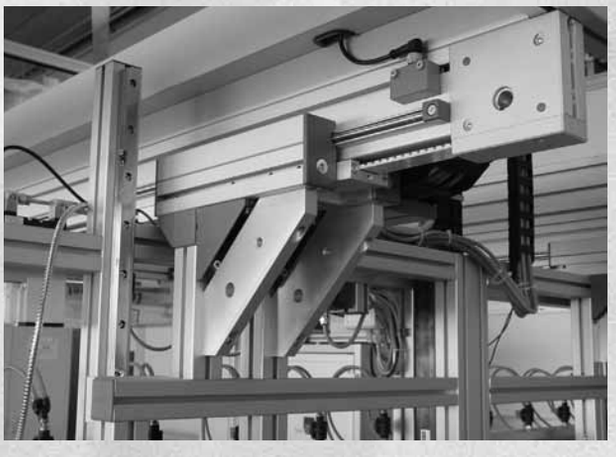
Both closed and open-frame slides with any desired length or width can be fabricated.

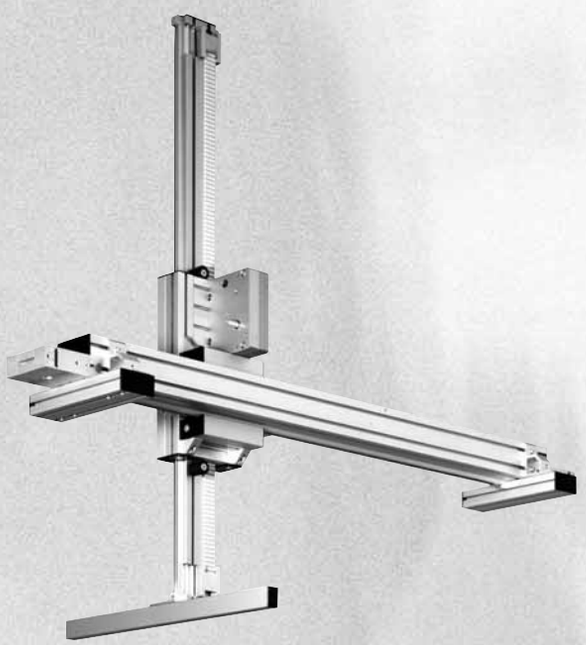




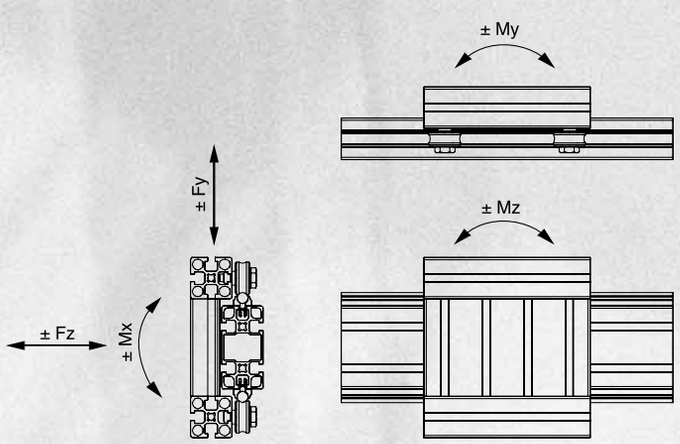
X/Y-tables are easily constructed by the attachment of 4 bearings on to the top of the slide. The guide rails for this configuration are made from profile 45 x 32. Caps LR and cover profile AL also fit the y-axis.

LINEAR SYSTEM LR





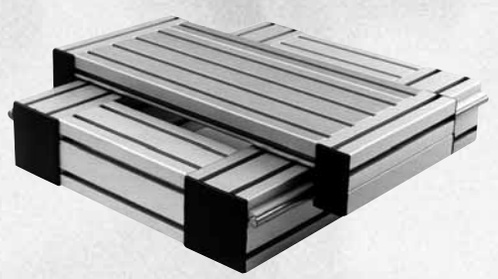
Load capacity



Calculation of max. moment loads as function of the slide length:

My max. = 0,89 • (L-45) Nm
Mz max. = 1,50 • (L-45) Nm

L = length of slide



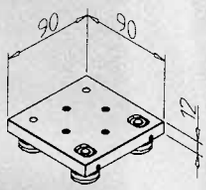
Linear system	**LR6**	**LR 12**				
Slides	Slide LR 6 4 bearings L = 90 mm	Slide 45 4 bearings L = 180 mm	Slide 90 4 bearings L = 180 mm	Slide 135 4 bearings L = 180 mm	Slide 180 4 bearings L = 180 mm	Slide 180 8 bearings L = 360 mm
Mx max.	30 Nm	79 Nm	107 Nm	130 Nm	165 Nm	240 Nm
My max.	75 Nm	120 Nm	120 Nm	120 Nm	120 Nm	275 Nm
Mz max.	40 Nm	202 Nm	202 Nm	202 Nm	202 Nm	470 Nm
Fy max.	800 N	3500 N	3500 N	3500 N	3500 N	7000 N
Fz max.	640 N	1500 N	1500 N	1500 N	1500 N	3000 N

Linear system	**LR 16**	
Slides	Slides LR 16-95	Slides LR 16-90
Mx max.	158 Nm	214 Nm
My max.	288 Nm	288 Nm
Mz max.	323 Nm	323 Nm
Fy max.	7000 N	7000 N
Fz max.	3000 N	3000 N

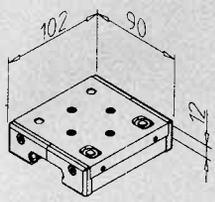
Maximal speed slide 45 - 180: 10 m/sec.
Maximal speed slide LR 6: 5 m/sec.

EXAMPLES OF SLIDES

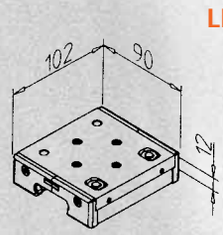
LR 6



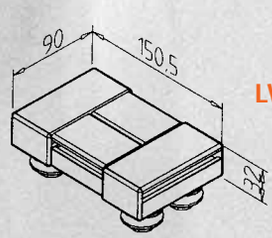
LR 6 Z with cover



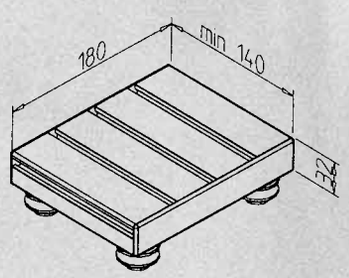
LR 6 Z



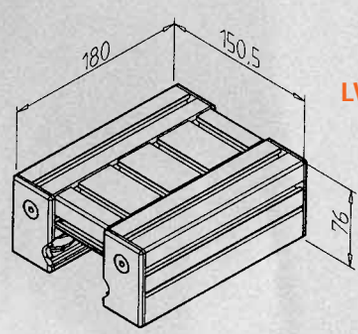
LW 32



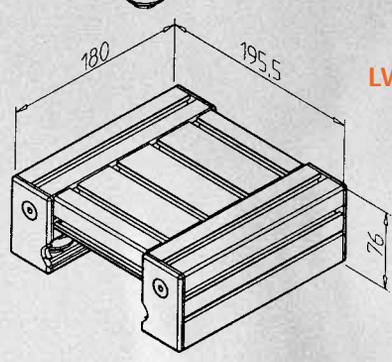
LW 32 E



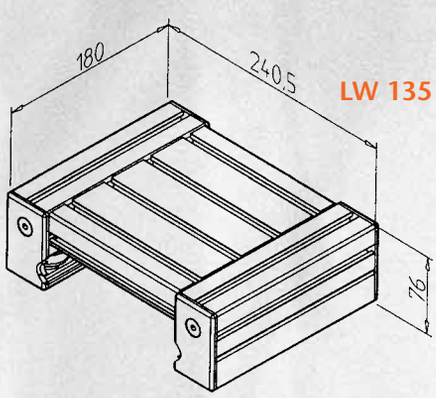
LW 45



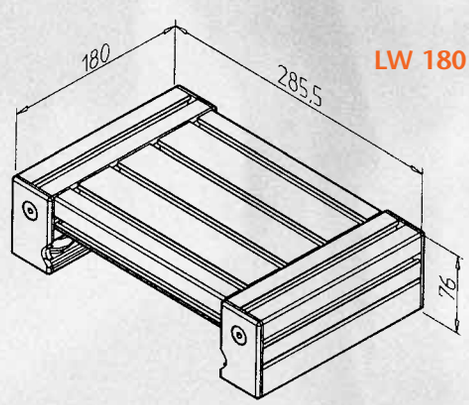
LW 90



LW 135



LW 180



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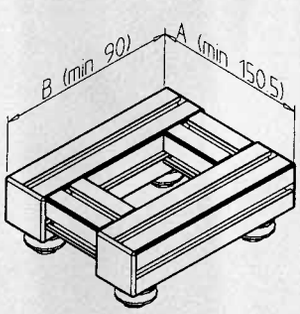

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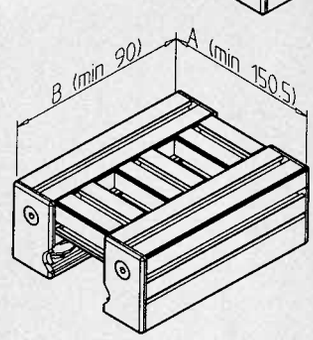
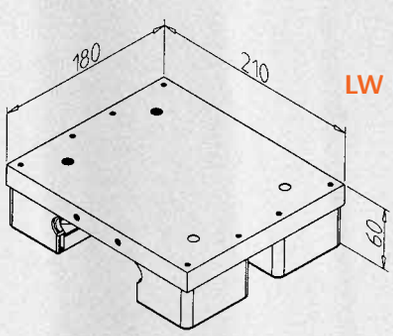
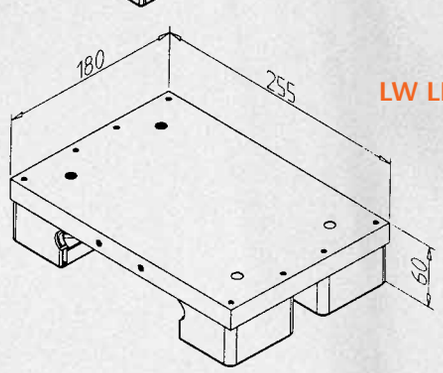


LW LR 16-45



LW LR 16-90

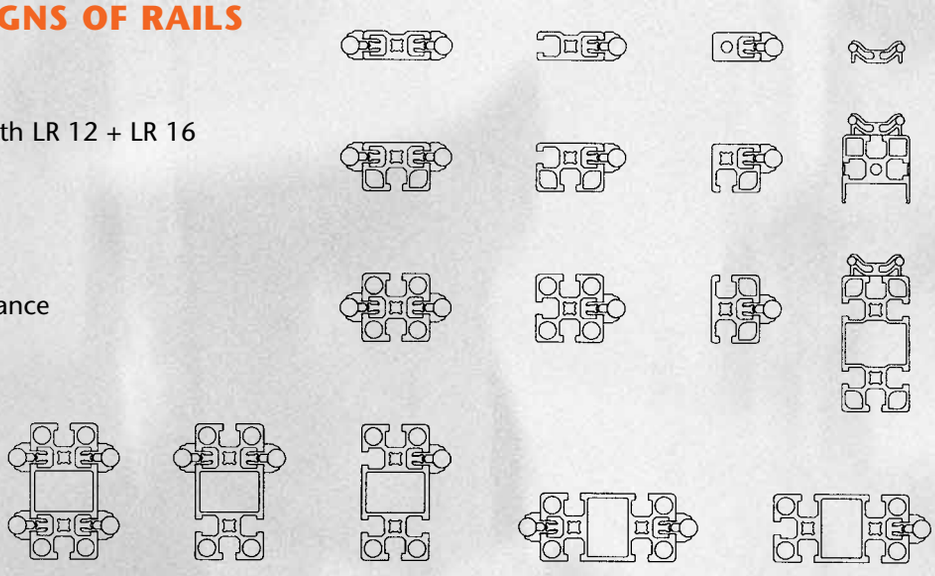


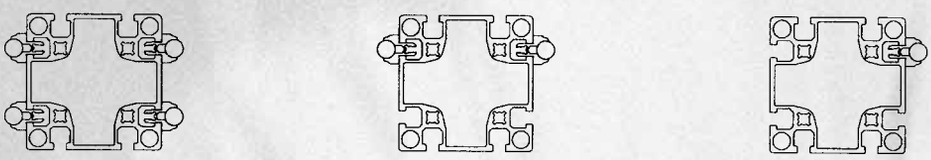
POSSIBLE DESIGNS OF RAILS

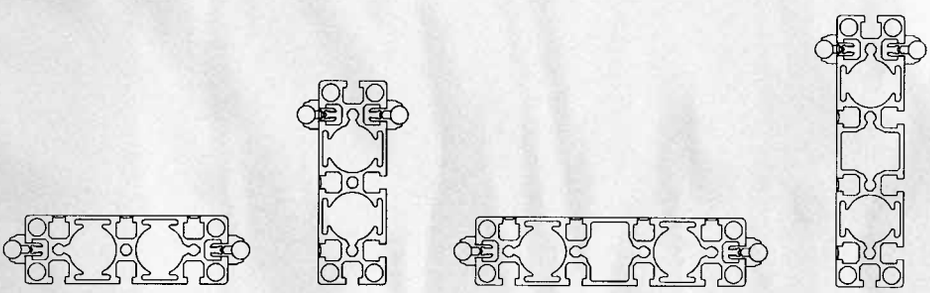
Calculation of rail length LR 12 + LR 16
(not for LR6)

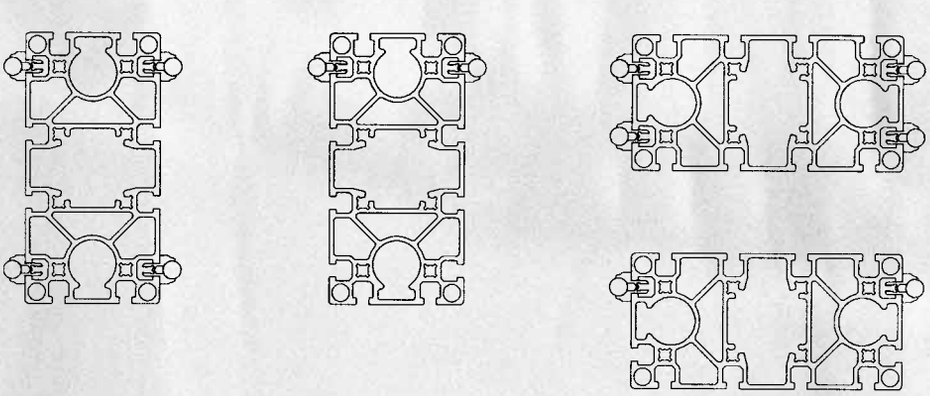
Travel
+ Slide length
+ 2 x Belt tensioner
+ 40 mm Security distance

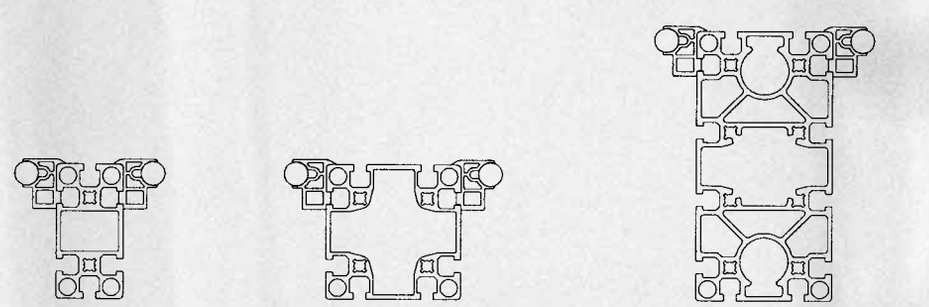
= Travel
+ Slide length
+ 180 mm



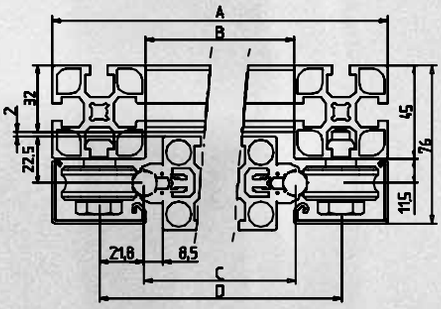




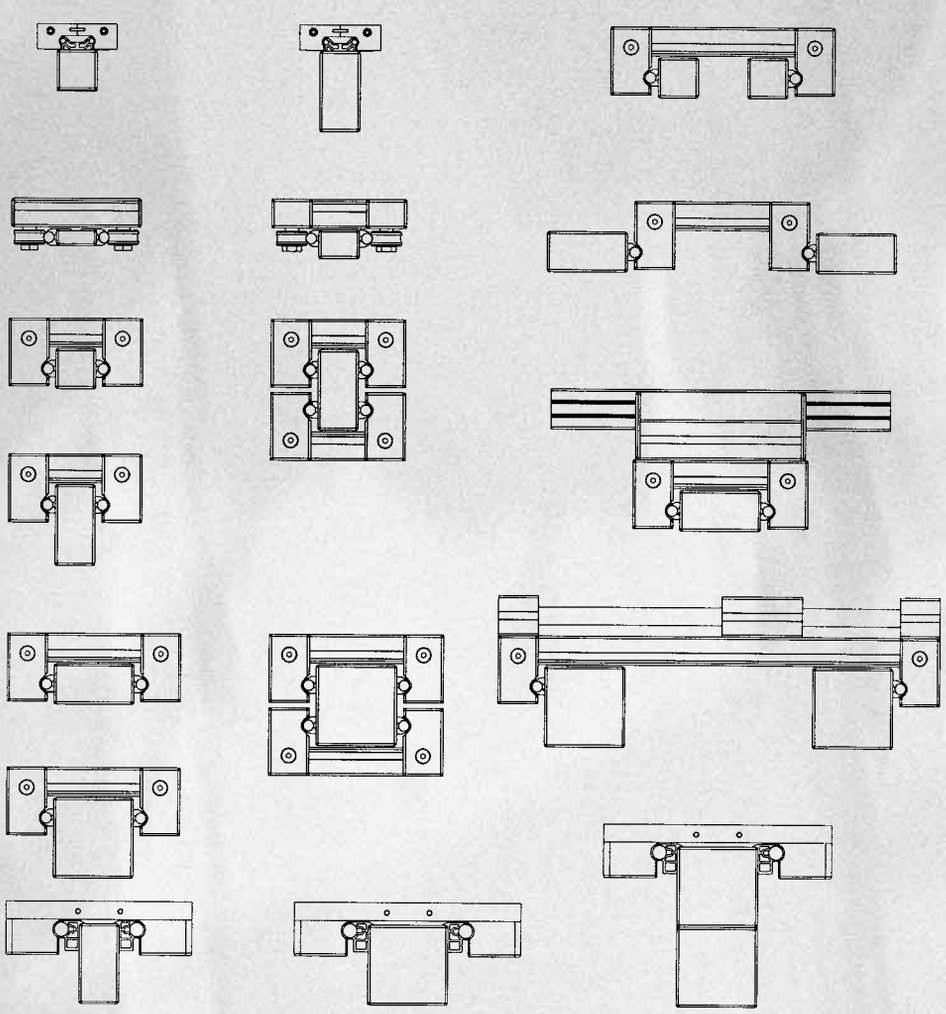


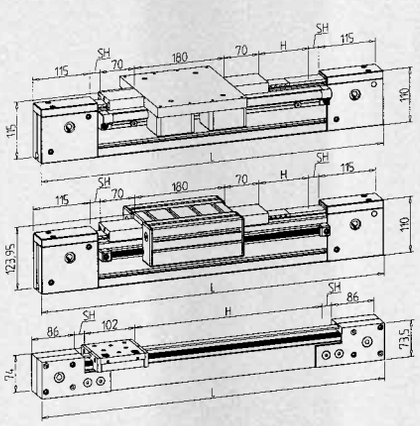


POSSIBLE COMBINATIONS OF RAILS AND SLIDES



Slide-type	LR 6	LW 45	LW 90	LW 135	LW 180	LR 16-45	LR 16-90
A	90	150,5	195,5	240,5	285,5	210	255
B	-	60,5	105,5	150,5	195,5	-	-
C	32	62	107	152	197	85	130
D	60	105,5	150,5	195,5	240,5	149,5	194,5





LR 12 + LR 16

Calculation of total length L:
Travel H
+ Slide length
+ 2 x Reverse unit
+ 2 x Belt tensioner
+ 40 mm Security distance SH

= Travel + slide length + 410 mm

LR 6

Calculation of total length L:
Travel H
+ Slide length (102)
+ 2 x Belt tensioner
+ 40 mm Security distance SH

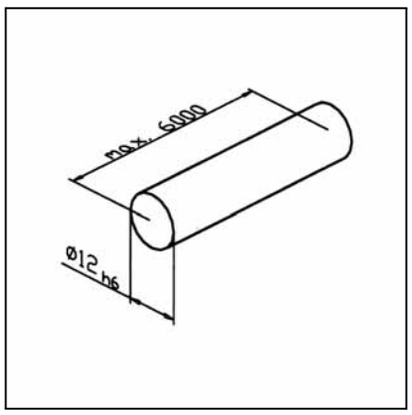
= Travel + 314 mm*

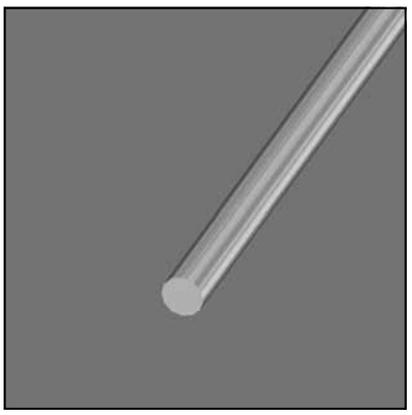
*Da die Riemenspannung über die Zahnriemenumlenkung aufgebracht wird, gilt dies nur als Anhaltswert!

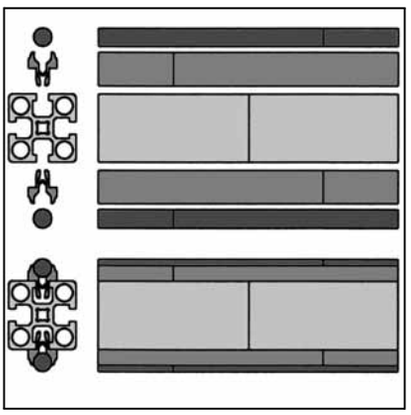
COMPONENTS LR

SHAFT 12

Part. N° 17.1741/0







TECH. DATA / ITEMD SUPPLIED	
- Cf 53, hardened 60 + 5 HRC, precision ground h6	
- Weight	0,888 kg/m
- max. Lenght	6 m
- **Stainless version Part N° 17.1760/0**	

APPLICATION

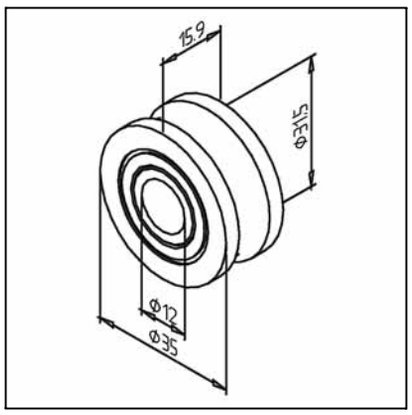
- All MiniTec linear guides LR

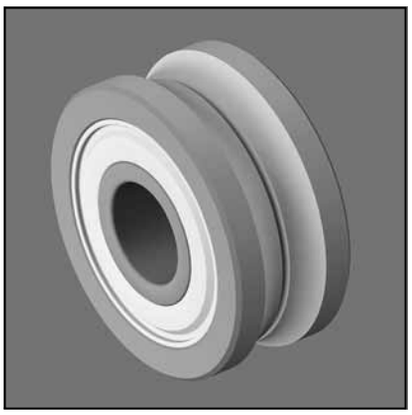
ASSEMBLY

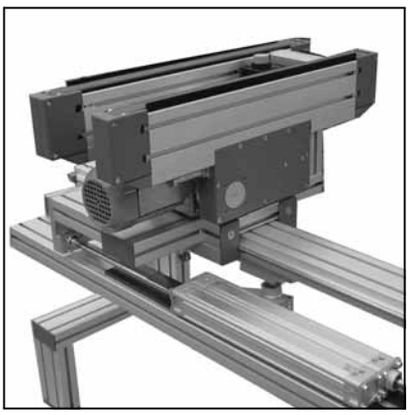
- Press shaft into supporting profile with appropriate tool (plastic mallet)
- For rails L > 6000 mm assemble profile, shaft supporting profile and shaft with offset joints

BALL BEARING LR 12

Part. N° 28.0001/0







TECH. DATA / ITEMD SUPPLIED	
- Double-rowangular contact bearing	
- For shaft 12	
- Load capacity:	
- dyn. C =	10.500 N
- stat. C_o =	6.000 N
- Weight	0,068 kg
- **Stainless version Part N° 28.0001/1**	

APPLICATION

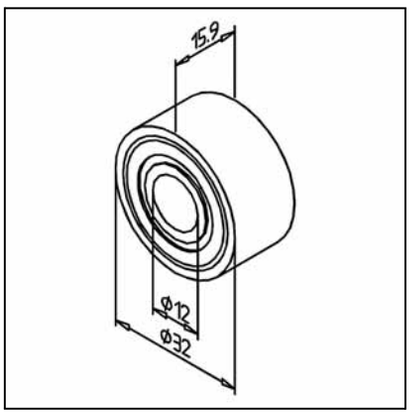
- All MiniTec linear guides LR

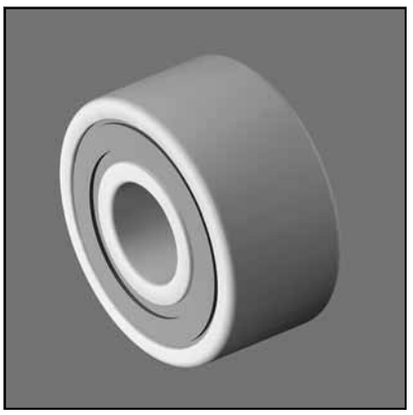
ASSEMBLY

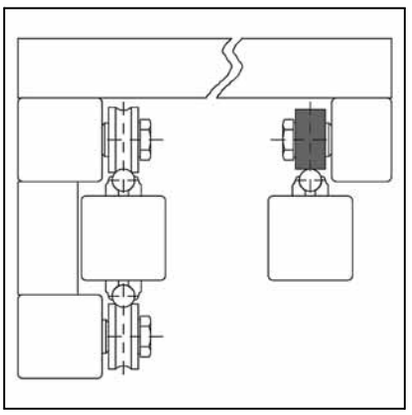
- With fixing kit LRK **Part N° 28.0021/0** or LRE **Part N° 28.0022/0**

BALL BEARING LR 12 L

Part. N° 28.0005/0







TECH. DATA / ITEMD SUPPLIED

- Double-rowangular contact bearing
- Load capacity:
- dyn. C = 8.600 N
- stat. C_o = 5.100 N
- Weight 0,060 kg

APPLICATION

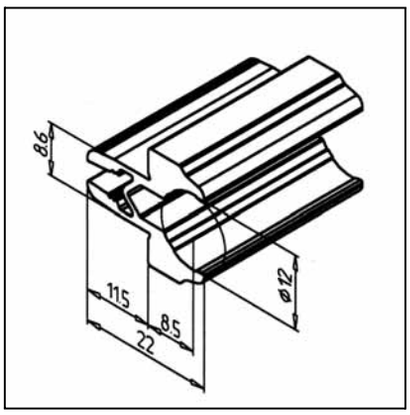
- MiniTec linear guiding systems with movable and fixed bearing side
- Balancing deviations in distance in parallel linear systems

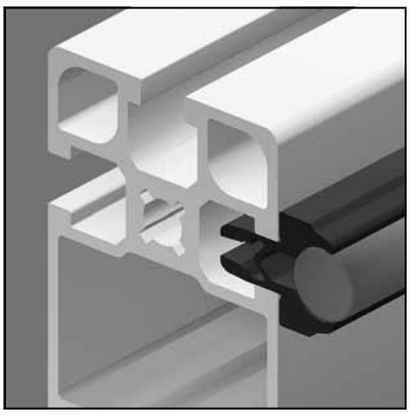
ASSEMBLY

- With fixing kit LRK **Part N° 28.0021/0** or LRE **Part N° 28.0022/0**

SHAFT SUPPORTING PROFILE

Part. N° 28.0002/0





TECH. DATA / ITEMD SUPPLIED

- Aluminium, natural anodized E6/EV1
- Weight 0,365 kg/m
- Lenght 6 m

APPLICATION

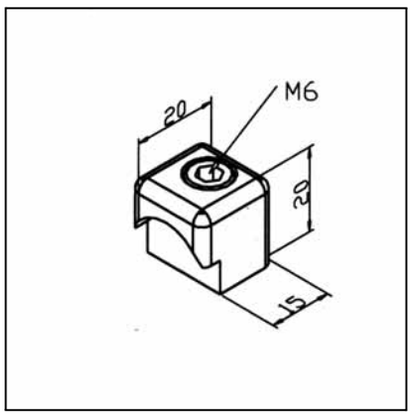
- MiniTec linear guides LR/LG

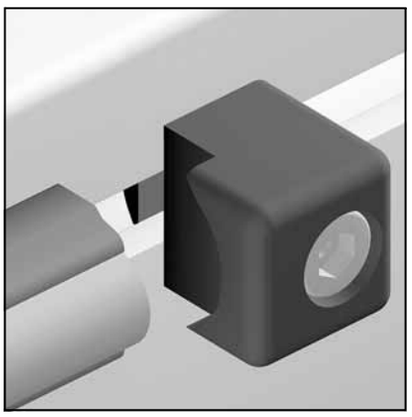
ASSEMBLY

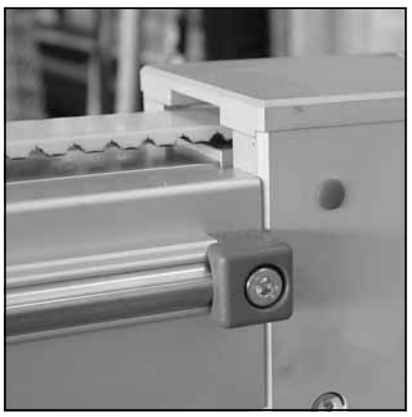
- Press into the groove of rail profile
- If necessary clamp with set-screw M5 x 10 in position
- Press shaft into supporting profile with appropriate tool (plastic mallet)

SHAFT RETENTION DEVICE

Part. N° 28.0052/0







TECH. DATA / ITEMD SUPPLIED

- Aluminium , powder coated, grey
- Fixing kit
- Weight 0,030 kg
- **Stainless version Part N° 28.0053/0**

APPLICATION

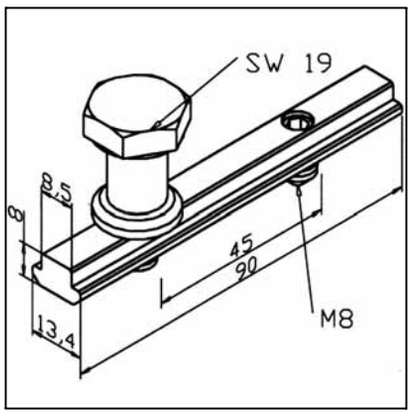
- Axial retention of shafts in dynamically stressed linear guides

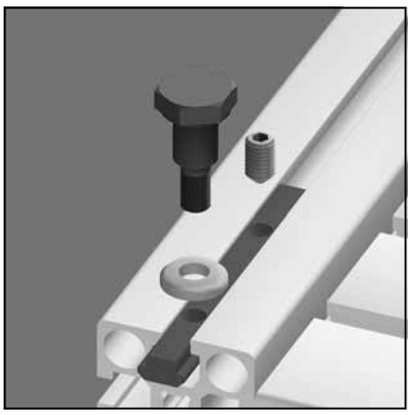
ASSEMBLY

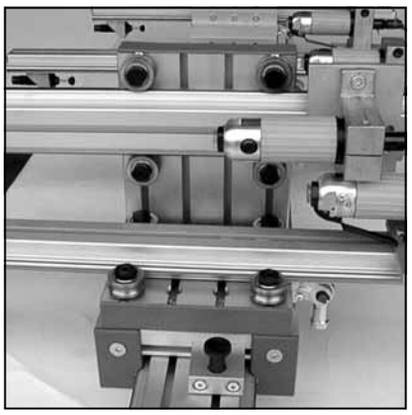
- Fix the retention device at both shaft ends with fixing kit from supply schedule
- No processing required

FIXING KIT LRK

Part. N° 28.0021/0







TECH. DATA / ITEMD 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 0,100 kg
- **Stainless version Part N° 28.0021/1**

APPLICATION

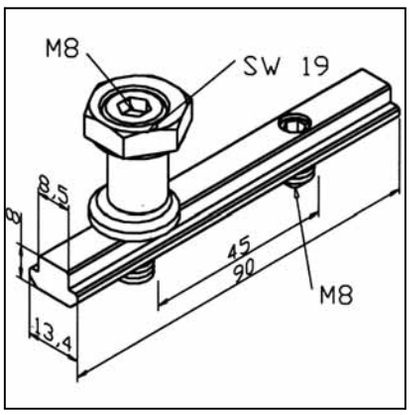
- All MiniTEec linear guides LR
- Concentric attachment of ball bearings LR 12

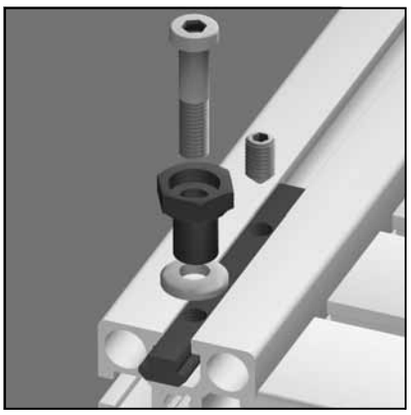
ASSEMBLY

- 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
- Recommed locking torque: 25 Nm

FIXING KIT LRE

Part. N° 28.0022/0





TECH. DATA / ITEMD SUPPLIED

- T-slot bar, steel, zinc plated with set-screw
- Eccentric bush, steel black finished
- Bolt M8, steel, black finished
- Washer 3,5 mm, steel, precision ground, black finished
- Weight 0,1 kg
- **Stainless version Part N° 28.0022/1**

APPLICATION

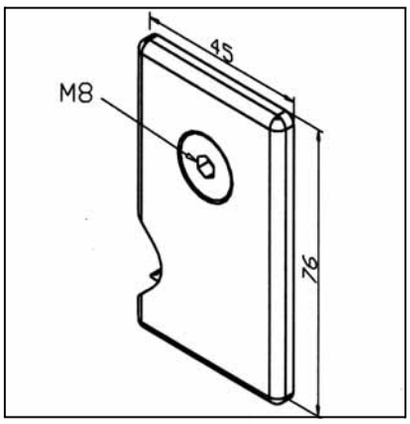
- All MiniTec linear guides LR
- Eccentric attachment of ball bearings LR 12

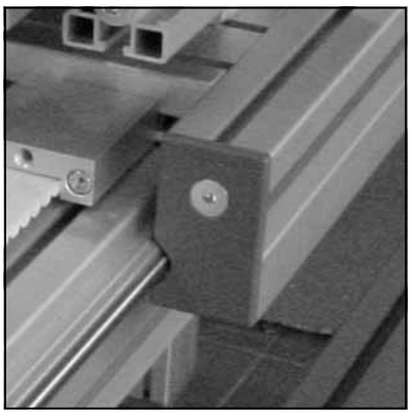
ASSEMBLY

- Mounting of T-slot bar: see fixing 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
- Recommed locking torque: 25 Nm

END CAP LR (RIGHT)

Part. N° 28.0004/1





TECH. DATA / ITEMD SUPPLIED

- ABS with integrated, spring-mounted stripping and greasin felt
- Fixing kit
- Weight 0,030 kg
- Also deliverable in black, **Part. N° 28.0004/0**

APPLICATION

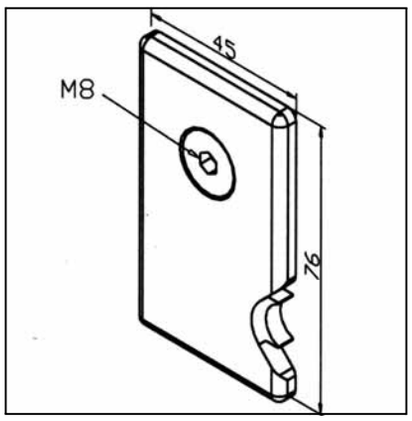
- All MiniTec linear guides LR

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 fixing kit from supply schedule
- Clean and relubricate the felt or replace it when neccesary **Part N° 28:0004/8**

END CAP LR (LEFT)

Part. N° 28.0004/3



TECH. DATA / ITEMD SUPPLIED

- ABS with integrated, spring-mounted stripping and greasin felt
- Fixing kit
- Weight 0,030 kg
- Also deliverable in black, **Part. N° 28.0004/2**

APPLICATION

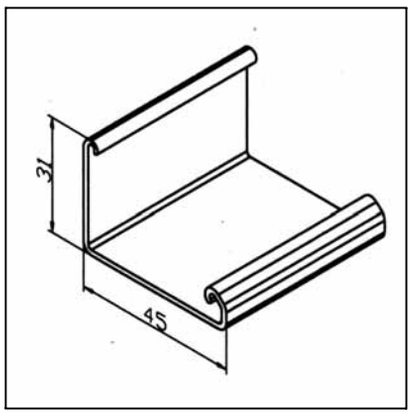
- All MiniTec linear guides LR

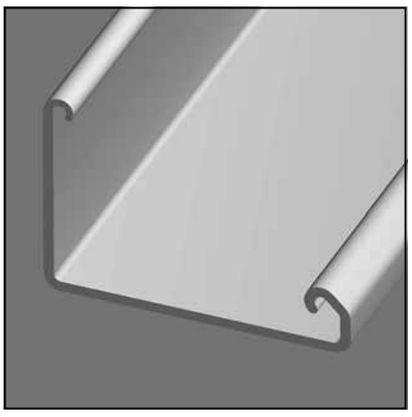
ASSEMBLY

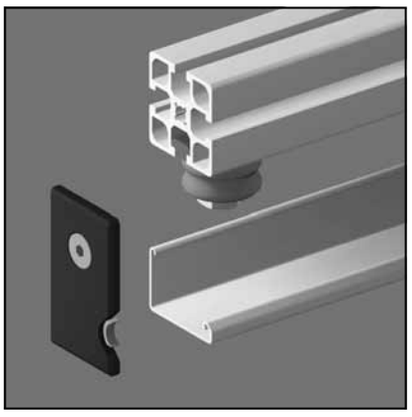
- Insert cover profile between the end caps
- Insert the lubricated felts and press fastening peg in profile 45 x 45 of the slide plate
- Use fixing kit from supply schedule
- Clean and relubricate the felt or replace it **Part N° 28.0004/8** when neccesary

COVER PROFILE LR

Part. N° 28.0049/0







TECH. DATA / ITEMD SUPPLIED

- Aluminium, naural anodized E6/EV1
- Weight 0,362 kg/m
- Lenght 6,000 m

APPLICATION

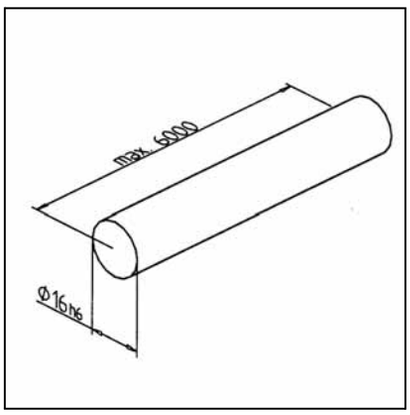
- All MiniTec linear guides LR

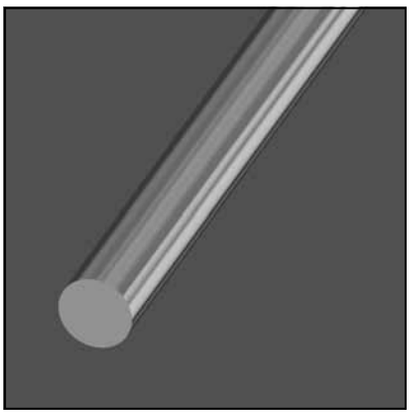
ASSEMBLY

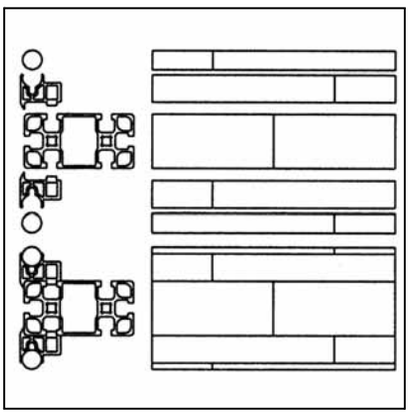
- Cut profile according to the length of the slide
- Insert the cover profile between the end caps; insert the felts; fasten the end caps LR on the slide by means of the supplied screws

SHAFT 16

Part. N° 17.1743/0







TECHN. DATA / ITEMS SUPPLIED	
- Cf 53, hardened 60 ± 5 HRC, precision ground h6	
- Weight	1,578 kg/m
- max. Lenght	6 m

APPLICATIONS

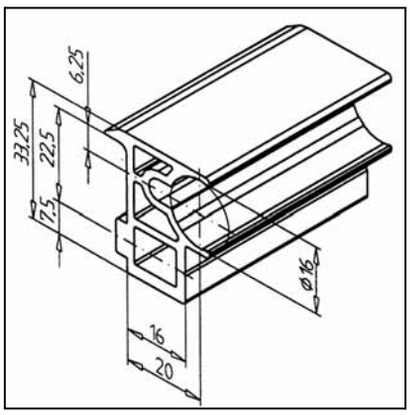
- MiniTec linear guide LR 16

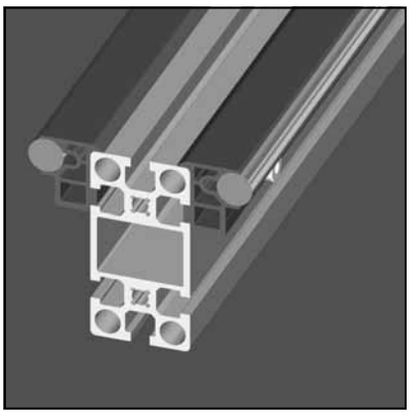
ASSEMBLY

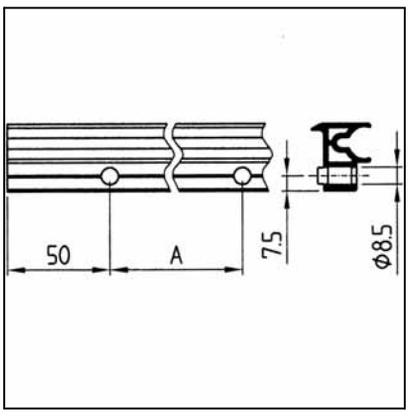
- Carefully hammer into the shaft carrier profile with a plastic-tipped hammer
- On guides with L > 6000 mm assemble profile, shaft support and shaft with offset joints

SHAFT SUPPORTING PROFILE LR 16

Part. N° 28.0019/0







TECHN. DATA / ITEMS SUPPLIED	
- Aluminium natur, eloxiert E6 / EV1	
- Weight	0,845 kg/m
- Lenght	6 m

APPLICATIONS

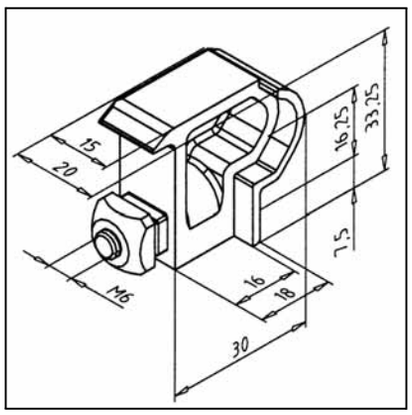
- MiniTec linear guide LR16

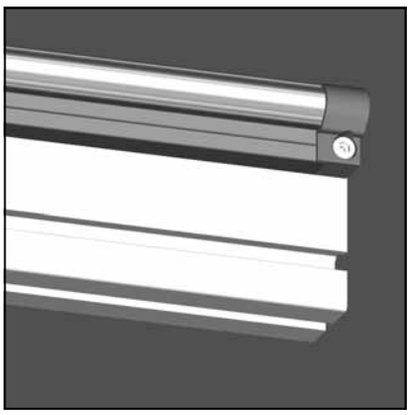
ASSEMBLY

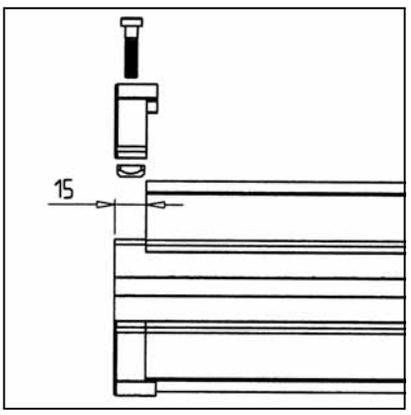
- Make holes with diameter 8.5 in the shaft carrier profile
- Recommended distance: 50 mm from the edge, then approximately every 200 - 300 mm
- Fasten to the carrier profile using M8 x 30 cheese-head screw and M8 slide nut
- Hammer the shaft into the shaft carrier profile with a plastic-tipped hammer

SHAFT FASTENER LEFT LR 16

Part. N° 28.0809/0







TECHNICAL DATA / INCLUDED ITEMS

- Aluminium GD, powder coated, grey
- With fastening materials
- Weight 0,04 kg

APPLICATIONS

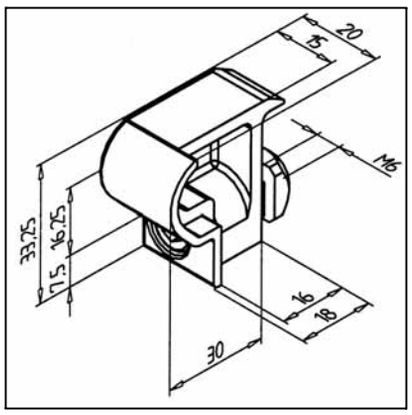
- Axial fastening of shafts in linear guides subject to heavy dynamic stress

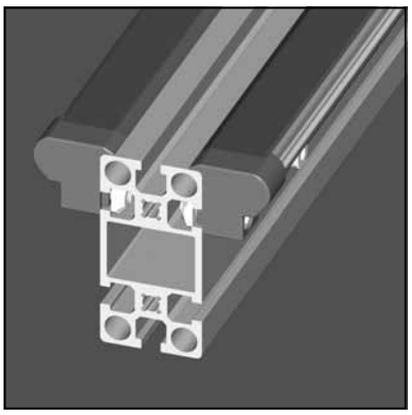
ASSEMBLY

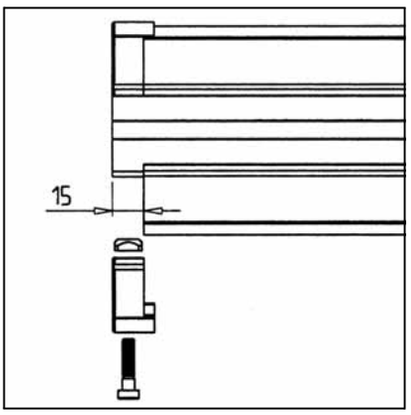
- Shaft carrier profile and shafts must be 15 mm shorter on each side than the carrier profile
- Attach the shaft fastening at both ends of the shaft with supplied fastening materials
- No machining is necessary

SHAFT RETENTION DEVICE RIGHT LR 16

Part. N° 28.0808/0







TECHN. DATA / ITEMS SUPPLIED

- Aluminium GD, powder coated, grey
- Fixing kit
- Weight 0,04 kg

APPLICATIONS

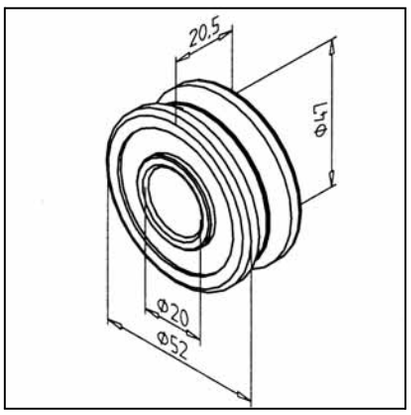
- Axial fastening of shafts in linear guides subject to heavy dynamic stress

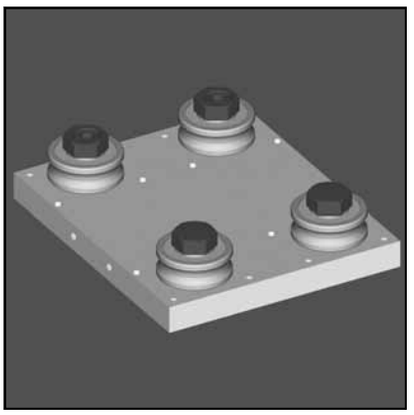
ASSEMBLY

- Shaft carrier profile and shafts must be 15 mm shorter on each side than the carrier profile
- Attach the shaft fastening at both ends of the shaft with supplied fastening materials
- No machining is necessary

BALL BEARING LR 16

Part. N° 50.1726/0





TECHN. DATA / ITEMS SUPPLIED

- Double-row angular contact bearing
- For shaft 16
- Load capacity
- dyn. C = 19.90 N
- stat. Co = 12.60 N
- Weight 0,2 kg

APPLICATIONS

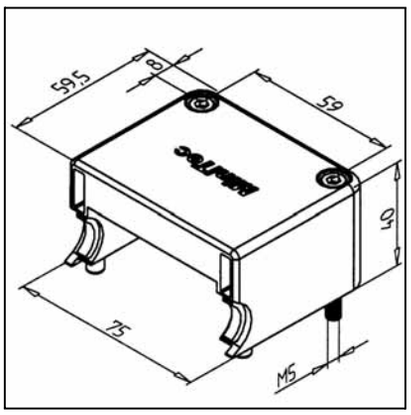
- MiniTec linear guides LR 16

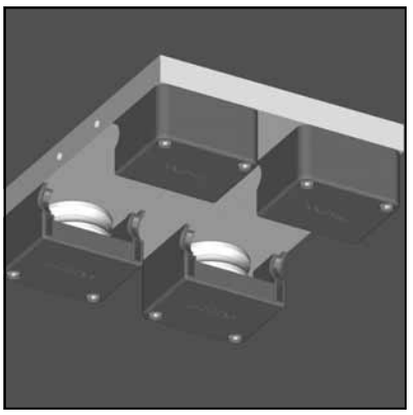
ASSEMBLY

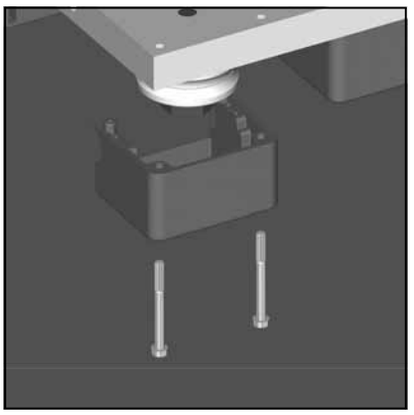
- Fastening with central bush **Part. N° 28.0814/0** or adjustable with eccentric bush **Part N° 28.0813/0** and M 12 x 40 bolt **Part N° 21.1257/0**

END CAP LR 16

Part. N° 28.0815/0







TECHN. DATA / ITEMS SUPPLIED

- ABS with integrated, spring-mounted stripping and greasin felt
- Fixing kit
- Weight 0,055 kg

APPLICATIONS

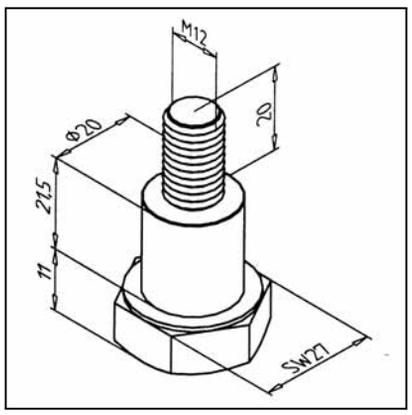
- MiniTec linear guides LR 16

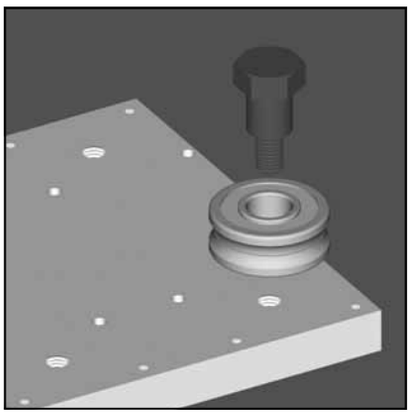
ASSEMBLY

- Use fixing kit from supply schedule
- Depending on the conditions, clean and soak the felt or insert a replacement felt **Part. N° 28.0816/0**

BOLT CONCENTRIC LR 16

Part. N° 28.0814/0





TECHNICAL DATA / INCLUDED ITEMS

- Bolt M12 concentric, steel, black gunmetal finish
- Weight 0,12 kg

APPLICATIONS

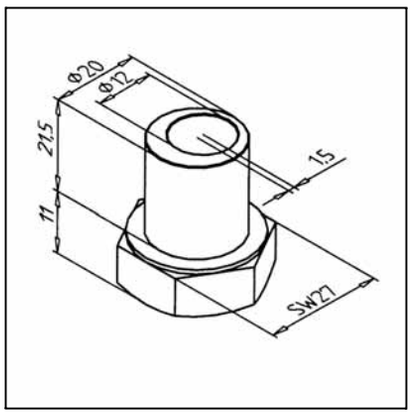
- MiniTec linear guides LR 16
- Concentric fastening of ball bearings LR 16

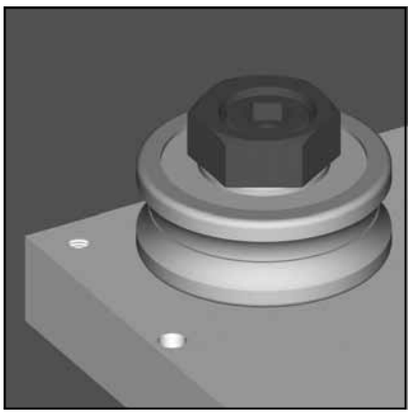
ASSEMBLY

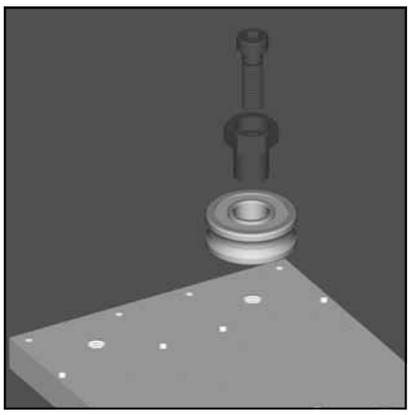
- MiniTec linear guides LR 16
- Recommended tightening torque:50 Nm

ECCENTRIC BUSH

Part. N° 28.0813/0







TECHN. DATA / ITEMS SUPPLIED

- Eccentric bush, steel, black gunmetal finish
- Weight 0,059 kg

APPLICATIONS

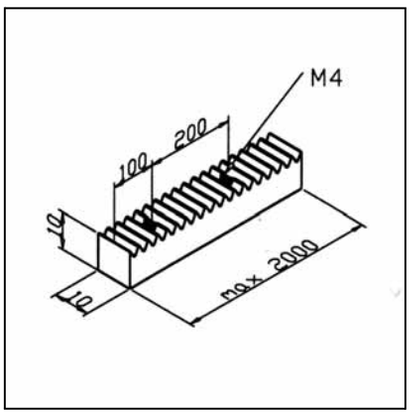
- MiniTec linear guides LR 16
- Eccentric fastening of ball bearings LR 16

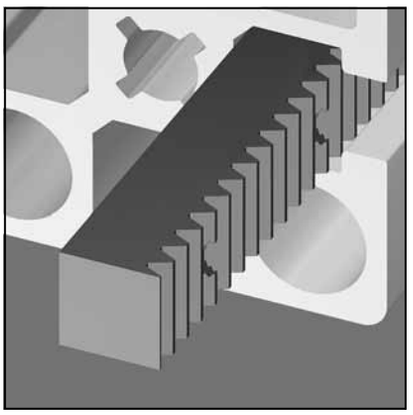
ASSEMBLY

- Insert screw M12 x 40 **Part. N° 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:50 Nm

TOOTHED RACK 8

Part. N° 28.0051/0





TECH. DATA / ITEMD SUPPLIED

- Steel
- Modul 1
- 1 set-screw M4 x 8 in 200 mm grid
- Weight 0,785 kg/m
- Lenght 2 m

APPLICATION

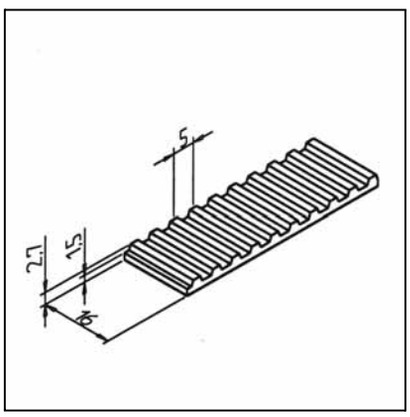
- Linear guides with extremely long travels
- Linear guides with compact dimension overall
- Recurring height sectioning and longuitudinal sectioning in 3,14 mm grid (e.g. sorting frame)

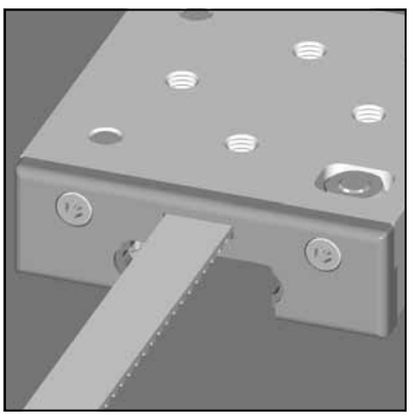
ASSEMBLY

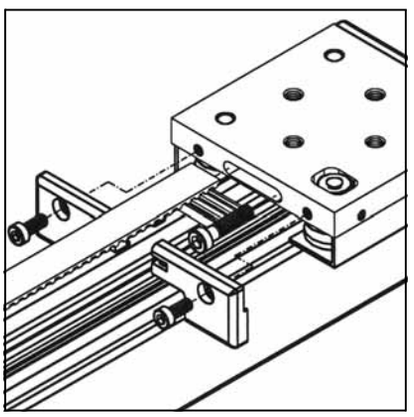
- Push toothed rack into profile groove
- Secure with set-screw M4

TIMING BELT 16 AT 5

Part. N° 28.0502/0







TECH. DATA / ITEMD SUPPLIED

- PUR white, steel-wire reinforced
- Typ 16 AT 5
- Weight 0,052 kg/m
- Load max. 1260 N

APPLICATION

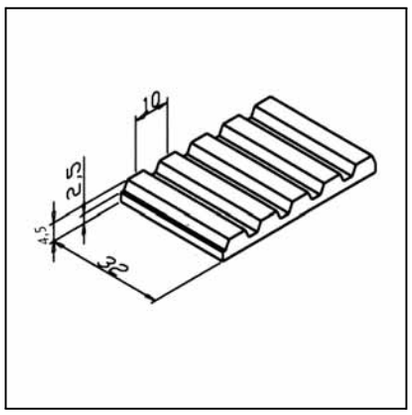
- Suitable for all MiniTec linear guides LR 6 Z

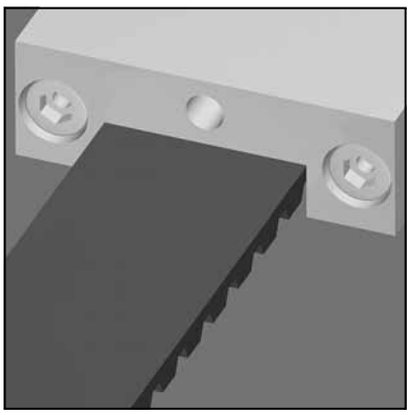
ASSEMBLY

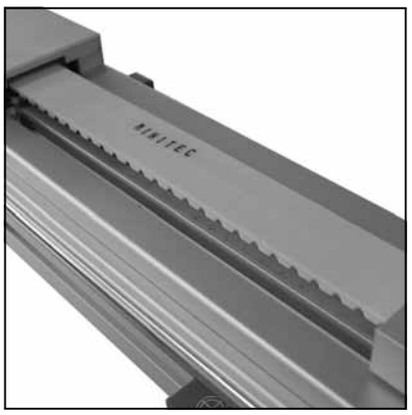
- Fix both sides in slide LR 6 Z
- Belt length calculation: 2 x rail length + 260 mm

TIMING BELT 32 AT 10

Part. N° 28.0093/0







TECH. DATA / ITEMD SUPPLIED	
- PUR white, reinforced with integrated wires	
- Typ 32 AT 10	
- Weight	0,190 kg/m
- Load max.	4750 N

APPLICATION

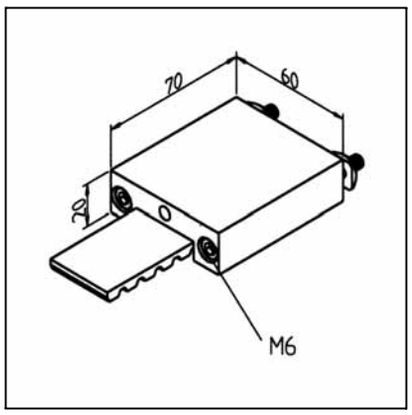
- For all MiniTec linear guides LR
- For belt drives

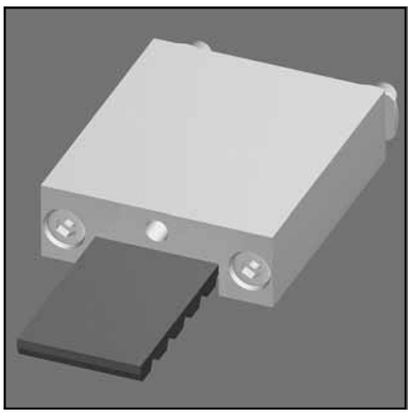
ASSEMBLY

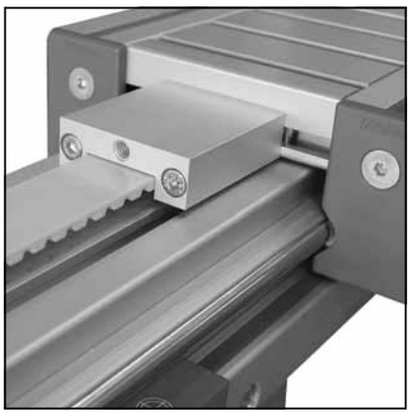
- Fix timing belt o timing belt tensioner
- Calculations belt lenght: see page 265

TIMING BELT TENSIONER

Part. N° 28.0090/0







TECH. DATA / ITEMD SUPPLIED	
- Housing, aluminium, natural anodized	
- Tensioning plug, steel, zinc plated with mateling with 3 teeth	
- Fitting for tming belt AT 10	
- Fixing kit	
- Weight	0,236 kg
- Stainless version Part N° 28.0090/1	

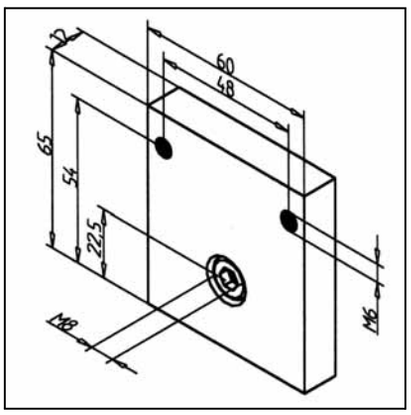
APPLICATION

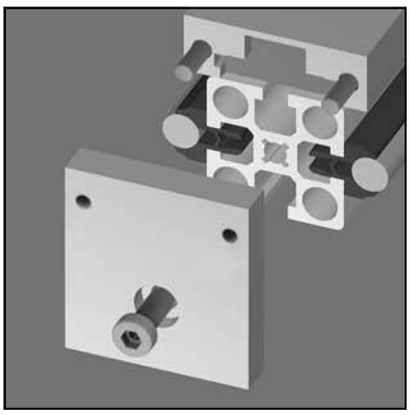
- For each end of the timing belt a tming belt tensioner is neccesary
- For all MiniTec linear guides LR
- For MiniTec belt drive

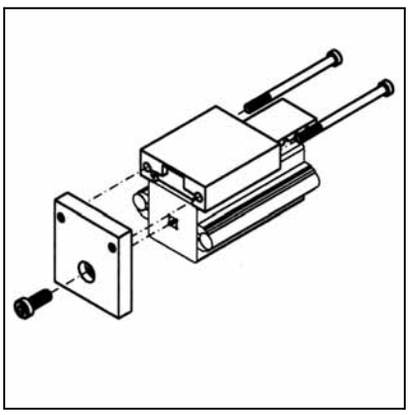
ASSEMBLY

- Subsequent fixing on the face of the slide with fixing kit from supply schedue
- After fixing on slide face, tension the belt central tensioning screw M8, 5 A/F
- Recommed stretching: after coordination

FASTENING KIT FOR TIMING BELT TENSIONNING DEVICE 45 Part. N° 28.0054/0







TECH. DATA / ITEMD SUPPLIED	
- Plate aluminium, natural anodized	
- Fixing kit	
- Weight	0,089 kg

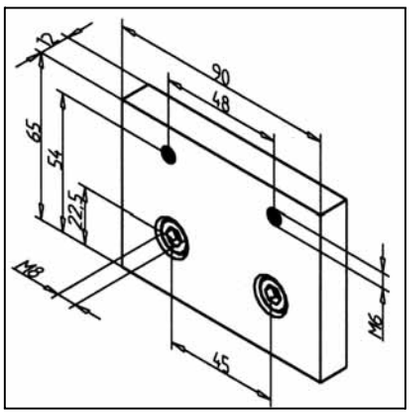
APPLICATION

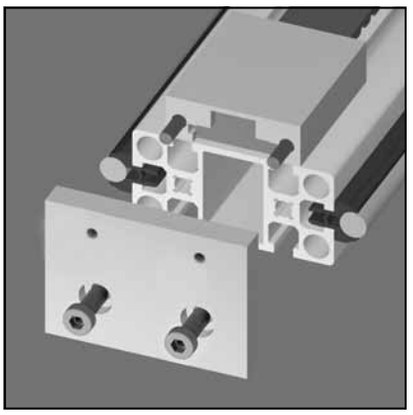
- **In connection with belt drive**
- For each timing belt tensioner one fastening kit is neccesary
- Attachment of timing belt tensioner on rail 45

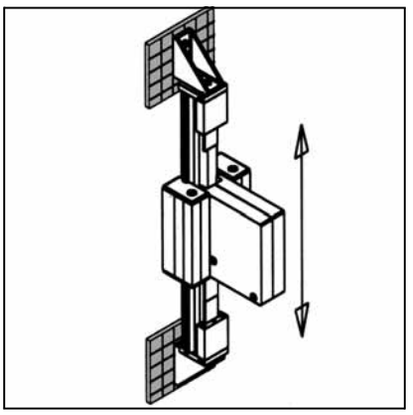
ASSEMBLY

- Fasten with fixing kit from supply schedule on rail end; thread M8 required
- Mount timing belt tensioner

FASTENING KIT FOR TIMING BELT TENSIONNING DEVICE 45 X 90 F Part. N° 28.0055/0







TECH. DATA / ITEMD SUPPLIED	
- Plate aluminium, natural anodized	
- Fixing kit	
- Weight	0,089 kg

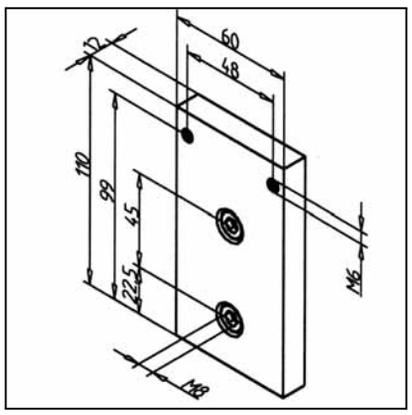
APPLICATION

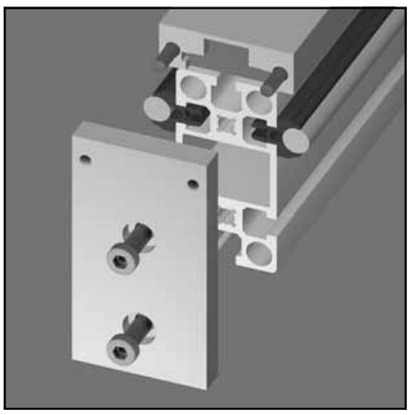
- For each timing belt tensioner one fastening kit is neccesary
- Attachment of timing belt tensioner on rail 45 x 90 F in connection with belt drive

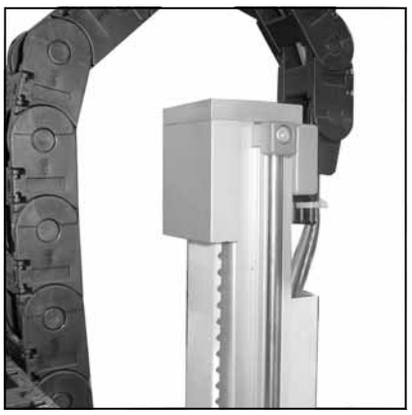
ASSEMBLY

- Fasten with fixing kit from supply schedule on rail end; thread M8 required
- Mount timing belt tensioner

FASTENING KIT FOR TIMING BELT TENSIONING DEVICE 45X90H Part. N° 28.0056/0







TECH. DATA / ITEMD SUPPLIED

- Plate aluminium, natural anodized
- Fixing kit
- Weight 0,089 kg

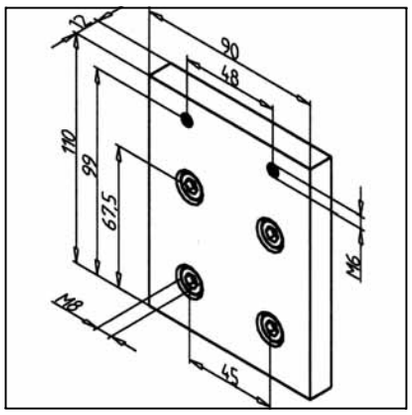
APPLICATION

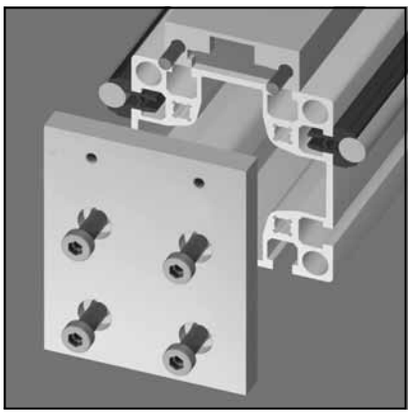
- For each timing belt tensioner one fastening kit is neccesary
- Attachment of timing belt tensioner on rail 45 x 90 H in connection with belt drive

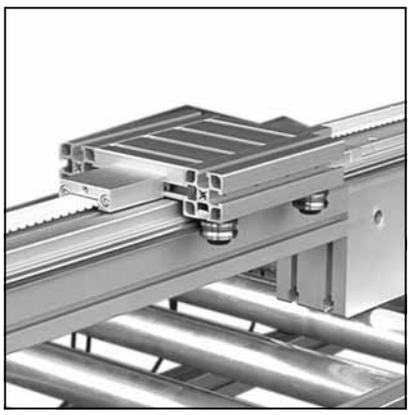
ASSEMBLY

- Fasten with fixing kit from supply schedule on rail end; thread M8 required
- Mount timing belt tensioner

FASTENING KIT FOR TIMING BELT TENSIONING DEVICE 90 Part. N° 28.0057/0







TECH. DATA / ITEMD SUPPLIED

- Plate aluminium, natural anodized
- Fixing kit
- Weight 0,089 kg

APPLICATION

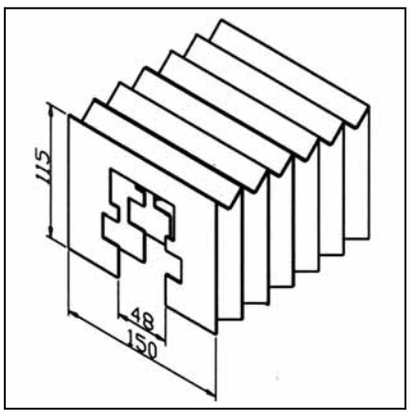
- For each timing belt tensioner one fastening kit is neccesary
- Attachment of timing belt tensioner on rail 90 in connection with belt drive

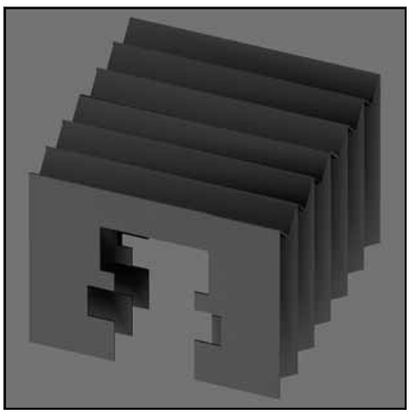
ASSEMBLY

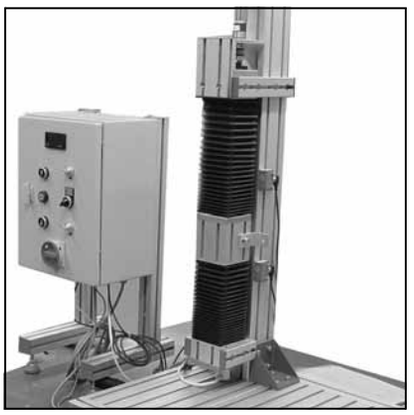
- Fasten with fixing kit from supply schedule on rail end; thread M8 required
- Mount timing belt tensioner

PROTECTIVE BELLOW LR 45

Part. N° 33.3007/0







TECH. DATA / ITEMD SUPPLIED	
- Plastic, black with plastic frame	
- Without fixing kit	
- Length when pushed together for 1 m travel: - 110 mm	
- Weight	0,650 kg/m
- max. Lenght	6 m

APPLICATION

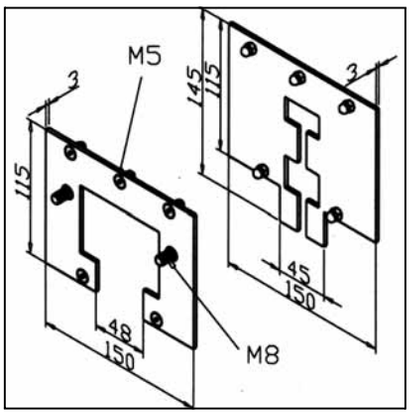
- Cover of MiniTec linear guides LR 45
- Rough working conditions, dust, chips

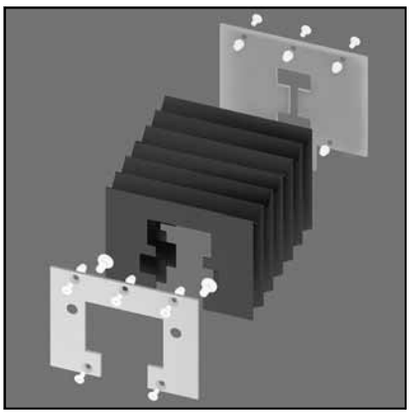
ASSEMBLY

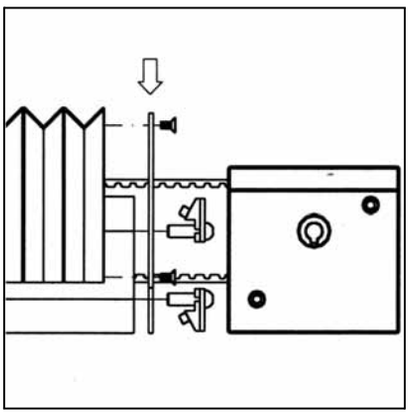
- Push bellow onto rail
- Fix ends with fastening kit for protective bellow **Part N° 33.3010/0**
- The travel length is reduced by approx. 22% when bellow is used
- Caution: Consider higher friction moment when dimensioning drive unit!

FASTENING KIT FOR PROTECTIVE BELLOW LR 45

Part. N° 33.3010/0







TECH. DATA / ITEMD SUPPLIED
- 1 End frame slide
- 1 End frame pulley
- Fixing kit for frame and bellow

APPLICATION

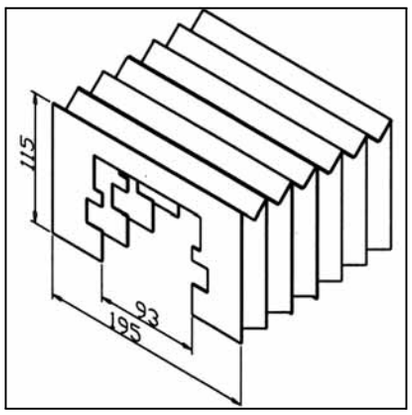
- Fastening of protective bellow LR 45 on slide LW 45
- Fastening of protective bellow LR 45 on timing belt pulley T 45

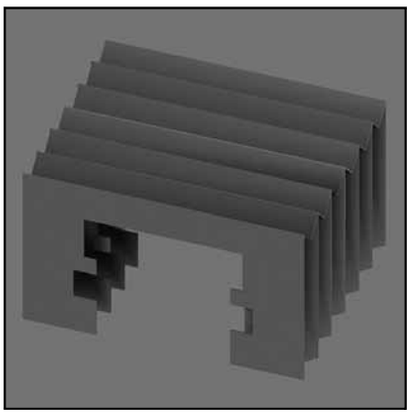
ASSEMBLY

- Fasten end frame on slide
- Push protective bellow on rail
- Loosen power-lock fastener on the pulley side and isert 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

PROTECTIIVE BELLOW LR 90

Part. N° 33.3008/0





TECH. DATA / ITEMD SUPPLIED	
- Plastic, black with plastic frame	
- Without fixing kit	
- Length when pushed together for 1 m travel: - 110 mm	
- Weight	0,750 kg/m
- max. Lenght	6 m

APPLICATION

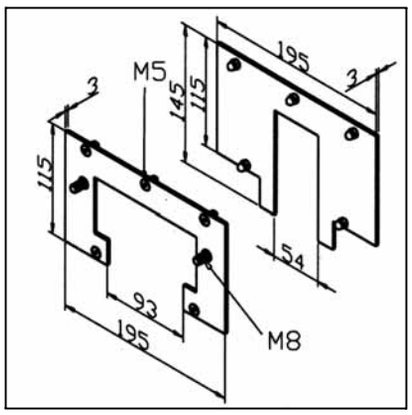
- Cover of MiniTec linear guides LR 90
- Rough working conditions, dust, chips

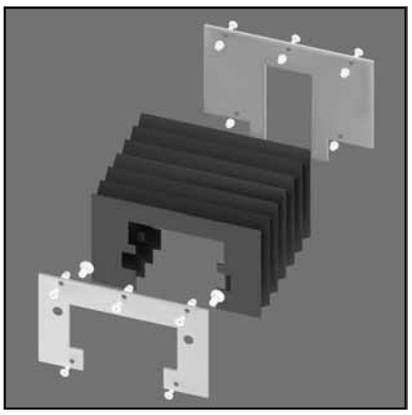
ASSEMBLY

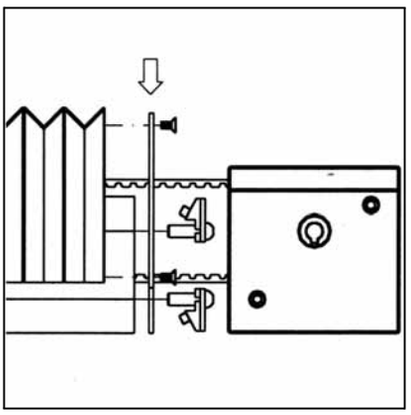
- Push bellow onto rail
- Fix ends with fasteing kit for protective bellow a **Part N° 33.3011/0** at slide or reverse unit
- The travel length is reduced by approx. 22% when bellow is used
- Caution: Consider higher friction moment when dimensioning drive unit!

FASTENING KIT FOR PROTECTIVE BELLOW LR 90

Part. N° 33.3011/0







TECH. DATA / ITEMD SUPPLIED
- 1 End frame slide
- 1 End frame pulley
- Fixing kit for frame and bellow

APPLICATION

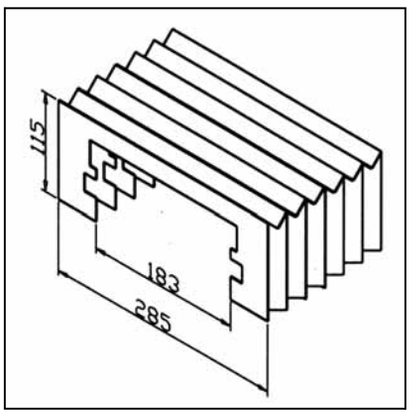
- Cover of MiniTec linear guides LR 90
- Rough working conditions, dust, chips

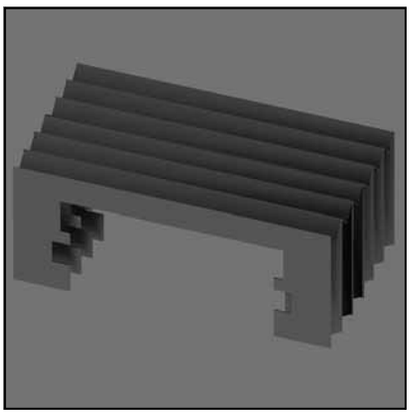
ASSEMBLY

- Push bellow onto rail
- Fix ends with fastening kit for protective bellow **Part N° 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!

PROTECTIVE BELLOW LR 180

Part. N° 33.3009/0





TECH. DATA / ITEMD SUPPLIED

- Plastic, black with plastic frame
- Without fixing kit
- Length when pushed together for 1 m travel: - 110 mm
- Weight 0,95 kg/m
- max. Lenght 6 m

APPLICATION

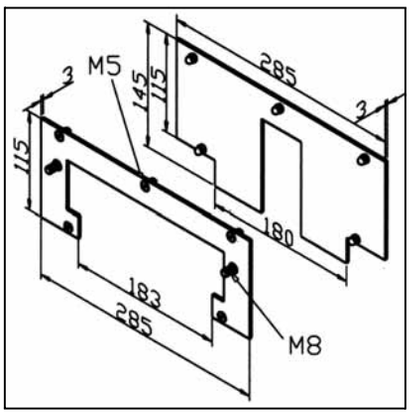
- Cover of MiniTec linear guides LR 180
- Rough working conditions, dust, chips

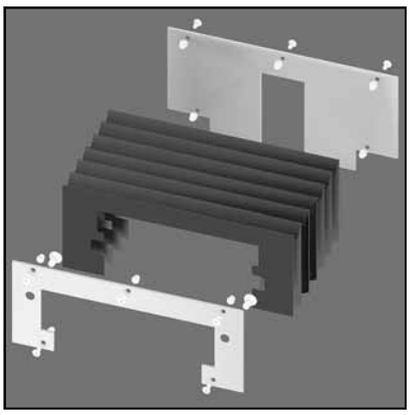
ASSEMBLY

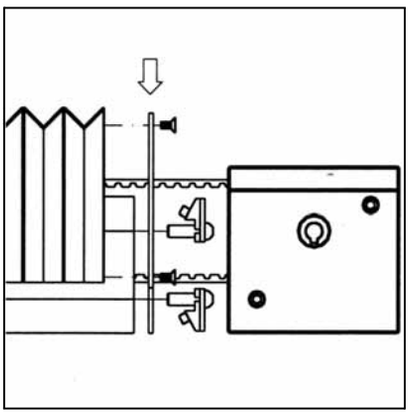
- Push bellow onto rail
- Fix ends with fasteing kit for protective bellow a **Part N° 33.3012/0** at slide or reverse unit
- The travel length is reduced by approx. 22% when bellow is used
- Caution: Consider higher friction moment when dimensioning drive unit!

FASTENING KIT FOR PROTECTIVE BELLOW LR 180

Part. N° 33.3012/0







TECH. DATA / ITEMD SUPPLIED

- 1 End frame slide
- 1 End frame pulley
- Fixing kit for frame and bellow

APPLICATION

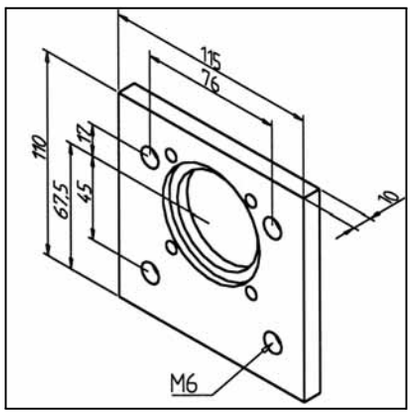
- Fastening of protective bellow LR 180 on slide LW 180

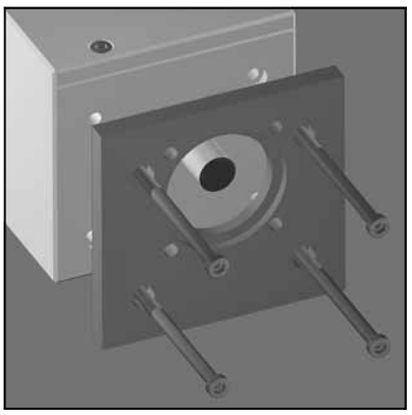
ASSEMBLY

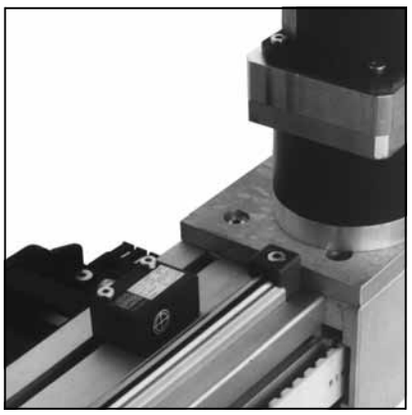
- Fasten end frame on slide
- Push protective bellow on rail
- Loosen power-lock fastener on the pulley side and insert end frame pulley between rail and timing belt pulley; tighten power-lock fastener
- Fasten protective bellow by means of the supplied screws on the end frame

ADAPTOR PLATE

Part. N° 28.0112/0







TECH. DATA / ITEMD SUPPLIED

- Aluminium, natural
- Dimension according to customers specification

APPLICATION

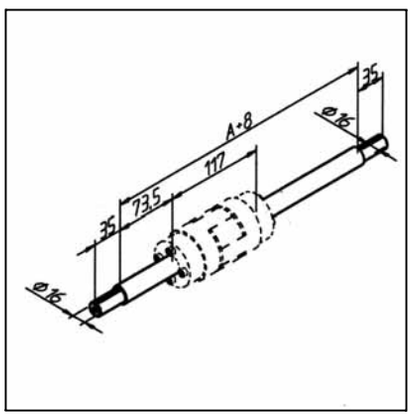
- Attachment of motors, timing belt pulley and counter

ASSEMBLY

- Mount on timing belt pulley

CONNECTING SHAFT 45

Part. N° 17.1706/0



TECH. DATA / ITEMD SUPPLIED

- Steel, Ø 20 mm
- Length and processing of ends according to customer specification
- 2 pieces, clutch not included
- Fixing kit
- Weight 2,470 kg/m
- + Spring

APPLICATION

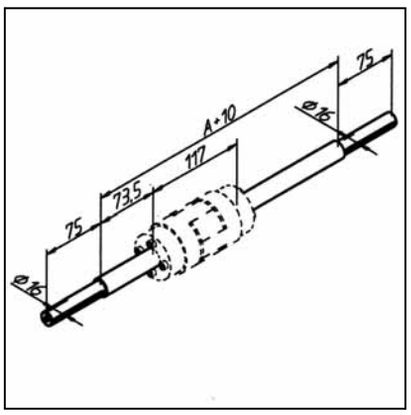
- Simultaneous transmission of 2 parallel linear guides
- Install support bearing for longer shafts

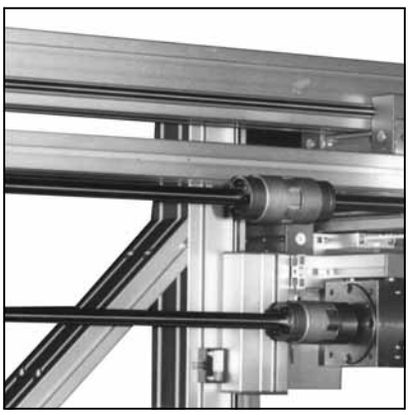
ASSEMBLY

- Fasten shafts with spring in timing belt pulley
- Connect both shaft pieces with clutch **Part N° 28.0180/0**

CONNECTING SHAFT 90

Part. N° 17.1706/1





TECH. DATA / ITEMD SUPPLIED

- Steel, Ø 20 mm
- Length and processing of ends according to customer specification
- 2 pieces, clutch not included
- Fixing kit
- Weight 2,470 kg/m
- + Spring

APPLICATION

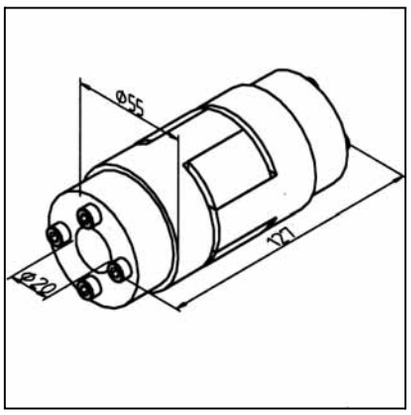
- Simultaneous transmission of 2 parallel linear guides
- For longer shafts use additional support bearing

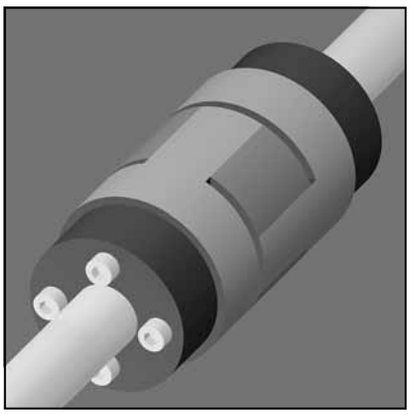
ASSEMBLY

- Fasten shaft with spring in timing belt pulley
- Connect both shaft pieces with clutch **Part N° 28.0180/0**

CLUTCH 20

Part. N° 28.0180/0





TECH. DATA / ITEMD SUPPLIED

- Clutch, steel with plastic inlay
- 2 tensioning sets, steel
- Weight 0,500 kg
- Locking torque max. 30 Nm

APPLICATION

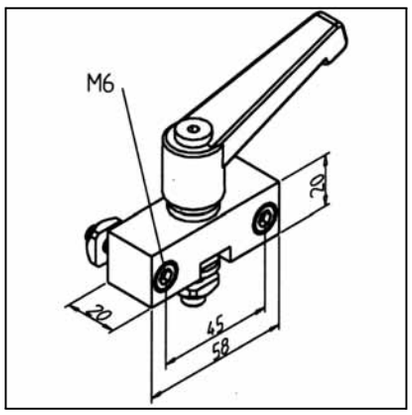
- Correction of motors to reverse unit
- Correction of misalignment for simultaneous transmission of 2 parallel linear guides with connecting shaft 45 a **Part N° 17.1706/0** or connecting shaft **Part N° 17.1706/1**

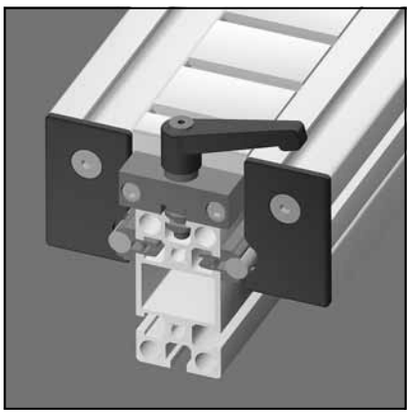
ASSEMBLY

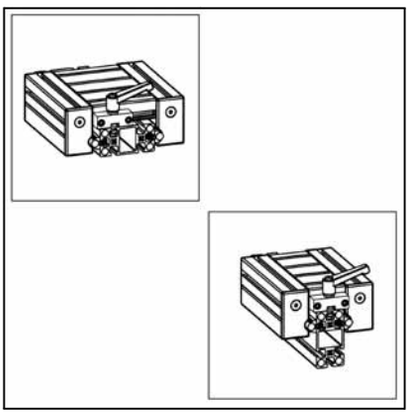
- Attachment with integrated tensioning device
- Position of both reverse units continuously adjustable

SLIDE CLAMPING UNIT (TOP) LWG / LWN / LW

Part. N° 28.0270/0







TECH. DATA / ITEMD SUPPLIED

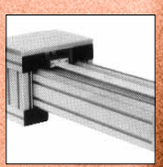
- Housing, aluminium, anodized E2/E6/EV1
- Clamp
- Fixing kit
- Weight 0,225 kg

APPLICATION

- Clamping of MiniTec slide LW and slides LWN / LWG on rail surface
- Clamping of MiniTec adjusting units

ASSEMBLY

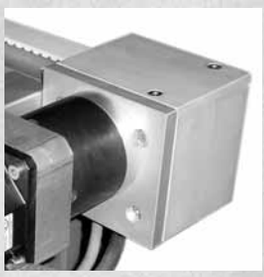
- Preadjust clamping shaft and lead it in profile groove
- Insert plastic element
- Mount housing block
- Secure clamping lever with mounting adhesive on clamping shaft



SYSTEM LR - READY FOR USE MODULES LR

CONNECTION OF MOTORS

Timing belt pulley T 45
Rotary-current-, step or servo-motors with max. shaft diameter of 16 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.



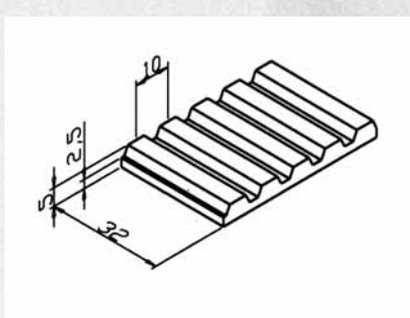
Timing belt pulley T 90
Rotary-current-, step or servo-motors with max. shaft diameter of 24 mm are suitable. Assemble directly on the timing belt pulley.
The pulley bore with fitting key groove and the connection side of the reverse unit will be designed according to customer specification.

Belt drive 45 und 90
Motors with hollow shafts can be attached directly on the slide-plate. Step and servo motors are connected via a coupling on the drive of the belt drive, diameter 17.
Shaft, slide-plate or adapter plate are also available according to customer specification.

Technical Data

Timing belt pulley:	LR6	T 45	T 90	Belt drive
Pulley				
D =	56,05 mm	58,6 mm	58,6 mm	58,6 mm
W =	16 mm	32 mm	32 mm	32 mm
Teeth	36	19	19	19
Bore	10 mm	8 mm	8 mm	8 mm
Reborable to max.	14 mm	16 mm	30 mm	drive shaft d 17
Travel (1 revolution)	180 mm	190 mm	190 mm	190 mm
Timing belt	16AT5	32AT10	32AT10	32AT10
Belt length in the reverse unit	160 mm	210 mm	210 mm	420 mm
Friction moment at 1/1000				
Belt tensioning	0,30 Nm	0.35 Nm	0.35 Nm	0.35 Nm
Maximal Load	30 Nm	70 Nm	130 Nm	30 Nm

Calculation of the timing belt



When using T 45 and T 90

2 x rail length
+2 x 210 mm belt length in reverse
- slide length
- 2 x 20 mm in belt tensioner

= 2 x rail length - slide lenght + 380 mm

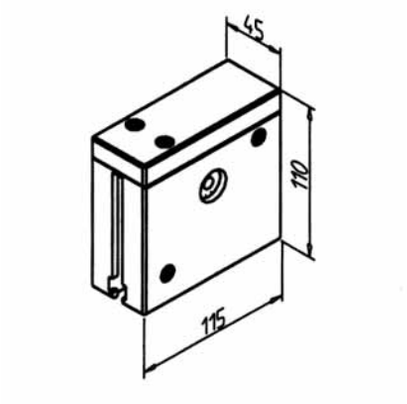
When using belt drive

Rail length + 212 mm

When using LR6

2 x Rail length + 260 mm

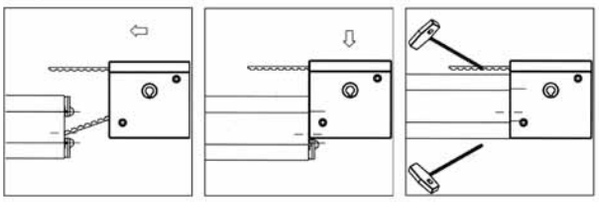
TIMING BELT PULLEY T 45 (LR 12 + LR 16)



Techn. data/items supplied
- Aluminium, anodized E6/EV1
- Completely assembled with pulley
- 2 ball bearings

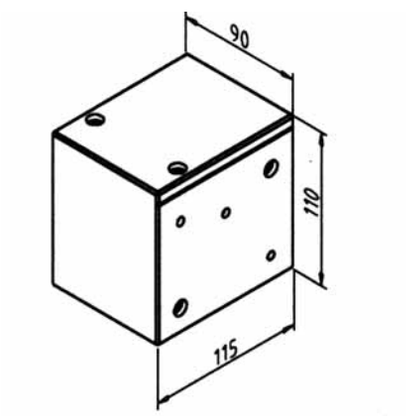
Applications
- For MiniTec linear guides LR

Assembly
- Form threads M8 in both rail ends and mount power lock fastener **Part N° 21.1018/0**
- Pass belt through the rail and through pulley unit
- Insert pulley unit from top
- Tighten set screw



Bore	Weight	Part N°	Part N° stainless steel
without	1,170 kg	28.0083/0	28.0046/0
Ø 11 mm	1,168 kg	28.0083/2	28.0046/2
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

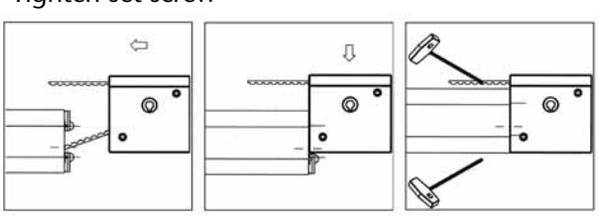
TIMING BELT PULLEY T 90 (LR 12 + LR 16)



Techn. data/items supplied
- Aluminium, anodized E6/EV1
- Completely assembled with pulley
- 2 ball bearings

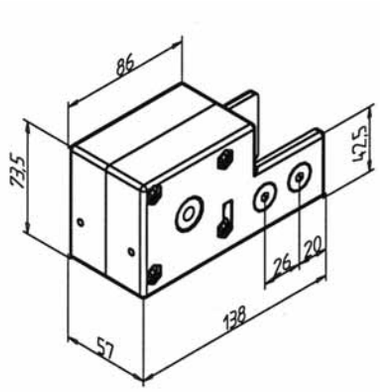
Applications
- For MiniTec linear guides LR

Assembly
- Form threads M8 in both ends of rail and mount power lock fastener **Part N° 21.1018/0**
- Pass belt through the rail and through pulley unit
- Insert pulley unit from top
- Tighten set screw



Bore	Weight	Part N°	Part N° stainless steel
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 LR 6



Techn. data/items supplied

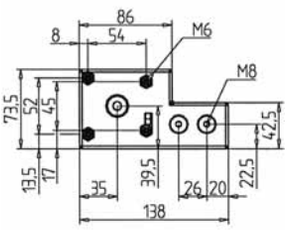
- Aluminium GD, powder coated, grey
- Assembled ready for use
- With fixing kit

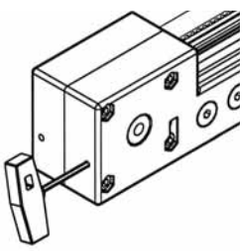
Applications

- 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
- Tigthen timing belt at reverse unit with key 3 A/F - if necessary from both sides
- Tigthen fixing screws

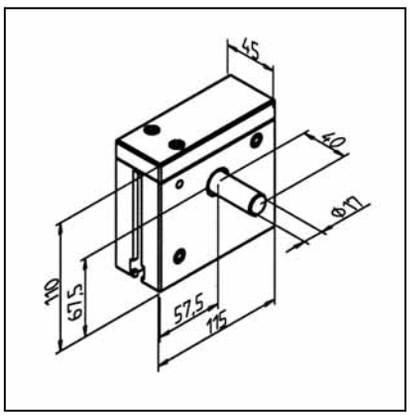


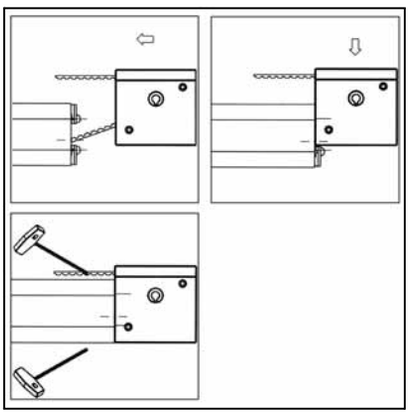


Bore	Weight	Part no.
without	0,96 kg	28.0510/0
Ø 10 mm	0,96 kg	28.0510/1
Ø 11 mm	0,96 kg	28.0510/2
Ø 14 mm	0,96 kg	28.0510/3

TIMING BELT PULLEY T 45 Z

Part. N° 28.0083/1





TECH. 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 N° 28.0046/1**

APPLICATIONSS

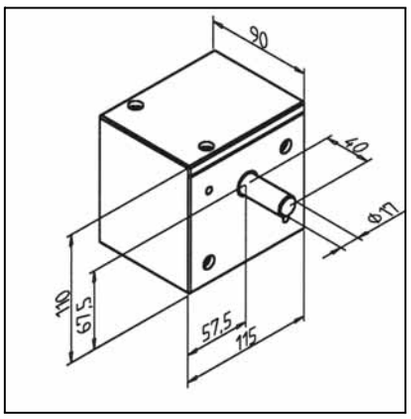
- All MiniTec linear guides

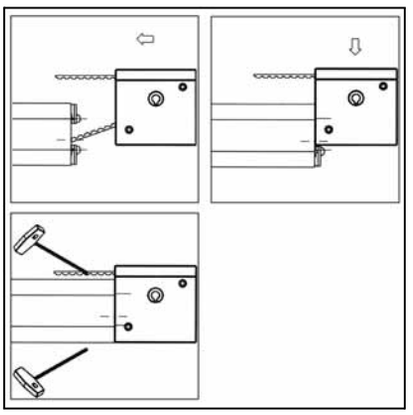
ASSEMBLY

- Form thread M8 and mout MiniTec power-lock fastener **Part N° 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

TIMING BELT PULLEY T 90 Z

Part. N° 28.0082/1





TECH. 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 N° 28.0045/1**

APPLICATIONSS

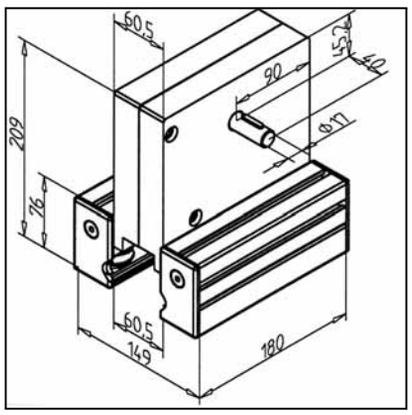
- All MiniTec linear guides

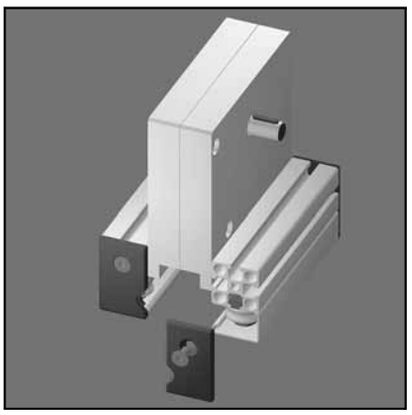
ASSEMBLY

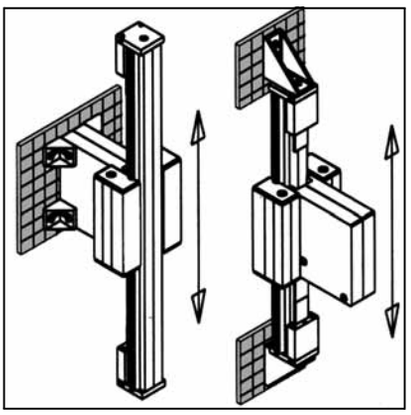
- Form thread M8 and mount MiniTec power-lock fastener **Part N° 21.1018/0** einschrauben
- Pass belt through the rail and through pulley unit
- Insert pulley unit from top
- Tighten power-lock fastener
- Tighten the timing belt

BELT DRIVE 45

Part. N° 28.0248/0







TECH. DATA / ITEMS SUPPLIED

- Aluminium
- Shaft end Ø 17 for motor connection
- 2 idler pulleys aluminium, integrated in linear slide LW 45
- Weight 6,320 kg

APPLICATIONSS

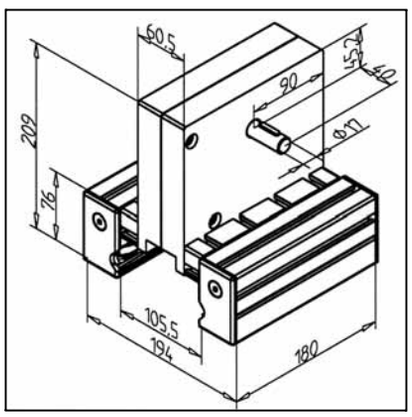
- MiniTec linear guides LR with extemely long travels, z-axis
- Use rail 45, 45 x 90 H, 45 x 135 H and 45 x 180 H

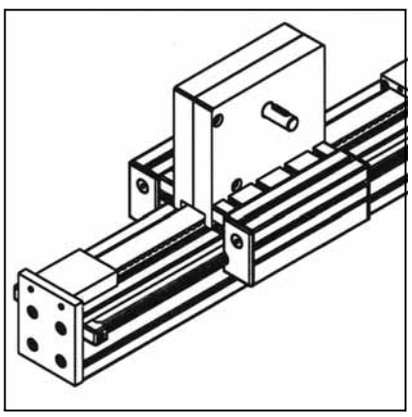
ASSEMBLY

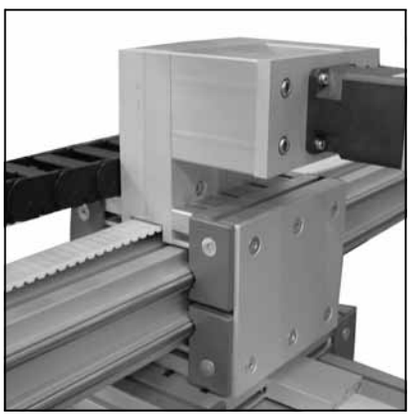
- Push the timing belt through the drive, slide drive on the rail and adjust clearance
- Fasten timing belt ends with timing belt tensioner **Part N° 28.0090/0** and fastening plate for rail 45 **Part N° 28.0054/0** or for rail 45 x 90 H **Part N° 28.0056/0** o the rail ends
- Tighten the timing belt
- Calculation of the timing belt: rail length + 212 mm

BELT DRIVE 90

Part. N° 28.0249/0







TECH. 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

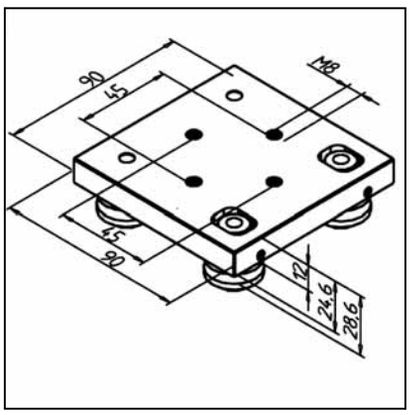
- MiniTec linear guides with extremely long travels, z-axis
- Use rail 45 x 90 F, rail 90 or 90 x 180 H

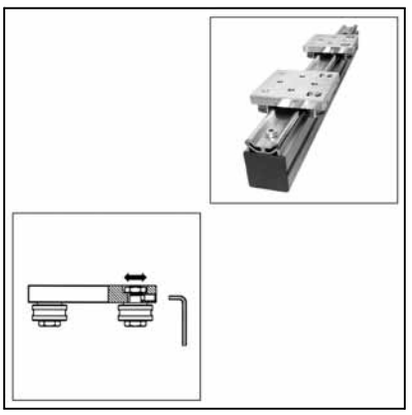
ASSEMBLY

- Push the timing belt through the drive, slide drive on the rail and adjust clearance
- Fasten timing belt ends with timing belt tensioner **Part N° 28.0090/0** and fastening plate for rail 45 **Part N° 28.0057/0** or for rail 45 x 90 H **Part N° 28.0055/0** o the rail ends
- Tighten the timing belt
- Calculation of the timing belt: rail length + 212 mm

SLIDE LR 6

Part. N° 28.0138/0





TECH. DATA / ITEMS SUPPLIED

- Aluminium, all faces machined
- Double row, angular-contact bearings
- Assembled ready for use
- Load capacity: see page 241
- Weight 0,396 kg

APPLICATIONS

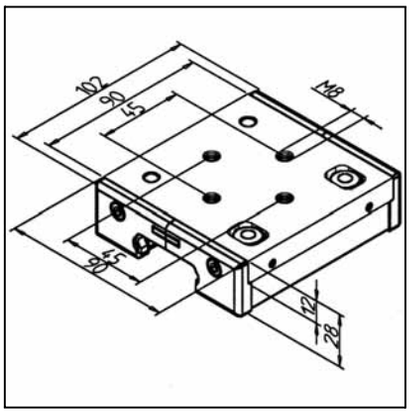
- MiniTec linear guide systems LR 6
- Material-handling
- Measuring devices
- Doors

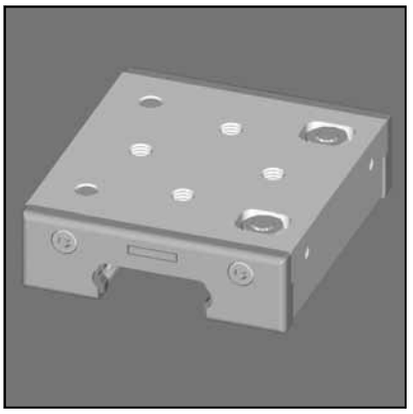
ASSEMBLY

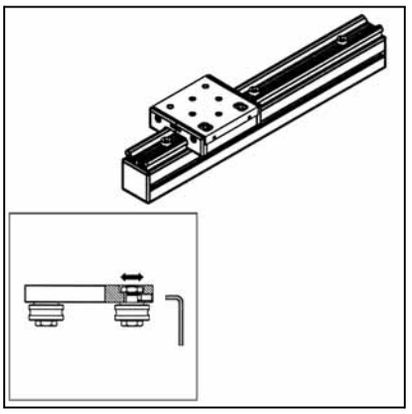
- Slip slide onto rail
- Adjust clearance with key 2,5 A/F
- Tighten fixing screw with a torque of 20 Nm
- When used in extreme environment, use slide LR6 with cover, **Part N° 28.0138/1**

SLIDE LR 6 WITH COVER

Part. N° 28.0138/1







TECH. 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
- Load capacity: see page 241
- Weight 0,458 kg

APPLICATIONS

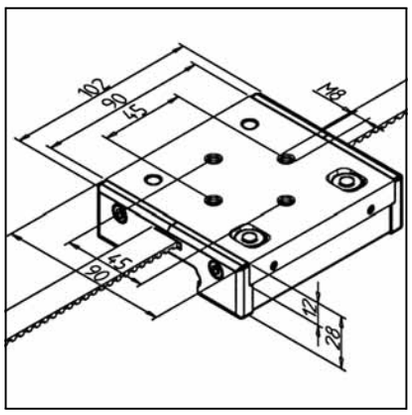
- MiniTec linear guide systems LR 6
- Jigs
- Sliding doors
- Large drawers

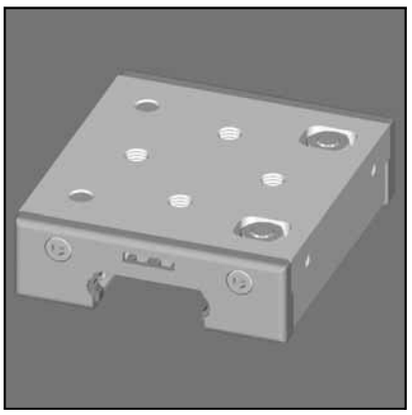
ASSEMBLY

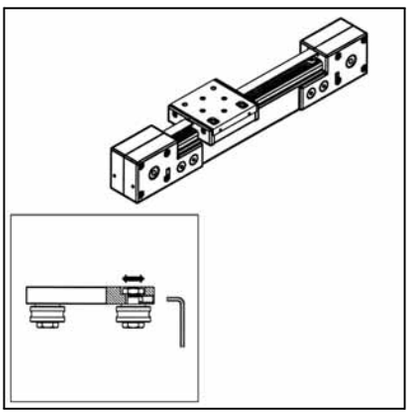
- Slip slide onto rail
- Adjust clearance with key 2,5 A/F
- Recommended torque: 20 Nm
- Saturate greasing felts with appropriate oil

SLIDE LR 6 Z

Part. N° 28.0138/2







TECH. 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
- Load capacity: see page 241
- Weight 0,502 kg

APPLICATIONS

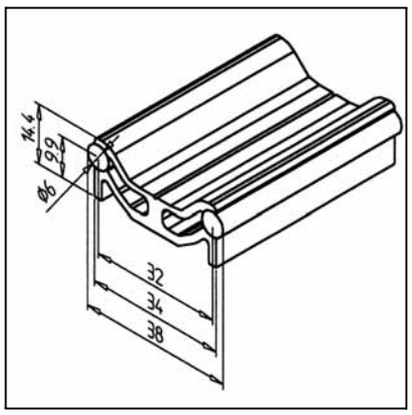
- MiniTec linear guide systems LR 6
- Material-handling devices

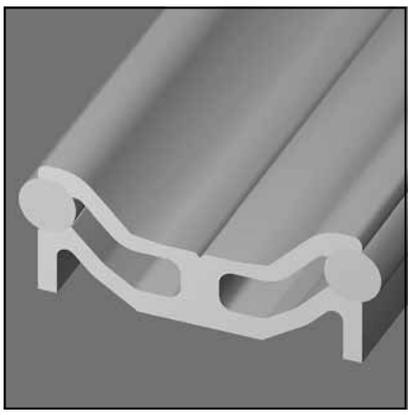
ASSEMBLY

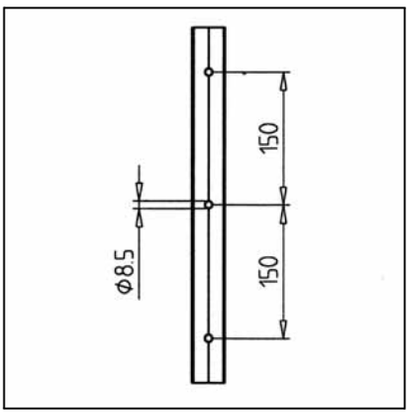
- Slip slide onto rail
- Adjust clearance with key 2,5 A/F
- Recommended torque: 20 Nm
- Saturate greasing felts with appropriate oil
- Screw end-caps clamping lower covers

RAIL LR 6

Part. N° 28.0016/0







TECH. DATA / ITEMS SUPPLIED

- Aluminium, natural anodized E6/EV 1
- 2 Shafts Cf 53 h6, 60±3 HRC
- With fixing bores Ø 8,5 mm, grid: 150 mm
- Weight 0,958 kg/m
- Lenght 4 m

APPLICATIONS

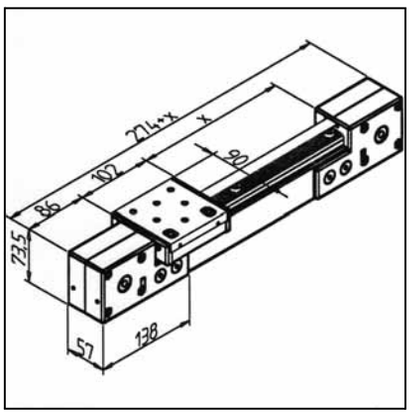
- MiniTec linear guide systems LR 6
- Material-handling
- Measuring devices
- Doors

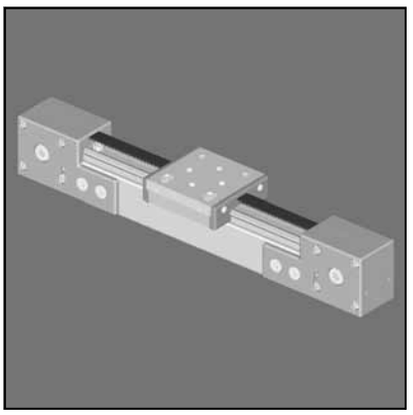
ASSEMBLY

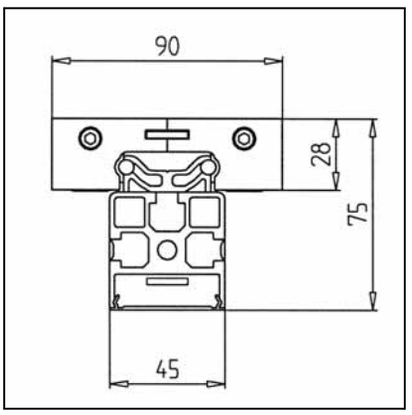
- Fasten rail with cap screws M8 x 20 and square nut M8 on MiniTec profile

MODULE LR 6 Z 45

Part. N° 28.0500/0







TECH. DATA / ITEMS SUPPLIED

- Linear-guide, ready for use assembled from:

- 1 Rail LR 6 with precision-steel-shafts Ø, 6mm, h6, with profile 45 x 45 R 1 Slide LW 6 Z with timing belt fastener 2 timing-belt reverse units 1 timing belt 16 AT 5, steel-reinforced

- Weight (without profile)	2,250 kg
- Weight/100 mm stroke	0,322 kg

- **Please specify travel "X" and bore of timing belt reverse unit (Ø 11 mm/Ø 14 mm/None)**

APPLICATIONS

- MiniTec linear guide systems LR 6

- Material-handling

- Measuring devices

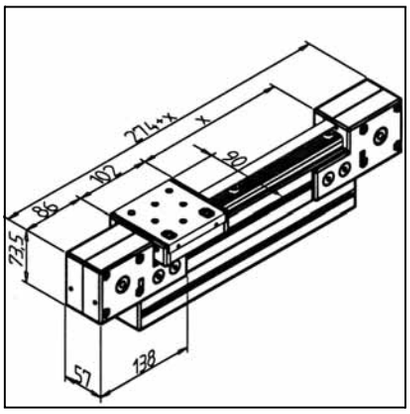
- Doors

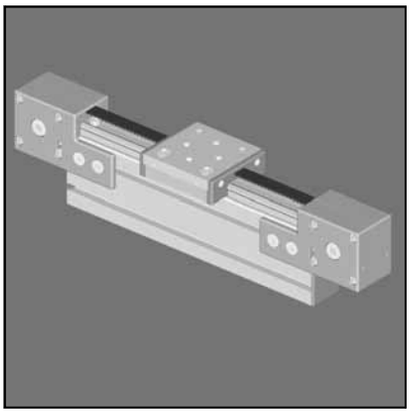
ASSEMBLY

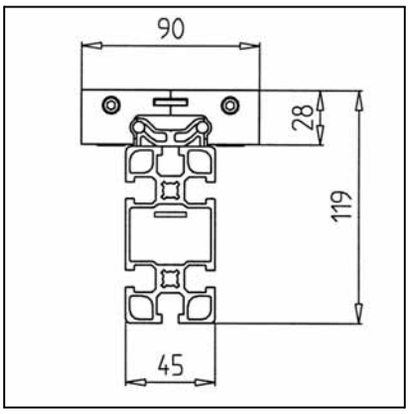
- Timing-belt tensioners integrated in reverse-units

MODULE LR 6 Z 90

Part. N° 28.0501/0







TECH. DATA / ITEMS SUPPLIED

- Linear-guide, ready for use assembled from:

- 1 Rail LR 6 with precision-steel-shafts Ø, 6mm, h6, with profile 45 x 45 R
- 1 Slide LW 6 Z with timing belt fastener,
- 2 timing- belt reverse units 1 timing belt 16 AT 5, steel-reinforced
- Basis weight (without profile)2,250kg
- Weight/100 mm stroke 0,453 kg

- **Please specify travel "X" and bore of timing belt reverse unit (Ø 11 mm/Ø 14 mm/None)**

APPLICATIONS

- MiniTec linear guide systems LR 6

- Material-handling

- Measuring devices

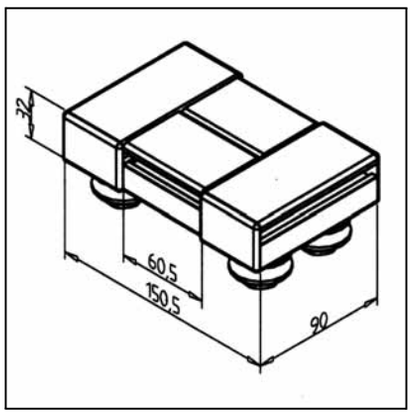
- Doors

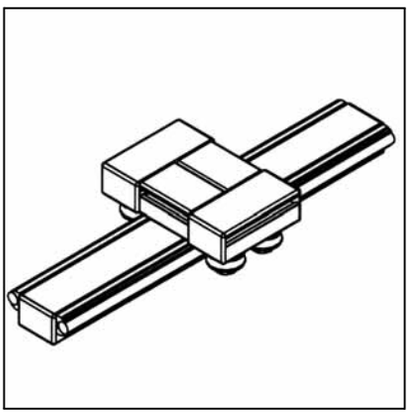
ASSEMBLY

- Timing-belt tensioners integrated in reverse-units

SLIDE LW 32

Part. N° 28.0088/0





TECH. DATA / ITEMS SUPPLIED

- Slide completely assembled
- 2 concentric and 2 eccentric bearing units
- End caps
- Load capacity: see page 241
- Weight 1,060 kg
- **Stainless version Part N° 28.0088/1**

APPLICATIONS

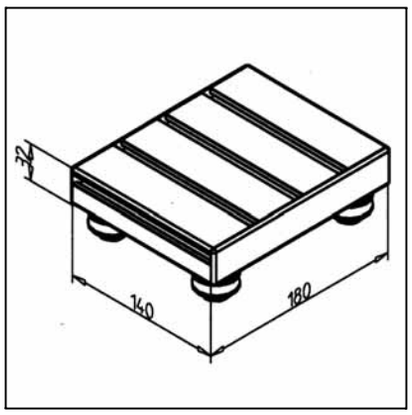
- Handling systems
- Measuring devices
- Automatic advance units
- For rails 19 and 32

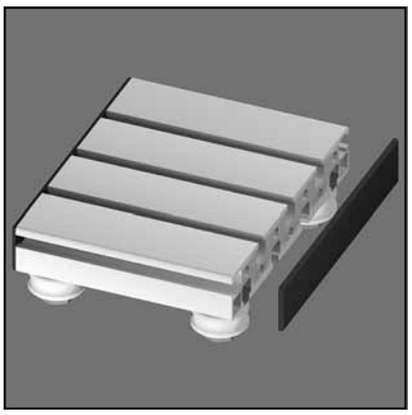
ASSEMBLY

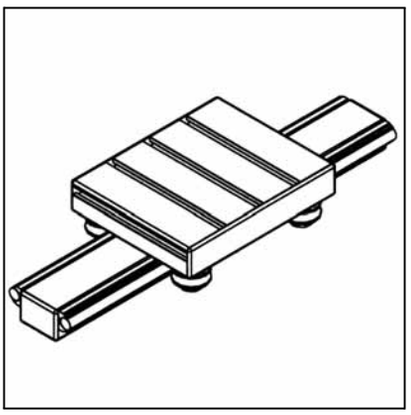
- Slip slide on rail 19 or 32; adjust clearance with eccentric bush

SLIDE LW 32 E

Part. N° 28.0089/0







TECH. DATA / ITEMS SUPPLIED

- Slide completely assembled
- 2 concentric and 2 eccentric bearing units
- End caps
- Load capacity: see page 241
- Weight 1,920 kg
- **Stainless version Part N° 28.0089/1**

APPLICATIONS

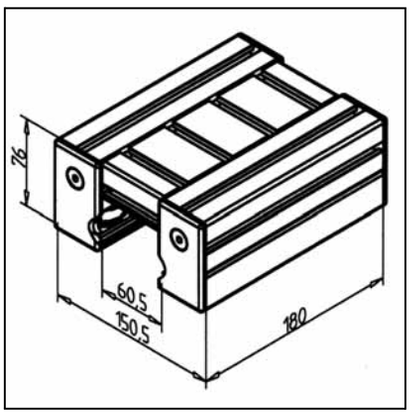
- 1- or multi-axis guides
- Handling systems
- Measuring devices
- For rails 19 and 32

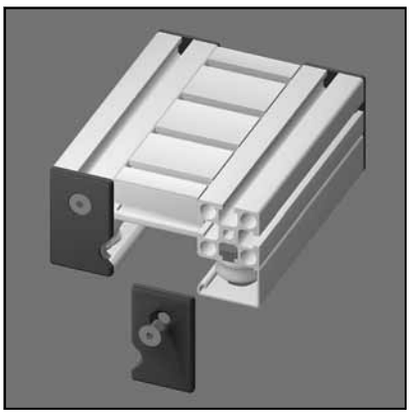
ASSEMBLY

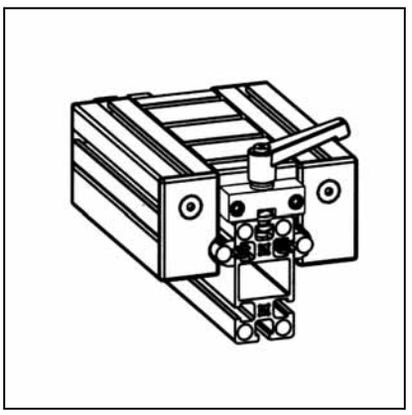
- Slip slide on rail 19 or 32; adjust clearance with eccentric bush

SLIDE LW 45

Part. N° 28.0091/0







TECH. DATA / ITEMS SUPPLIED

- Slide completely assembled
- 2 concentric and 2 eccentric bearing units
- End caps LR and 2 cover profiles LR
- Load capacity: see page 241
- Weight 2,260 kg
- **Stainless version Part N° 28.0091/3**

APPLICATIONS

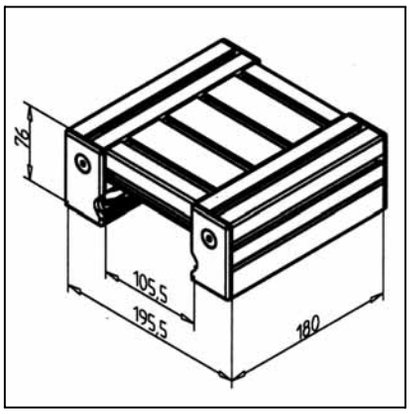
- 1- or multi-axis guides
- Linear robots
- Handling systems
- Measuring devices
- For rails 45, 45 x 90 H, 45 x 180 H and 135 H

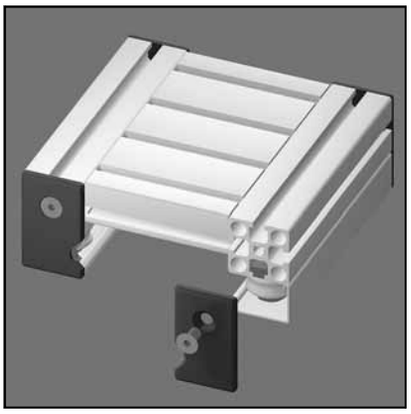
ASSEMBLY

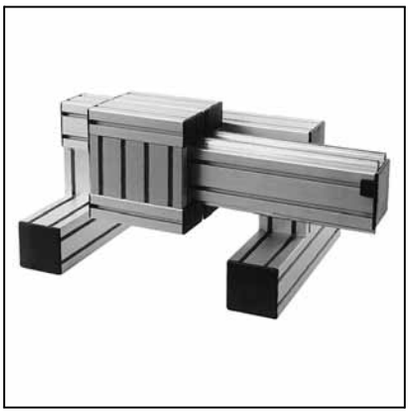
- Assemble slide on rail 45 or 45 x 90 H, adjust clearance with eccentric bush
- Assemble cover and greasing system
- OPTIONS:
- Slide clamping unit **Part N° 28.0270/0**

SLIDE LW 90

Part. N° 28.0092/0







TECH. DATA / ITEMS SUPPLIED

- Slide completely assembled
- 2 concentric and 2 eccentric bearing units
- End caps LR and Cover profiles LR
- Load capacity: see page 241
- Weight 2,700 kg
- **Stainless version Part N° 28.0092/2**

APPLICATIONS

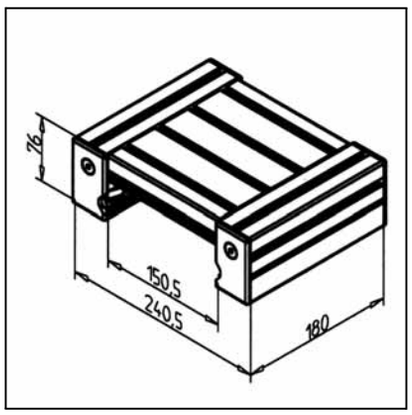
- 1- or multi-axis guides
- Linear robots
- Handling systems
- Measuring devices
- For rails 45 x 90 F, 90 x 90, 90 x 180 H

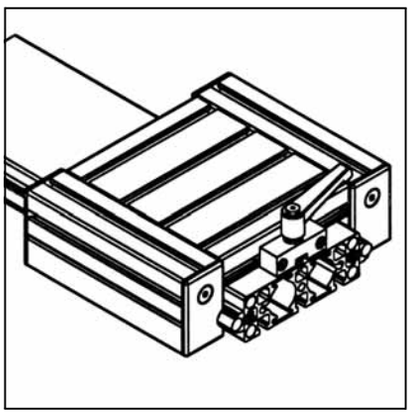
ASSEMBLY

- 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 N° 28.0270/0**

SLIDE LW 135

Part. N° 28.0084/0





TECH. DATA / ITEMS SUPPLIED

- Slide completely assembled
- 2 concentric and 2 eccentric bearing units
- End caps LR and Cover profiles LR
- Load capacity: see page 241
- Weight 3,150 kg
- **Stainless version Part N° 28.0084/1**

APPLICATIONS

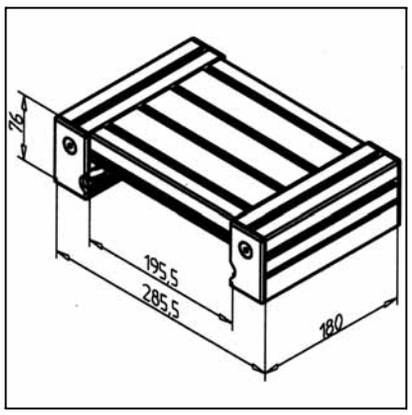
- 1- or multi-axis guides
- Linear robots
- Handling systems
- Measuring devices
- For rails 135 F

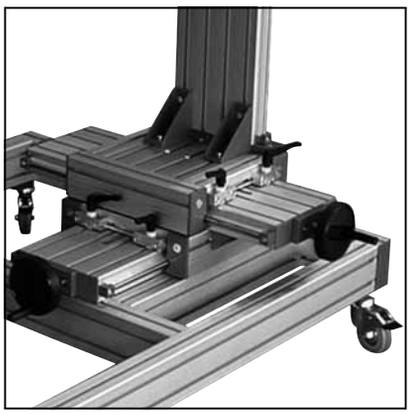
ASSEMBLY

- Assemble slide on rail 45 x 135; adjust clearance with eccentric bush
- Assemble cover and greasing system
- OPTIONS:
- Slide clamping unit **Part N° 28.0270/0**

SLIDE LW 180

Part. N° 28.0087/0





TECH. DATA / ITEMS SUPPLIED

- Slide completely assembled
- 2 concentric and 2 eccentric bearing units
- End caps LR and Cover profiles LR
- Load capacity: see page 241
- Weight 3,590 kg
- **Stainless version Part N° 28.0087/1**

APPLICATIONS

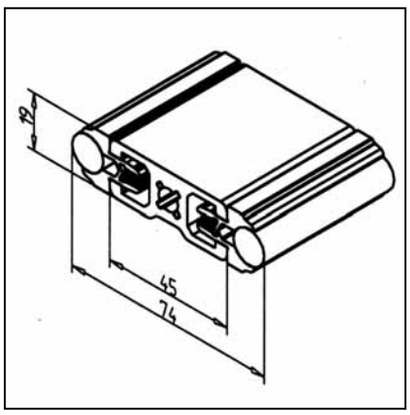
- 1- or multi-axis guides
- Linear robots
- Handling systems
- Measuring devices
- For rails 45 x 180 F and 90 x 180 F

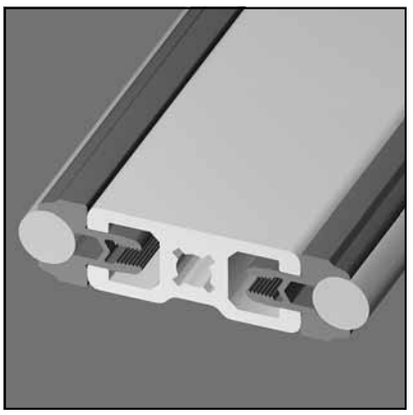
ASSEMBLY

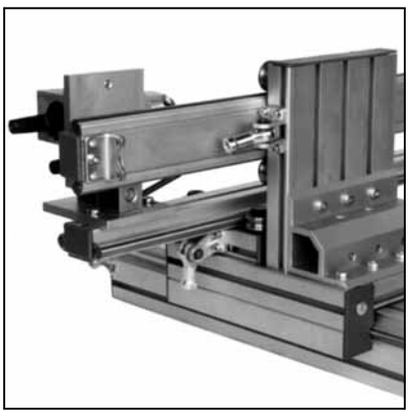
- Assemble slide on rail 90 x 180; adjust clearance with eccentric bush
- Assemble cover and greasing system
- OPTIONS:
- Slide clamping unit **Part N° 28.0270/0**

RAIL 19

Part. N° 28.0009/0







TECH. DATA / ITEMS SUPPLIED

- Profile 19 x 45
- Both sides with shaft supporting profile and shafts Ø 12 h6, ready for use
- Without end caps
- Weight 3,666 kg/m
- Length 6 m
- **Stainless version Part N° 28.0009/3**

APPLICATIONS

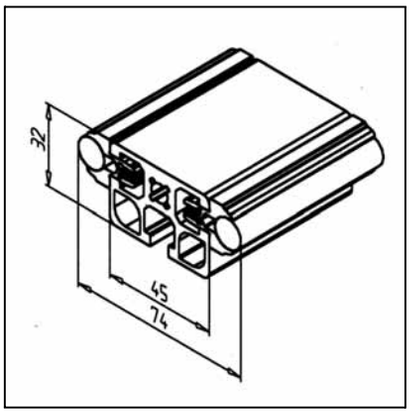
- Linear-guides
- Longer rails with composite shafts possible

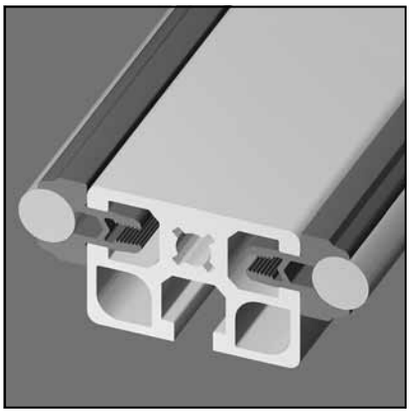
ASSEMBLY

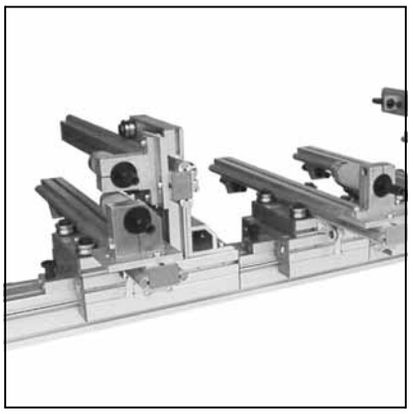
- For vertical use or for high speed Applicationss, we recommed the use of shaft retention devices **Part N° 28.0052/0**
- Load capacity: see page 240

RAIL 32

Part. N° 28.0010/0







TECH. DATA / ITEMS SUPPLIED

- Profile 45 x 32 F
- Both sides with shaft supporting profile and shafts Ø 12 h6, ready for use
- Without end caps
- Weight 4,161 kg/m
- Length 6 m
- **Stainless version Part N° 28.0010/3**

APPLICATIONS

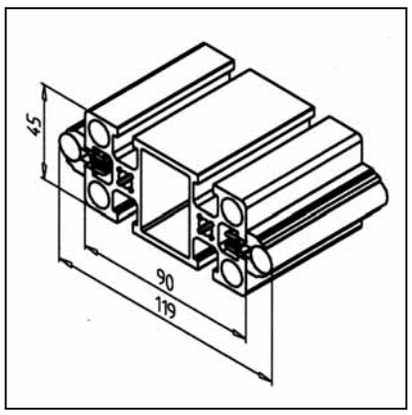
- Linear-guides
- Longer rails with composite shafts possible

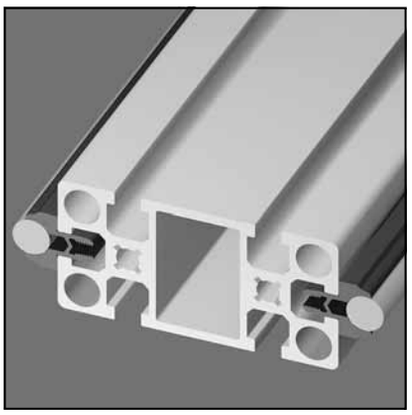
ASSEMBLY

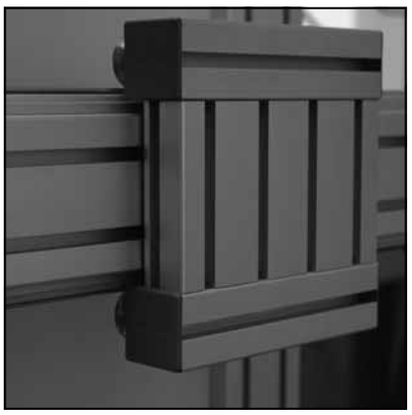
- For vertical use or for high speed Applicationss, we recommed the use of shaft retention devices **Part N° 28.0052/0**
- Load capacity: see page 240

RAIL 45

Part. N° 28.0006/0







TECH. DATA / ITEMS SUPPLIED

- Profile 45 x 45
- Both sides with shaft supporting profile and shafts Ø 12 h6, ready for use
- Without end caps
- Weight 4,720 kg/m
- Length 6 m
- **Stainless version Part N° 28.0006/3**

APPLICATIONS

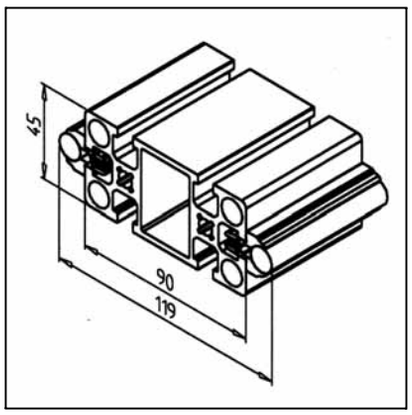
- Linear-guides
- Longer rails with composite shafts possible

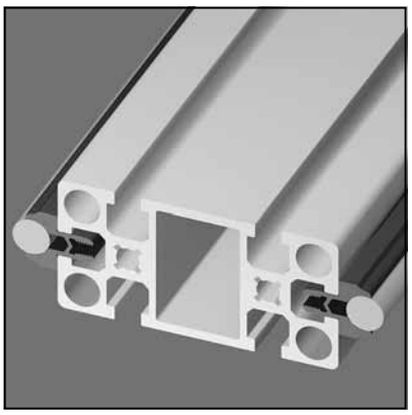
ASSEMBLY

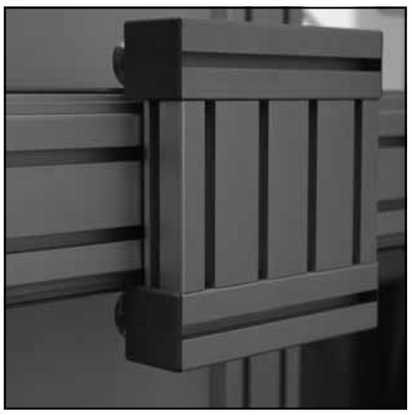
- For vertical use or for high speed Applicationss, we recommed the use of shaft retention devices **Part N° 28.0052/0**
- Load capacity: see page 240

RAIL 45 X 90 F

Part. N° 28.0007/1







TECH. DATA / ITEMS SUPPLIED

- Profile 45 x 90
- Both sides with shaft supporting profile and shafts Ø 12 h6, ready for use
- Without end caps
- Weight 6,190 kg/m
- Length 6 m
- **Stainless version Part N° 28.0007/3**

APPLICATIONS

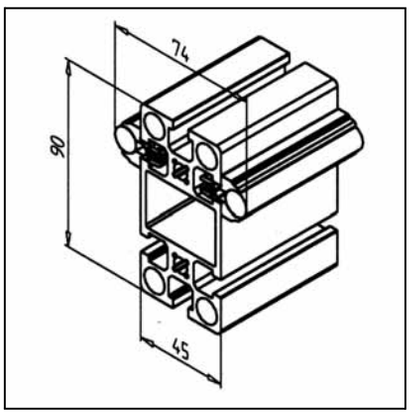
- Linear-guides
- Longer rails with composite shafts possible

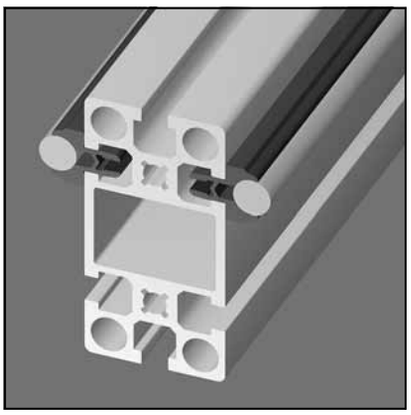
ASSEMBLY

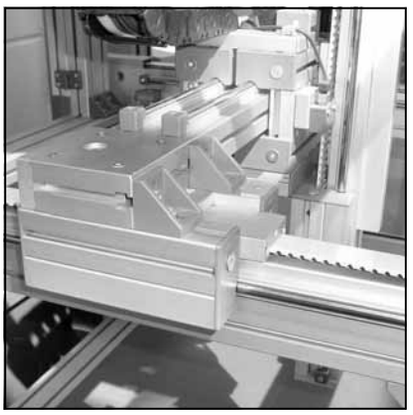
- For vertical use or for high speed Applicationss, we recommed the use of shaft retention devices **Part N° 28.0052/0**
- Load capacity: see page 240

RAIL 45 X 90 H

Part. N° 28.0007/2







TECH. DATA / ITEMS SUPPLIED

- Profile 45 x 90
- Both sides with shaft supporting profile and shafts Ø 12 h6, ready for use
- Without end caps
- Weight 6,190 kg/m
- Length 6 m
- **Stainless version Part N° 28.0007/4**

APPLICATIONS

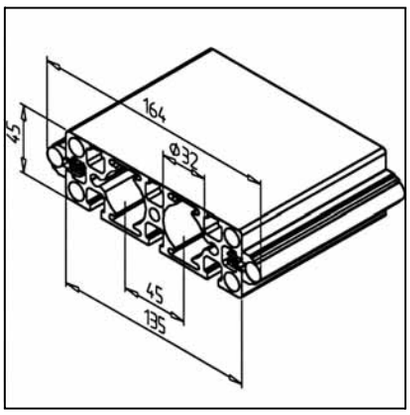
- Linear and lifting guides
- Belt return in profile
- Longer rails with shafts put together

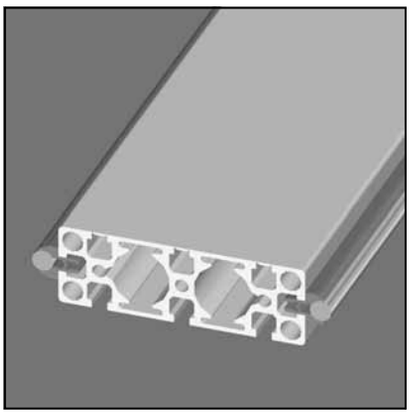
ASSEMBLY

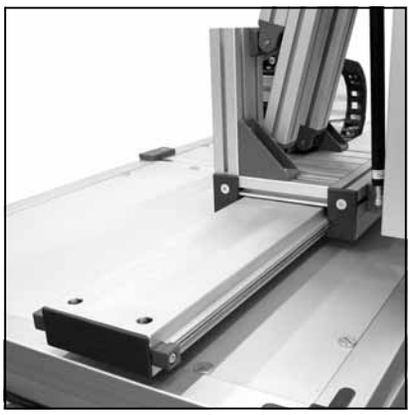
- For vertical use or for high speed Applicationss, we recommed the use of shaft retention devices **Part N° 28.0052/0**
- Load capacity: see page 240

RAIL 135 F

Part. N° 28.0012/1







TECH. DATA / ITEMS SUPPLIED

- Profile 45 x 135 G
- Both sides with shaft supporting profile and shafts Ø 12 h6, ready for use
- Without end caps
- Weight 8,09 kg/m
- Length 6 m
- **Stainless version Part N° 28.0012/3**

APPLICATIONS

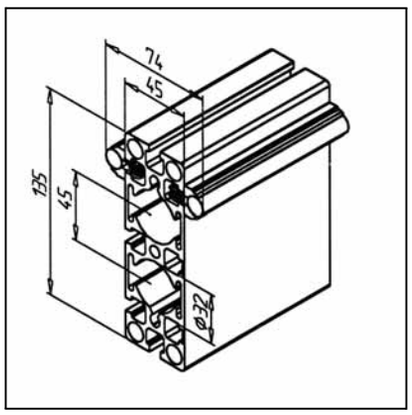
- Linear and lifting guides
- Longer rails with shafts put together

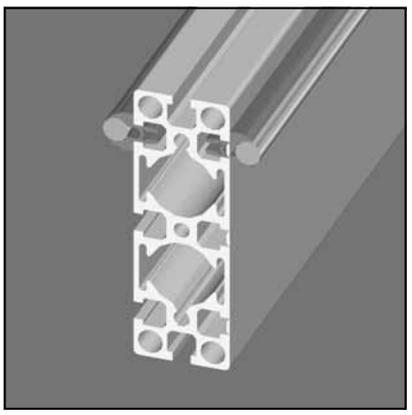
ASSEMBLY

- For vertical use or for high speed Applicationss, we recommed the use of shaft retention devices **Part N° 28.0052/0**
- Load capacity: see page 240

RAIL 135 H

Part. N° 28.0012/2





TECH. DATA / ITEMS SUPPLIED

- Profile 45 x 135 G
- Both sides with shaft supporting profile and shafts Ø 12 h6, ready for use
- Without end caps
- Weight 8,090 kg/m
- Length 6 m
- **Stainless version Part N° 28.0012/4**

APPLICATIONS

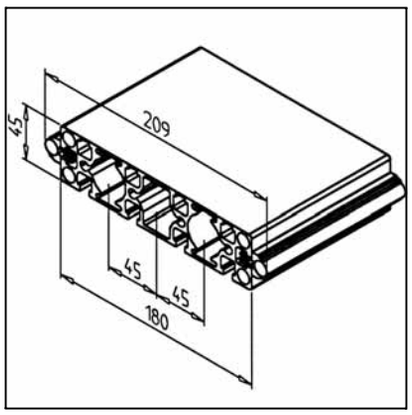
- Linear-guides
- Longer rails with composite shafts possible

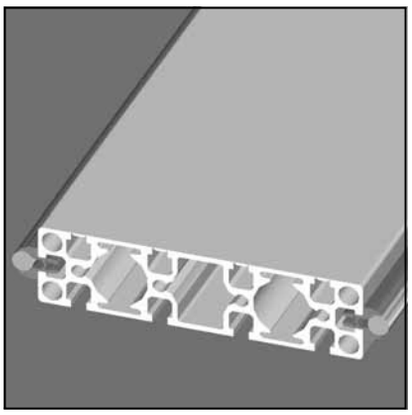
ASSEMBLY

- For vertical use or for high speed Applicationss, we recommed the use of shaft retention devices **Part N° 28.0052/0**
- Load capacity: see page 240

RAIL 45 X 180 F

Part. N° 28.0013/1





TECH. DATA / ITEMS SUPPLIED

- Profile 45 x 180 G
- Both sides with shaft supporting profile and shafts Ø 12 h6, ready for use
- Without end caps
- Weight 10,020 kg/m
- Length 6 m
- **Stainless version Part N° 28.0013/3**

APPLICATIONS

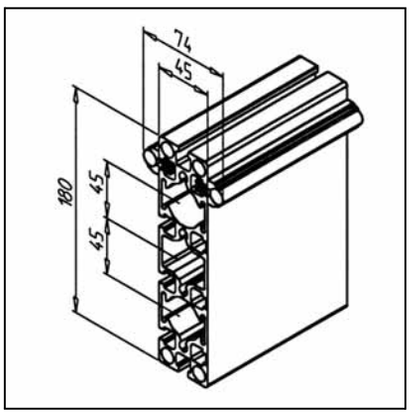
- Linear-guides
- Longer rails with composite shafts possible

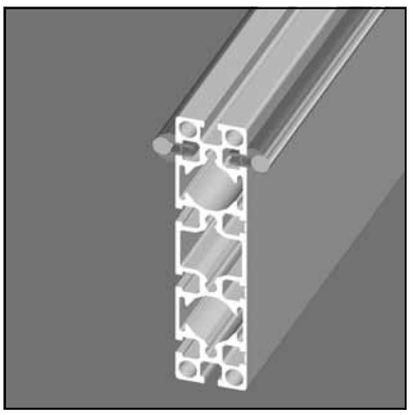
ASSEMBLY

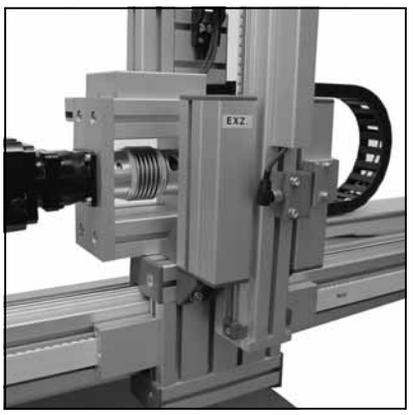
- For vertical use or for high speed Applicationss, we recommed the use of shaft retention devices **Part N° 28.0052/0**
- Load capacity: see page 240

RAIL 45 X 180 H

Part. N° 28.0013/2







TECH. DATA / ITEMS SUPPLIED

- Profile 45 x 180 G
- Both sides with shaft supporting profile and shafts Ø 12 h6, ready for use
- Without end caps
- Weight 10,020 kg/m
- Length 6 m
- **Stainless version Part N° 28.0013/4**

APPLICATIONS

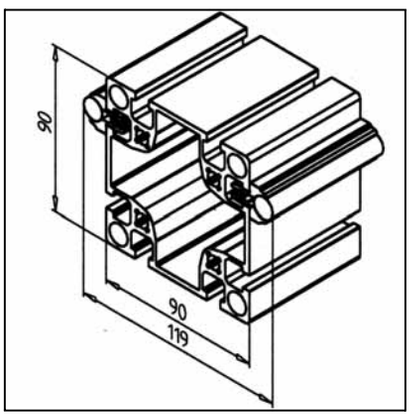
- Linear-guides
- Longer rails with composite shafts possible

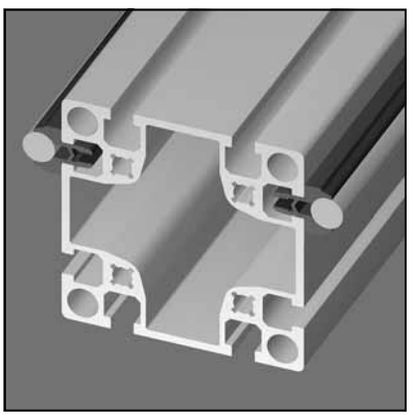
ASSEMBLY

- For vertical use or for high speed Applicationss, we recommed the use of shaft retention devices **Part N° 28.0052/0**
- Load capacity: see page 240

RAIL 90

Part. N° 28.0008/0





TECH. DATA / ITEMS SUPPLIED

- Profile 90 x 90 L
- Both sides with shaft supporting profile and shafts Ø 12 h6, ready for use
- Without end caps
- Weight 7,88 kg/m
- Length 6 m
- **Stainless version Part N° 28.0008/3**

APPLICATIONS

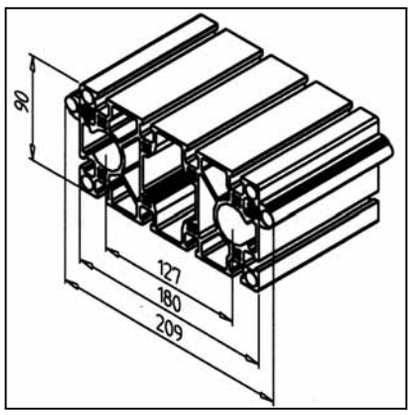
- Linear-guides
- Timing belt return inside the profile
- Longer rails with composite shafts possible

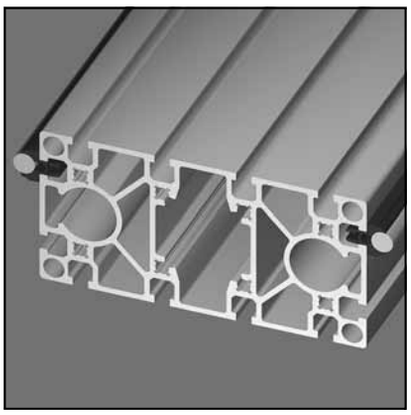
ASSEMBLY

- For vertical use or for high speed Applicationss, we recommed the use of shaft retention devices **Part N° 28.0052/0**
- Load capacity: see page 240

RAIL 180 F

Part. N° 28.0011/1





TECH. DATA / ITEMS SUPPLIED

- Profile 90 x 180 S
- Both sides with shaft supporting profile and shafts Ø 12 h6, ready for use
- Without end caps
- Weight 14,220 kg/m
- Length 6 m
- **Stainless version Part N° 28.0011/3**

APPLICATIONS

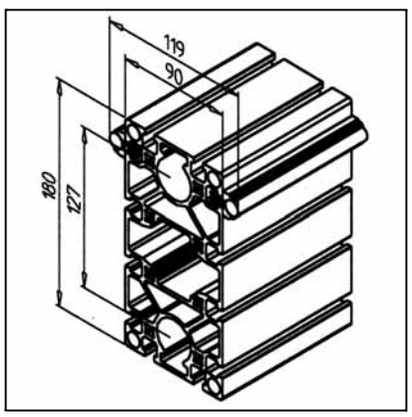
- Linear-guides
- Timing belt return inside the profile
- Longer rails with composite shafts possible

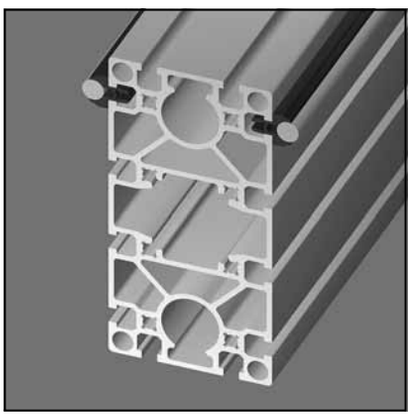
ASSEMBLY

- For vertical use or for high speed Applicationss, we recommed the use of shaft retention devices **Part N° 28.0052/0**
- Load capacity: see page 240

RAIL 180 H

Part. N° 28.0011/2





TECH. DATA / ITEMS SUPPLIED

- Profile 90 x 180 S
- Both sides with shaft supporting profile and shafts Ø 12 h6, ready for use
- Without end caps
- Weight 14,220 kg/m
- Length 6 m
- **Stainless version Part N° 28.0011/4**

APPLICATIONS

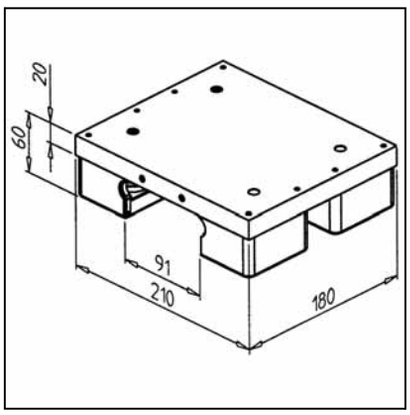
- Linear-guides
- Timing belt return inside the profile
- Longer rails with composite shafts possible

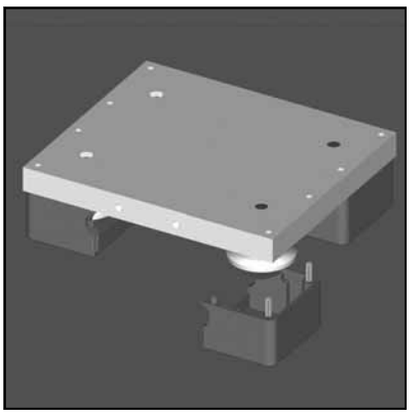
ASSEMBLY

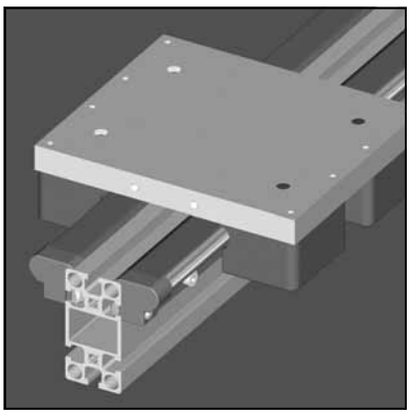
- For vertical use or for high speed Applicationss, we recommed the use of shaft retention devices **Part N° 28.0052/0**
- Load capacity: see page 240

SLIDE LR16 - 45

Part. N° 28.0810/0







TECHN. DATA / ITEMS SUPPLIED

- With 2 concentric and 2 eccentric bearing units
- Load / Bearing:
- dyn. C = 19.90 N
- stat. Co = 12.60 N
- Weight 3,640 kg

APPLICATIONSS

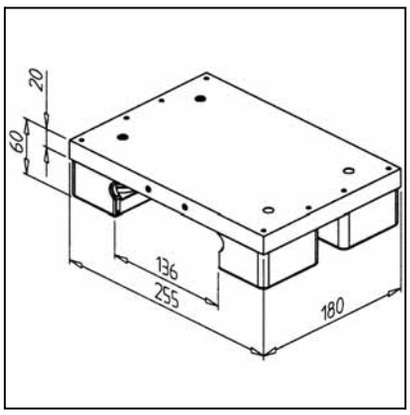
- Single and multi-axis guidance
- Linear robot
- Handling equipment
- Measuring equipment
- For rail LR16 45x90 H

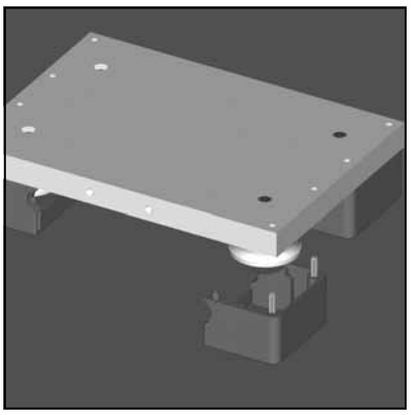
ASSEMBLY

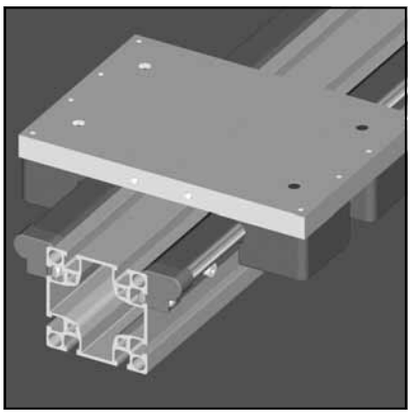
- Push the trolley onto the rails, adjust for zero play with eccentric fastening set
- Mount the covering and lubrication system

SLIDE LR 16 - 90

Part. N° 28.0811/0







TECHN. DATA / ITEMS SUPPLIED

- Fully assembled trolley
- With 2 concentric and 2 eccentric bearing units
- Load / Bearing:
- dyn. C = 19.90 N
- stat. Co = 12.60 N
- Weight 4,078 kg

APPLICATIONSS

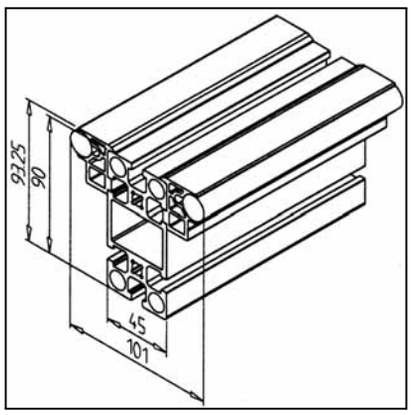
- Single and multi-axis guidance
- Linear robot
- Handling equipment
- Measuring equipment
- For rail LR16 90 and LR16 90x180 H

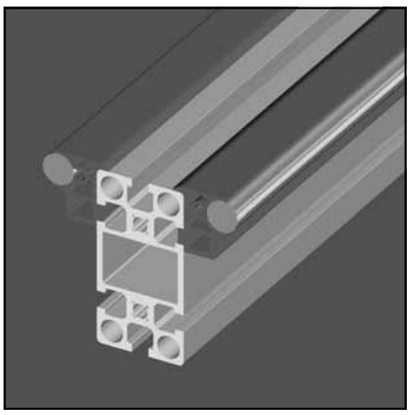
ASSEMBLY

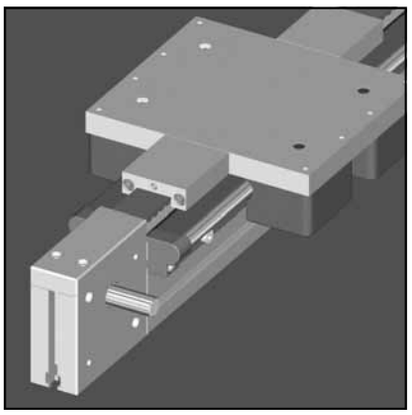
- Push the trolley onto the rails, adjust for zero play with eccentric fastening set
- Mount the covering and lubrication system

RAIL LR 16 45X90 H

Part. N° 28.0820/0







TECHN. DATA / ITEMS SUPPLIED

- Profile 45 x 90
- With shaft carrier profile LR 16 and shaft with diameter 16 h6 on both sides, assembled ready to fit
- Without end caps
- Weight 7,979 kg/m
- Lenght 6 m

APPLICATIONSS

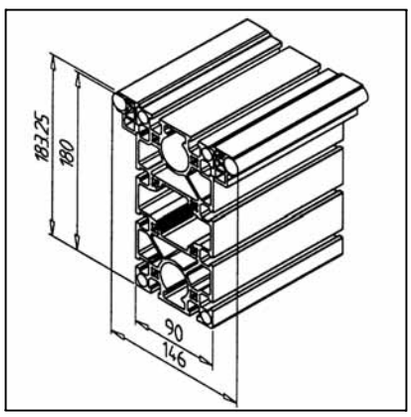
- Linear and column guides for high loading capacity
- Toothed belt return in profile
- Greater lengths are possible with compound shafts

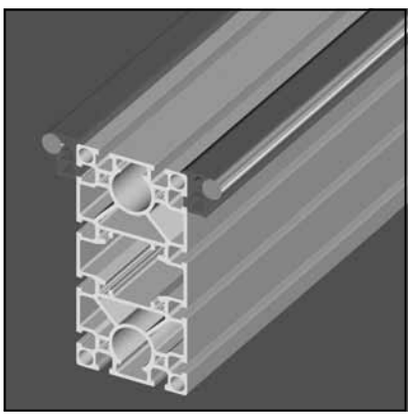
ASSEMBLY

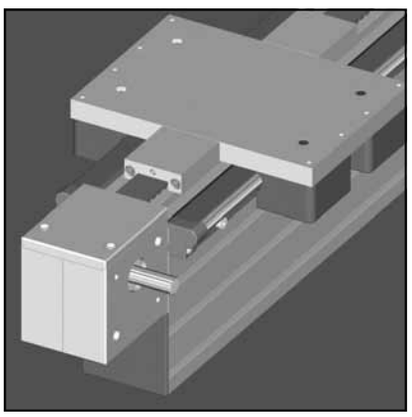
- When used vertically, or with high acceleration figures, we recommend the use of shaft fastener LR 16 **Part. N° 28.0808/0 and 28.0809/0**

RAIL LR 16 90X180 H

Part. N° 28.0822/0







TECHN. DATA / ITEMS SUPPLIED

- Profile 90 x 180 S
- With shaft carrier profile and shaft with diameter 16 h6 on both sides, assembled ready to fit
- Without end caps
- Weight 16,278 kg/m
- Lenght 6 m

APPLICATIONSS

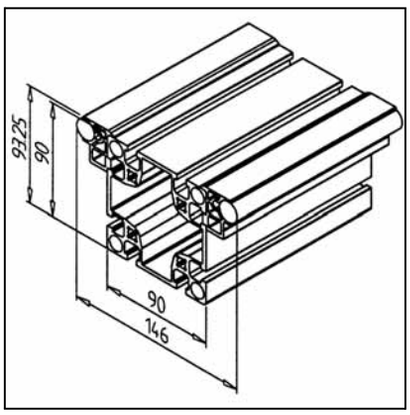
- Linear and column guides for high loading capacity
- Toothed belt return in profile
- Greater lengths are possible with compound shafts

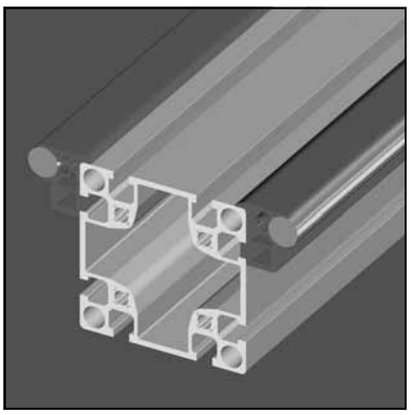
ASSEMBLY

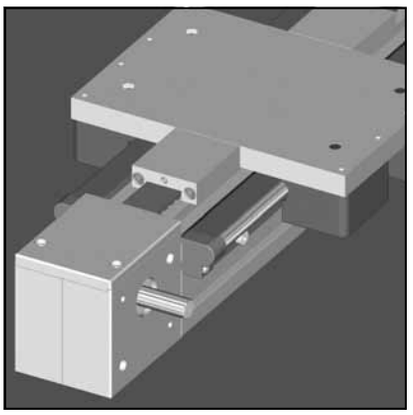
- When used vertically, or with high acceleration figures, we recommend the use of shaft fastener LR 16 **Part. N° 28.0808/0 and 28.0809/0**

RAIL LR 16 90

Part. N° 28.0821/0







TECHN. DATA / ITEMS SUPPLIED

- Profile 90 x 90
- With shaft carrier profile LR 16 and shaft with diameter 16 h6 on both sides, assembled ready to fit
- Without end caps
- Weight 10,067 kg/m
- Lenght 6 m

APPLICATIONSS

- Linear and column guides for high loading capacity
- Toothed belt return in profile
- Greater lengths are possible with compound shafts

ASSEMBLY

- When used vertically, or with high acceleration figures, we recommend the use of shaft fastener LR 16 **Part. N° 28.0808/0 and 28.0809/0**

LINEAR SYSTEM LB

LINEAR SYSTEM LB

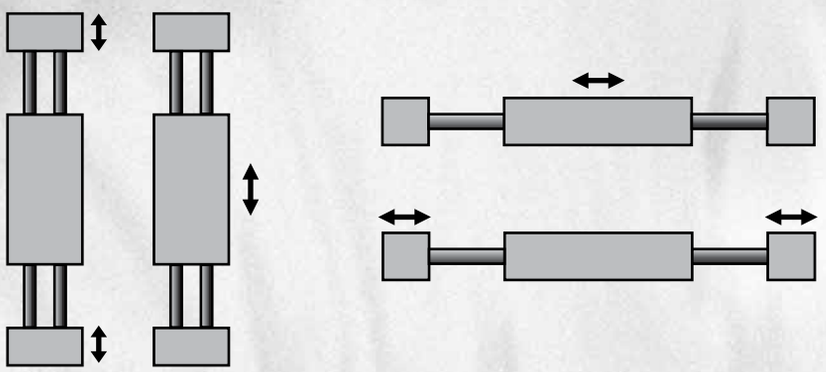
The LB design is based on LME 20 linear ball bearings that are built into our construction profile in the specially provided bore holes. Precision shafts D 20 mm give this guide high load capacity. The LB design offers substantial advantages for short travelling distances and high stroke frequencies. Especially compact and economical guide elements based on our solid precision ball bushings from the LME series with integrated sealing rings, which provide functional security under rough conditions.

Possible applications

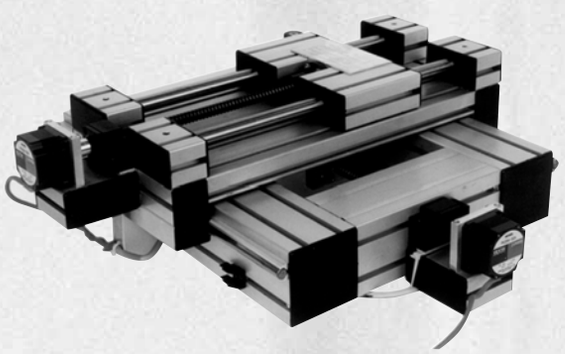
Calculation of life:

$$L = \frac{C}{F} \cdot 10^5$$

L = Life
C = Basic dynamic load rating (N)
F = Working load (N)



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 32 Ø bores of the extra strong profil 45 x 135, 45 x 180, 90 x 180, 90 x 45 S and 90 x 90 S.



The axial posititon of the bushes is secured with one-component glue. The ball-bushing combines low friction, limited clearance, low noise and long life.

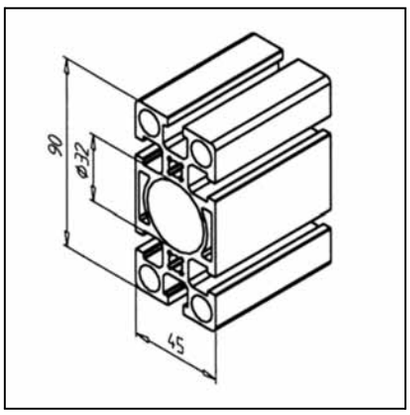
When designing a linear system LB, shaft deflection under load of max. 0.5° must be considered.

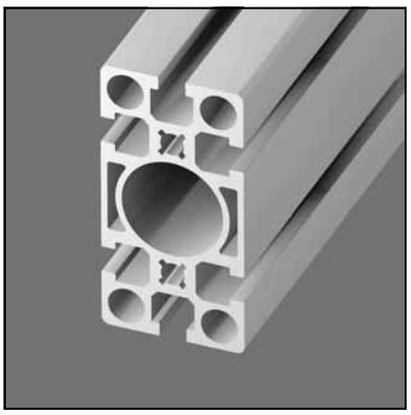
For further technical details see MiniTec catalogue “Linear bearings”.
Linear guides LB are available completely assembled with ball-screw on request.
All components are also available in stainless version.

COMPONENTS LB

PROFILE 45 X 90 S

Part. N° 20.1017/0





TECHN. DATA / ITEMS SUPPLIED	
- Ix =	113,487 cm⁴
- Iy =	30,719 cm⁴
- wx =	25,219 cm³
- wy =	13,653 cm³
- Weight	3,860 kg/m
- Length	6 m
- Packing unit	24 m

APPLICATIONS

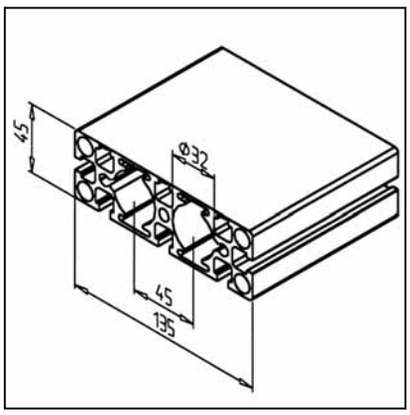
- Universal for general heavy duty constructios
- Linear guides LB
- Linear-guides
- 5 carities for pressed air piping
- Central bore Ø 32 mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic add-in cylinders

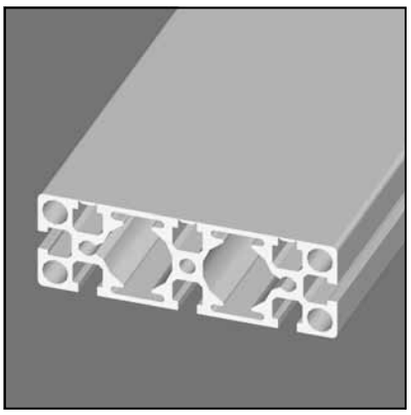
ASSEMBLY

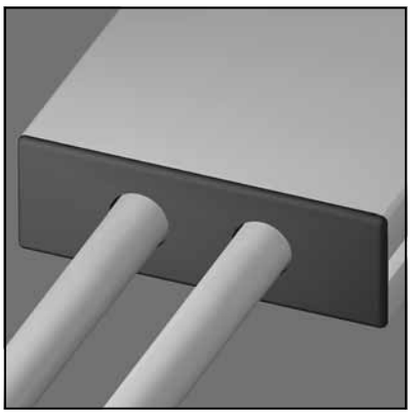
- MiniTec power-lock fastener
- Cross bolt-fastener
- Angle 45 / 90
- Screw connection

PROFILE 45 X 135 1G

Part. N° 20.1078/0







TECHN. DATA / ITEMS SUPPLIED	
- Ix =	359,242 cm⁴
- Iy =	47,064 cm⁴
- wx =	20,618 cm³
- wy =	53,221 cm³
- Weight	5,570 kg/m
- Length	6 m
- Packing unit	12 m

APPLICATIONS

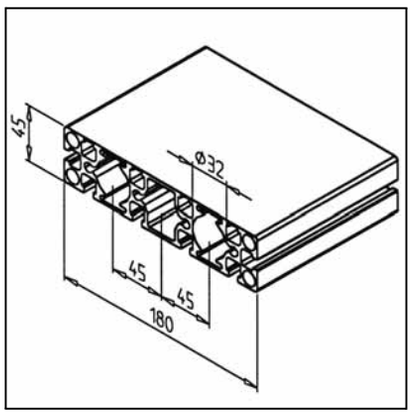
- General engineering structures, particularly for use in the food industry, in medical engineering and for the filling of beverages, where strict hygienic standards are set
- Linear guiding
- Central bore Ø 32 mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or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

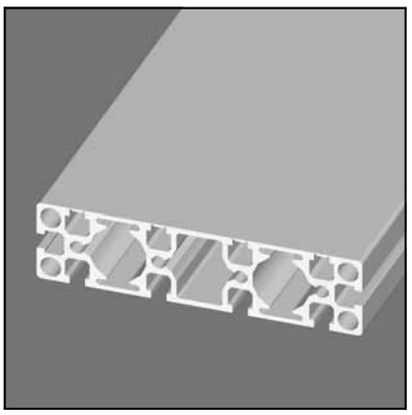
ASSEMBLY

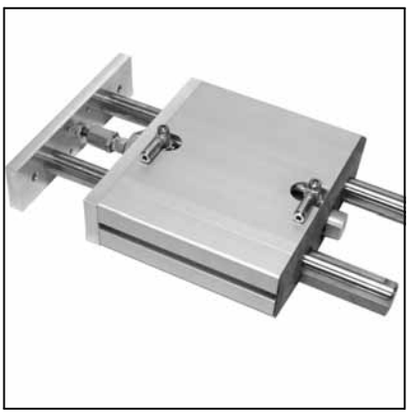
- MiniTec power-lock fastener
- 3 closed grooves can be opened up to the desired length, by means of the tear-off lever **Part N° 26.0815/0**

PROFILE 45 X 180 1G

Part. N° 20.1079/0







TECHN. DATA / ITEMS SUPPLIED	
- Ix =	810,885 cm⁴
- Iy =	61,015 cm⁴
- wx =	90,097 cm³
- wy =	26,704 cm³
- Weight	6,954 kg/m
- Length	6 m
- Packing unit	12 m

APPLICATIONS

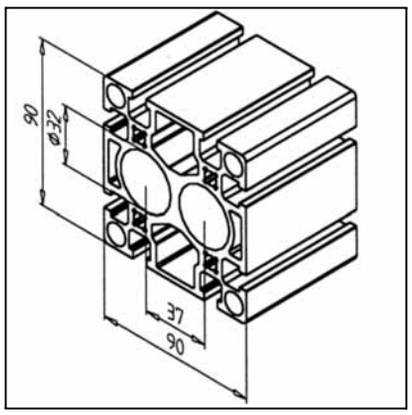
- General engineering structures, particularly for use in the food industry, in medical engineering and for the filling of beverages, where strict hygienic standards are set
- Linear guiding
- Central bore Ø 32 mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or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

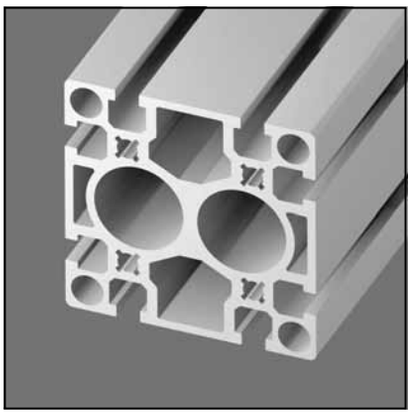
ASSEMBLY

- MiniTec power-lock fastener
- 4 closed grooves can be opened up to the desired length, by means of the tear-off lever **Part N° 26.0815/0**

PROFILE 90 X 90 S

Part. N° 20.1019/0





TECHN. DATA / ITEMS SUPPLIED	
- Ix =	223,949 cm⁴
- Iy =	208,888 cm⁴
- wx =	49,766 cm³
- wy =	46,419 cm³
- Weight	7,514 kg/m
- Length	6 m
- Packing unit	12 m

APPLICATIONS

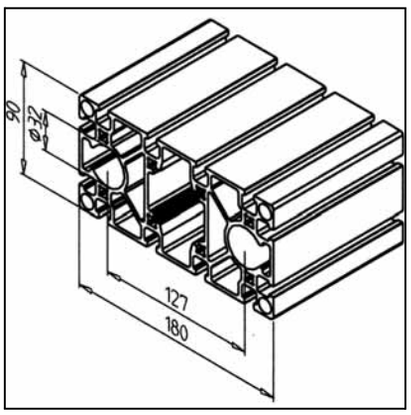
- Universal for general heavy duty constructions
- Linear guiding
- Central bore Ø 32 mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic dd-in cylinders

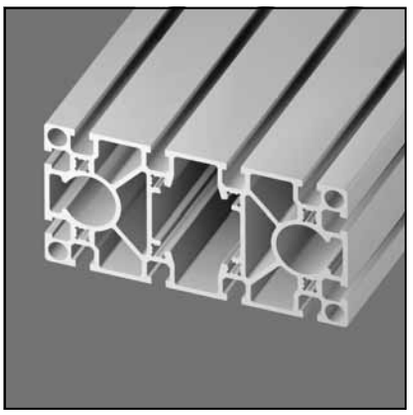
ASSEMBLY

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

PROFILE 90 X 180 S

Part. N° 20.1013/0





TECHN. DATA / ITEMS SUPPLIED	
- Ix =	1421,865 cm⁴
- Iy =	376,784 cm⁴
- wx =	157,983 cm³
- wy =	83,729 cm³
- Weight	11,482 kg/m
- Length	6 m
- Packing unit	6 m

APPLICATIONS

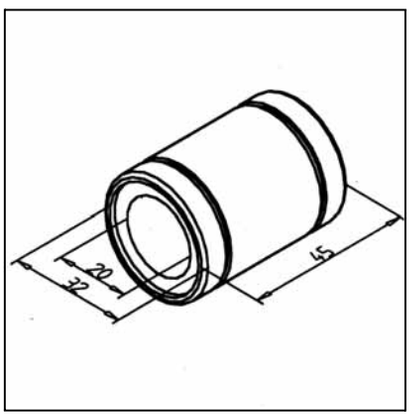
- Universal for general heavy duty constructions
- Linear guiding LB as slide
- Central bore Ø 32 mm for ball-bushings LME 20, for ball-bearings 6201 or 6002, for compressed air piping or guiding of hydraulic dd-in cylinders

ASSEMBLY

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

BALL BUSHING LME 20 UU

Part. N° 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° =	1.400 N
- Weight	0,090 kg

APPLICATIONS

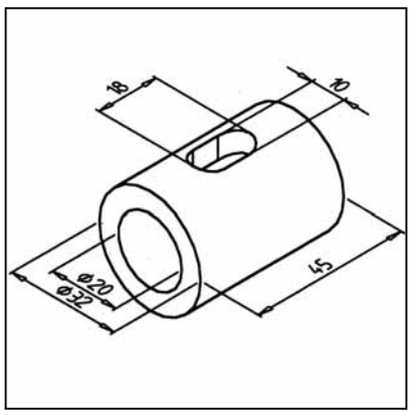
- Precision linear guides
- Linear slide system LB
- Lifting-tables
- Quattro-units

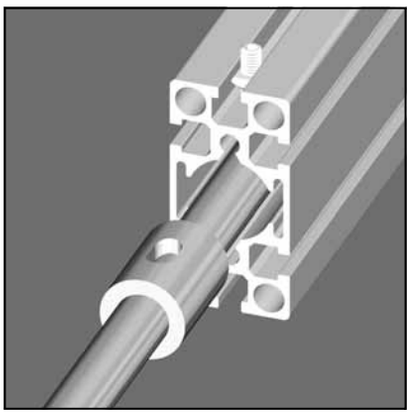
ASSEMBLY

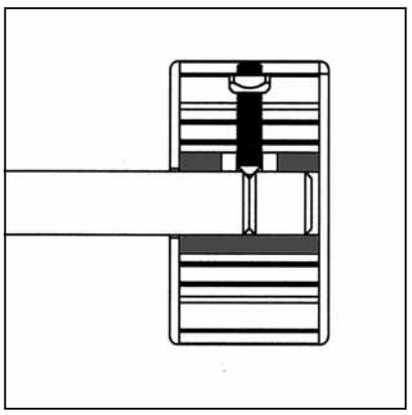
- Push in bore 32 of the profile
- Axial securing with housing adhesive

CENTERING BUSH

Part. N° 28.0146/0







TECHN. DATA / ITEMS SUPPLIED

- Aluminium, natural
- Weight 0,067 kg

APPLICATIONS

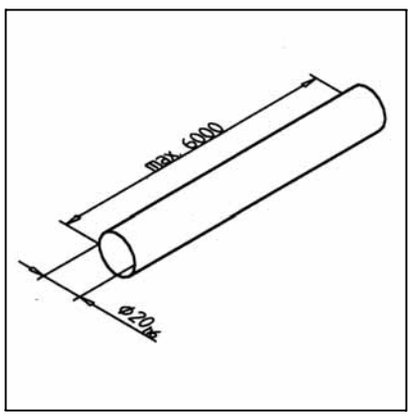
- Centrical clamping of shafts for all shaft supporting blocks of the MiniTec-linear system LB

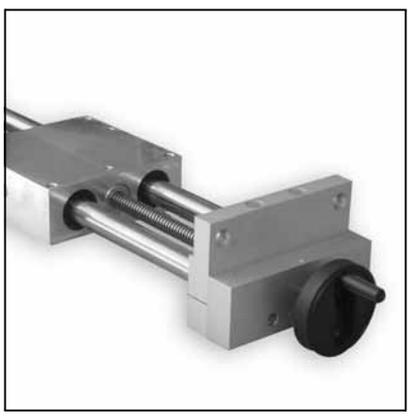
ASSEMBLY

- Insert centering bush in bore Ø 32 mm
- Insert shaft
- Attachment with set screw M8 x 35

SHAFT 20

Part. N° 17.1744/0





TECHN. DATA / ITEMS SUPPLIED

- Cf53, inductive hardened 60 +5 HRC ground h6
- Weight 2,466 kg/m
- Length 6 m

APPLICATIONS

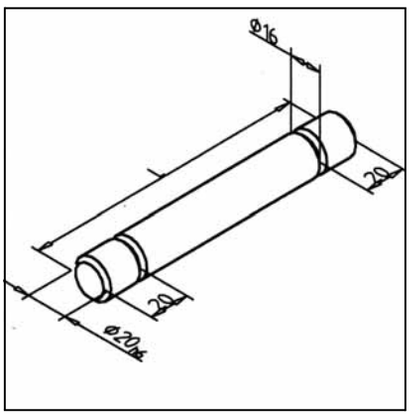
- Linear guide system LB

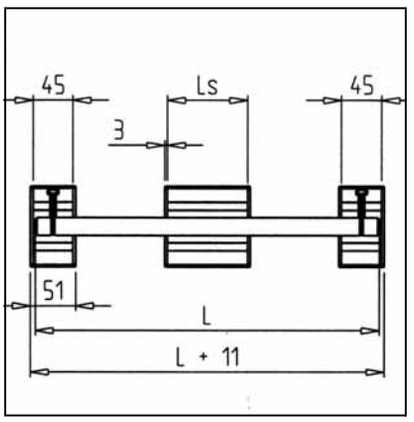
ASSEMBLY

- With centering bush in shaft support block

SHAFT 20 FOR LB-SYSTEM

Part. N° 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

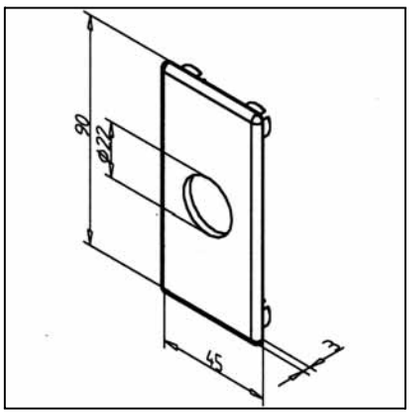
- MiniTec linear guides LB
- In each direction usable

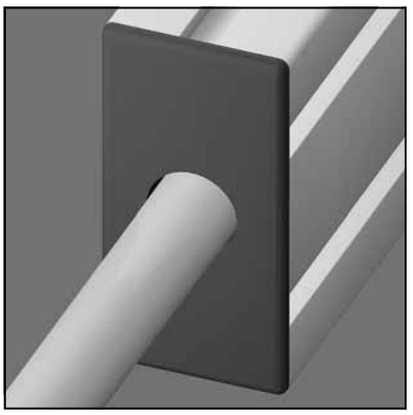
ASSEMBLY

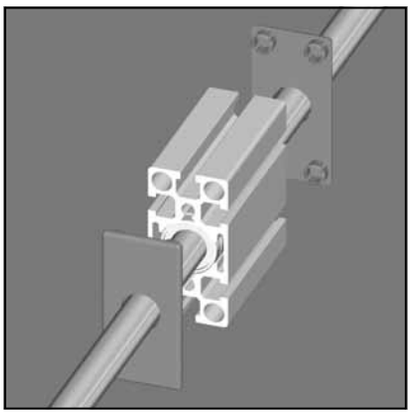
- Insert in shaft support
- Clamp with set screw M8 x 35

END CAP LB 45

Part. N° 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

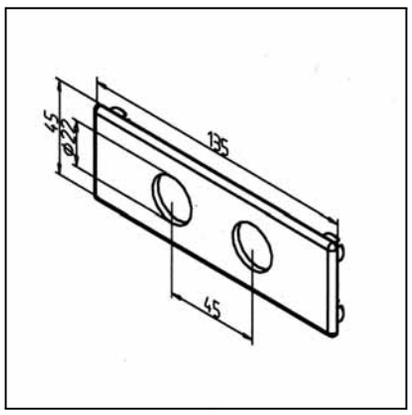
- Face covering of linear slides LB 45
- Face covering of shaft support block WB 45 (shaft side)

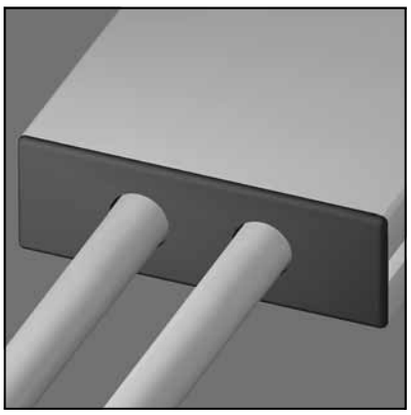
ASSEMBLY

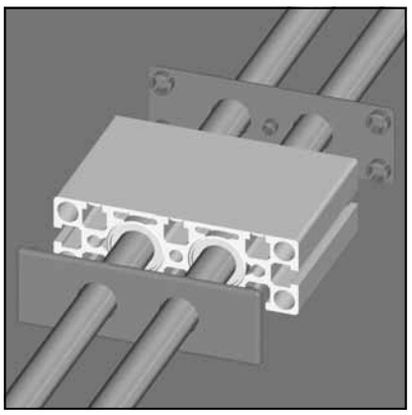
- Press into profile bores

END CAP LB 45 X 135

Part. N° 28.0101/1







TECHN. DATA / ITEMS SUPPLIED

- ABS, non-aging and oil resistant, grey
- On request also deliverable in black
- 2 bores Ø 22 mm
- Weight 0,017 kg

APPLICATIONS

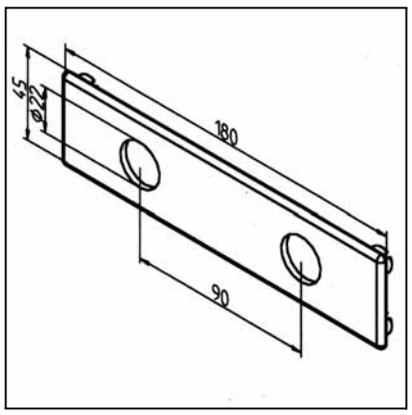
- Face covering of linear slides LB 45 x 135
- Face covering of shaft support blocks WB 45 x 135

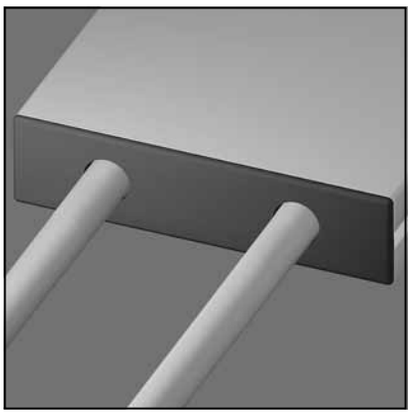
ASSEMBLY

- Press into profile bores

END CAP LB 45 X 180

Part. N° 28.0102/1





TECHN. DATA / ITEMS SUPPLIED

- ABS, non-aging and oil resistant, grey
- On request also deliverable in black
- 2 bores Ø 22 mm
- Weight 0,020 kg

APPLICATIONS

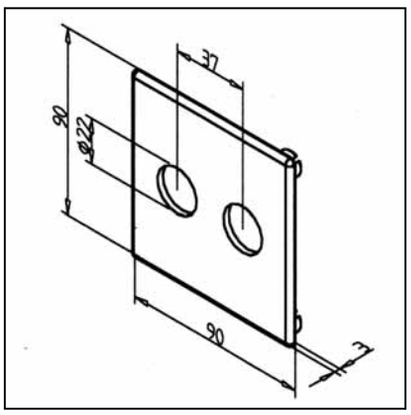
- Face covering of linear slides LB 45 x 180
- Face covering of shaft support blocks WB 45 x 180

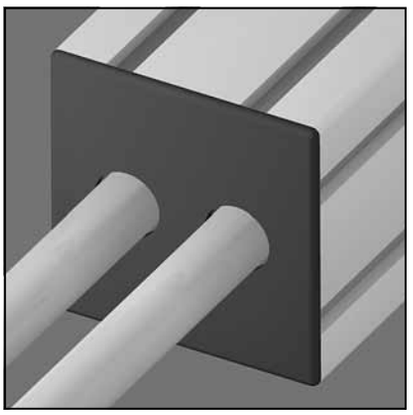
ASSEMBLY

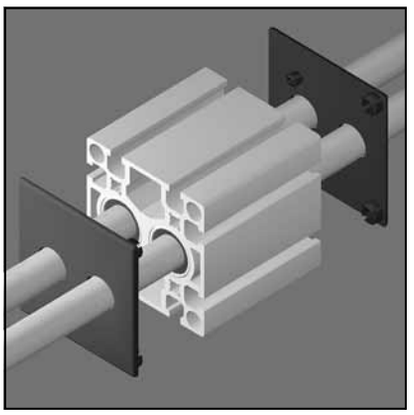
- Press into profile bores

END CAP LB 90

Part. N° 28.0095/1







TECHN. DATA / ITEMS SUPPLIED	
- ABS, non-aging and oil resistant, grey	
- On request also deliverable in black	
- 2 bores Ø 22 mm	
- Weight	0,0165 kg

APPLICATIONS

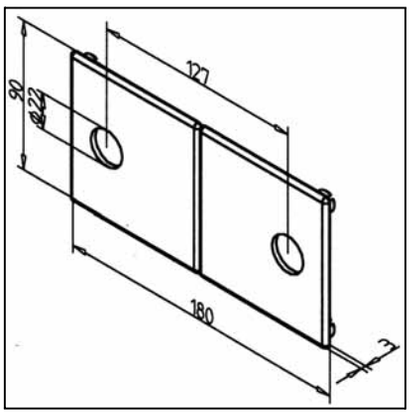
- Face covering of linear slides LB 90
- Face covering of shaft support blocks WB 90

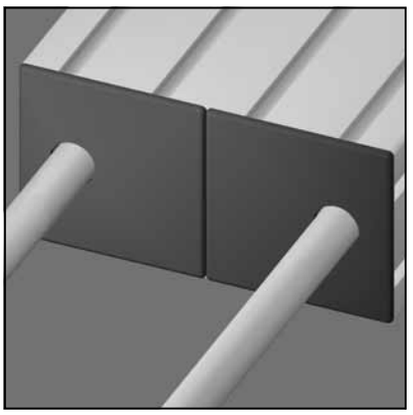
ASSEMBLY

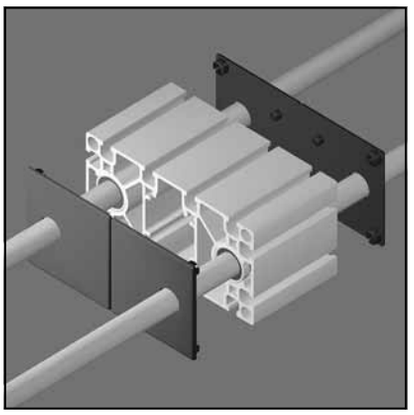
- Press into profile bores

END CAP LB 180

Part. N° 28.0103/1







TECHN. DATA / ITEMS SUPPLIED	
- ABS, non-aging and oil resistant, grey	
- On request also deliverable in black	
- 2 bores Ø 22 mm	
- Weight	0,037 kg

APPLICATIONS

- Face covering of linear slides LB 180
- Face covering of shaft support blocks WB 180

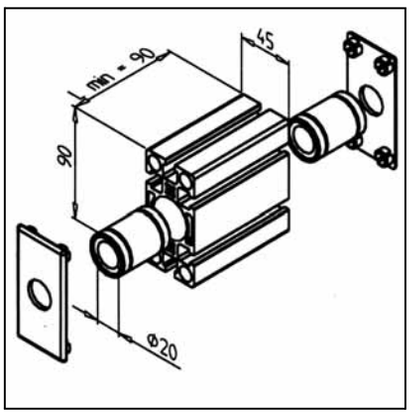
ASSEMBLY

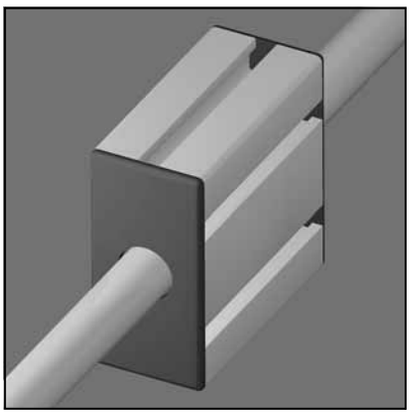
- Press into profile bores

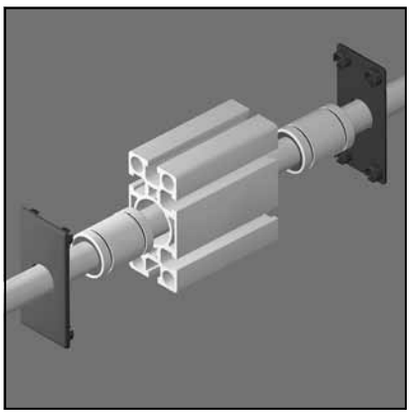
SYSTEM LB - READY FOR USE MODULES LB

SLIDE LB 45

Part. N° 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

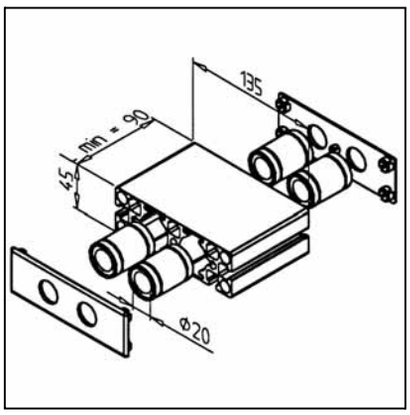
- All MiniTec linear systems LB

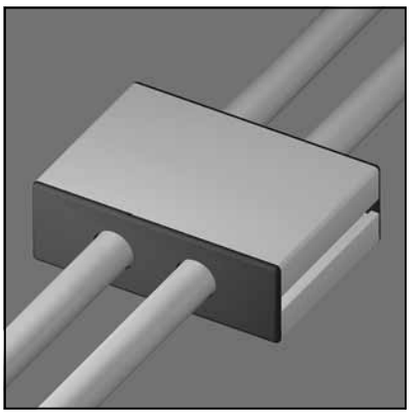
ASSEMBLY

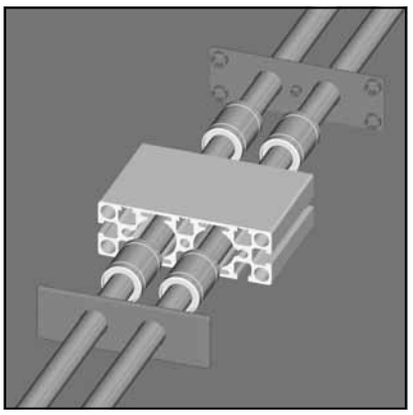
- Lead shaft through slide

SLIDE LB 45 X 135

Part. N° 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

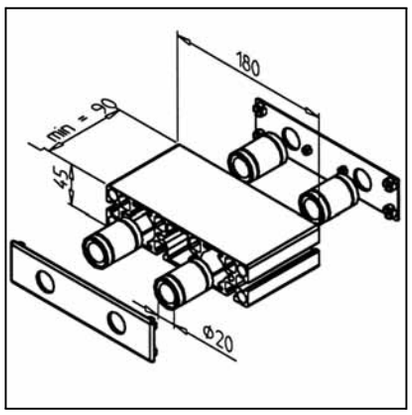
- All MiniTec linear systems LB

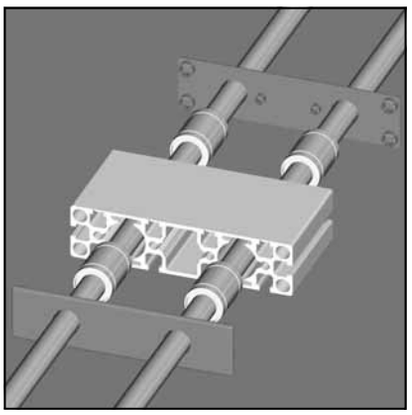
ASSEMBLY

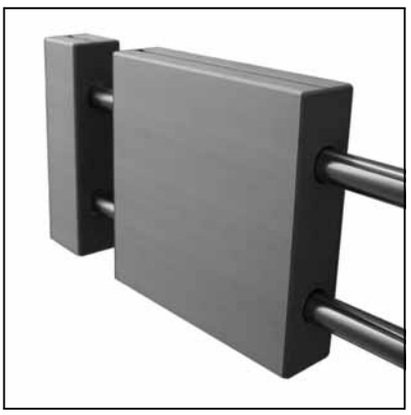
- Lead shaft through slide

SLIDE LB 45 X 180

Part. N° 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

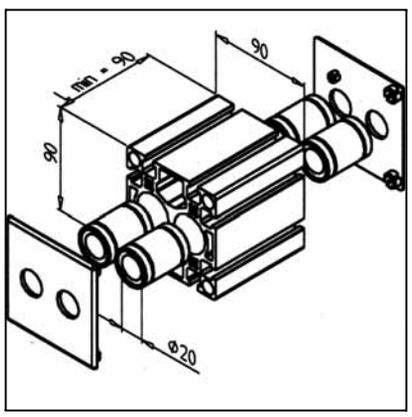
- All MiniTec linear systems LB

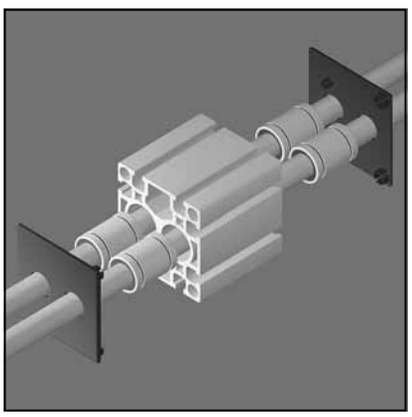
ASSEMBLY

- Lead shaft through slide

SLIDE LB 90

Part. N° 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

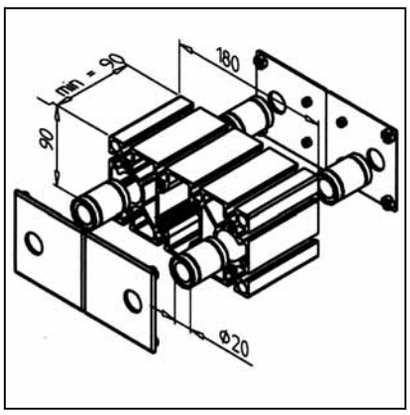
- All MiniTec linear systems LB

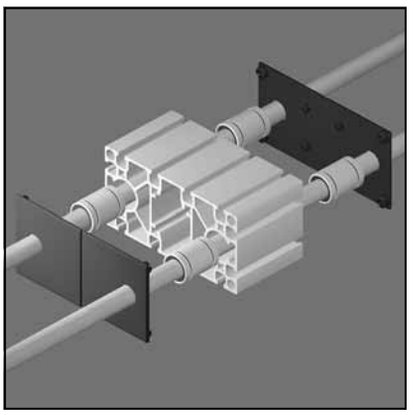
ASSEMBLY

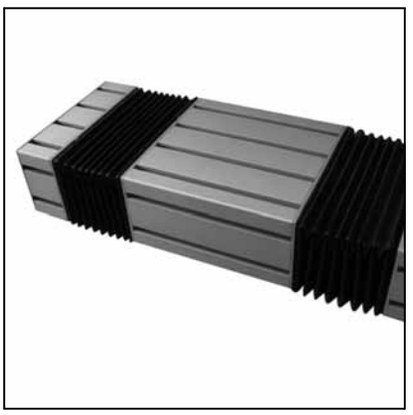
- Lead shaft through slide

SLIDE LB 180

Part. N° 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

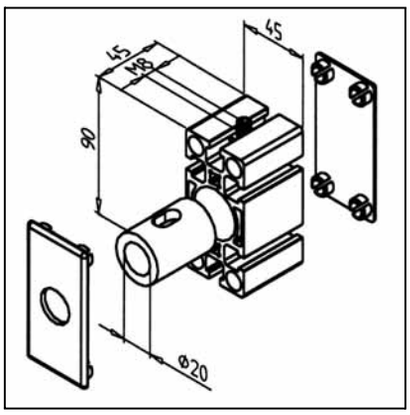
- All MiniTec linear systems LB

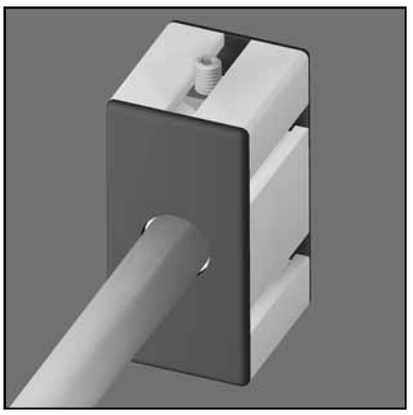
ASSEMBLY

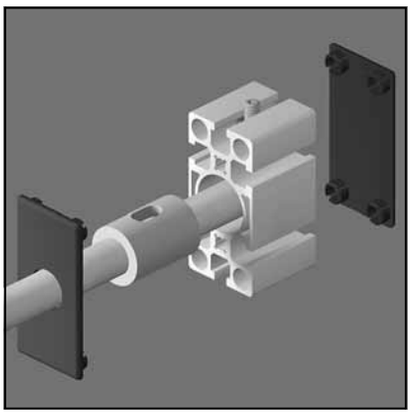
- Lead shaft through slide

SHAFT SUPPORT BLOCK WB 45

Part. N° 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

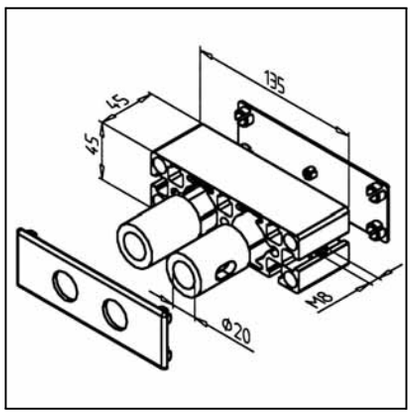
- Fastening shafts Ø 20 in MiniTec linear systems LB 45

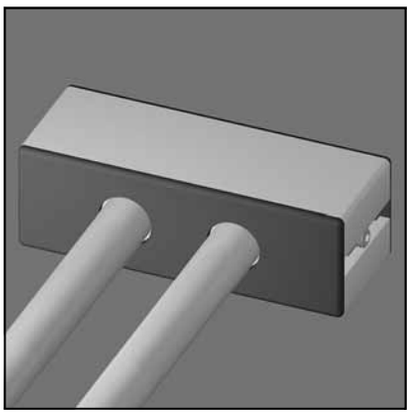
ASSEMBLY

- Insert shaft
- Tighten with set screw M8 x 35

SHAFT SUPPORT BLOCK WB 45 X 135

Part. N° 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

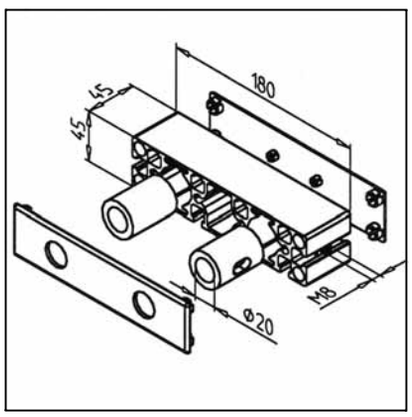
- Fastening shafts Ø 20 in MiniTec linear systems LB 45

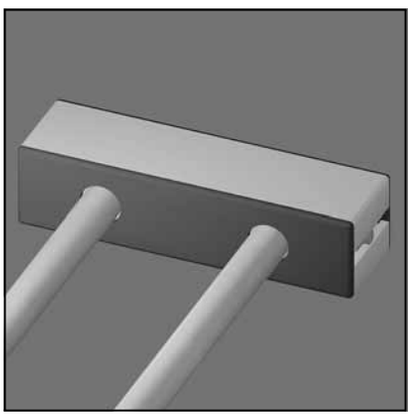
ASSEMBLY

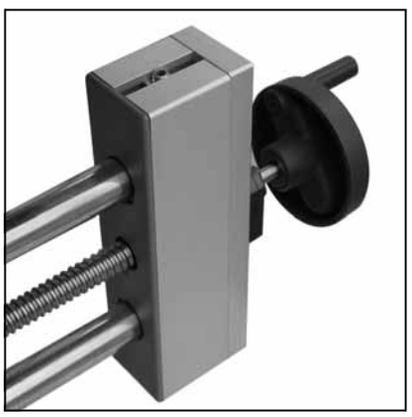
- Insert shaft
- Tighten with set screw M8 x 35

SHAFT SUPPORT BLOCK WB 45 X 180

Part. N° 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

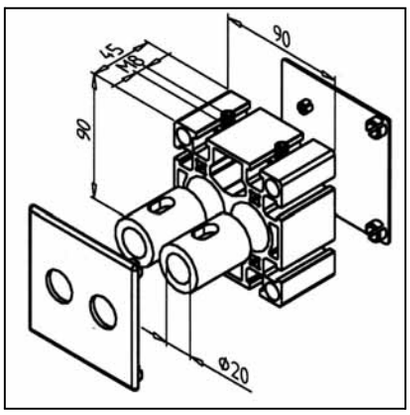
- Fastening shafts Ø 20 in MiniTec linear systems LB 45

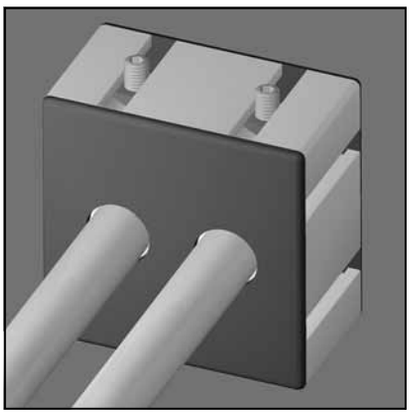
ASSEMBLY

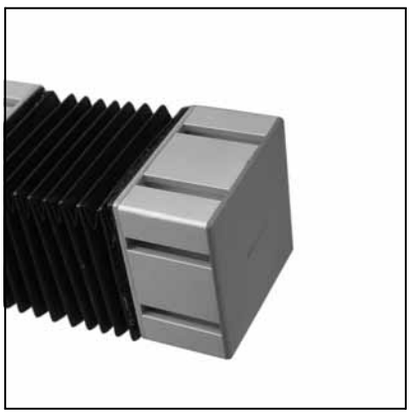
- Insert shaft
- Tighten with set screw M8 x 35

SHAFT SUPPORT BLOCK WB 90

Part. N° 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

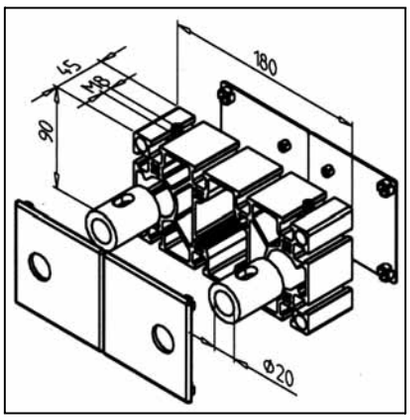
- Fastening shafts Ø 20 in MiniTec linear systems LB 90

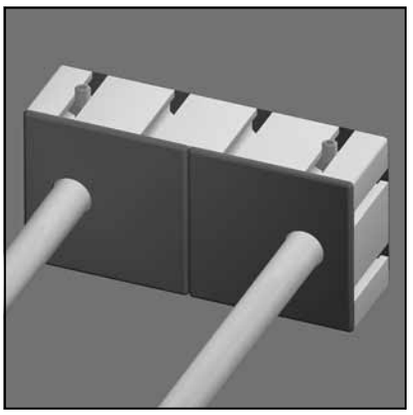
ASSEMBLY

- Insert shaft
- Tighten with set screw M8 x 35

SHAFT SUPPORT BLOCK WB 180

Part. N° 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

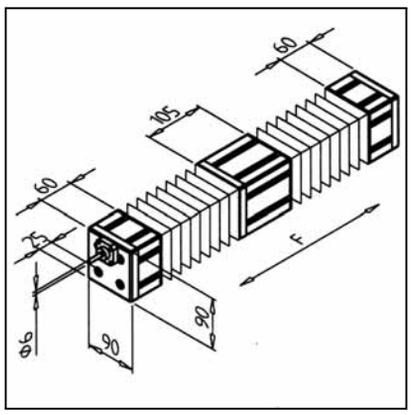
- Fastening shafts Ø 20 in MiniTec linear systems LB 180

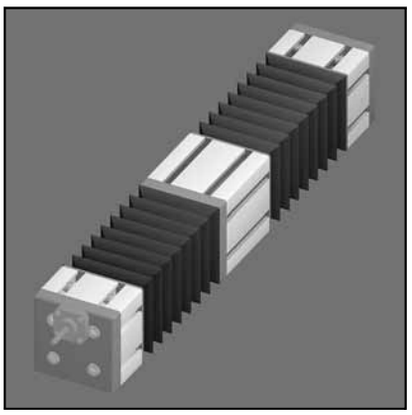
ASSEMBLY

- Insert shaft
- Tighten with set screw M8 x 35

LINEAR MODULE LB 90

Part. N° 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 lenght 760 mm

TECHN. DATA / ITEM SUPPLIED

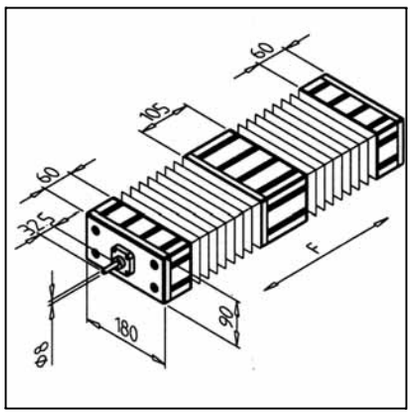
- Shaft end processed at fixed bearing side according to customer specification for motor and crank connection
- Shafts and spindles covered with protective bellows
- Positioning accuracy: ± 0,1 mm

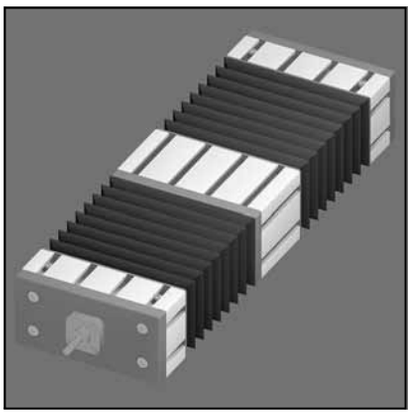
ASSEMBLY

- Handling systems
- z-axis in portals
- Multiple axis systems
- Grabbing units

LINEAR MODULE LB 180

Part. N° 28.0179/0





MULTIPLE AXIS SYSTEMS

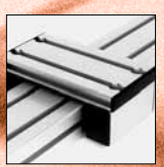
- Linear module made of profile 90 x 180; ready for use
- Drive unit with rolled circulated ball spindle RNCT 1404-3,4 Ø 14 mm, incline 4
- Incline fault / 300: 12 µm (class C3)
- Slide guidance on 4 linear ball bearings with hardened ground precision shafts Ø 20 mm, total length 950 mm

TECHN. DATA / ITEM 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

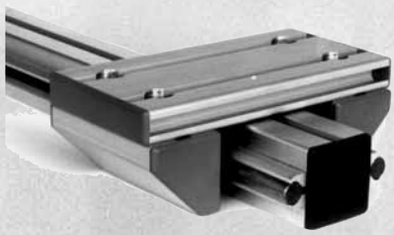
APPLICATIONS

- Handling systems
- Z-axis in portals
- Multiple axis systems
- Grabbing units

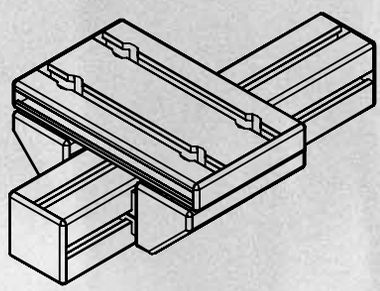


LINEAR SYSTEM LN/LG

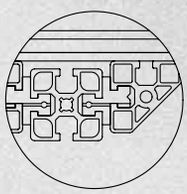
SLIDEWAYS



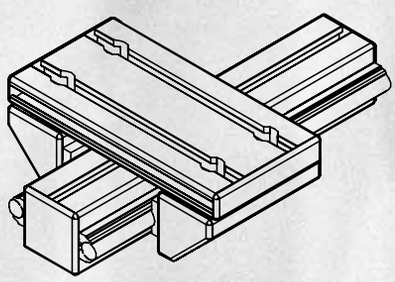
The LN/LG slide guides were built for applications where demands for guidance accuracy are not high but where extreme usage conditions are present.
These guides are especially suitable for wet operation, high dust concentrations, and insufficient lubrication.
The slides series LN/LG are constructed according to the same modular principle as series LR.



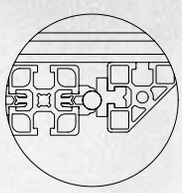
Series LN:



Slide guidance in profile groove and on profile surface. This series requires little space.



Series LG:



Slide guidance on ground and hardened shafts h6 made from material Cf53.
For operation in humid environment we recommend the use of our stainless shafts.

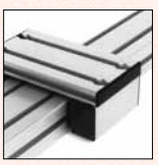
Accuracy: Series LG: ± 0.15 mm Series LN: ± 0.20 mm.
The lateral guide rails can be used to adjust clearance.

Max. load:	50 N/cm supporting slide rail (= slide length)
Slide friction coefficient:	0.05 on steel shaft (Series LG), 0.1 on anodized profile surface (Series LN)

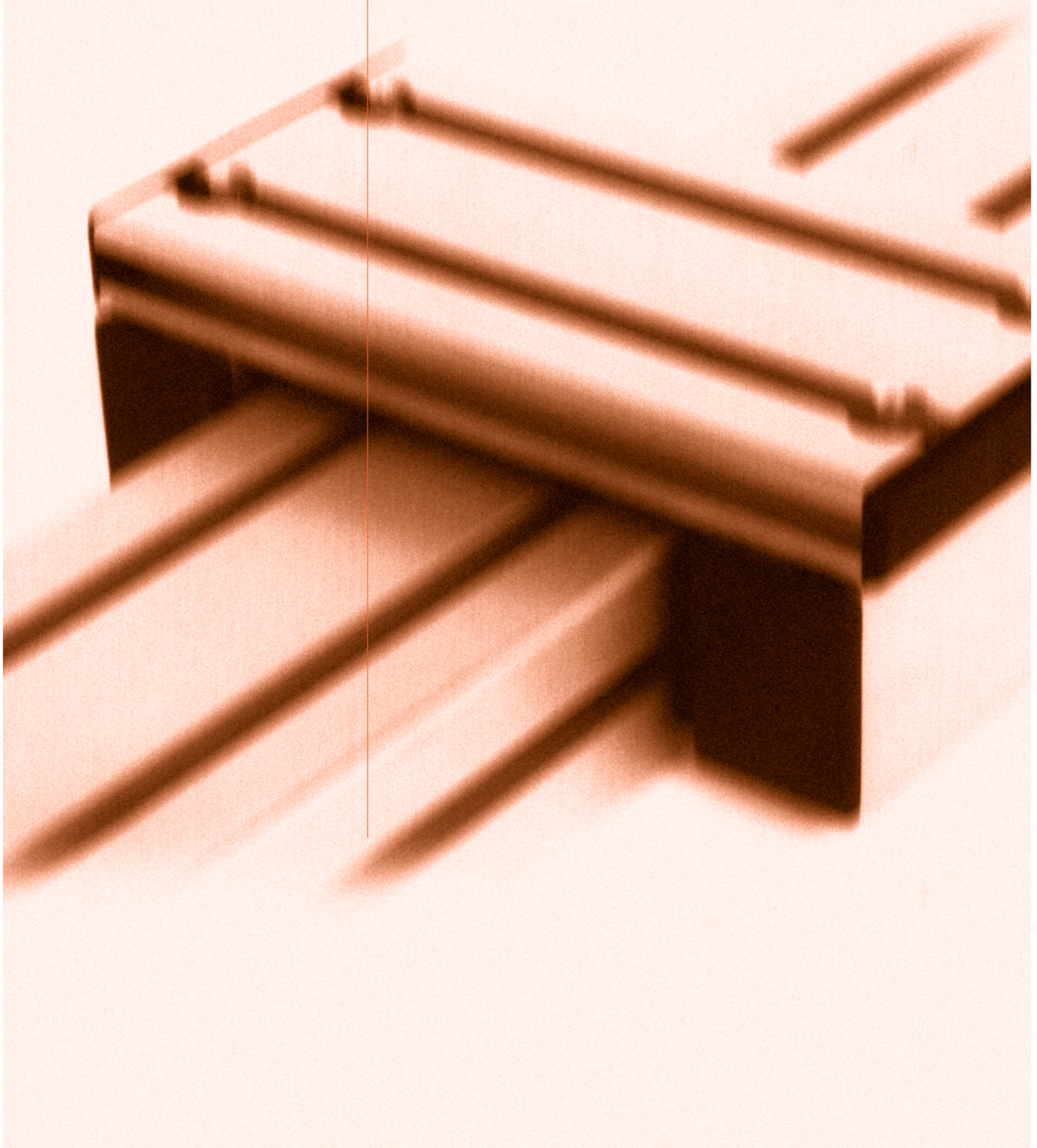
This bearing requires no lubrification. Please consider higher slip-stick effect.

Travel:	1 m/sec (max.)
Average temperature:	50°C (max.)
Peak load:	70°C (max.)

The slide rail is resistant to organic acids, alkalis, hydrous solutions, inorganic salt, organic acids and alcohol. They are not fully resistant to hydrocarbon and halogenated hydrocarbons.

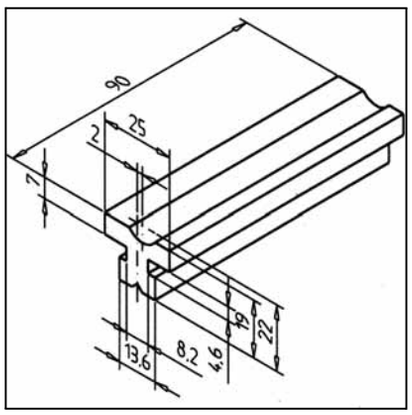


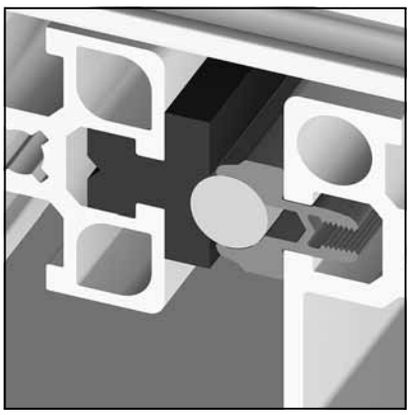
COMPONENTS LG

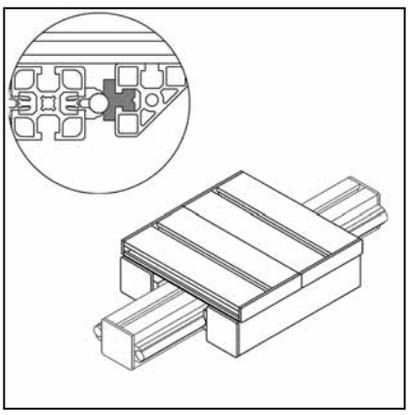


SLIDE RAIL LG

Part. N° 22.1094/0



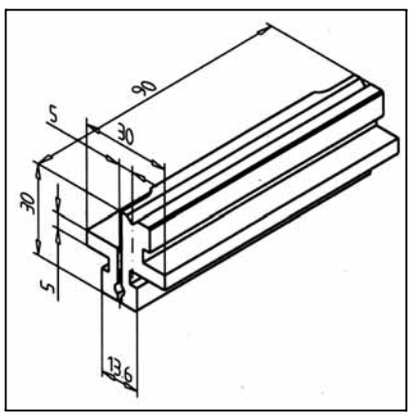


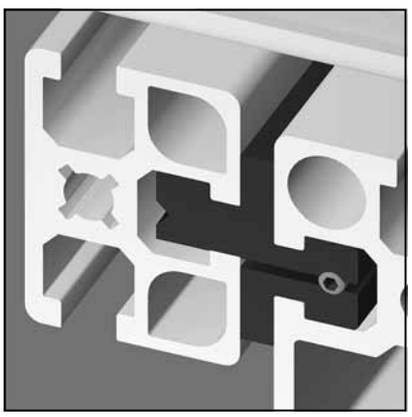


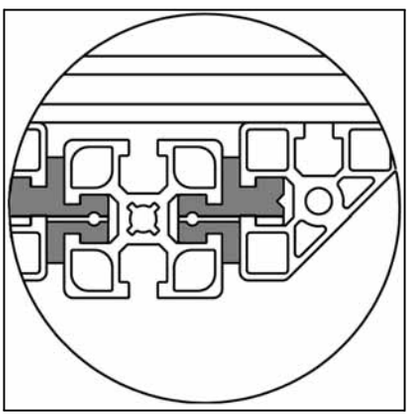
TECHN. DATA / ITEMS SUPPLIED	APPLICATIONS	ASSEMBLY
- Hard plastic PE-UHMW, black	- Slide guides LG	- Insert into groove of lateral guide profile
- 2 set screws		- Secure with set screw
- Max. surface pressure: 10 N/mm²		
- Weight 0,032 kg		

SLIDE RAIL LN

Part. N° 22.1095/0



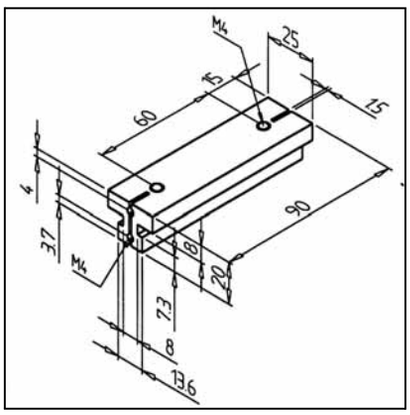


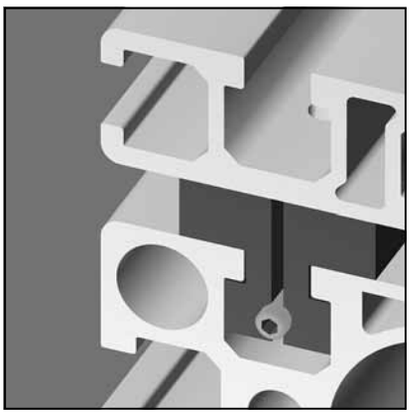


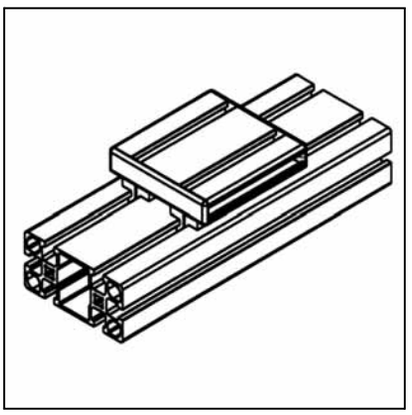
TECHN. DATA / ITEMS SUPPLIED	APPLICATIONS	ASSEMBLY
- Hard plastic PE-UHMW, black	- Slide guides LN	- Connect with slide plate
- Fixing kit	- Adjusting units	- Insert into grooves of the guide profile
- Max. surface pressure: 10 N/mm²	- Heavy sliding doors	- Adjust with clearance, use fixing kit
- Weight 0,030 kg	- Drawers	

SLIDE RAIL LN-S

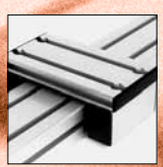
Part. N° 22.1096/0







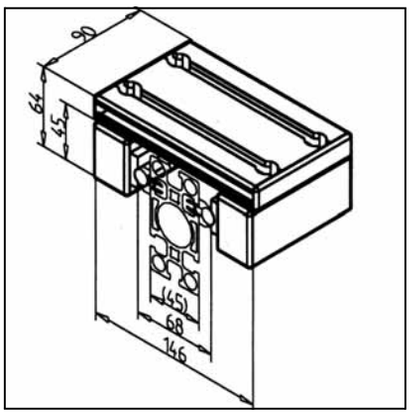
TECHN. DATA / ITEMS SUPPLIED	APPLICATIONS	ASSEMBLY
- Hard plastic PE-UHMW, black	- Slide guides LN-S	- Insert into profile groove
- 2 set screws M5 x 10	- Adjusting units	- Adjust with clearance
- Max. surface pressure: 10 N/mm²	- Automatic advance units	- Connect with slide plate
- Weight 0,030 kg	- Workpiece support	

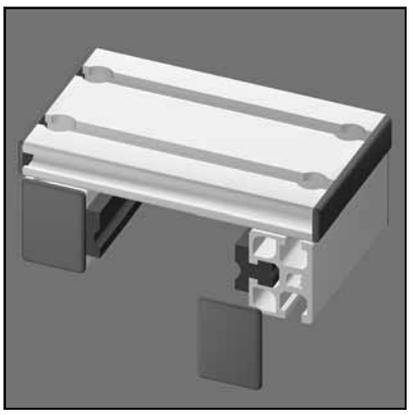


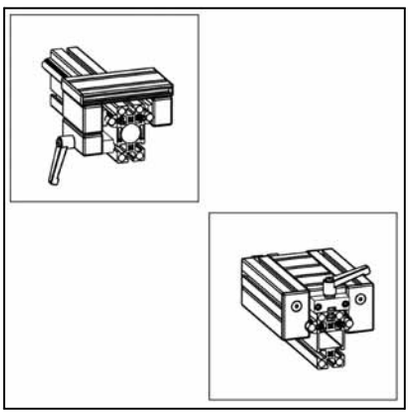
SYSTEM LN/LG - READY FOR USE MODULES LN/LG

SLIDE LWG 32 X 45 - 45

Part. N° 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

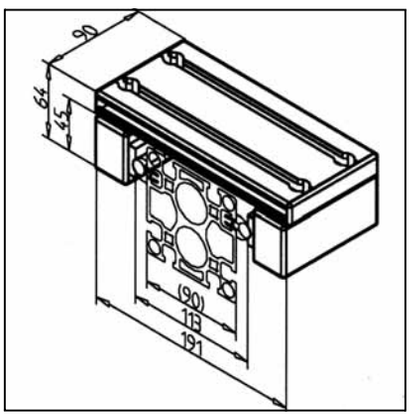
- Simple linear guides
- Automatic advance units
- Adjusting units

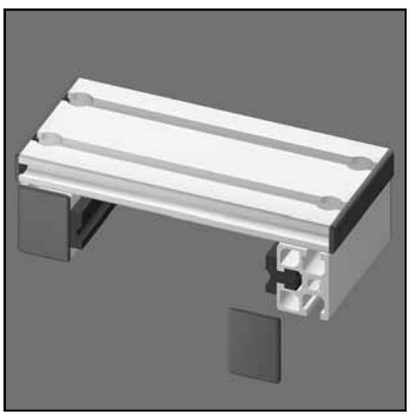
SPECIAL DESIGNS

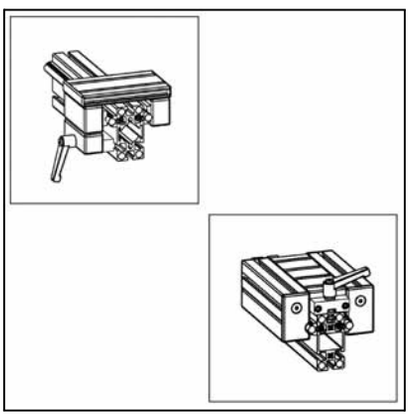
- With slide clamping unit (Top) **Part N° 28.0132/1**
- With slide clamping unit (Lateral) **Part N° 28.0132/2**
- Slide plate made of aluminium profile 32 x 180
- Different slide lengths

SLIDE LWG 32 X 45 - 90

Part. N° 28.0133/0







TECHN. DATA / ITEMS SUPPLIED

- Slide completely assembled
- 2 slide rails LG
- End caps
- Clearance adjusted
- Load max. 450 N
- Weight 0,810 kg

APPLICATIONS

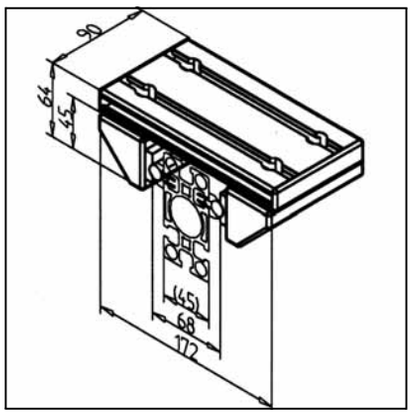
- Simple linear guides
- Automatic advance units
- Adjusting units

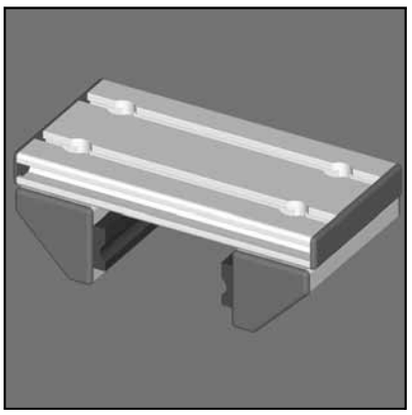
SPECIAL DESIGNS

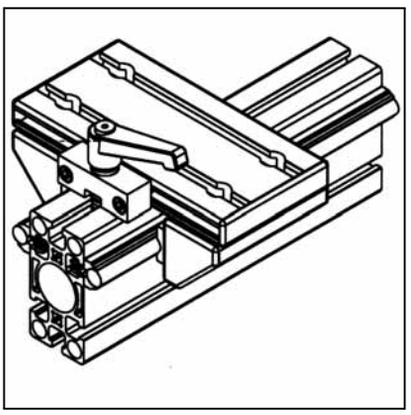
- With slide clamping unit (Top) **Part N° 28.0133/1**
- With slide clamping unit (Lateral) **Part N° 28.0133/2**
- Slide plate made of aluminium profile 32 x 180
- Different slide lengths

SLIDE LWG 45/45° - 45

Part. N° 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

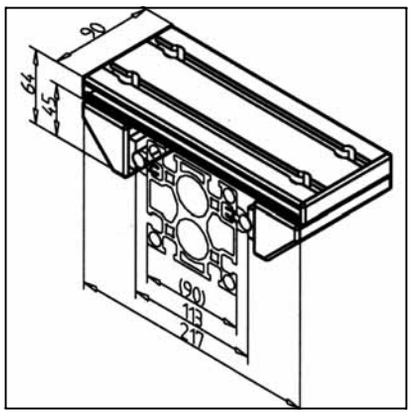
- Simple linear guides
- Automatic advance units

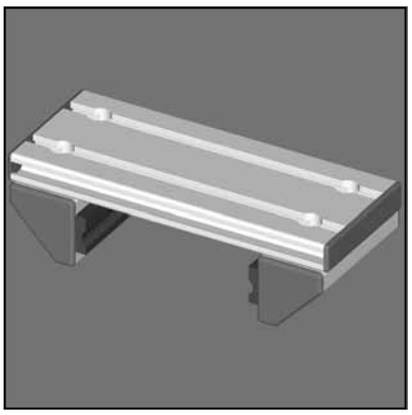
SPECIAL DESIGNS

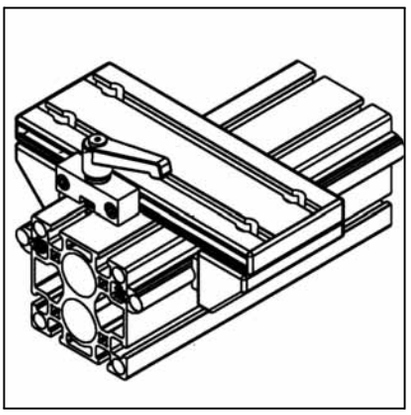
- With slide clamping unit (Top) **Part N° 28.0136/1**
- Slide plate made of aluminium profile 32 x 180
- Different slide lengths

SLIDE LWG 45/45° - 90

Part. N° 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

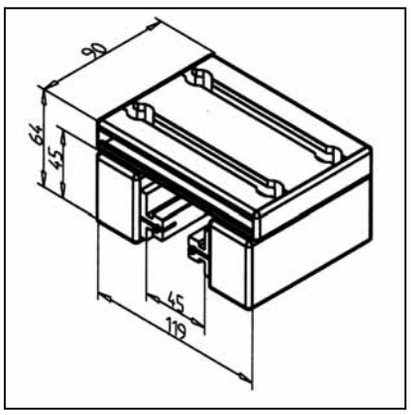
- Simple linear guides
- Automatic advance units

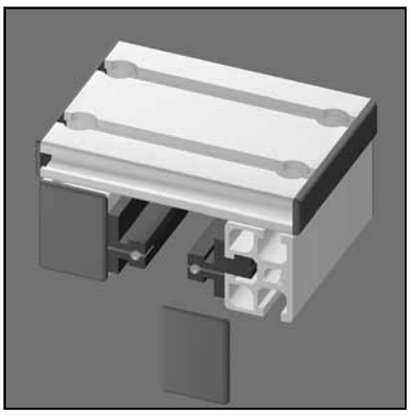
SPECIAL DESIGNS

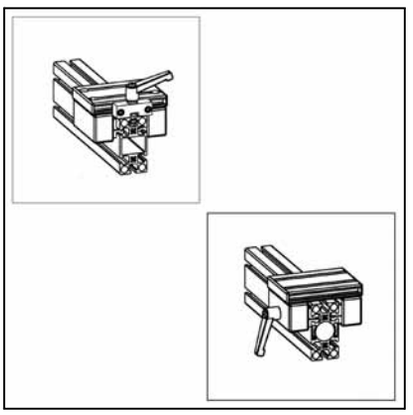
- With slide clamping unit (Top) **Part N° 28.0137/1**
- Slide plate made of aluminium profile 32 x 180
- Different slide lengths

SLIDE LWN 32 X 45 - 45

Part. N° 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

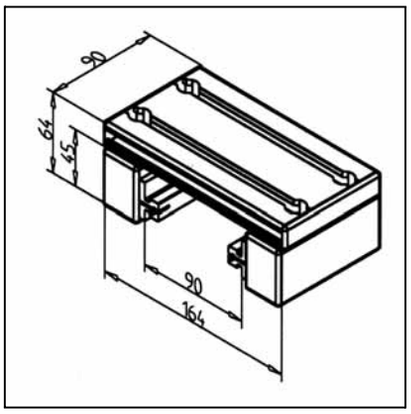
- Simple linear guides
- Automatic advance units

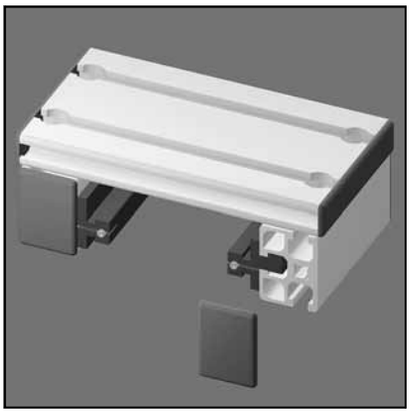
SPECIAL DESIGNS

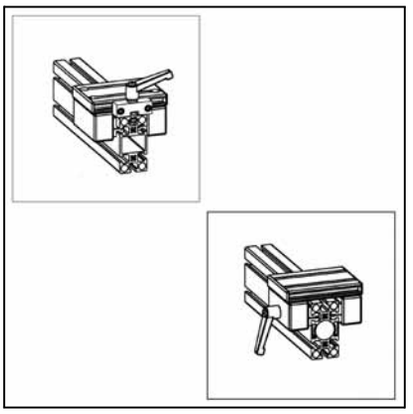
- With slide clamping unit (Top) **Part N° 28.0192/1**
- With slide clamping unit (Lateral) **Part N° 28.0192/2**
- Slide plate made of aluminium profile 32 x 180
- Different slide lengths

SLIDE LWN 32 X 45 - 90

Part. N° 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

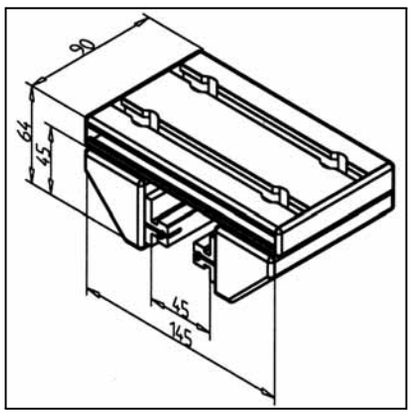
- Simple linear guides
- Automatic advance units

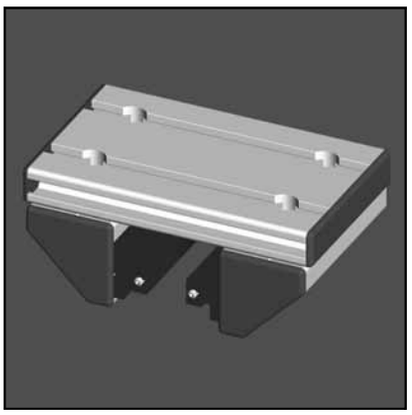
SPECIAL DESIGNS

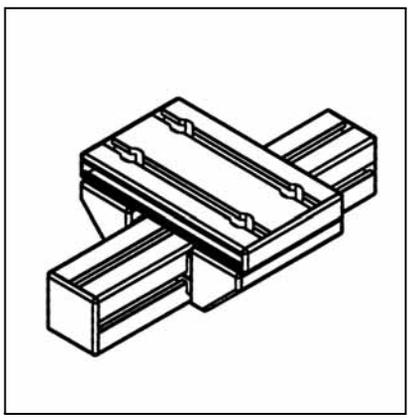
- With slide clamping unit (Top) **Part N° 28.0193/1**
- With slide clamping unit (Lateral) **Part N° 28.0193/2**
- Slide plate made of aluminium profile 32 x 180
- Different slide lengths

SLIDE LWN 45/45° - 45

Part. N° 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

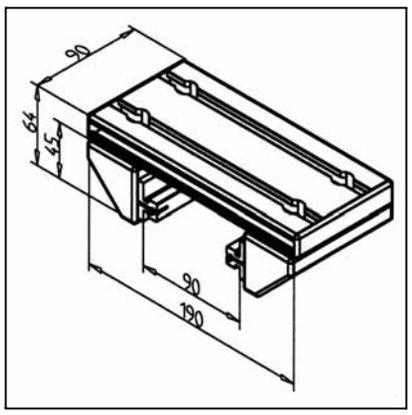
- Simple linear guides
- Automatic advance units

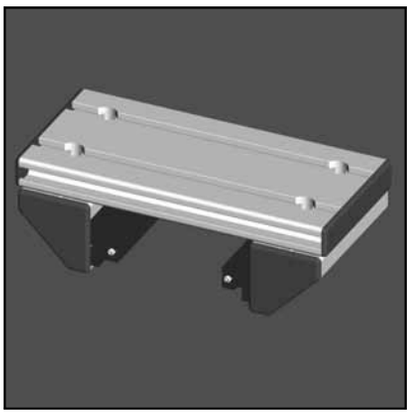
SPECIAL DESIGNS

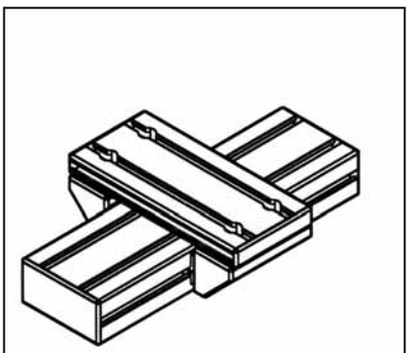
- With slide clamping unit (Top) **Part N° 28.0196/1**
- Slide plate made of aluminium profile 32 x 180
- Different slide lengths

SLIDE LWN 45/45° - 90

Part. N° 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

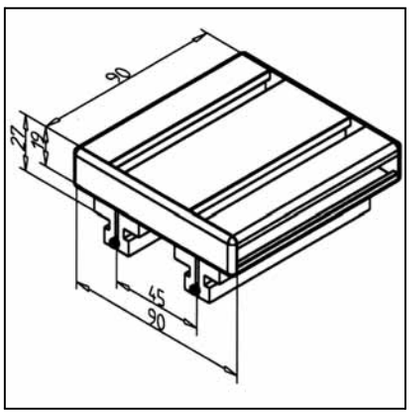
- Simple linear guides
- Automatic advance units

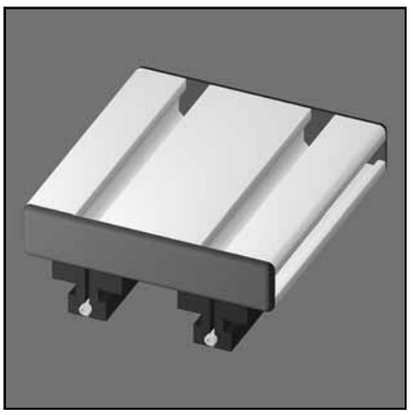
SPECIAL DESIGNS

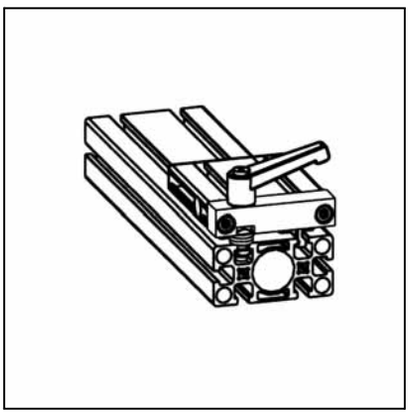
- With slide clamping unit (Top) **Part N° 28.0197/1**
- Slide plate made of aluminium profile 32 x 180
- Different slide lengths

SLIDE LWN-S

Part. N° 28.0170/0







TECHN. DATA / ITEMS SUPPLIED

- Slide completely assembled
- 2 slide rails LN
- End caps
- Clearance adjusted
- Load max. 450 N
- Weight 0,261 kg

APPLICATIONS

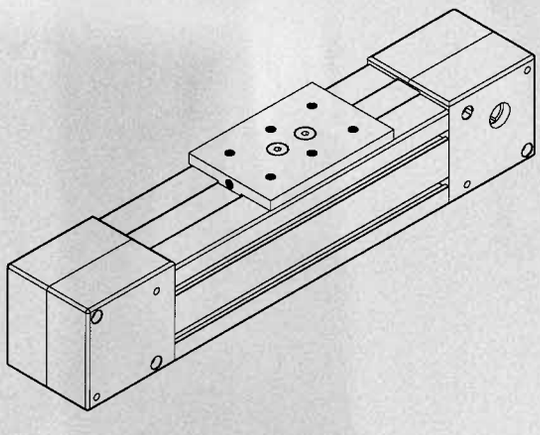
- Simple linear guides
- Automatic advance units

SPECIAL DESIGNS

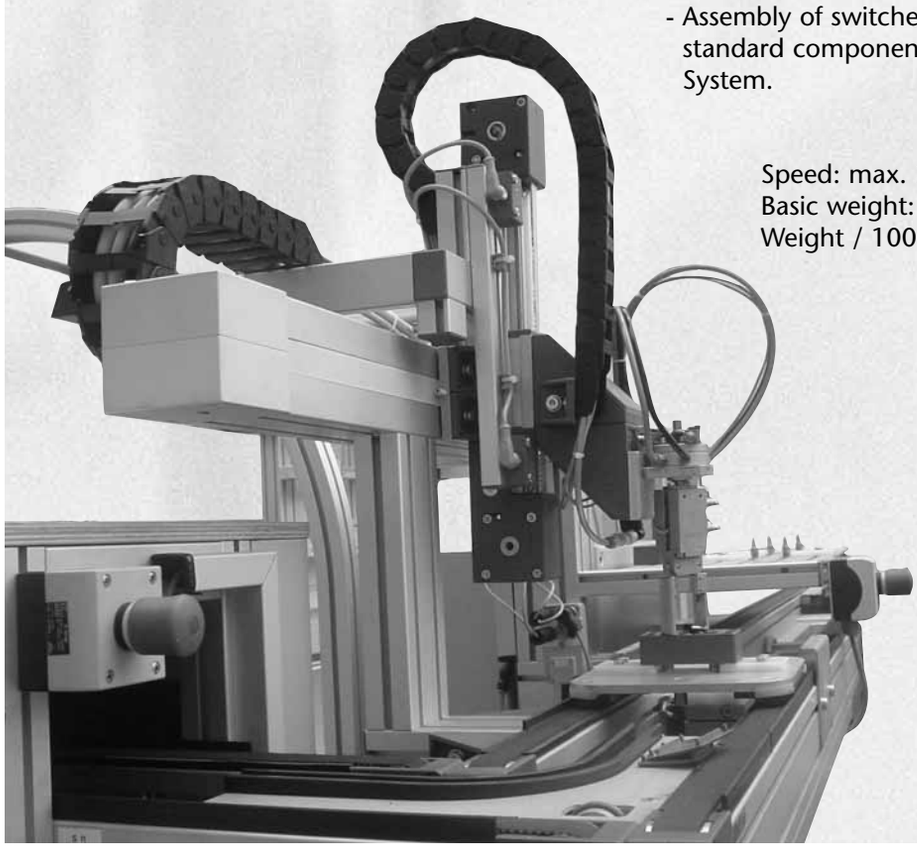
- With slide clamping unit (Top) **Part N° 28.0170/1**
- Slide plate made of aluminium profile 32 x 180
- Different slide lengths

LINEAR MODULE LMZ 90 WITH TIMING BELT

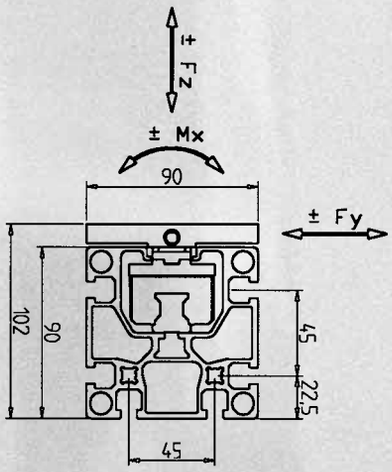
Part N° 28.0400/0



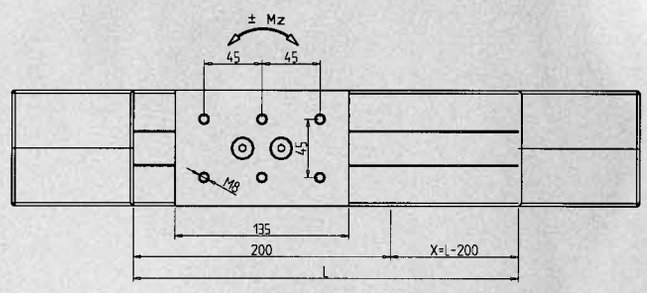
- Compact carrier profile with standard t-slots. Compatible to MiniTec construction profiles, anodized E6/EV1.
- Integrated rail guide
- With two slides, covered by timing belt.
- Permanent lubrication. Lubrication system for a service performance up to 10000 km
- Aluminium slide (processed on all sides) with integrated timing belt tensioner and 6 connection threads M8.
- 2 deflection units with presicion ball bearings (mounted on carrier profile by using MiniTec powerlock fastener, prepared for built-on motors with connection shaft Ø 17 mm and feather key. The adapter plate can be processed according to desired motor specifications.
- Infeed: 200 mm/revolution
- Max. allowable belt tractive force: 3.500 N
- Timing belt 25 AT 10, strengthened with steel wire. Mounted with preload.
- Max. traverse path X = 3.800 mm
- Assembly of switches sideways on t-slots with standard components of the MiniTec Profile-System.

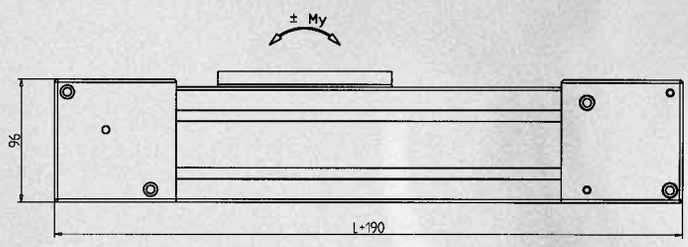


Speed: max. 3m/s
Basic weight: 5.200 g
Weight / 100mm traverse path: 800g



load rating N		allowable static breakdown torque Nm		
C_{dyn}	C_{stat}	Mx	My	Mz
18800	24400	240	128	128



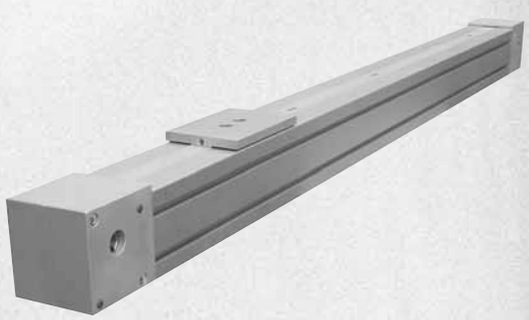


Availabilities:

- Module completely assembled with drive connection, but without drive
- Customized module completely assembled with gear and engine
- Customized module completely assembled with gear, engine and control system

Application examples:

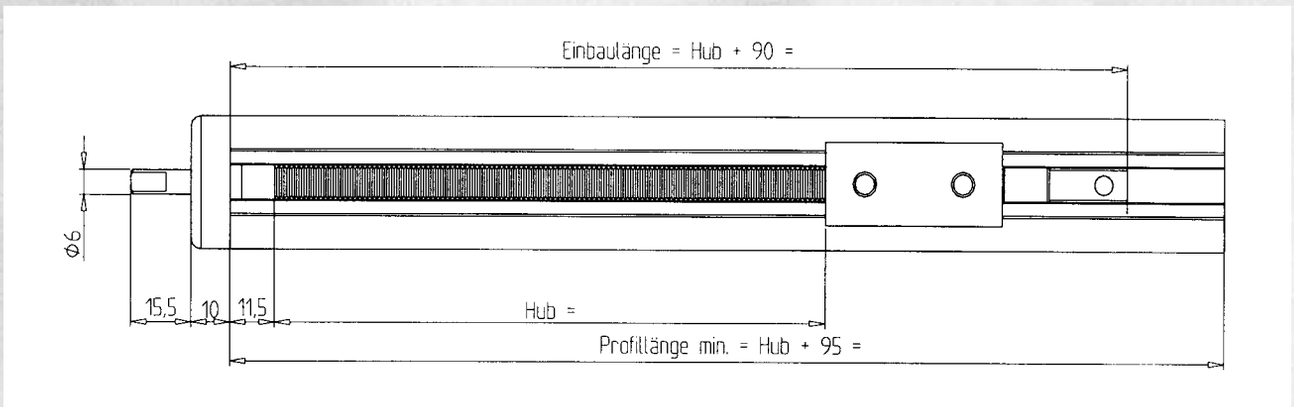
- Pick-and-Place
- Robotic palletizer
- Measuring systems
- Feedings
- Handling systems



Operating conditions:

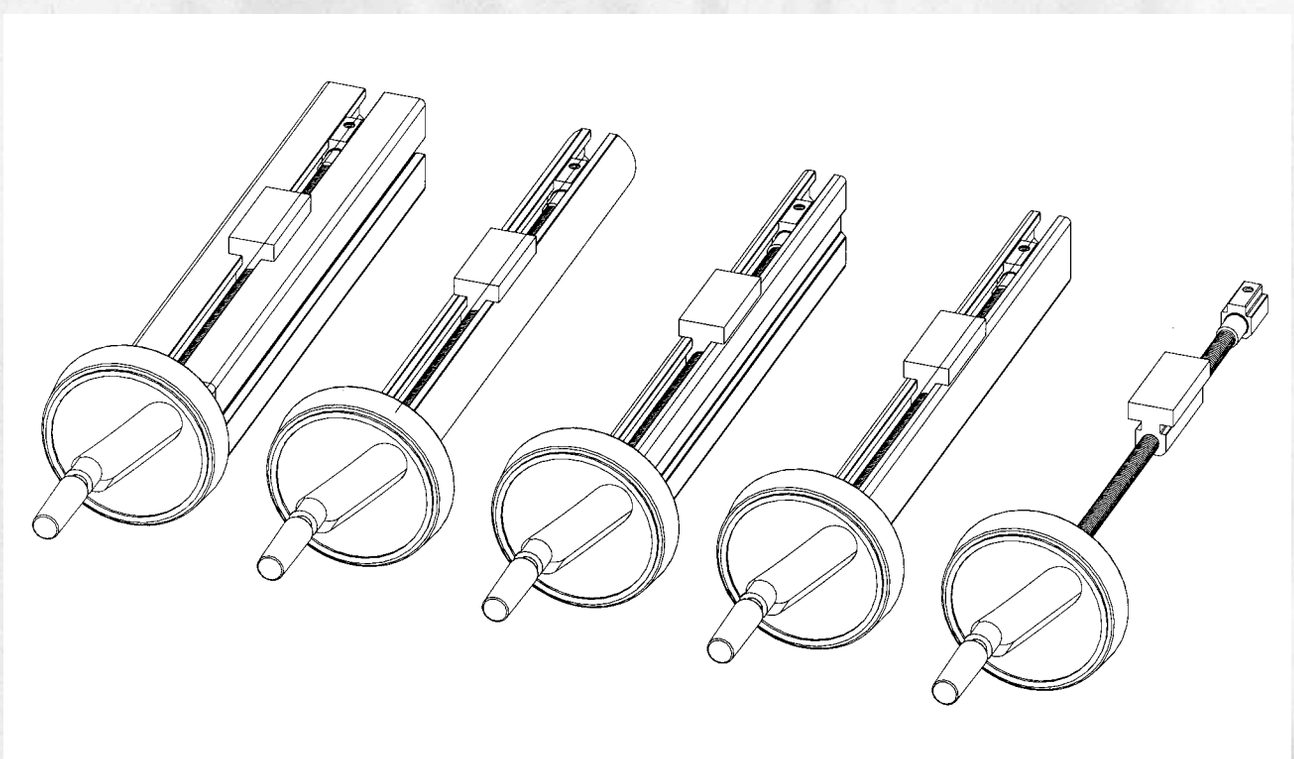
Please consider the the max. allowable deflection of 3,5 mm / 4000 mm for cantilever assemblies. To guarantee high stability, we recommend to suppot the module every 300 to 600mm (particularly for modules with a high dynamic load).

MINI-ADJUSTMENT UNITS



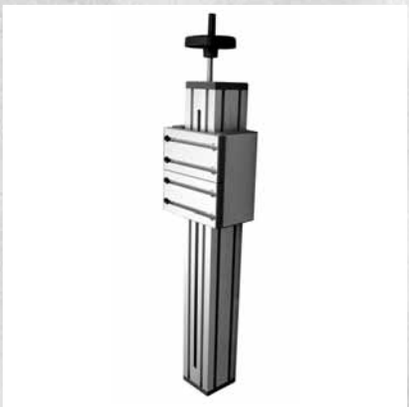
MiniTec mini-adjustment units are ready-to-install devices that are also mounted strictly in accordance with the modular construction principle as standard elements from our profile system. They are used in machine construction, packaging equipment, filling systems and testing equipment.

Versions

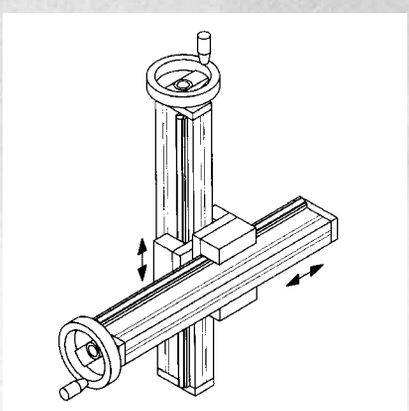


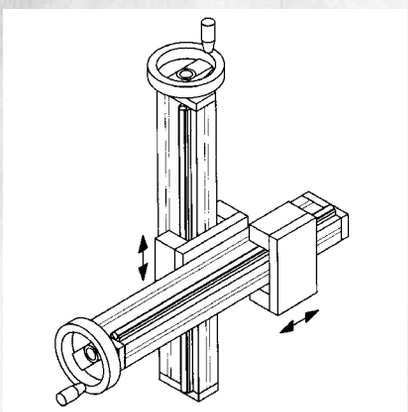
Spindles:	VA metric thread M8 x 1,25, slides made of brass
Travel:	500 mm (max.)
Load capacity:	1000 gr

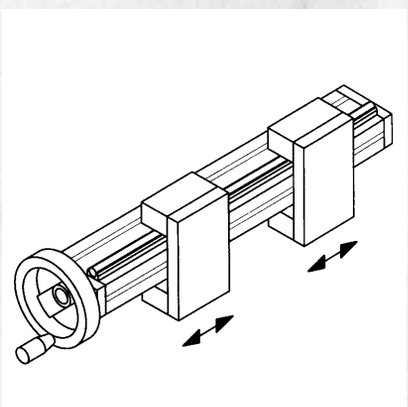
ADJUSTING UNITS



Possible combinations:

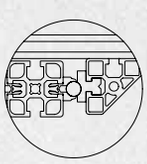




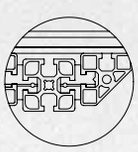


MiniTec adjusting units are ready-to-use modules that are strictly assembled according to the modular system of our standard profile elements. They are used in mechanical engineering, in the packing industry, for filling installations and testing. The adjusting units are equipped with slide elements made from plastics PE-UHMW. This material is resistant against most acids and lyes. The friction value for ground steel shafts in 0.05 and 0.1 for andodized aluminium surfaces (see page 265).

Designs



Series VEW
Slide guidance on ground, hardend precision shafts Ø 12 mm, h6, material special steel Cf 53, mat. no. 1.1213

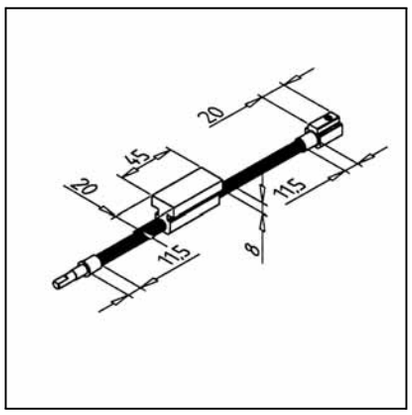


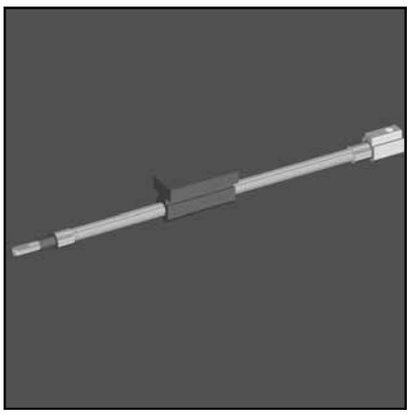
Series VEN
Slide guidance in profile grooves

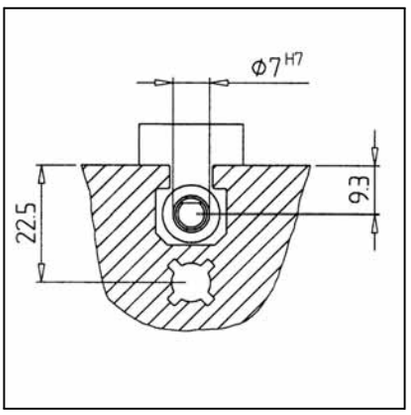
Screw:	ACME-Screw 16 x 4, St, with nut RG 7
Incline fault:	± 0.1/300 mm (max.)
Positioning accuracy:	± 0.1/300 mm
Travel:	1000 mm (max.)
Max. load:	50 N/cm slide rail (slide length)

MINI ADJUSTING UNIT FITTING KIT

Part. N° 28.0350/0







TECHN. DATA / ITEMS SUPPLIED

- Without carrier profile, handwheel and bearing block for mounting in existing equipment
- VA spindle M8 x 1.25
- Brass carriage
- Max. loading 1 - 2 kg
- **Please quote stroke length**

APPLICATIONS

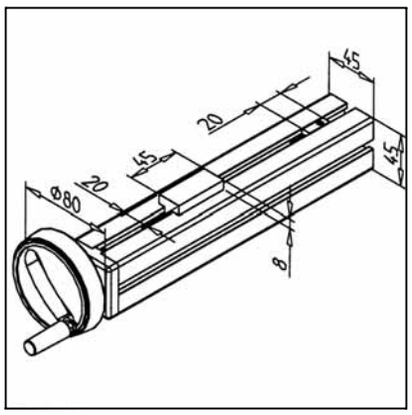
- For adjustment of the lateral guides on conveying equipment
- For adjusting sensor holders or light barriers
- For simple equipment

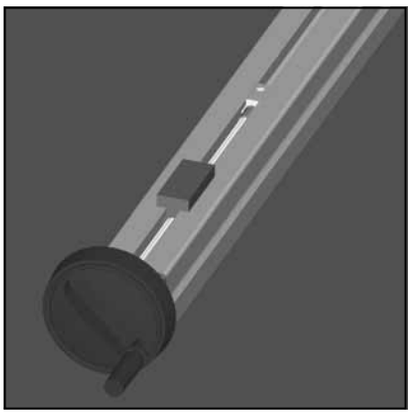
ASSEMBLY

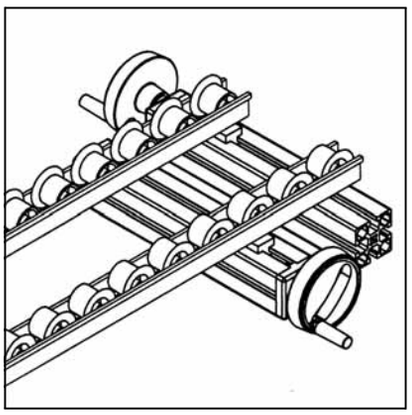
- With MiniTec power-lock fastener
- Push into the profile groove and fasten the end block

MINI ADJUSTING UNIT WITH PROFILE 45 X 45

Part. N° 28.0354/0







TECHN. DATA / ITEMS SUPPLIED

- With carrier profile 45 x 45 F
- VA spindle M8 x 1.25
- Brass carriage
- Max. loading 1 - 2 kg
- **Please quote stroke length**

APPLICATIONS

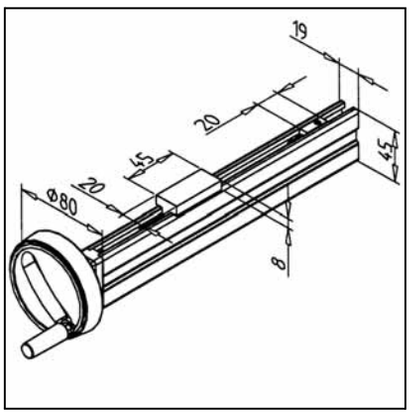
- For adjustment of the lateral guides on conveying equipment
- For adjusting sensor holders or light barriers
- For simple equipment

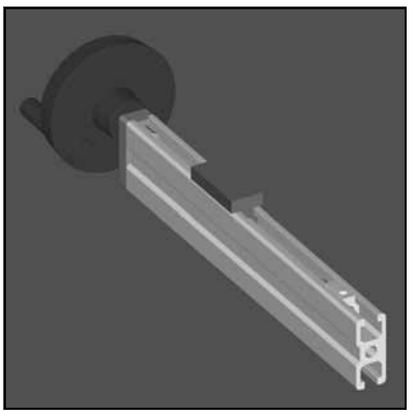
ASSEMBLY

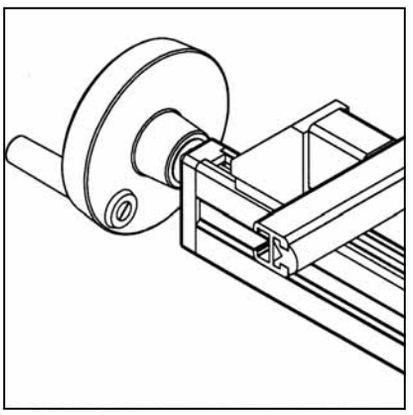
- With MiniTec power-lock fastener
- Can also be fastened with a mounting bracket
- Also available without carrier profile, **Part. N° 28.0354/1**

MINI ADJUSTING UNIT WITH PROFILE 19 X 45

Part. N° 28.0352/0







TECHN. DATA / ITEMS SUPPLIED

- With carrier profile 19 x 45
- VA spindle M8 x 1.25
- Brass carriage
- Max. loading 1 - 2 kg
- **Please quote stroke length**

APPLICATIONS

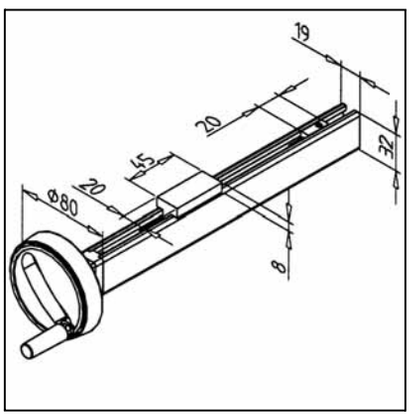
- For adjustment of the lateral guides on conveying equipment
- For adjusting sensor holders or light barriers
- For simple equipment

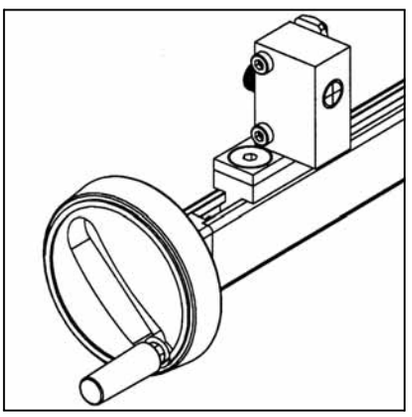
ASSEMBLY

- With MiniTec power-lock fastener
- Can also be fastened with a mounting bracket
- Also available without carrier profile, **Part. N° 28.0352/1**

MINI ADJUSTING UNIT WITH PROFILE 19 X 32

Part. N° 28.0351/0





TECHN. DATA / ITEMS SUPPLIED

- With carrier profile 19 x 32
- VA spindle M8 x 1.25
- Brass carriage
- Max. loading 1 - 2 kg
- **Please quote stroke length**

APPLICATIONS

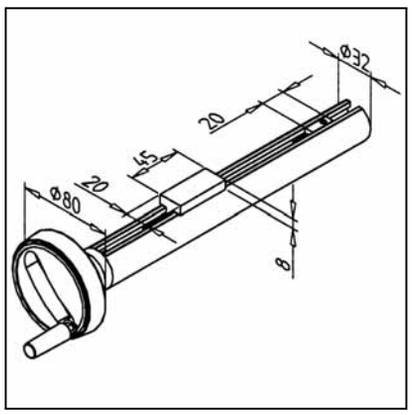
- For adjustment of the lateral guides on conveying equipment
- For adjusting sensor holders or light barriers
- For simple equipment

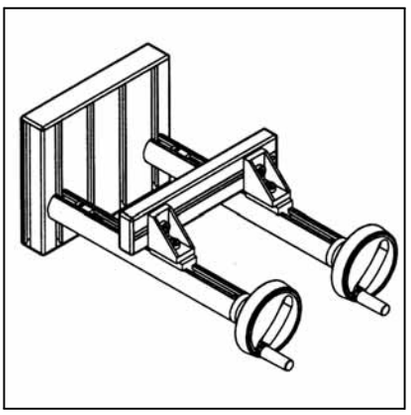
ASSEMBLY

- With MiniTec power-lock fastener
- Can also be fastened with a mounting bracket
- Also available without carrier profile, **Part. N° 28.0351/1**

MINI ADJUSTING UNIT WITH HANDLE PROFILE 32

Part. N° 28.0353/0





TECHN. DATA / ITEMS SUPPLIED

- With carrier profile handle profile 32
- VA spindle M8 x 1.25
- Brass carriage
- Max. loading 1 - 2 kg
- **Please quote stroke length**

APPLICATIONS

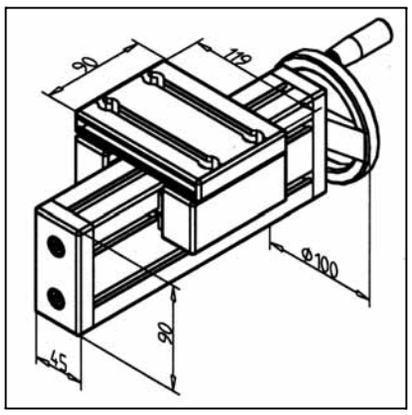
- For adjustment of the lateral guides on conveying equipment
- For adjusting sensor holders or light barriers
- For simple equipment

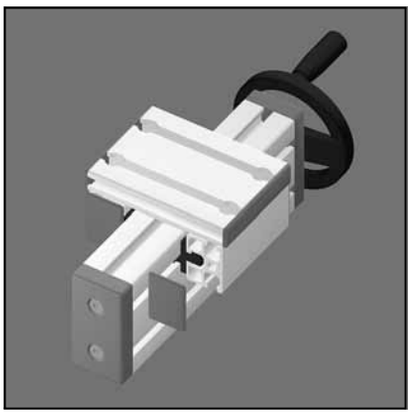
ASSEMBLY

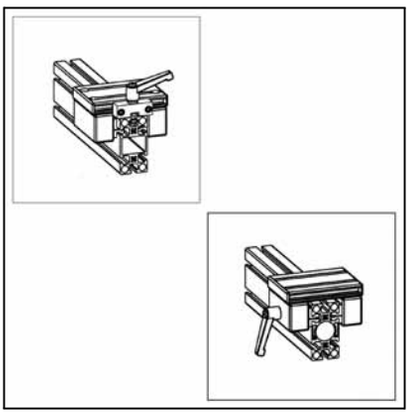
- With MiniTec power-lock fastener
- Can also be fastened with a mounting bracket
- Fasten with strap handle profile 32, **Part. N° 22.1022/0**
- Also available without carrier profile, **Part. N° 28.0353/1**

ADJUSTING UNIT VEN 45 X 90 H

Part. N° 28.0185/0







TECHN. DATA / ITEMS SUPPLIED

- Slide plate made of profile 19 x 90
- AVCME screw 16 x 4
- Basic length 120 mm (0 mm stroke)
- Basic weight 1,970 kg
- Weight/100 mm stroke 0,490 kg
- **Please indicate desired length of stroke**

APPLICATIONS

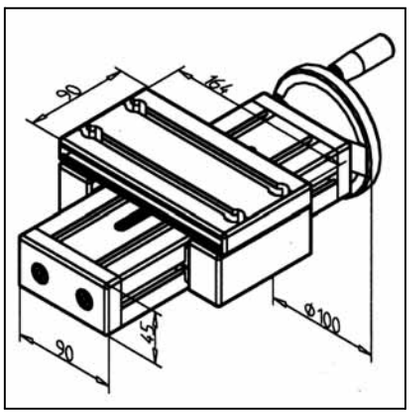
- Adjustment of conveyor systems
- Adjustment of feeders
- Adjustable devices

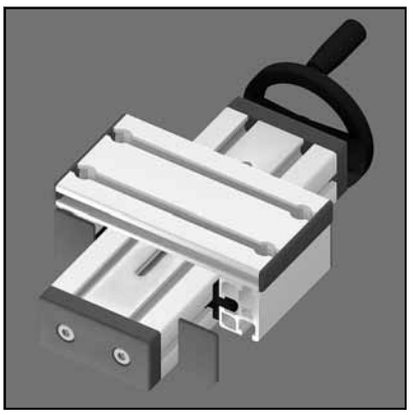
SPECIAL DESIGNS

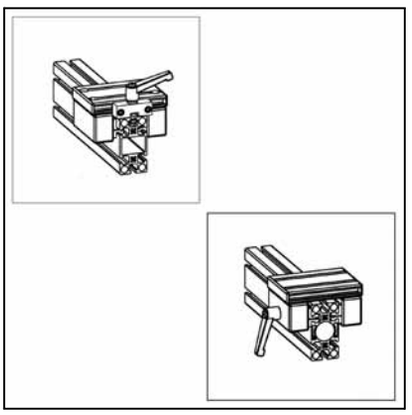
- Slide plate made of profile 32 x 180
- Different slide lengths
- Digital display
- Angular drive
- OPTIONS:
  With slide clamping unit (Top)
  Part N° 28.0185/1
  With slide clamping unit (Lateral)
  Part N° 28.0185/2

ADJUSTING UNIT VEN 45 X 90 F

Part. N° 28.0188/0







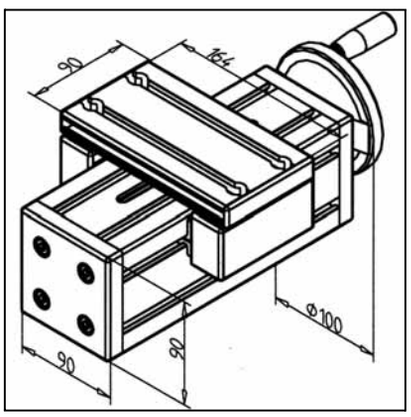
TECHN. DATA / ITEMS SUPPLIED	
- Slide plate of profile 19 x 90	
- ACME screw 16 x 4	
- Basic length 120 mm (0 mm stroke)	
- Basic weight	2,050 kg
- Weight/100 mm stroke	0,500 kg
- Please indicate desired length of stroke	

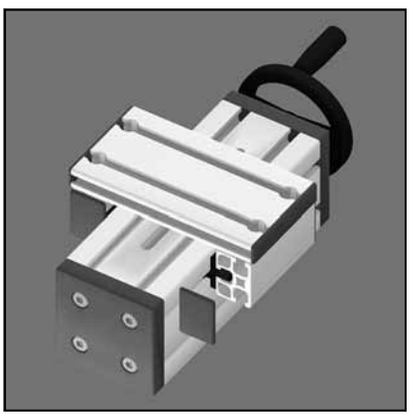
APPLICATIONS
- Adjustment of conveyor systems
- Adjustment of feeders
- Adjustable devices

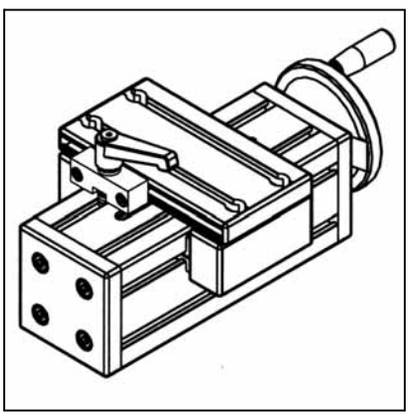
SPECIAL DESIGNS
- Slide plate made of profile 32 x 180
- Different slide lengths
- Digital display
- Angular drive
- OPTIONS: With slide clamping unit (Top) **Part N° 28.0188/1** With slide clamping unit (Lateral) **Part N° 28.0188/2**

ADJUSTING UNIT VEN 90

Part. N° 28.0186/0







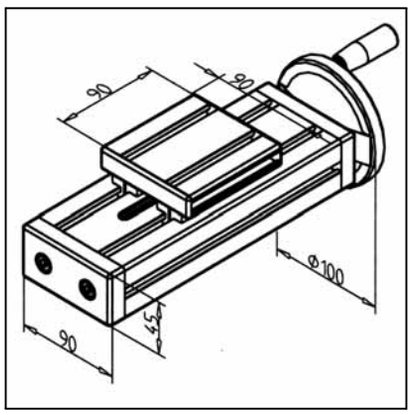
TECHN. DATA / ITEMS SUPPLIED	
- Slide plate of profile 19 x 90	
- ACME screw 16 x 4	
- Basic length 120 mm (0 mm stroke)	
- Basic weight	2,750 kg
- Weight/100 mm stroke	0,870 kg
- Please indicate desired length of stroke	

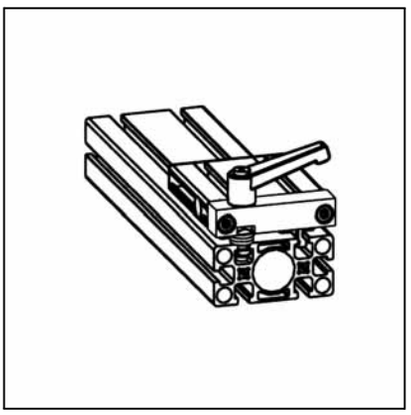
APPLICATIONS
- Adjustment of conveyor systems
- Adjustment of feeders
- Adjustable devices

SPECIAL DESIGNS
- Slide plate made of profile 32 x 180
- Different slide lengths
- Digital display
- Angular drive
- OPTIONS: With slide clamping unit (Top) **Part N° 28.0186/1** With slide clamping unit (Lateral) **Part N° 28.0186/2**

ADJUSTING UNIT VEN 45 X 90 S

Part. N° 28.0187/0





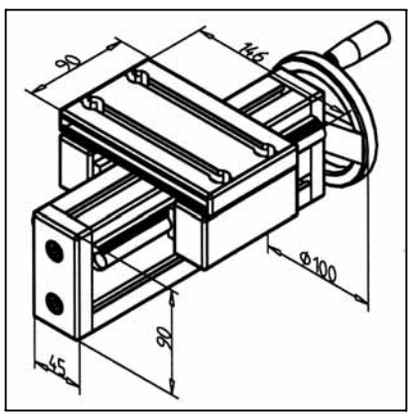
TECHN. DATA / ITEMS SUPPLIED	
- Slide plate of profile 19 x 90	
- ACME screw 16 x 4	
- Basic length 120 mm (0 mm stroke)	
- Basic weight	2,280 kg
- Weight/100 mm stroke	0,500 kg
- **Please indicate desired length of stroke**	

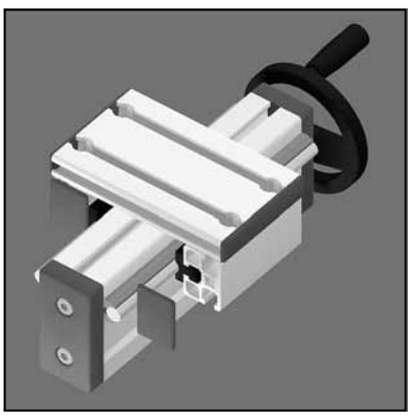
APPLICATIONS
- Adjustment of conveyor systems
- Adjustment of feeders
- Adjustable devices

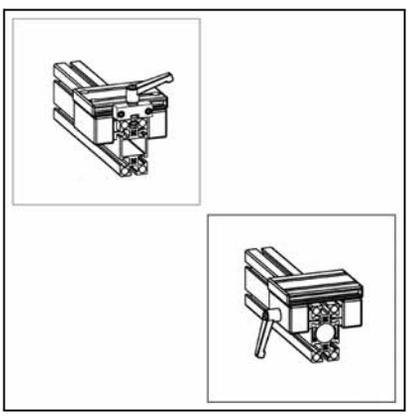
SPECIAL DESIGNS
- Slide plate made of profile 32 x 180
- Different slide lengths
- Digital display
- Angular drive
- OPTIONS: With slide clamping unit (Top) **Part N° 28.0187/1**

ADJUSTING UNIT VEW 45 X 90 H

Part. N° 28.0182/0







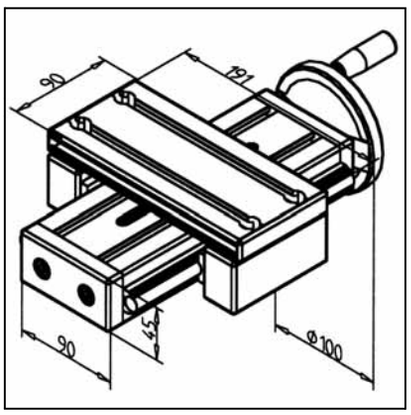
TECHN. DATA / ITEMS SUPPLIED	
- Slide plate of profile 19 x 90	
- ACME screw 16 x 4	
- Basic length 120 mm (0 mm stroke)	
- Basic weight	2,109 kg
- Weight/100 mm stroke	0,740 kg
- **Please indicate desired length of stroke**	

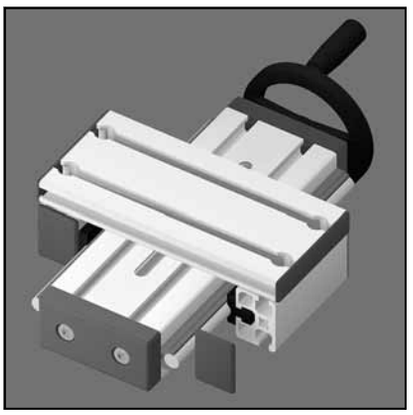
APPLICATIONS
- Adjustment of conveyor systems
- Adjustment of feeders
- Adjustable devices

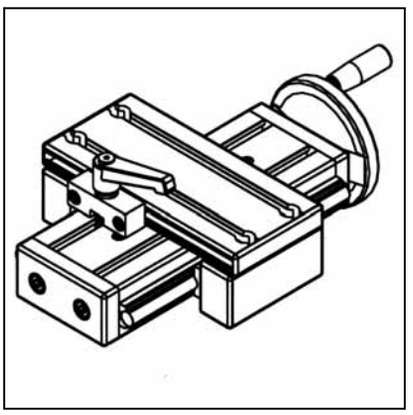
SPECIAL DESIGNS
- Slide plate made of profile 32 x 180
- Different slide lengths
- Digital display
- Angular drive
- Shafts stainless
- OPTIONS: With slide clamping unit (Top) **Part N° 28.0182/1** With slide clamping unit (Lateral) **Part N° 28.0182/2**

ADJUSTING UNIT VEW 45 X 90 F

Part. N° 28.0181/0







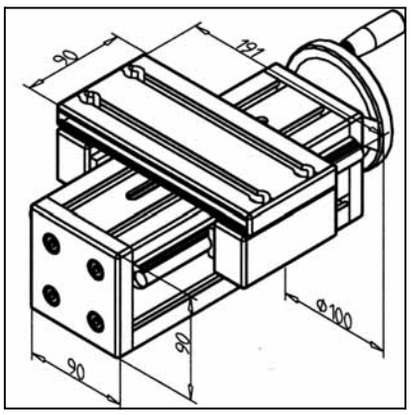
TECHN. DATA / ITEMS SUPPLIED	
- Slide plate of profile 19 x 90	
- ACME screw 16 x 4	
- Basic length 120 mm (0 mm stroke)	
- Basic weight	2,310 kg
- Weight/100 mm stroke	0,750 kg
- **Please indicate desired length of stroke**	

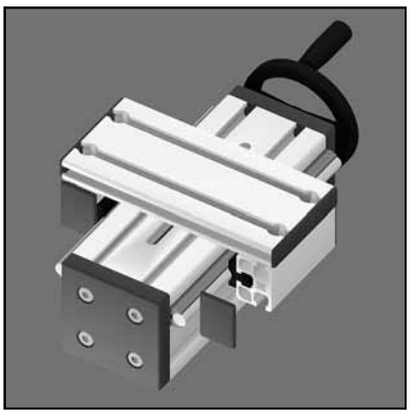
APPLICATIONS
- Adjustment of conveyor systems
- Adjustment of feeders
- Adjustable devices

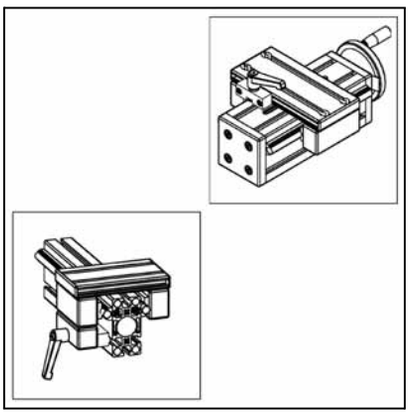
SPECIAL DESIGNS
- Slide plate made of profile 32 x 180
- Different slide lengths
- Digital display
- Angular drive
- Shafts stainless
- OPTIONS: With slide clamping unit (Top) **Part N° 28.0181/1**

ADJUSTING UNIT VEW 90

Part. N° 28.0183/0





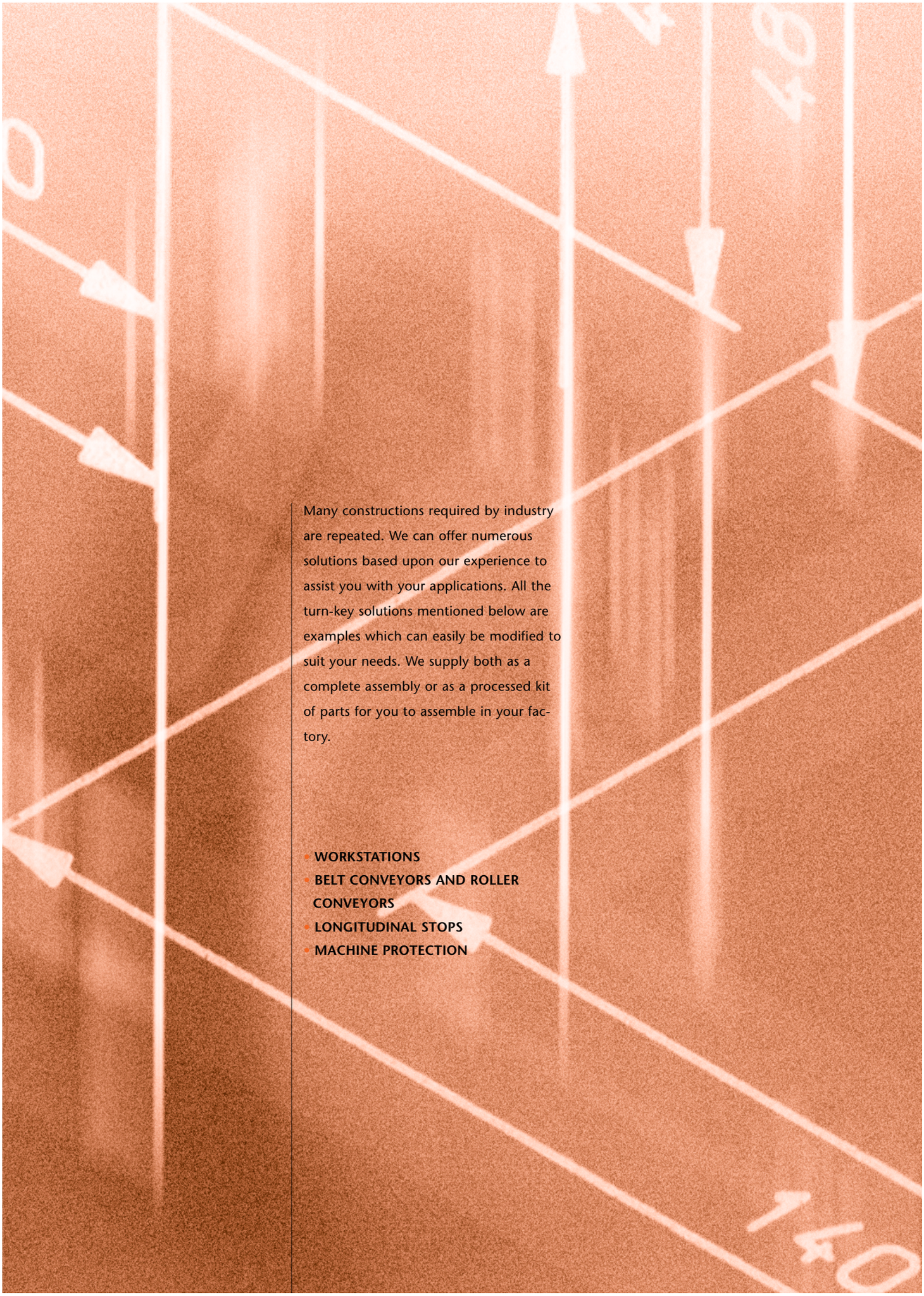


TECHN. DATA / ITEMS SUPPLIED	
- Slide plate of profile 19 x 90	
- ACME screw 16 x 4	
- Basic length 120 mm (0 mm stroke)	
- Basic weight	3,030 kg
- Weight/100 mm stroke	1,120 kg
- **Please indicate desired length of stroke**	

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
- Shafts stainless
- Options: With slide clamping unit (Top) **Part N° 28.0183/1** With slide clamping unit (Lateral) **Part N° 28.0183/2**

NOTES...



Many constructions required by industry are repeated. We can offer numerous solutions based upon our experience to assist you with your applications. All the turn-key solutions mentioned below are examples which can easily be modified to suit your needs. We supply both as a complete assembly or as a processed kit of parts for you to assemble in your factory.

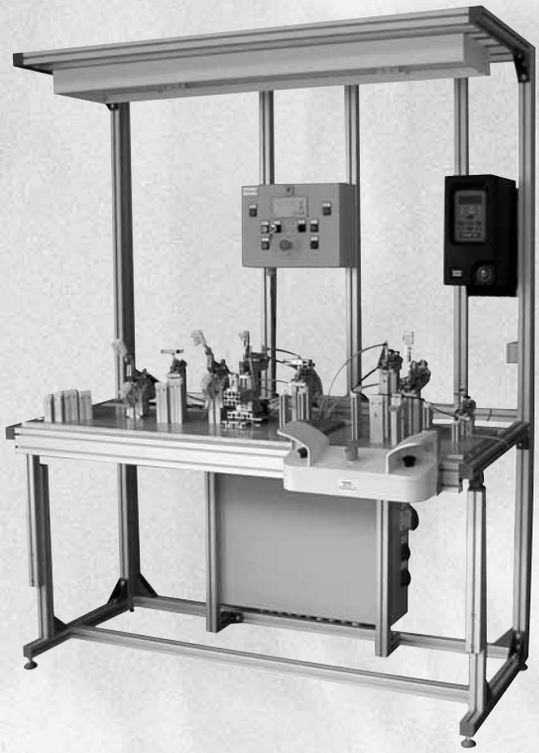
- **WORKSTATIONS**
- **BELT CONVEYORS AND ROLLER CONVEYORS**
- **LONGITUDINAL STOPS**
- **MACHINE PROTECTION**

3 TURN-KEY SOLUTIONS

WORKSTATIONS

Our construction module “Workstation” of our CADmenue draws automatically your individual workstation including correct parts list

WORKSTATIONS



Assembly Station
for brake tubes

Workstation with
universally monitor support

Workstation with
touchscreen and label printer

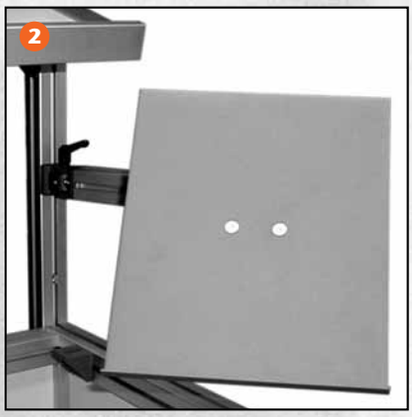
WORKSTATIONS

Height adjustable workstation

Measuring cabinet
for car industry

Work bench,
manually height adjustable

CUSTOMISED WORKSTATION COMPONENTS



1. Workbench
A great variety standing and sitting workstations can be designed due to free dimension planning.

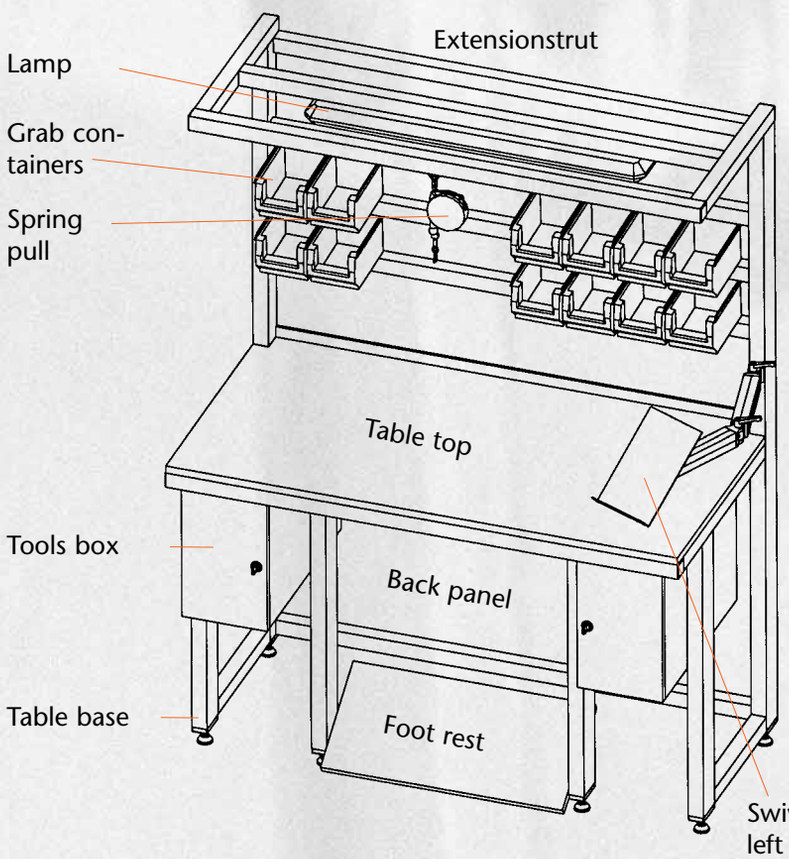
2. Swivelling tray
Horizontally and vertically slewable with fixing bracket

3. Springpull with sliding eyelet
For hanging tools in correkt position

4. Cross beams
Easy attachment of standard grab containers of all kinds and sizes.

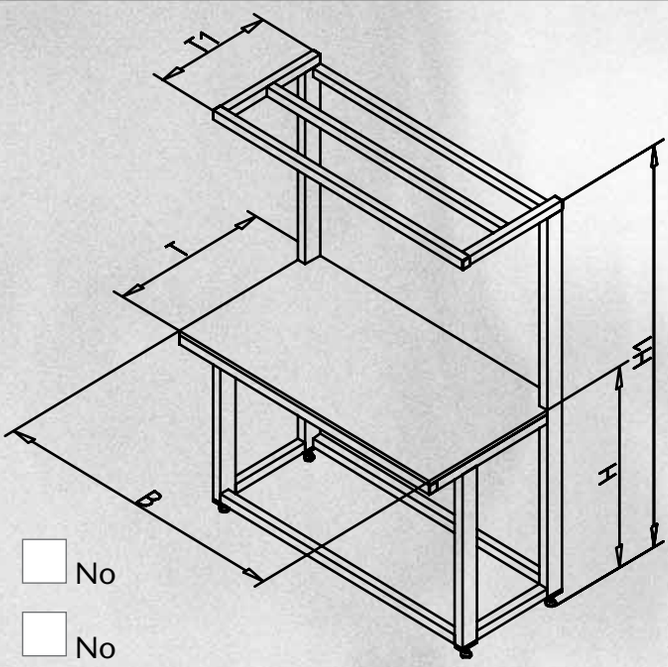
5. Tool box
Attachable to the table base left or right with lockable door. Made of grey sheet steel

Workplace System



INQUIRY CUSTOMISED WORKTABLE

Dimensions



Width B ☐ mm

Height H ☐ mm

Depth T ☐ mm

Total height H1 ☐ mm

Extension strut T1 ☐ mm

Options

Extension strut ☐ Yes ☐ No

Foot rest ☐ Yes ☐ No

Foot rest, adjustable ☐ Yes ☐ No
from ☐ mm up to ☐ mm

Grab containers ☐ Yes ☐ No ☐ Size

Tools box right ☐ Yes ☐ No

Tools box left ☐ Yes ☐ No

Pressed air connection ☐ Yes ☐ No

Lamp ☐ Yes ☐ No

Back panel ☐ Yes ☐ No ☐ Material

Table top ☐ Yes ☐ No ☐ Material

Spring pull ☐ Yes ☐ No

Swivelling tray ☐ Yes ☐ No

Company ☐

Name ☐

Phone number ☐

Fax number ☐

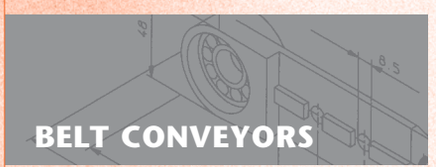
☐ Please call me back

☐ Please send me an offer

MANUAL WORKPLACE SYSTEM

Please order our MiniTec Manual Workplace System-catalogue for more information.

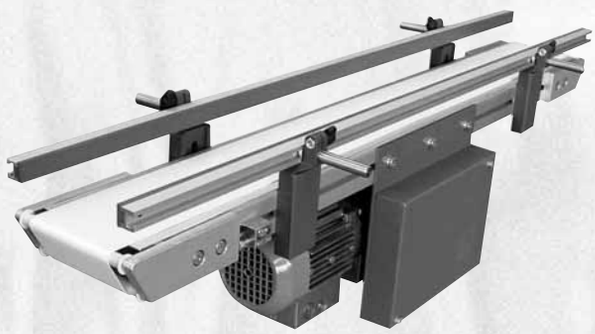
You can order the catalogues online on our website www.minitec.de or send an email to info@minitec.de



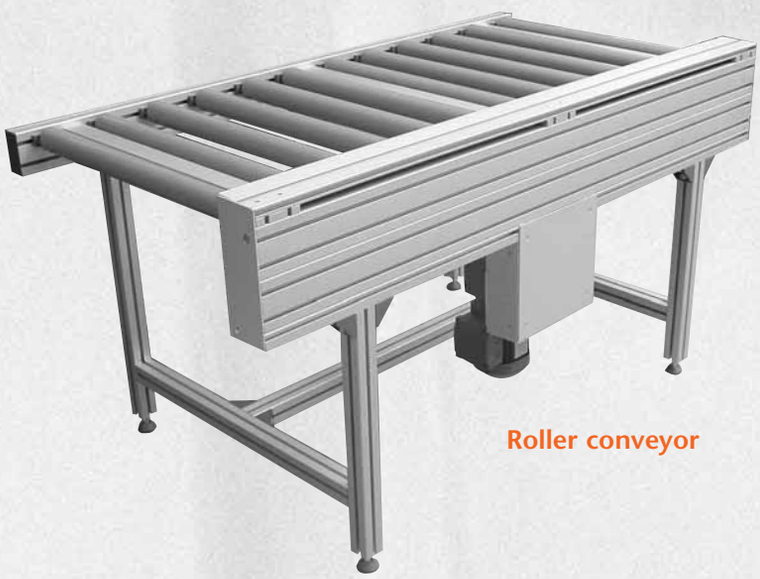
BELT CONVEYORS

BELT CONVEYOR AND ROLLER CONVEYORS

Roller conveyor with pneumatic stoppers



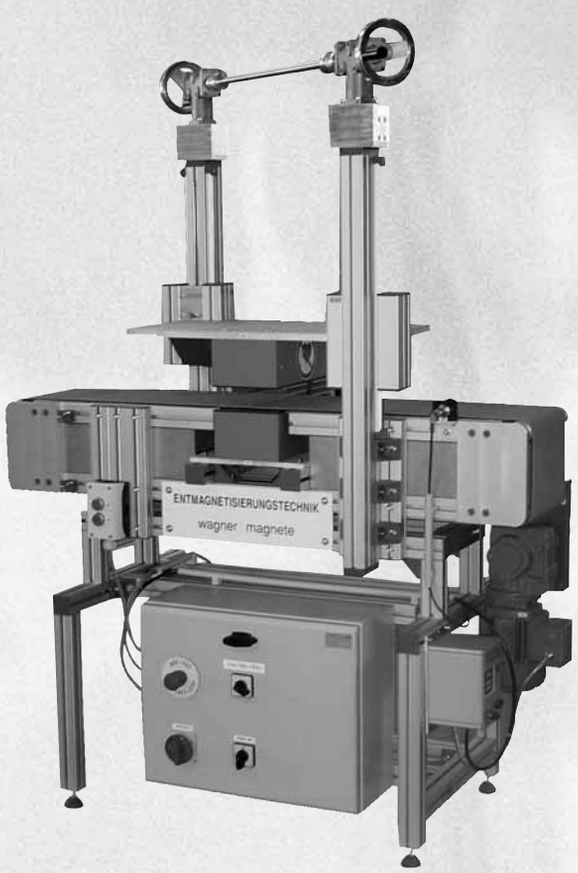
Flat-Top belt conveyor with intermediate drive



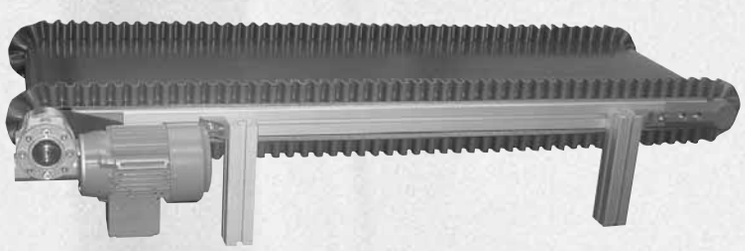
Roller conveyor

BELT CONVEYOR AND ROLLER CONVEYORS

Conveyor with
cylinder drive



Special conveyor with
inbuilt demagnetizer

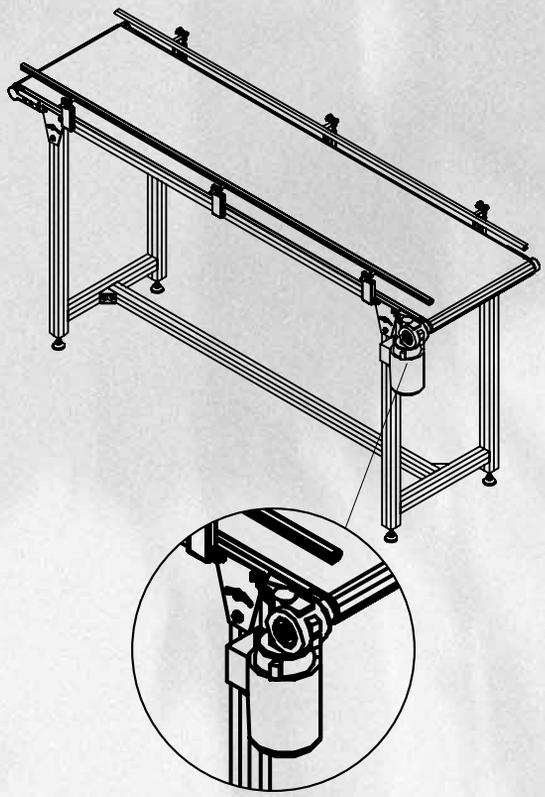


Conveyor with
corrugated edge

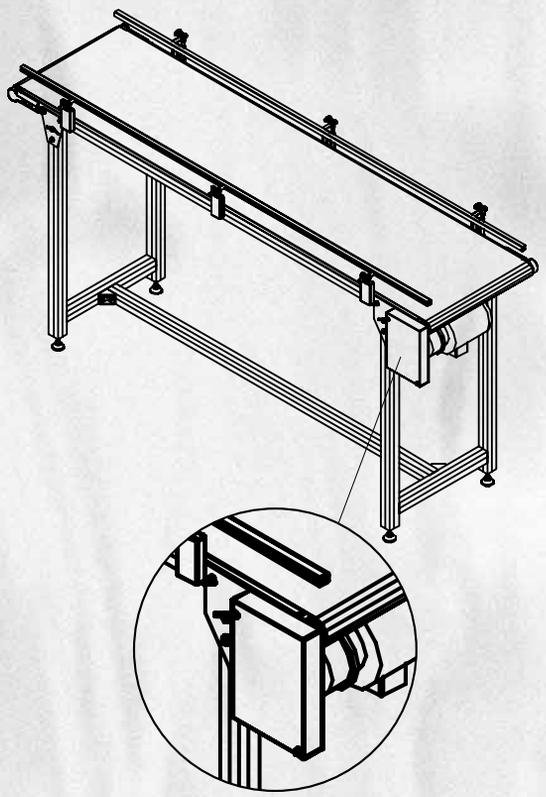
BELT CONVEYOR

The belt conveyor module in our MiniTec CADmenue construction software designs your belt conveyor automatically according to your requirements. Furthermore it calculates the deflection, suggests the number of supports and generates the respective part list - within a few minutes. Assembly can be carried out quickly and easily as a result of our proven components.

Motor arrangement

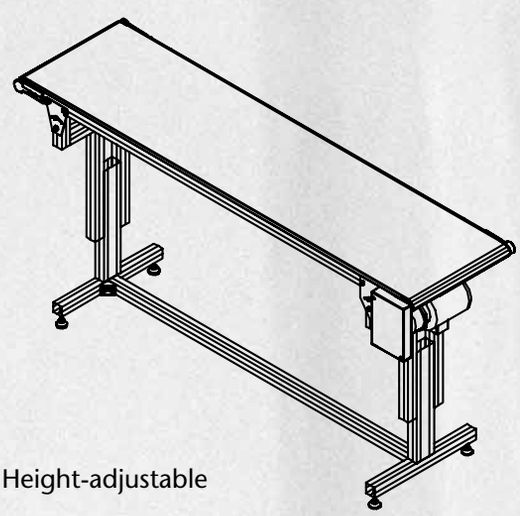


Plug-on motor



Flanged motor

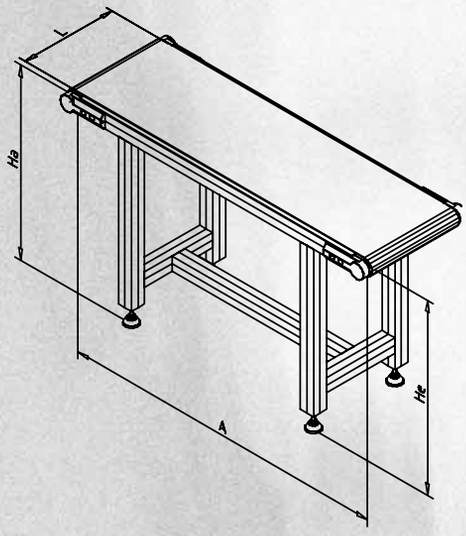
Subconstructions



Height-adjustable

Standard

REQUEST FOR OFFER: BELT CONVEYORS AND ROLLER TRACKS



Standard dimension

Axial distance A ☐ mm

Belt with L ☐ mm

System ☐ 45 Diameter 50 mm

☐ 90 Diameter 90 mm

Conditions of usage

Goods to be conveyed ☐

Weight/piece ☐ kg

Total belt load ☐ kg

Temperature ☐ °C

Subconstruction

Charging side height He ☐ mm

Discharging side height Ha ☐ mm

Number of supports ☐ Stk.

Height adjustable sup. from ☐ mm to ☐ mm

No. of lateral guide support ☐ Pcs. (max. distance: 1000 mm)

Lateral guide ☐ one side ☐ both side

Floor anchor ☐ Yes ☐ No

Rollers ☐ Yes ☐ No

Feet ☐ Yes ☐ No

Options

Belt ☐ PVC ☐ PU ☐ Others

Supporting sheet ☐ Aluminium ☐ Inox

Antrieb

Motor arrangement ☐ Flanged only system 45 ☐ Plug on motor

Motor ☐ Type ☐ Part N°

Speed ☐ m/min.

Adjustable speed from ☐ m/min. up to ☐ m/min.

Company ☐ ☐ Please callme back

Name ☐ ☐ Please send me an offer

Phone no. ☐

Fax no. ☐

e-mail ☐

CONVEYORS

Please order our MiniTec Conveyors-catalogue for more information.

You can order the catalogues online on our website www.minitec.de or send an email to info@minitec.de

LONGITUDINAL STOPS

LONGITUDINAL STOPS

MiniTec longitudial stops are proven turn-key solutions based on MiniTec 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 including bores for floor mounting. Connection to the machine via adaptor plate with fixing bores. Digital LCD display 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 display

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

Slide guide:
Linear guide LR with 4 precision bearings, clearance adjusted, shafts Ø 12 mm , hardened special steel Cf 53, Mat. no. 1.1213

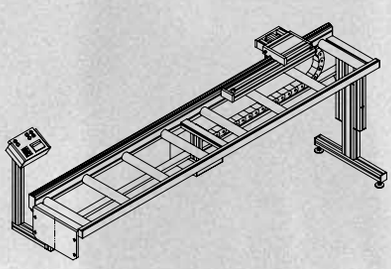
Slide clamping:
Motor drive: automatically at stop position,
manual drive: via switch (pneumatic) or via clamping lever.

Motor drive:
AC-motor with positioning control system, integrated in housing. Displacement speed: 0.6 m/s

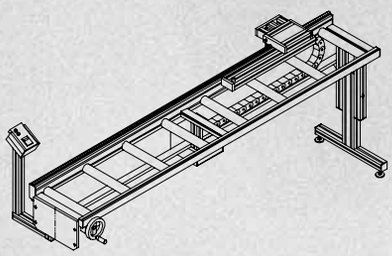
Input for motor drive:
Input terminal with foil keyboard and LCD-display, fixed in switch-box plate at operator height next to the machine.

LONGITUDINAL STOPS

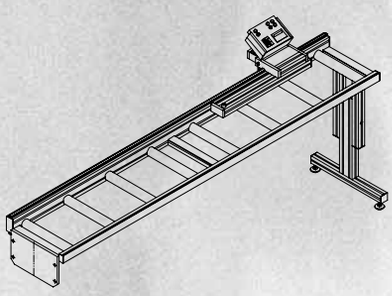
First cuts can easily be carried out: The top of the stop can be swung out of the conveyor by 180°. Adjustable measuring length compensation including scale, L = 400 mm, fixed onto slide.



Motorized drive with stationary display, integrated in the switch-box



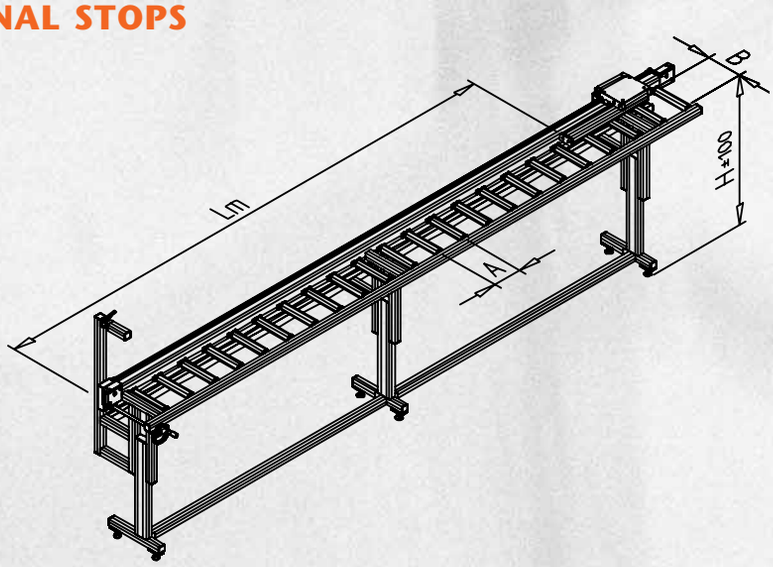
Manual handwheel drive with stationary 230 V - display



Manual slide displacement with battery-driven digital display on slide

DATA REQUIRED LONGITUDINAL STOPS

Dimensions



Measuring length Lm ☐ mm

Roller distance A ☐ mm

Roller width B ☐ mm

Height H ☐ mm

Load ☐ dN

Control

Drive ☐ motoric ☐ handwheel ☐ manual

Stop ☐ right ☐ left

MACHINE PROTECTION

MACHINE PROTECTION - EXAMPLES

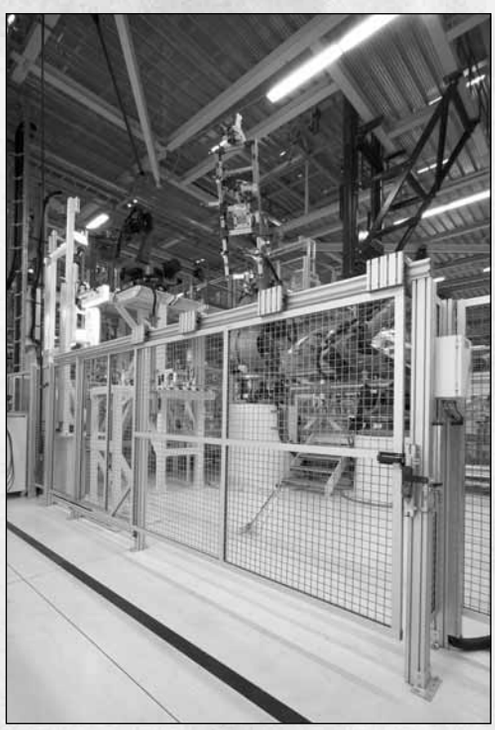
Workstations with security guards for hightemperature applications

Enclosure for laser application

Guard unit for machine protection

MACHINE PROTECTION - EXAMPLES

Safety guard for
a full production system



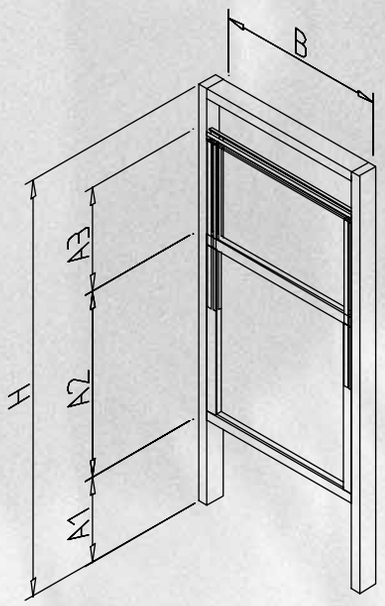
Safety fence with
sliding door

Saftey guard in final
assembly of car factory

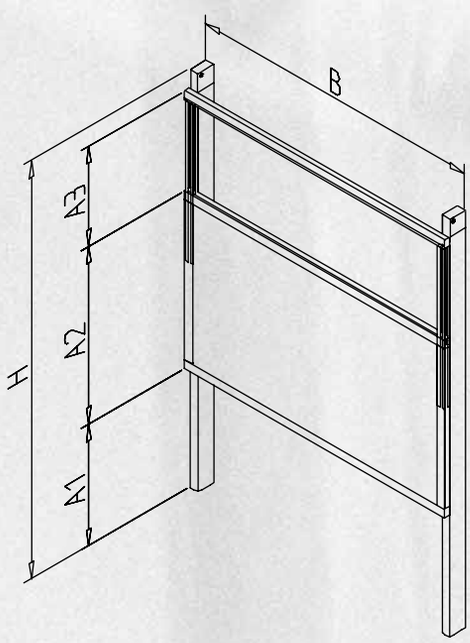
LIFTING-DOOR FOR MACHINE PROTECTION

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



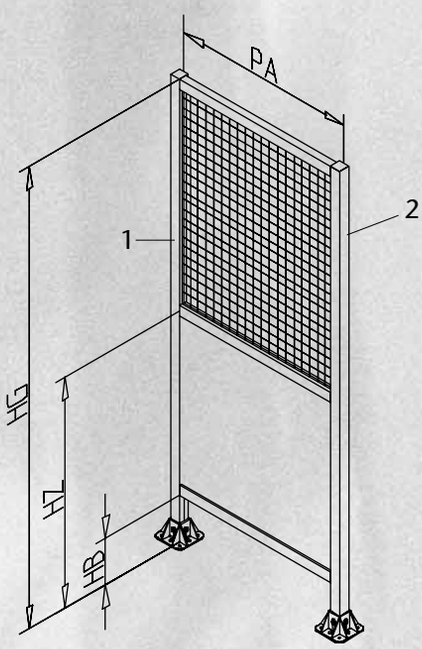
GUARD UNIT FOR MACHINE PROTECTION

Guard unit with integrated frame

Items supplied:

- 1 vertical column profile (1)
- 2 horizontal clamp profiles
- 1 panel element, assembled:
- Corrugated mesh, mesh 40 mm, wire size 4 mm, galvanized

The vertical profile (2) belongs to the next unit. When used as a single element order one additional vertical profile.

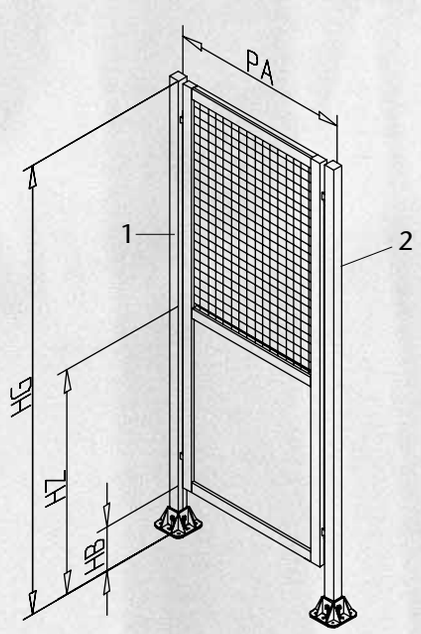


Guard unit with exchangeable panel element

Items supplied:

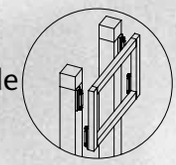
- 1 framed panel element, assembled:
  corrugated mesh, mesh 40 mm, wire size 4 mm, galvanized.
- 1 vertical profile (1) with floor-fixing and 2 guard unit fixing angles.

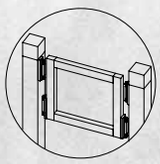
The vertical profile (2) belongs to the next unit. When used as a single element, order one additional vertical profile.



MACHINE PROTECTION REQUEST FOR OFFER

Lifting door





Lifting door arrangement ☐ Outside ☐ Inside

Lifting field width B _____ mm

Lifting field height A2 _____ mm

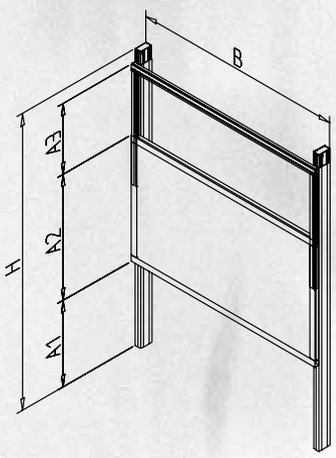
Stroke A3 _____ mm

Stand-up dimension A1 _____ mm

Actuation ☐ Manual ☐ Pneumatic

Panel element _____ Part no.

Strokes per hour _____

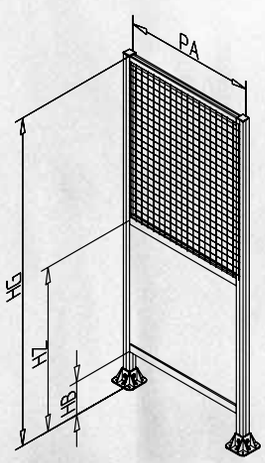


Additional fixed element

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. (e.g. mesh, acrylic, PVC)

Panel element, bottom _____ Part no. (e.g. mesh, acrylic, PVC)

Feet ☐ Base foot ☐ Base plate ☐ Without

Company _____ ☐ Please call me back

Name _____ ☐ Please send me an offer

Phone no. _____

Fax no. _____

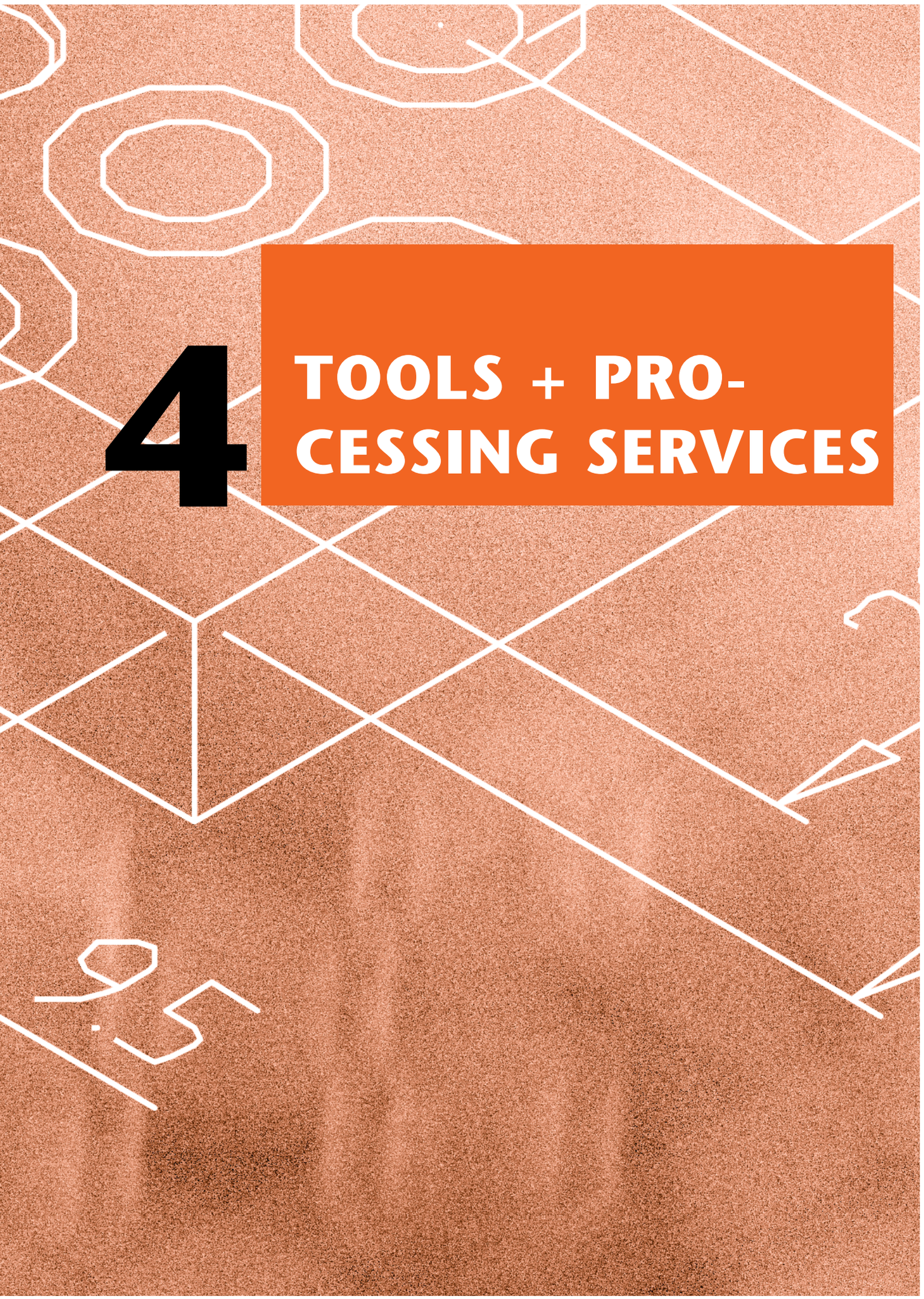
SAVEGUARD SAFETY SYSTEM

Please order our MiniTec SaveGuard-catalogue for more information.

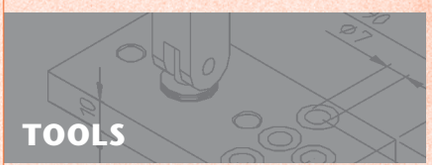
You can order the catalogues online on our website www.minitec.de or send an email to info@minitec.de

The MiniTec profiles system requires minimum of processing. Saw cutting and thread-forming are the essential processes. Only for exceptional cases boring is necessary.

- **TOOLS**
- **PROCESSING SERVICES**



4 TOOLS + PROCESSING SERVICES



TOOLS

BALL-HEADED KEY

TECHN. DATA / ITEMS SUPPLIED

- Chrome plated, with handle PA GF, green

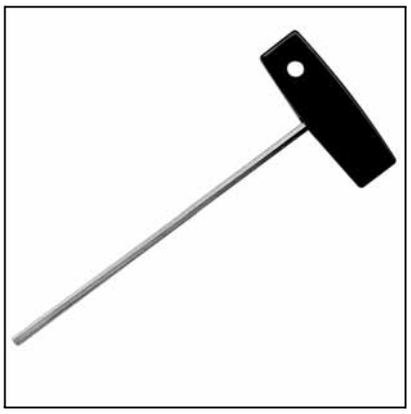
APPLICATIONS

- Pretightening of MiniTec power-lock fastener

OTHER DESIGNS

- **BALL-headed key 4 A/F Part N° 26.1817/0**
- **BALL-headed key 5 A/F Part N° 26.1084/0**
- Pretightening of bolt- and butt- fasteners

T-HANDLE KEY



TECHN. DATA / ITEMS SUPPLIED

- Chrome plated
- Handle, PA GF, black

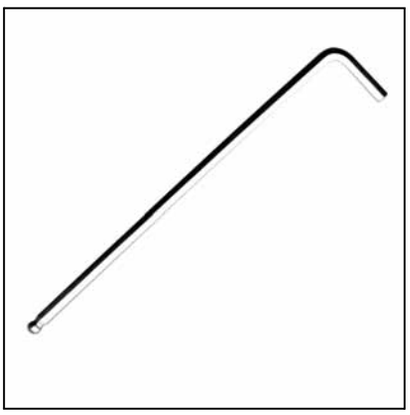
APPLICATIONS

- Tightening of MiniTec power-lock fastener

OTHER DESIGNS

- **T-handle key 4 A/F Part N° 26.1810/0**
- **T-handle key 5 A/F Part N° 26.1083/0**

COMBI L-KEY



TECHN. DATA / ITEMS SUPPLIED

- Chrome plated, one end ball headed

APPLICATIONS

- Pretightening and final tightening of MiniTec power-lock fastener

OTHER DESIGNS

- **Combi L-key 4 A/F Part N° 26.1811/0**
- **Combi L-key 5 A/F Part N° 26.1085/0**
- Pretightening of hex socket cap screws and counter sunk screws M8

T-HANDLE KEY TORX T40

Part. N° 26.1814/0

TECHN. DATA / ITEMS SUPPLIED

- Chrome plated
- Handle, PA GF, black

APPLICATIONS

- Pretightening and final tightening of MiniTec power-lock fastener SF and ESDSF

OTHER DESIGNS

MAGNETIC BIT HOLDER TORX

Part. N° 26.1820/0

TECHN. DATA / ITEMS SUPPLIED

- Automatic holder with strong permanent magnet

APPLICATIONS

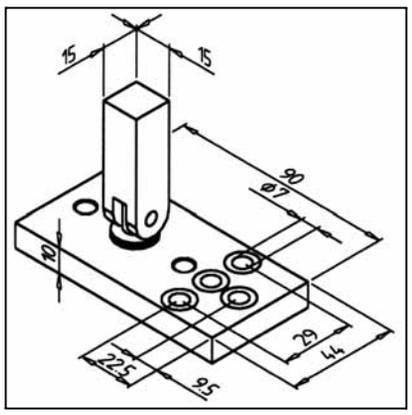
- Receptacle for bits Torx 40 for self-forming screws M8 of MiniTec Power-lock fastener

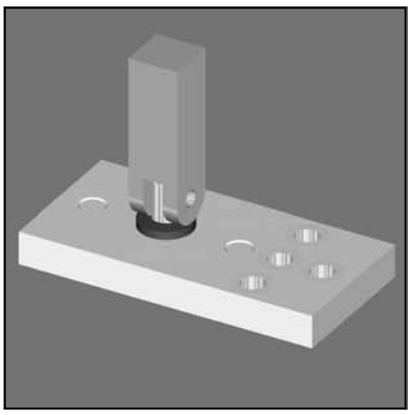
APPLICATIONS

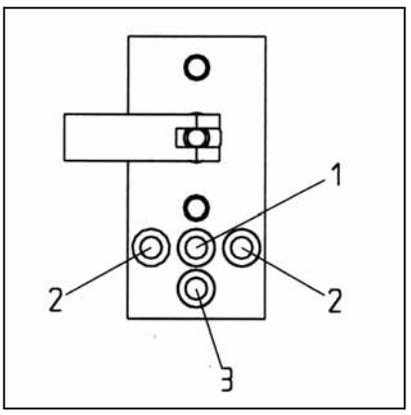
- Retains the screws optimal on the tool in every position even at high revolution speed

DRILLING JIG

Part. N° 26.1092/0







TECHN. DATA / ITEMS SUPPLIED

- Aluminium
- Steel drill bushes Ø 7 mm
- Eccentric clamp device
- Weight 0,220 kg

APPLICATIONS

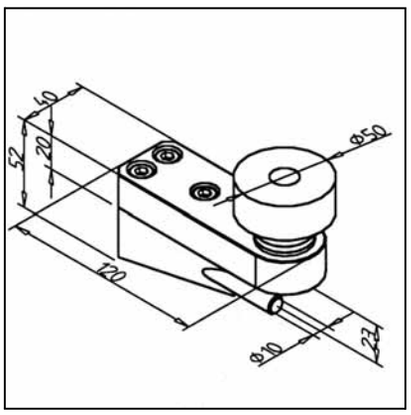
- Positioning of step drilling for screw-connection
- Precise positioning of drillings for pneumatic connections on profile surface
- Screw connection of profiles 32 x 32

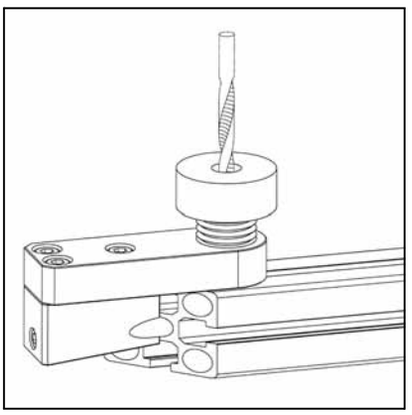
ASSEMBLY

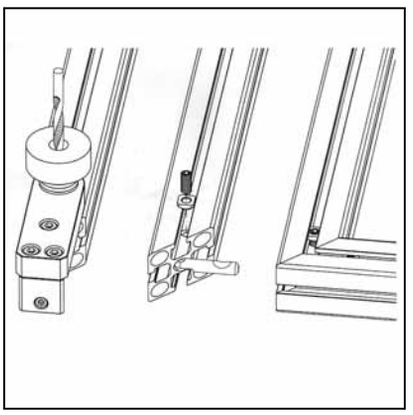
- Clamp drilling jig on profile groove and bore through bushes

DRILLING JIG FOR MITRE-CONNECTOR

Part. N° 26.1050/0







TECHN. DATA / ITEMS SUPPLIED

- Body: Al, anodized
- Centering pin: steel
- Fixing-screw: plastic with steel bush
- Weight 0,450 kg

APPLICATIONS

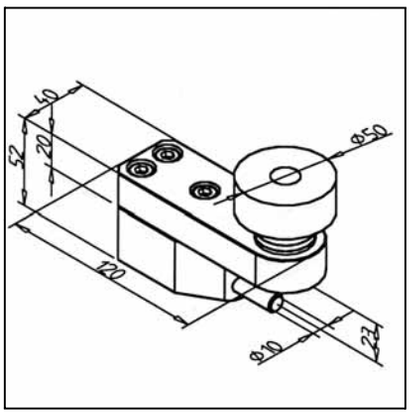
- Positioning of bore for set screw of mitre connector in relation to mitre angle
- Suitable for all MiniTec profiles

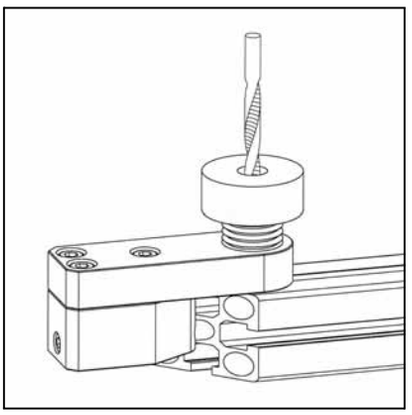
ASSEMBLY

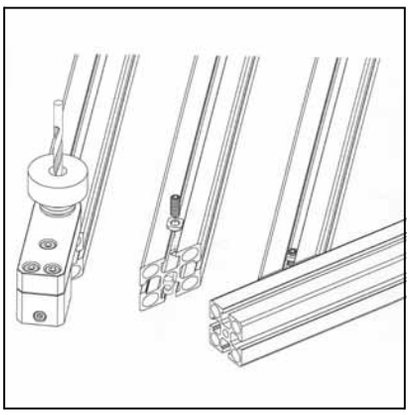
- Cut profile in desired angle, rebore the center-bore Ø 7,3 mm to Ø 10,2 mm
- Insert pin into center bore and fix plastic clamp screw
- Drill bore Ø 8,0 mm through drilling jig in fixing screw
- Tighten mitre-connector with set screw M8

DRILLING JIG FOR MITRE-CONNECTOR N

Part. N° 26.1060/0







TECHN. DATA / ITEMS SUPPLIED

- Body: Al, anodized
- 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 Ø 10,2 mm
- Insert pin into center bore and fix plastic clamp screw
- Drill bore Ø 8,0 mm through drilling jig in fixing screw
- Tighten mitre-connector with set screw M8

THREAD FORMER M8

Part. N° 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

TORX BIT T 40 X 25

Part. N° 26.1822/0

TECHN. DATA / ITEMS SUPPLIED

- Steel, hardened

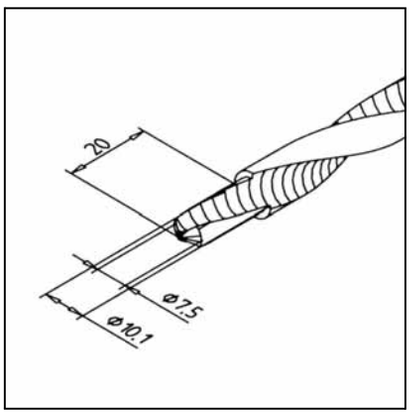
APPLICATIONS

- Adapted to self-forming screws M8 for MiniTec power-lock fastener

ASSEMBLY

STEP DRILL 10,1

Part. N° 26.1816/0



TECHN. DATA / ITEMS SUPPLIED

- HSS-steel
- Steps Ø 7,5 mm, 20 mm
- Shaft cylindric
- Length: 132 mm

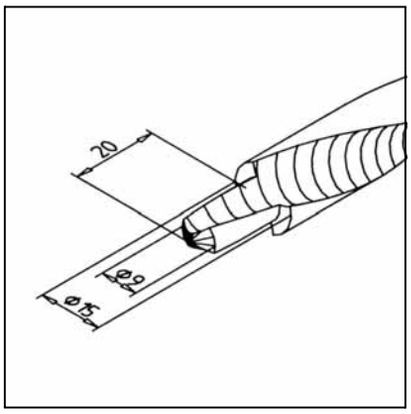
APPLICATIONS

- Step drilling for mitre connector and mitre connector N

ASSEMBLY

STEP DRILL 15

Part. N° 26.1815/0



TECHN. DATA / ITEMS SUPPLIED

- HSS-steel
- Steps Ø 9 mm, 20 mm
- Shaft cylindric
- Length: 165 mm

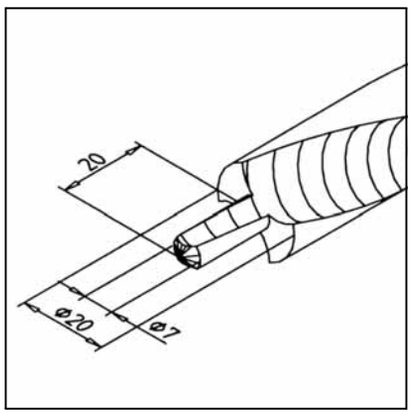
APPLICATIONS

- Step drilling for bolt- and butt-fastener

ASSEMBLY

STEP DRILL 20

Part. N° 26.1813/0



TECHN. DATA / ITEMS SUPPLIED

- HSS-steel
- Steps Ø 7 mm, 20 mm
- Shaft cylindric
- Length: 238 mm

APPLICATIONS

- Step drilling for bolt- and butt-fastener

ASSEMBLY

THREAD FORMING MACHINE

Part. N° 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 2,30 kg

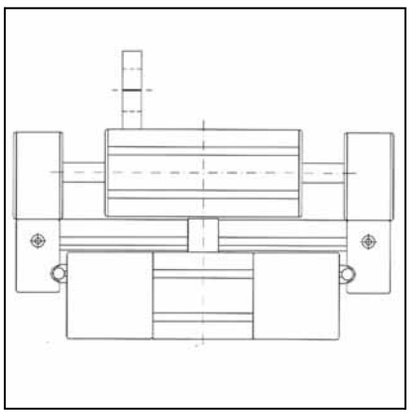
APPLICATIONS

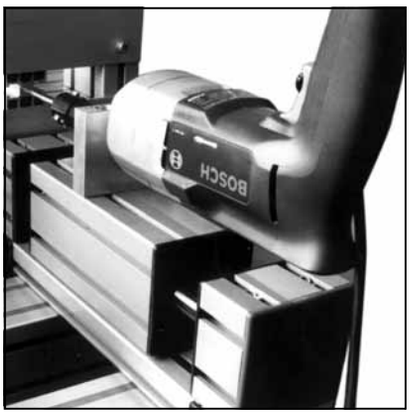
- Cost effective forming of threads in core bores of profiles, To be used together with thread forming jig

ASSEMBLY

AUTOMATIC THREAD FORMING MACHINE

Part. N° 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 support frame
- Without machine

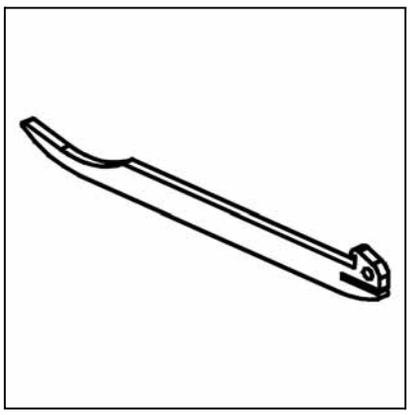
APPLICATIONS

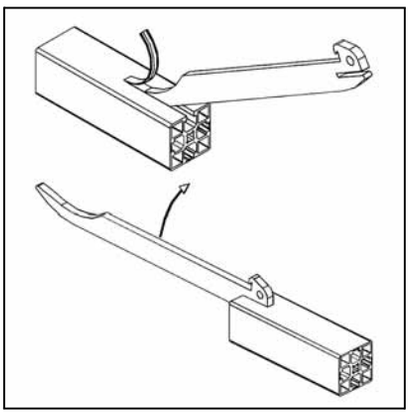
- Rational thread forming
- Rational reboring of central bores
- Can be delivered with 1 - 4 slides for up to 4 machines

APPLICATIONS

TEAR-OFF LEVER

Part. N° 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
- The produced opening is designed for the assembly of MiniTec power-lock fasteners. After tightening cut out is covered with a cap G **Part N° 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. N° 26.0813/0

TECHN. DATA / ITEMS SUPPLIED	
- Plastic handle	
- Changable	
- Weight	0,090 kg

APPLICATIONS

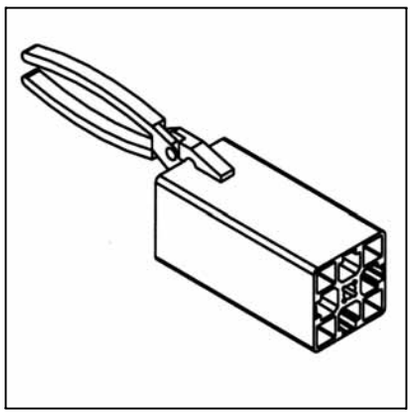
- For deburring of the profile groove after opening the grooves of profiles G
- For deburring of bores

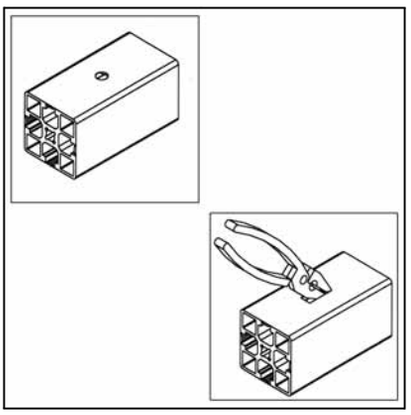
ASSEMBLY

- Set tool and slide along area to be deburred

TEAR-OFF PLIERS FOR G PROFILES

Part. N° 26.0814/0





TECHN. DATA / ITEMS SUPPLIED	
- plastic handle	
- Weight	0,150 kg

APPLICATIONS

- For opening the profile grooves of MiniTec profiles G groove covers

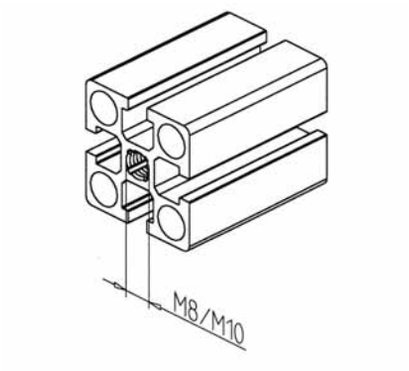
ASSEMBLY

- Set pincers onto profile cover and break by swivelling several times

PROCESSING SERVICES

PROCESSING SERVICES

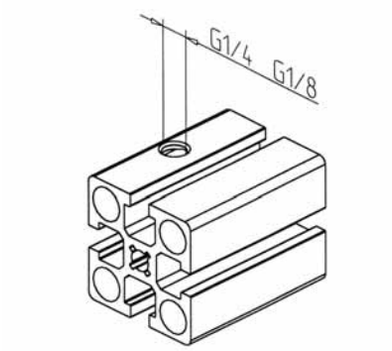
The MiniTec profile system requires minimum of processing. Saw cutting and thread-forming are the essential processes, only in exception cases is drilling required.



Thread M8 M10

Thread M8 x 20 — Part N° 25.1087/0
in core bore
for power-lock fastener

Thread M10 x 25 — Part N° 25.1088/0
in core bore
for feets

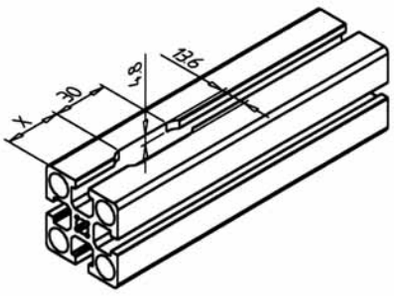


Thread G1/4 G1/8

Thread G 1/4 — Part N° 25.1089/0
on profile surface
for pneumatics

Thread G 1/8 — Part N° 25.1090/0
on profile surface
for pneumatics

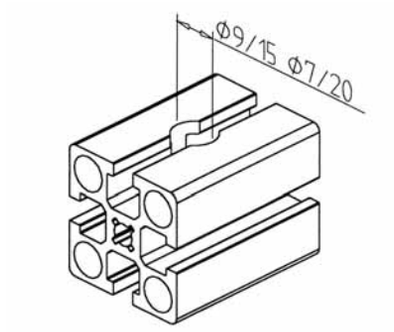
Thread G 1/4 — Part N° 25.1091/0
in core bore Ø 11,7 mm
for plug, pneumatics



Processing Insertion tide

Through bore Ø 7 mm — Part N° 25.1092/0
for screw connection

Insertion tide — Part N° 25.0315/0
on profile surface
for subsequent insertion of
power-lock fastener



Bore

Bore Ø9 / Ø15 — Part N° 25.1085/0
for bolt and butt fastener 15

Bore Ø7 / Ø20 — Part N° 25.1097/0
for bolt and butt fastener

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