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Introduction

Due to the ever increasing automation of manufacturing processes and equipment, the protection of people from sources of danger is growing in importance. The safety guard has a grid design and therefore reduces the effort required from the user in planning, construction and assembly to a minimum. It complies with the new Machinery Directive 2006/42/EC.

A modern connector that meets the legal requirements for safety devices safely fixes post and safety guard element. Posts and safety guard elements come with all attachments on delivery, so safety guard elements can be installed without tools. After the posts are secured to the substrate, the safety guard elements need only be inserted at the bottom and pressed in at the top – done!



Safety guards

Choosing a system

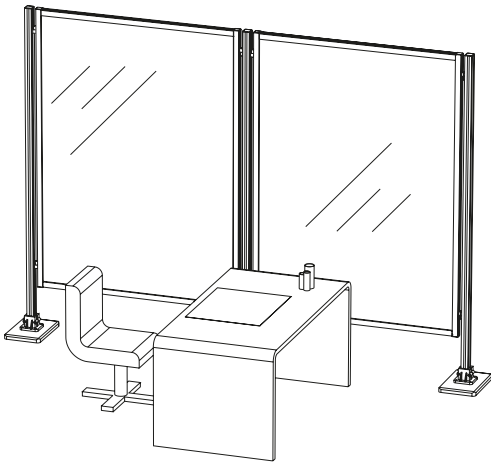
Introduction

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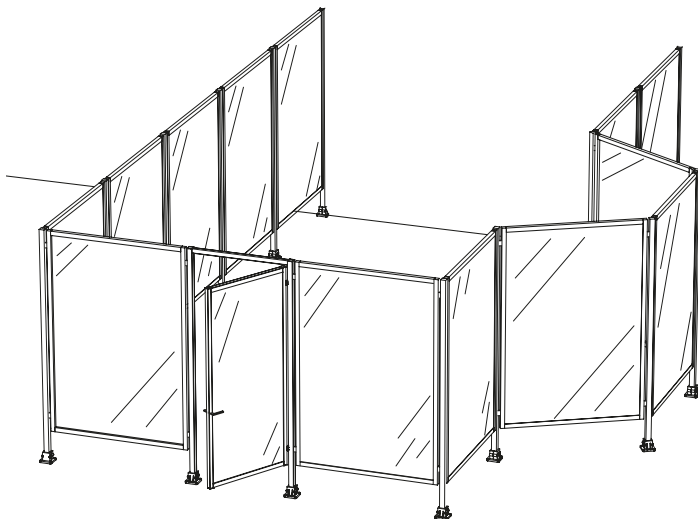
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RK Click & Safe Basic

No danger to personnel e.g. from plant or machinery
Partitioning system

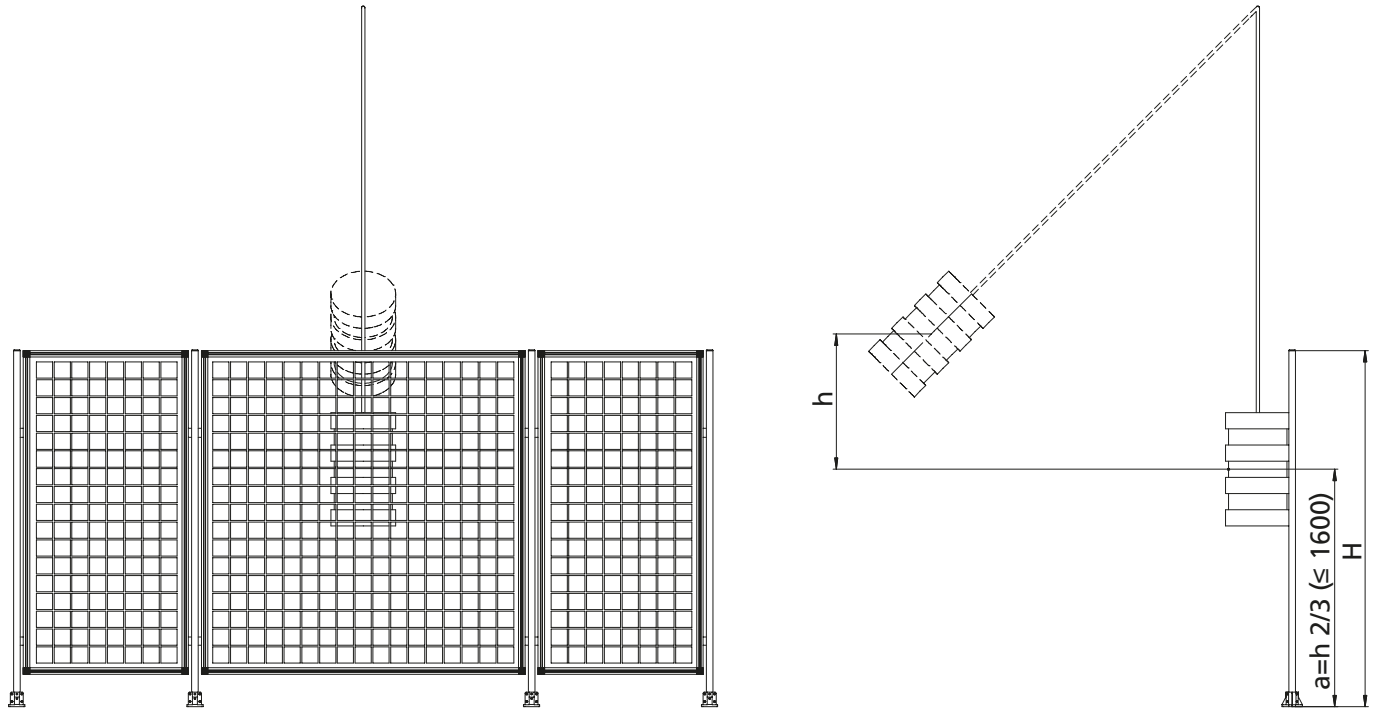


Safety guard to cordon off danger zones



Upon request we immediate supply safety guards with standard DIN EN ISO 14120, annex C, e.g. collisions with persons (90 kg, 1,6 m/s, 115 J) or machine parts (robots). Compliance is determined and confirmed using the pendulum test method.

The test rig and the measuring process for the pendulum test has been inspected and approved by TÜV Süd.


Legend:

H= Height of the guard

h= height of fall

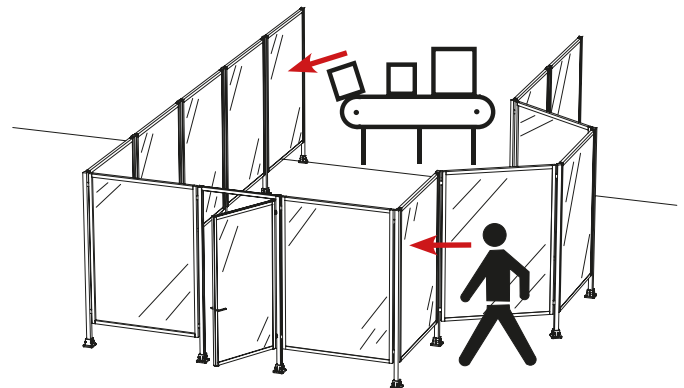
a= Height of the point of impact, which must not exceed 1600 mm.

RK Click & Safe Protect 115

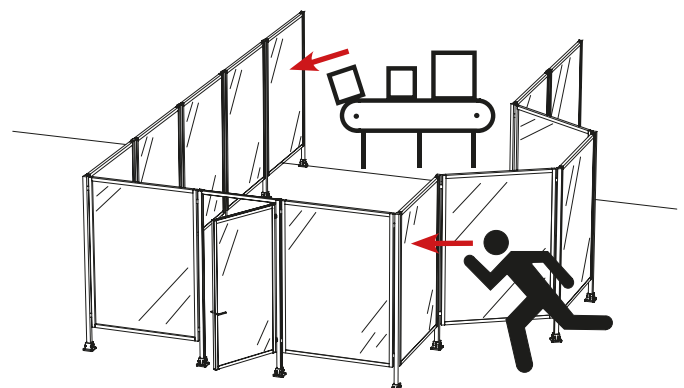
(Page 427)

Risks from moving parts

- Pendulum, standard ISO 14120, annex C, 5,8 km/h, 90 kg, normal walking speed


RK Click & Safe Protect 370
Risks from moving parts

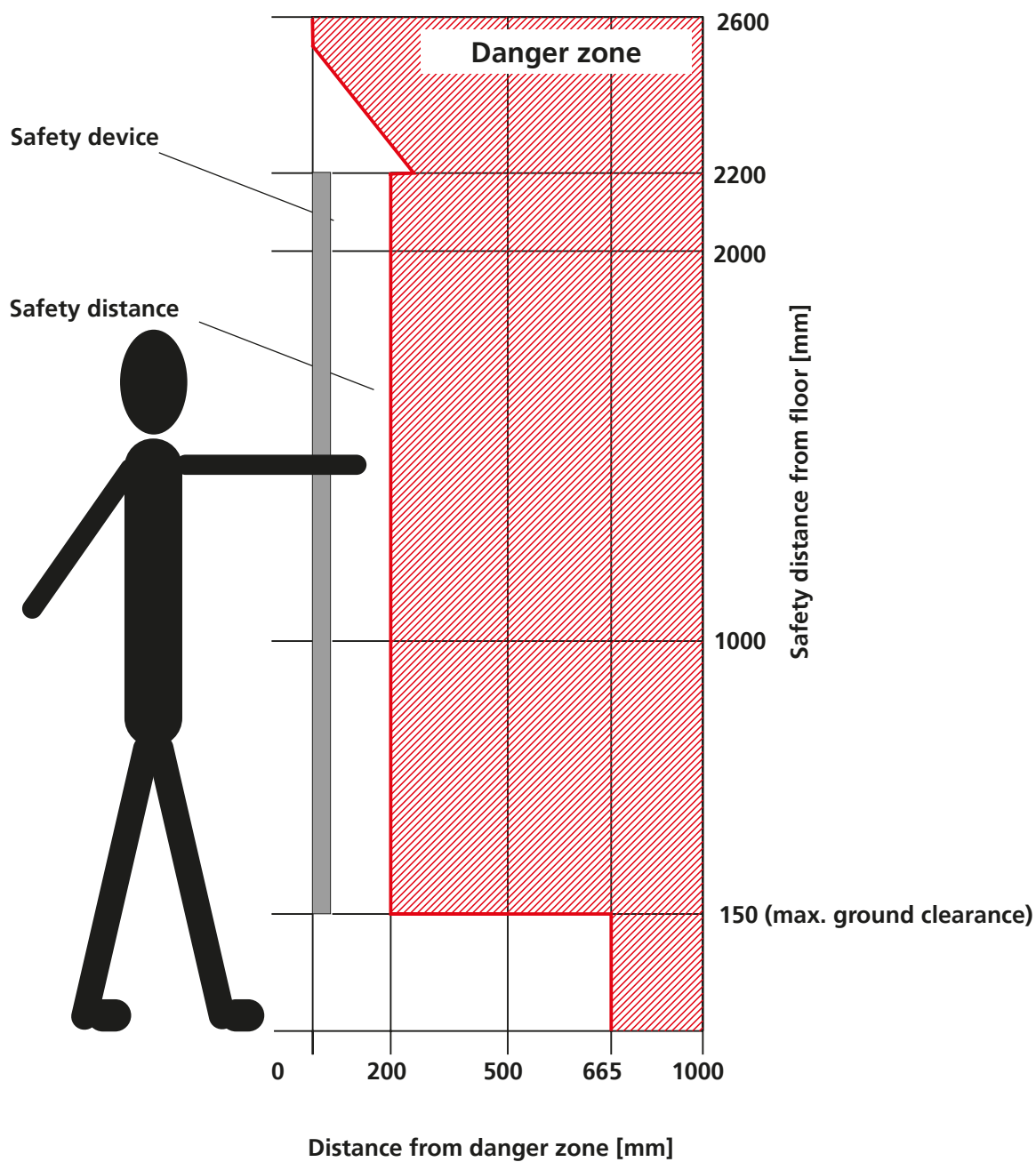
- Pendulum, standard ISO 14120, annex C, 10 km/h, 90 kg, running speed



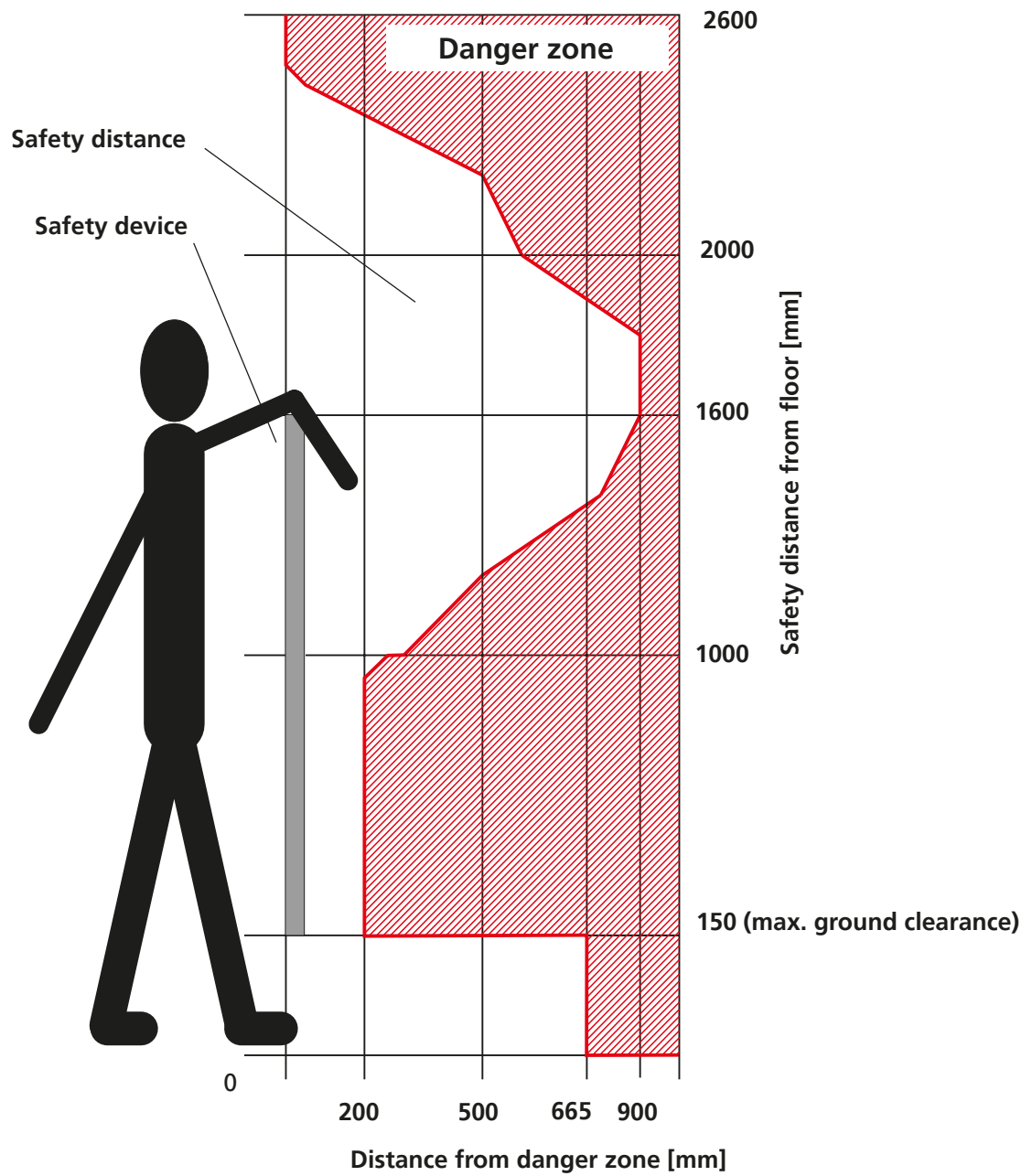
Safety distances

Safety distances

Distance from danger zone for frame height 2200 mm according to DIN EN ISO 13857 (upper limb, lower limb, full body access)



Distance from danger zone
for frame height 1600 mm



Modular system

The modular system

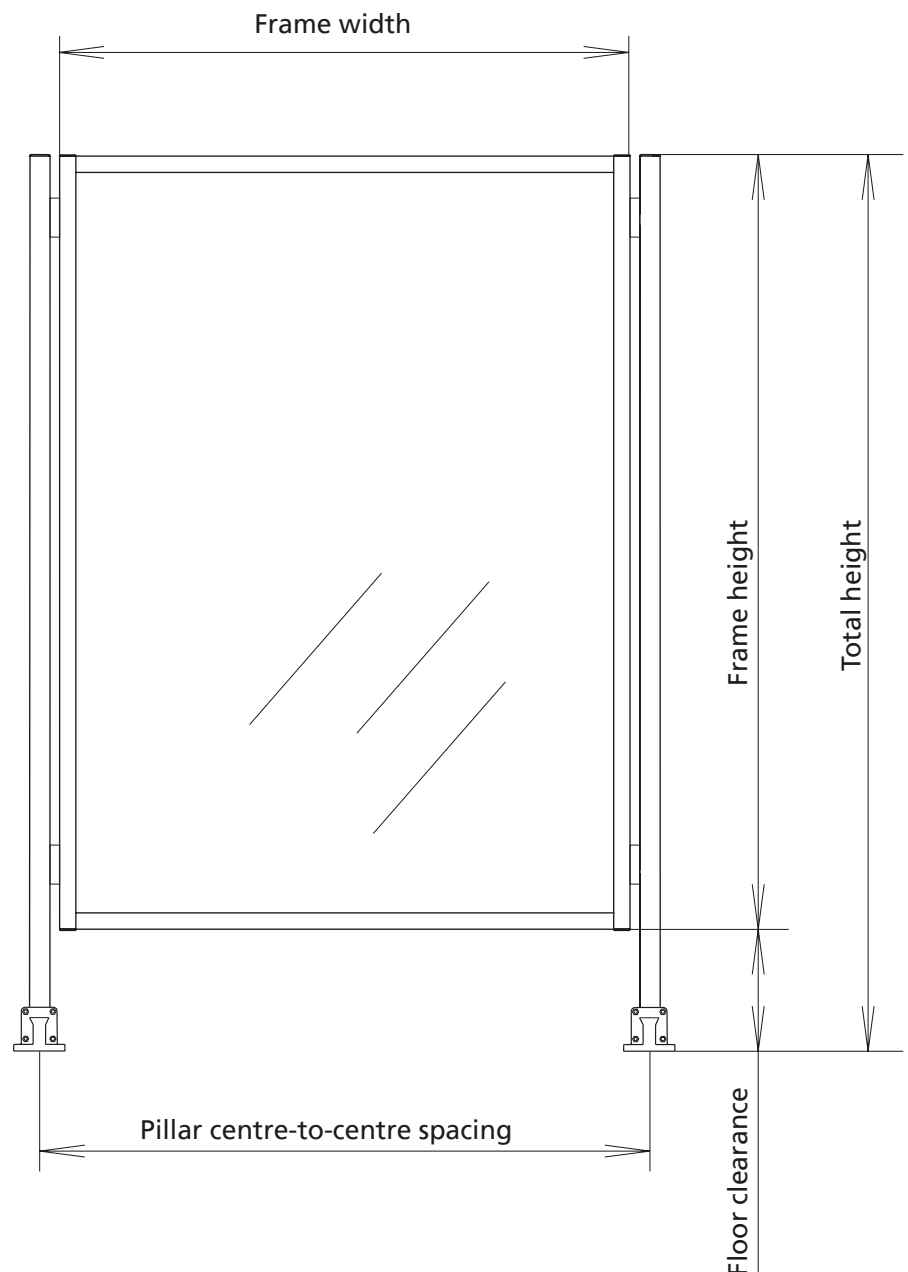
The modular system allows the user to concentrate on the most important thing – the safety function and its design with minimal time expenditure.

Features:

- Quick and easy on-site installation (with Click&Safe connection element, see page 444)
- Fast assembly and dismantling of individual frames, e.g. for maintenance work on the machine
- Frames with the same module size are interchangeable

Clamping or inserting profile available in the cross-sections 30 mm and 40 mm.
(see page 431–436)

Pillar profile 50, S-profile 40x40 or F-profile 50x50
(see page 418–419
Page 438–439)



Procedure

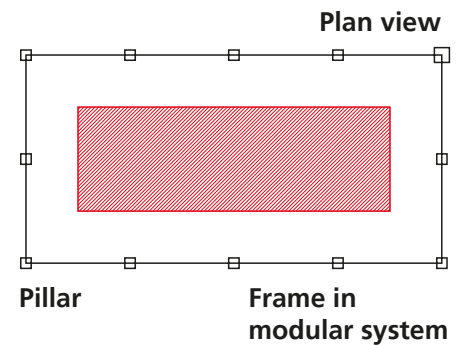
1. Planning

a) Calculate the required lengths

Example:

The machine to be protected has the dimensions 5.50 m x 3.50 m. Allowing for the safety distance, you get a rectangle of approx. 6 m x 4 m.

b) The protection system can now be designed in line with requirements with the aid of the different module sizes. In our example, one solution is as follows:
 4 m side = 2 x 2.0 m module
 6 m side = 4 x 1.5 m module
 Number of pillars = 12

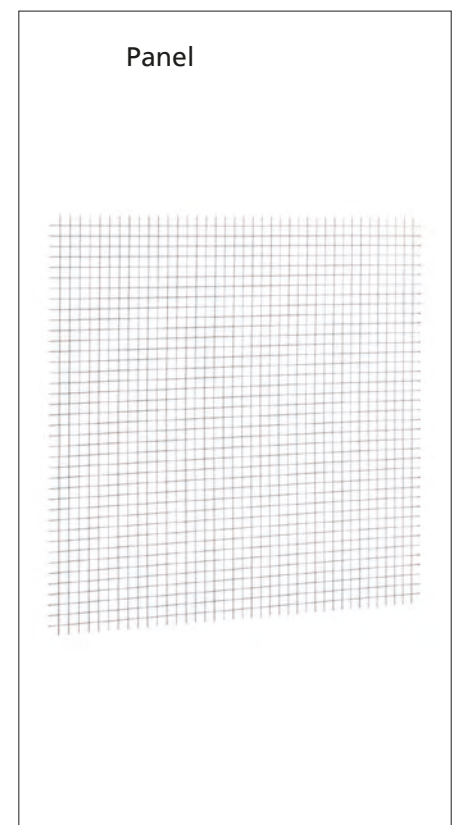
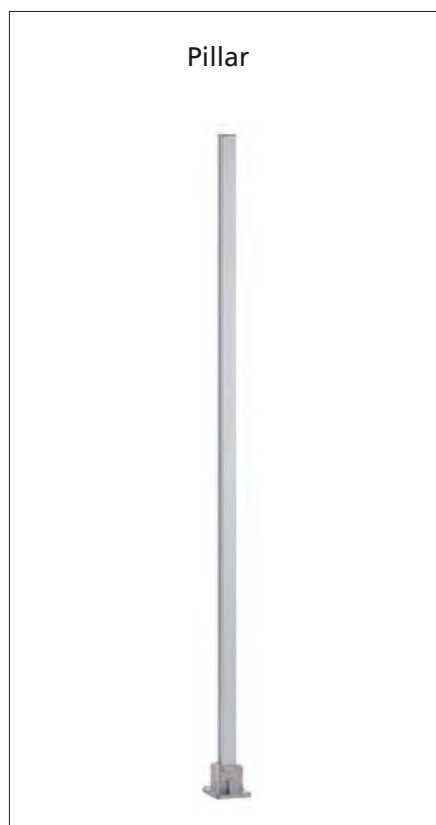


2. Material requirements

a) Pages 420–422 list the different frame versions with different panels.
 b) Furthermore, sliding, hinged and lifting doors are available, which are also configured in the modular system (page 416).

c) Page 418 shows the pillars. The following distinction must be made in relation to the pillars:

- Protection system = pillar with base clamp (type 1 and 2)
- Safety guard = pillar with base plate (type 3)



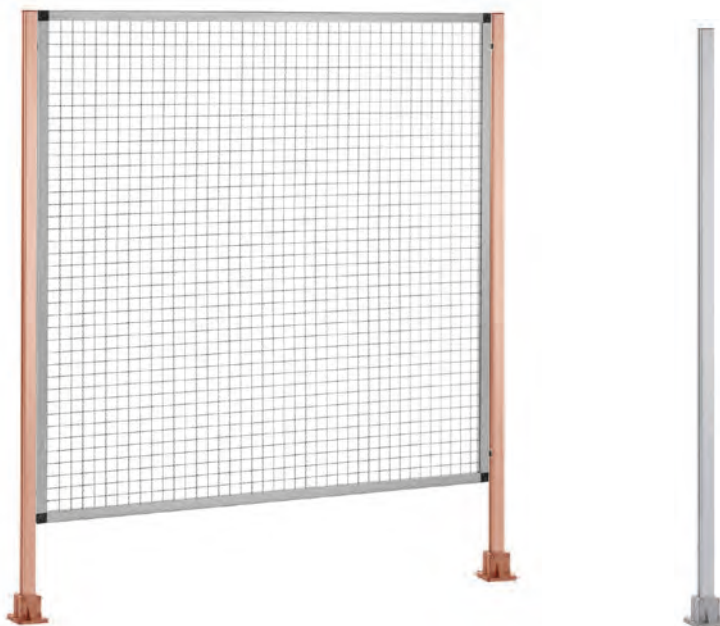
Modular system

Pillar

Application:

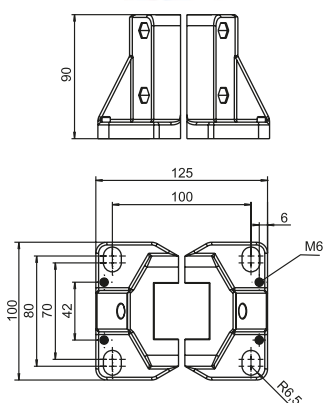
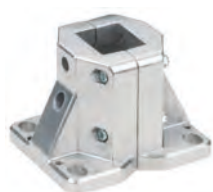
- Consisting of pillar profile 50 / S-profile 40x40 / F-profile 50x50

- Choice of base versions

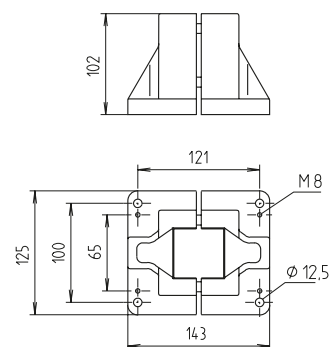


Type 1 (FVV)

For pillar profile S-40x40

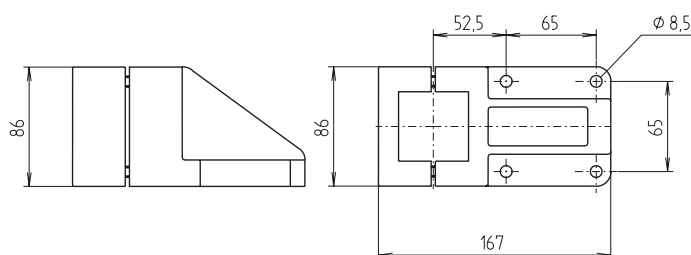


For pillar profile 50, F-50x50



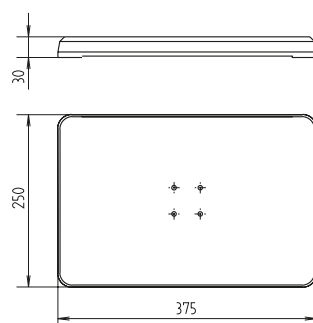
Type 2 (FVA)

For pillar profile 50, F-50x50



Type 3 (FP)

For pillar profile 50, F-50x50, S-40x40

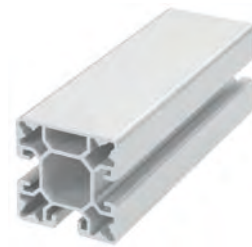




Pillar profile S-40x40



Pillar profile F-50x50



Pillar profile SP-50x50

Order example: Pillar F-50 1600 0000 X

Pillar profile F-50,
Height = 1600,
Version = Type 1 (FVV)

Pillar profile	Tall pillar (max. 6000 mm)	Base version
S-40x40	---- 0000	—
F-50x50	---- 0000	—
SP-50x50	---- 0000	—



X = type 1 (FVV)
Y = type 2 (FVA, not available for F-40)
Z = type 3 (FP)

Supporting/Levelling shims

- For levelling with the aid of set screws
- For preventing the set screws from digging into the floor
- Give the base clamp a full contact surface

Material:

Supporting shim galvanised steel,
levelling shim aluminium



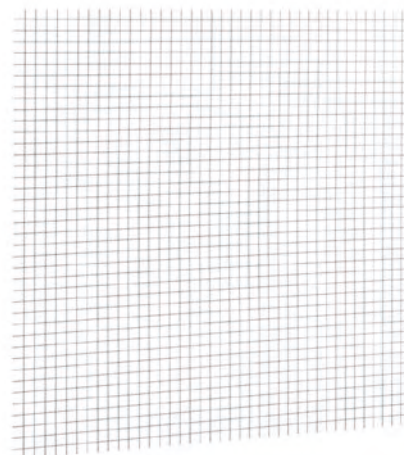
Code No.	Version	Base version	Includes
4080500	Supporting shim 50	Type 1 for pillar profile 50, F-50x50	1 1-mm shim
40143011	Levelling shims 40	Type 1 for pillar profile S-40x40	4 1-mm shims, 1 0.5-mm shim
40143021	Levelling shims 50	Type 1 for pillar profile F-50x50	4 1-mm shims, 1 0.5-mm shim

Safety guards

Modular system

Panel module version -A-

- Consisting of frame, panels and connection elements



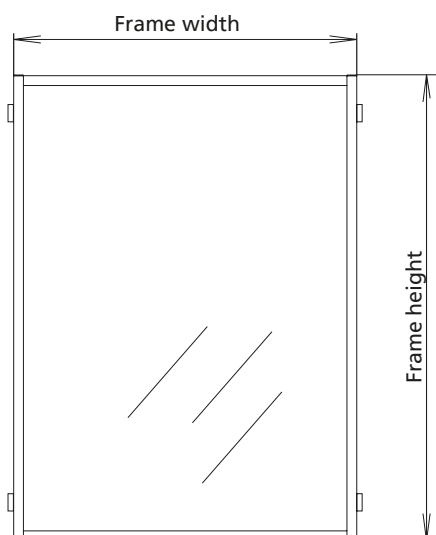
Frame profile, see p. 19-21	Frame height	Frame width	Choice of panels
Module A, ESP 30x30	Up to 2000 mm	Up to 1000 mm	A, G
Module A, ESP 40x40	Up to 2000 mm	Up to 1500 mm	A, I
Module A, ESP 30x30/2	Up to 2000 mm	Up to 1000 mm	A, G
Module A, ESP 40x40/2	Up to 2000 mm	Up to 1500 mm	A, I
Module A, KL 30x30-3	Up to 2000 mm	Up to 1000 mm	All
Module A, KL 40x40-3	Up to 2000 mm	Up to 2000 mm	A, B, C, D
Module A, KL 40x40-3	Up to 2000 mm	Up to 1500 mm	All

A = Without panel
 B = Acrylic glass, 6 mm, clear
 C = Acrylic glass, 6 mm, tinted
 D = Makrolon glass, 6 mm, clear
 E = Trespa, 6 mm
 F = Composite, 6 mm, anodised,
 G = Wire mesh, 30x30x3, galv. steel
 I = Wire mesh, 40x40x4, galv. steel

Further versions available on request.

Order example:
 Module A, ESP 30 1500 0900 G

 Frame profile ESP 30x30,
 Height=1500,
 Width=900,
 Panel = wire mesh 30x30x3 galv. steel

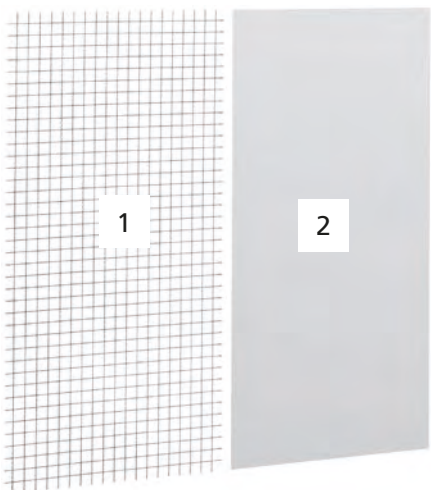


Panel module version -B-

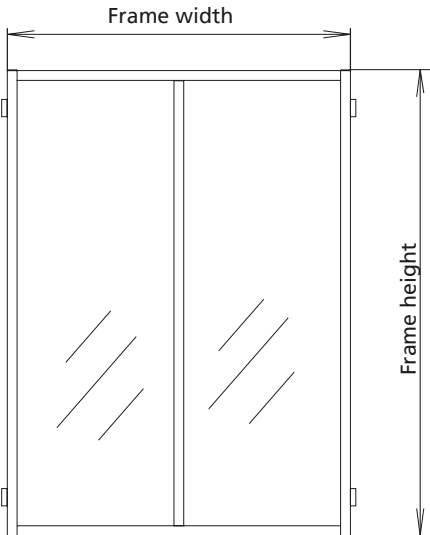
- Consisting of frame, panels and connection elements, vertical division (in centre)



+



Frame profile, see p. 431-433	Frame height	Frame width	Panel 1 Choice of:	Panel 2 Choice of:
Module B, ESP 30	Up to 2000 mm	Up to 1500 mm	A, G	A, G
Module B, ESP 40	Up to 2500 mm	Up to 2000 mm	A, I	A, I
Module B, ESP 30/2	Up to 2000 mm	Up to 1500 mm	A, G	A, G
Module B, ESP 40/2	Up to 2500 mm	Up to 2000 mm	A, I	A, I
Module B, KL 30x30-3	Up to 2000 mm	Up to 1500 mm	All	All
Module B, KL 40x40-4	Up to 2500 mm	Up to 2000 mm	All	All



- A = Without panel
B = Acrylic glass, 6 mm, clear
C = Acrylic glass, 6 mm, tinted
D = Makrolon glass, 6 mm, clear
E = Trespa, 6 mm, brown solid core panel available in widths up to 1500 mm
F = Composite, 6 mm, anodised, available in widths up to 1500 mm
G = Wire mesh, 30x30x3, galv. steel, available in widths up to 1500 mm
I = Wire mesh, 40x40x4, galv. steel, available in widths up to 1500 mm

Further versions available on request.

Order example:
Module B, KL 40 2000 1200 BI

Frame profile KL 40x40-3
Height = 2000,
Width = 1200,
Panel 1 = Acrylic glass, 6 mm, clear
Panel 2 = wire mesh 40x40x4 galv. steel

Safety guards

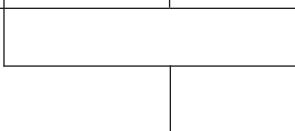
Modular system

Panel module version -C-

- Consisting of frame, panels and connection elements, horizontal division (in centre)

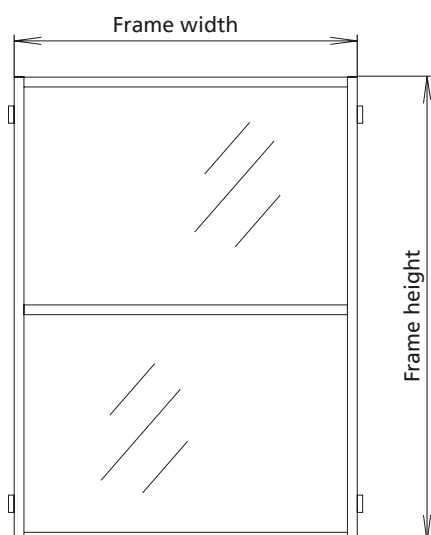


Frame profile, see p. 431 - 433	Frame height	Frame width	Panel 1 Choice of:	Panel 2 Choice of:
Module C, ESP 30	Up to 2000 mm	Up to 1500 mm	A, G	A, G
Module C, ESP 40	Up to 2500 mm	Up to 2000 mm	A, I	A, I
Module C, ESP 30/2	Up to 2000 mm	Up to 1500 mm	A, G	A, G
Module C, ESP 40/2	Up to 2500 mm	Up to 2000 mm	A, I	A, I
Module C, KL 30x30-3	Up to 2000 mm	Up to 1500 mm	All	All
Module C, KL 40x40-3	Up to 2500 mm	Up to 2000 mm	All	All



A = Without panel
 B = Acrylic glass, 6 mm, clear
 C = Acrylic glass, 6 mm, tinted
 D = Makrolon glass, 6 mm, clear
 E = Trespa, 6 mm, brown solid core panel available in widths up to 1500 mm
 F = Composite, 6 mm, anodised, available in widths up to 1500 mm
 G = Wire mesh, 30x30x3, galv. steel
 I = Wire mesh, 40x40x4, galv. steel

Further versions available on request.



Order example:

Module C, KL 40 2000 0850 BI

Frame profile KL 40x40-3,

Height = 2000,

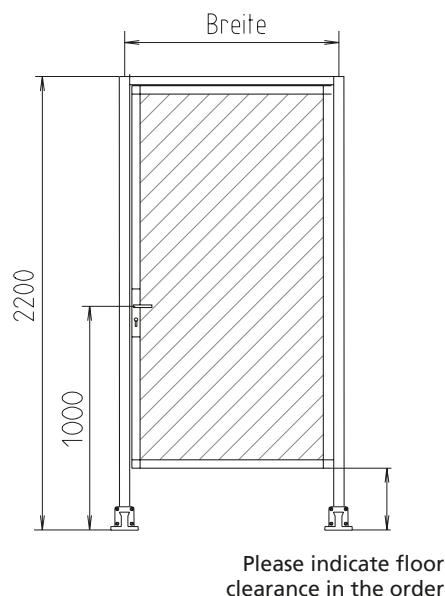
Width = 850,

Panel 1 = Acrylic glass, 6 mm, clear

Panel 2 = wire mesh 40x40x4 galv. steel

Hinged door

- Consisting of pillar profile 50 with base version type 1, top cross strut
- Choice of door lock



Fixed knob
on outside in
panic lock
version



Version
DIN right

Type	Mounting	Height	Width	Panel	Door lock	Frame profile
Hinged door	—	— — —	— — —	—	—	KL 30x30-3
	—	— — —	— — —	—	—	KL 40x40-3

W = Panic lock
X = Cylinder lock with handle set
Y = Magnetic lock with handle
Z = Ball catch with handle

A = Without panel
B = Acrylic glass, 6 mm, clear
C = Acrylic glass, 6 mm, tinted
D = Makrolon glass, 6 mm, clear
E = Trespa, 6 mm, brown solid core panel available in widths up to 1500 mm
F = Composite, 6 mm, anodised, available in widths up to 1500 mm
G = Wire mesh, 30x30x3, galv. steel
I = Wire mesh, 40x40x4, galv. steel

F = DIN right mounting
G = DIN left mounting

Standard height:
2200 = 2200 mm

Standard width:
0800 = 0800 mm
1000 = 1000 mm

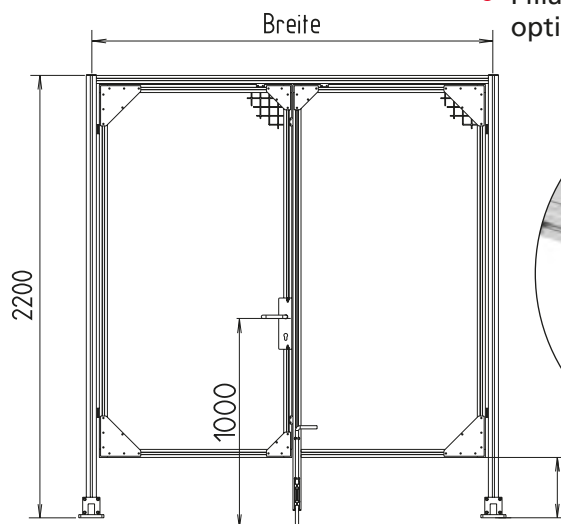
Further widths/heights available on request.

Order example:
Hinged door F 2200 1000 DY
DIN right,
Height = 2200,
Width = 1000,
Panel = Makrolon,
Door lock = Magnetic lock

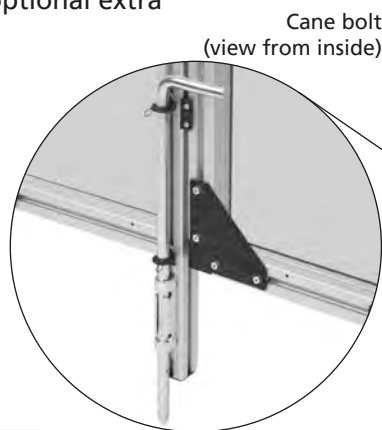
Modular system

Double-winged hinged door

- Consisting of pillar profile 50 with base version type 1, top cross strut
- Choice of door lock
- Pillar roller available as an optional extra



Please indicate floor clearance in the order



Type	Mounting	Height	Width	Panel	Door lock	Frame profile
Double-wing hinged door	---	---	---	---	---	KL 40x40-3

L = DIN right mounting
M = DIN left mounting

Order example:
Double-wing hinged door L 2200 1500 DW
DIN right,
Height = 2200,
Width = 1500,
Panel = Makrolon,
Door lock = panic lock

Standard height:
2200 = 2200 mm

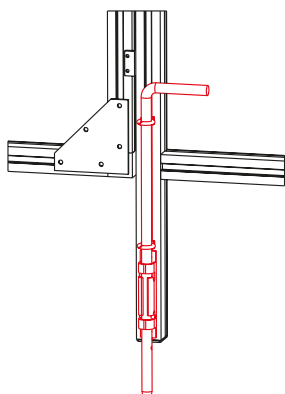
Standard width:
1500 = 1500 mm
2000 = 2000 mm

Further widths/heights available on request.

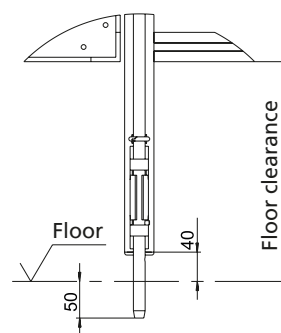
W = Panic lock
X = Cylinder lock with handle set
Y = Magnetic lock with handle
Z = Ball catch with handle

A = Without panel
B = Acrylic glass, 6 mm, clear
C = Acrylic glass, 6 mm, tinted
D = Makrolon glass, 6 mm, clear
E = Trespa, 6 mm, brown solid core panel available in widths up to 1500 mm
F = Composite, 6 mm, anodised, available in widths up to 1500 mm
G = Wire mesh, 30x30x3, galv. steel
I = Wire mesh, 40x40x4, galv. steel

Cane bolt for double-winged hinged door



Material: galvanised steel.
Includes:
Complete with fixing set.



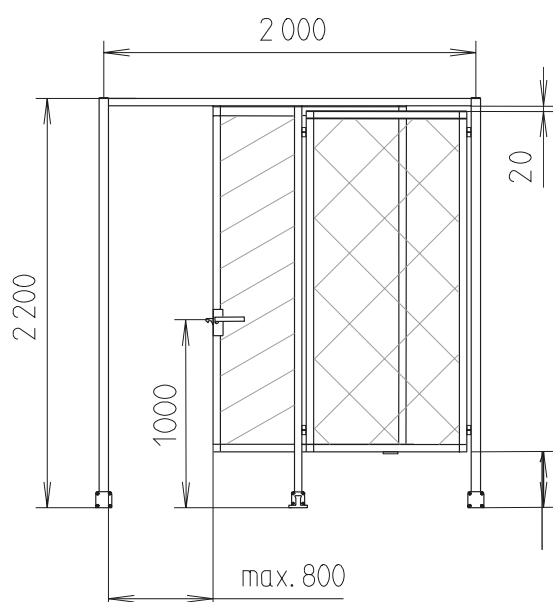
Code No.	Type
95208	Cane bolt for double-winged hinged door



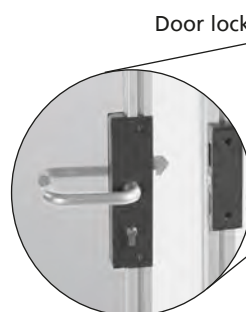
RK Click & Safe Basic Sliding door

- Consisting of pillar profil 50 with base version type 1
- Guide with sliding door profile 40 and roller carriage

Sliding door profile, roller carriage
(view from inside)



Please indicate floor clearance in the order



Door lock

Version
DIN right

Type	Mounting	Height	Width	Panel	Frame profile
Sliding door	—	— — —	— — —	—	KL 40x40-3

N = DIN right mounting
P = DIN left mounting

Standard height:
2200 = 2200 mm

Standard width:
2000 = 2000 mm

Further widths/heights available on request.

A = Without panel
B = Acrylic glass, 6 mm, clear
C = Acrylic glass, 6 mm, tinted
D = Makrolon glass, 6 mm, clear
E = Trespa, 6 mm, brown solid core panel available in widths up to 1500 mm
F = Composite, 6 mm, anodised, available in widths up to 1500 mm
G = Wire mesh, 30x30x3, galv. steel
I = Wire mesh, 40x40x4, galv. steel

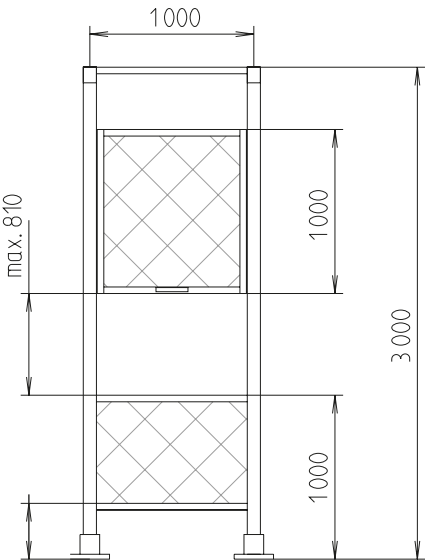
Order example:
Sliding door N 2200 2000 IB

Sliding door right,
Height = 2200,
Width = 2000,
Panel1 = Wire mesh,
Panel2 = Clear acrylic

Modular system

Lifting door

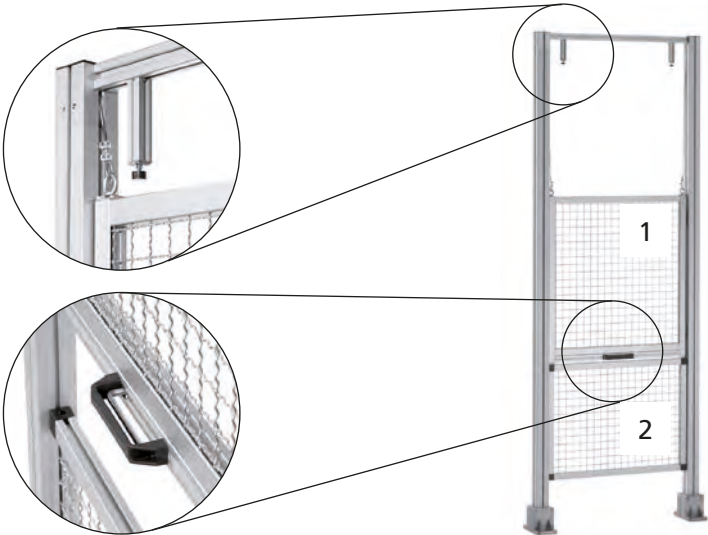
- Consisting of pillar profile F-profile 80-L with base version type 1
- Incl. pulleys, counterweights and infinitely adjustable brake



Please indicate floor clearance in the order

Door limiter with shock absorbers, counterweight pulley system

Infinitely adjustable holding brake in handle



Type	Height	Width	Panel		Frame profile
			1	2	
Lifting door	----	----	-	-	KL 40x40-3

Standard height: 3000 = 3000 mm	Standard width: 1000 = 1000 mm	A = Without panel B = Acrylic glass, 6 mm, clear C = Acrylic glass, 6 mm, tinted D = Makrolon glass, 6 mm, clear E = Trespa, 6 mm, brown solid core panel available in widths up to 1500 mm F = Composite, 6 mm, anodised, available in widths up to 1500 mm G = Wire mesh, 30x30x3, galv. steel I = Wire mesh, 40x40x4, galv. steel	

Further widths/heights available on request.

Order example:
Lifting door 3000 1000 BE

Frame profile = KL 40-II
Height = 3000
Width = 1000
Panel 1 = Clear acrylic
Panel 2 = Trespa

RK Click & Safe Protect 115

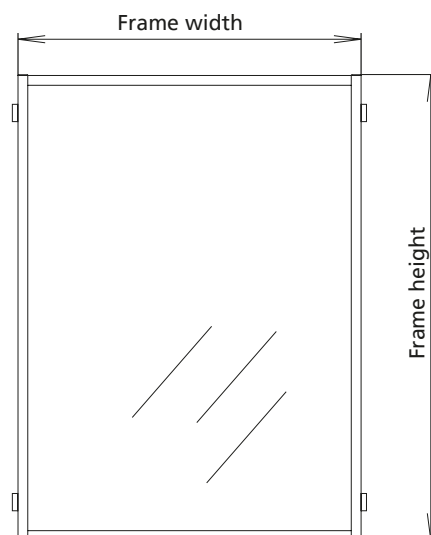
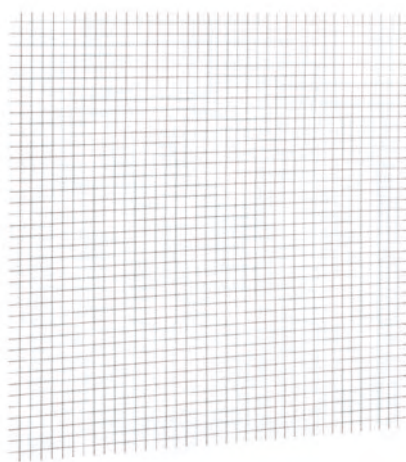
Risks from moving parts

- Pendulum, standard ISO 14120, annex C 115 j (5,8 km/h, 90 kg) normal walking speed

The test rig and the measuring process for the pendulum test has been inspected and approved by TÜV Süd.

Panel module version -A-

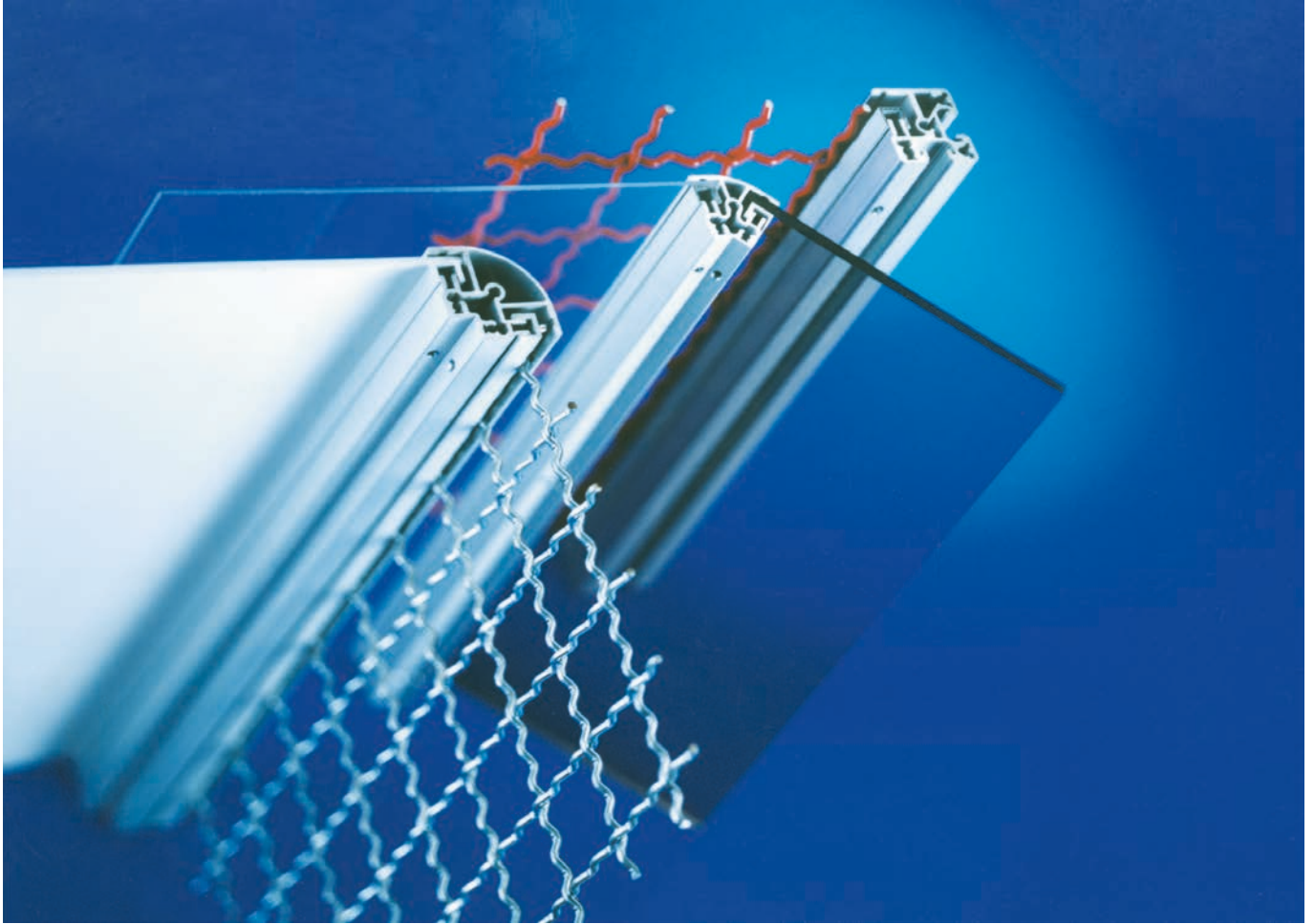
- Consisting of frame, panels and connection elements



Pillar profile p. 438	Frame profile p. 432	Frame height	Frame width	Panels
S-40x40	ESP 30x30 (30/2)	2000 mm	1000 mm	Wire mesh, 30x30x3
S-40x40	ESP 40x40 (40/2)	2000 mm	1000 mm	Wire mesh, 40x40x4
S-40x40	KL 30x30	2000 mm	1500 mm	Wire mesh, 30x30x3
S-40x40	KL 40x40	2000 mm	1500 mm	Wire mesh, 40x40x4
S-40x40	KL 40x40	2000 mm	1500 mm	Wire mesh, 30x30x3
S-40x40	KL 30x30	2000 mm	1500 mm	Makrolon glass 4 mm
S-40x40	KL 30x30	2000 mm	1500 mm	Makrolon glass 6 mm
S-40x40	KL 40x40	2000 mm	1500 mm	Makrolon glass 4 mm
S-40x40	KL 40x40	2000 mm	1500 mm	Makrolon glass 6 mm
F-50x50	KL 40x40	2000 mm	1500 mm	Makrolon glass 4 mm
S-40x40	KL 40x40	2000 mm	1500 mm	Safety glass VSG 6 mm
S-40x40	KL 30x30	2000 mm	1000 mm	Wire mesh, 30x30x3
S-40x40	KL 40x40	2000 mm	1000 mm	Wire mesh, 40x40x4
F-50x50	KL 40x40	2000 mm	1000 mm	Safety glass VSG 6 mm

Other combinations on request

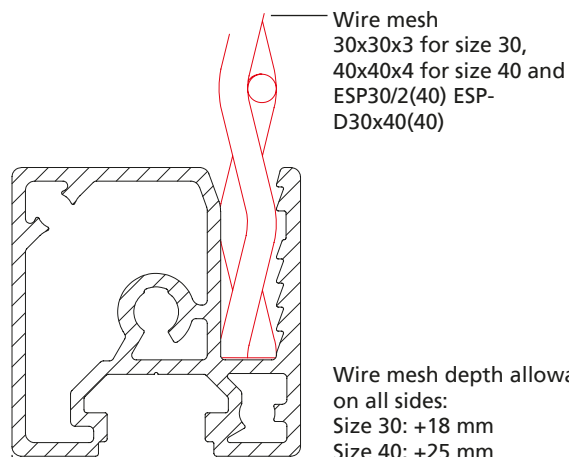
System profiles



Inserting profiles ESP for wire mesh

Features:

- Special profile for inserting wire meshes (size 30 for 30x30x3, size 40 for 40x40x4,
- Type ESP 30/2 (40) and ESPD 30x40 (40) for 40x40x4)
- Visually attractive and easy to clean thanks to profile visible surfaces without longitudinal slot.
- Corner joint ensures quick and rotation-locked assembly
- High stability thanks to high insertion depth



Clamping profiles

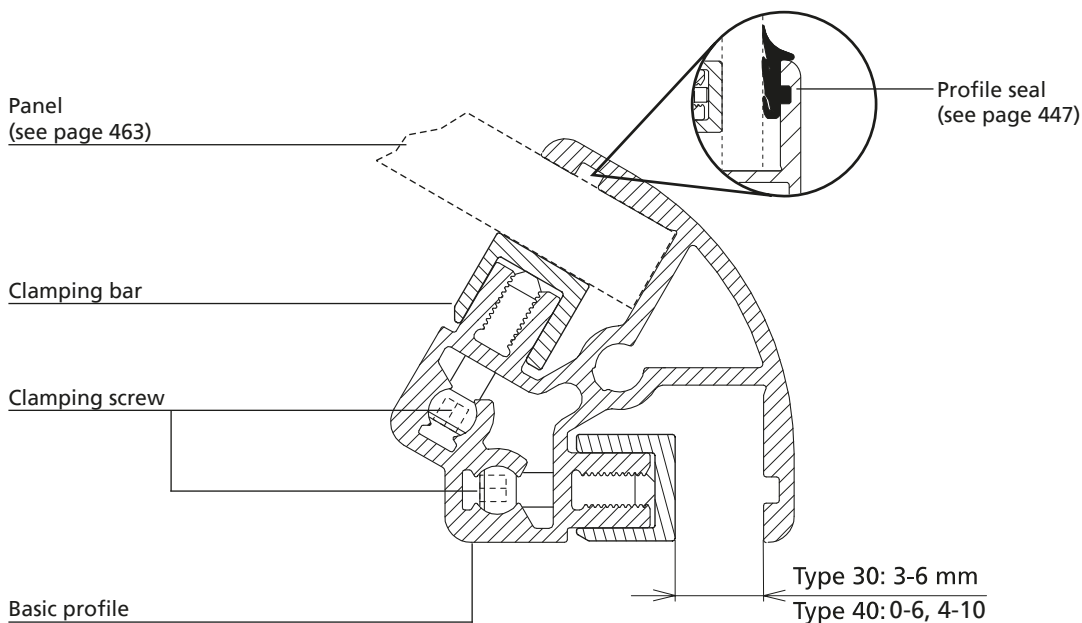
- A clamping screw presses the clamping bar against the panel. This ensures secure seating and tolerances can be absorbed by the panels without any difficulty.

Features:

- Secure seating, no flapping because the panels are clamped
- Visually attractive and easy to clean thanks to smooth visible surface
- Various angle versions for different applications
- Suitable for panel elements with a wall thickness of up to 10 mm
- Panel depth allowances on all sides:
Size 30 +10 mm
Size 40 +15 mm

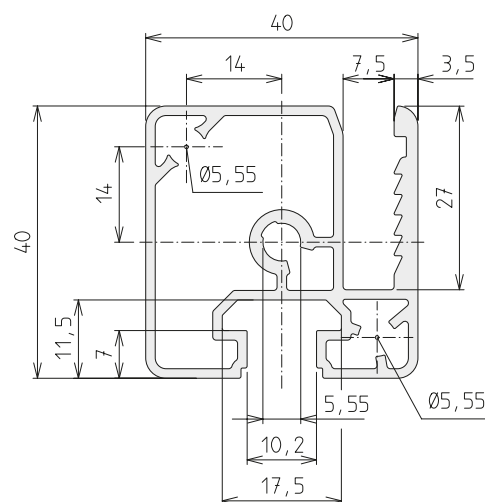
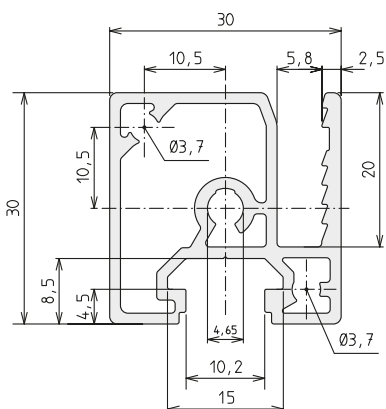
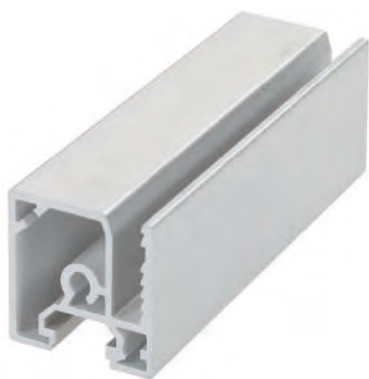
Includes:

Basic profile, clamping bar and set screws (hole spacing approx. 200 mm)



Profiles

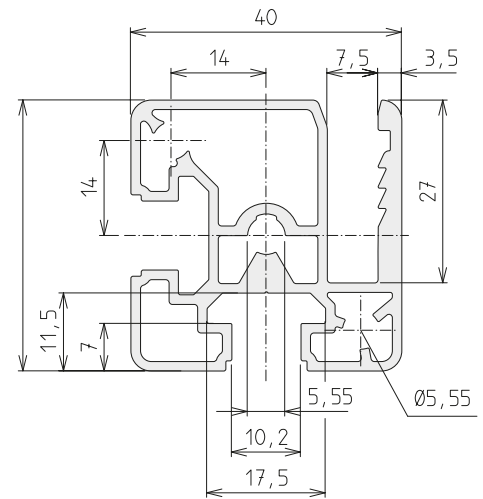
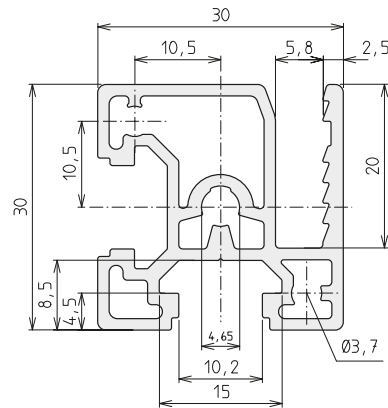
Inserting profile ESP
for wire mesh



Code No.	Size	Version	For wire mesh	Anodised
4895000	30	Cut to size (max. 6000 mm)	30x30x3	Clear
4895001	30	6000 mm bar	30x30x3	Clear
4905000	40	Cut to size (max. 6000 mm)	40x40x4	Clear
4905001	40	6000 mm bar	40x40x4	Clear

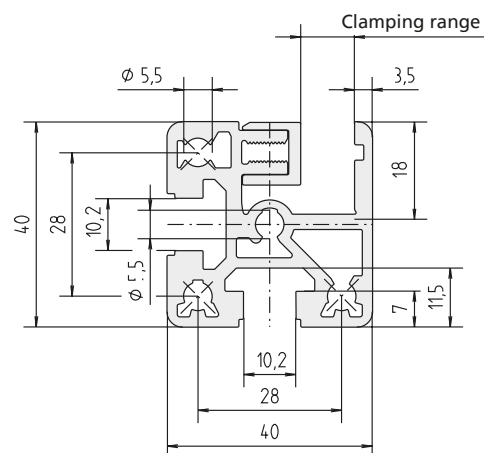
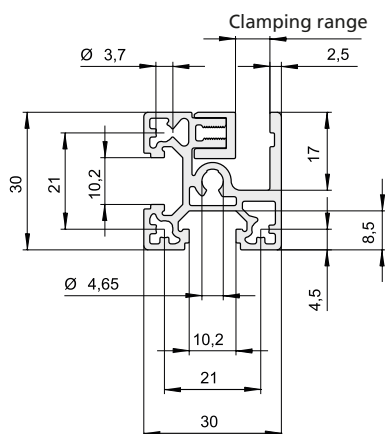


Inserting profile ESP/2 for wire mesh

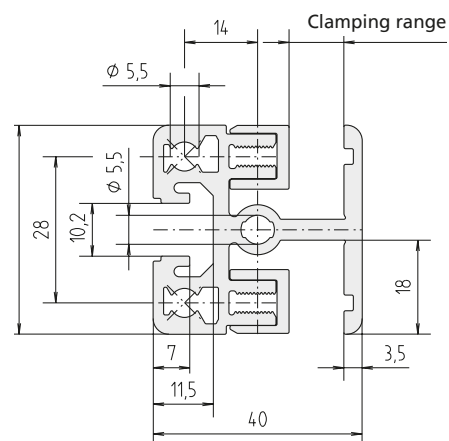


Code No.	Size	Version	For wire mesh	Anodised
4935000	30	Cut to size (max. 6000 mm)	30x30x3	Clear
4935001	30	6000 mm bar	30x30x3	Clear
4945000	40	Cut to size (max. 6000 mm)	40x40x4	Clear
4945001	40	6000 mm bar	40x40x4	Clear

Profiles

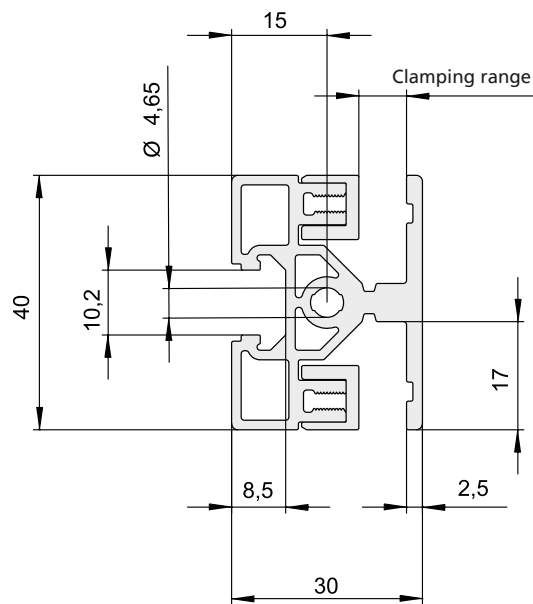


Code No.	Size	Version	Clamping range	Anodised
4F75008	30	Cut to size (max. 6000 mm)	3 - 6 mm	Clear
4F75009	30	6000 mm bar	3 - 6 mm	Clear
4B95100	40	Cut to size (max. 6000 mm)	0 - 6 mm	Clear
4B95101	40	6000 mm bar	0 - 6 mm	Clear
4B95008	40	Cut to size (max. 6000 mm)	4 - 10 mm	Clear
4B95009	40	6000 mm bar	4 - 10 mm	Clear



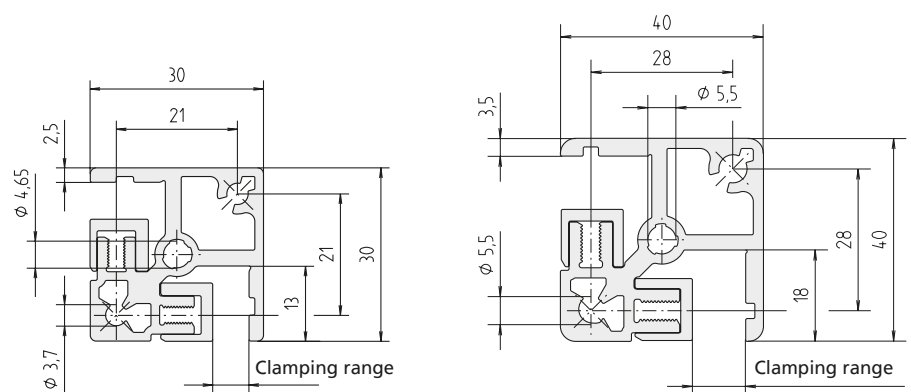
Code No.	Size	Version	Clamping range	Anodised
4615100	40	Cut to size (max. 6000 mm)	0 - 6 mm	Clear
4615101	40	6000 mm bar	0 - 6 mm	Clear
4615008	40	Cut to size (max. 6000 mm)	4 - 10 mm	Clear
4615009	40	6000 mm bar	4 - 10 mm	Clear

Clamping profile KLD



Code No.	Size	Version	Clamping range	Anodised
4F85008	30x40	Cut to size (max. 6000 mm)	3 - 6 mm	Clear
4F85009	30x40	6000 mm bar	3 - 6 mm	Clear

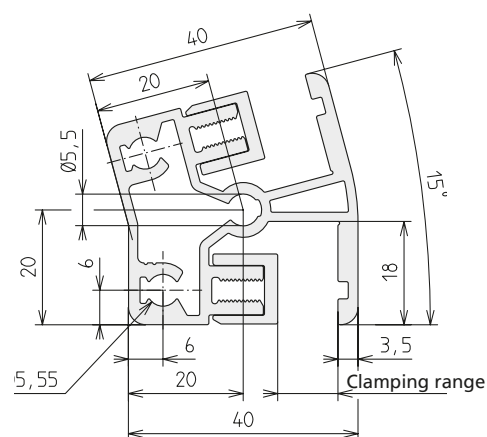
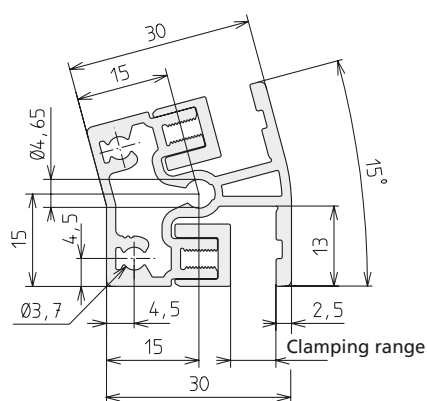
Clamping profile KLE



Code No.	Size	Version	Clamping range	Anodised
4705008	30	Cut to size (max. 6000 mm)	3 - 6 mm	Clear
4705009	30	6000 mm bar	3 - 6 mm	Clear
4715100	40	Cut to size (max. 6000 mm)	0 - 6 mm	Clear
4715101	40	6000 mm bar	0 - 6 mm	Clear
4715008	40	Cut to size (max. 6000 mm)	4 - 10 mm	Clear
4715009	40	6000 mm bar	4 - 10 mm	Clear

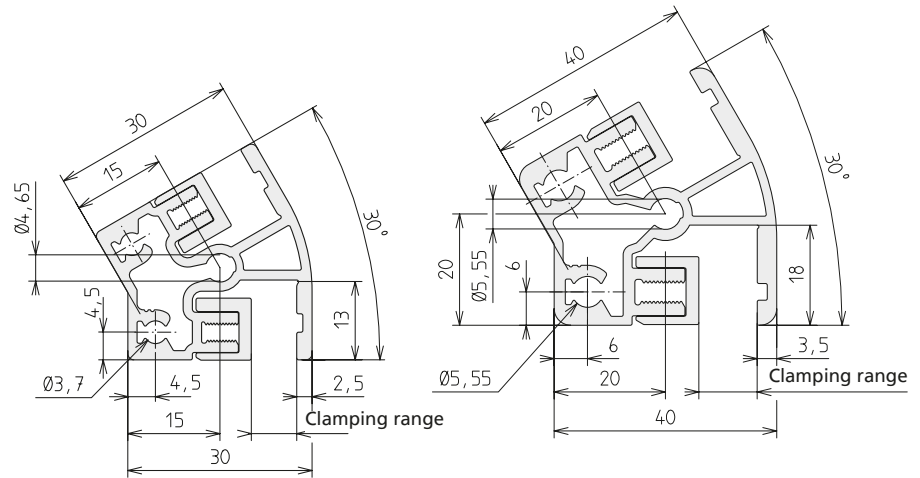


Clamping profile K LW-15



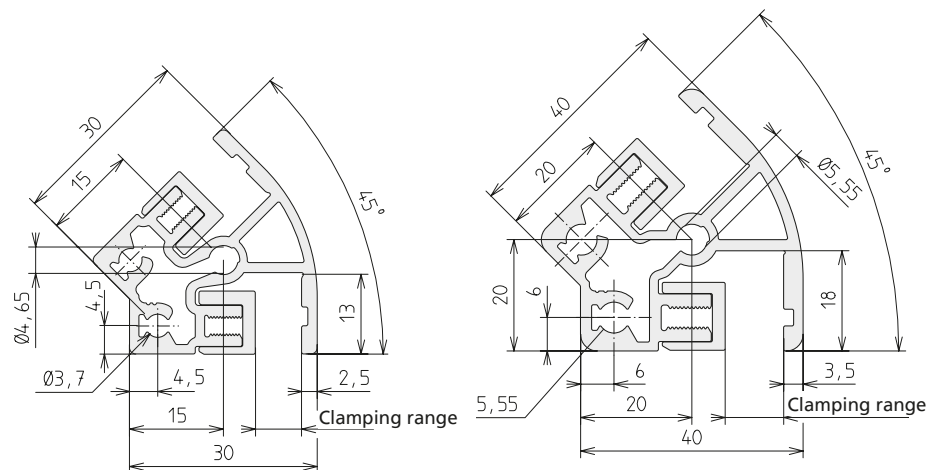
Code No.	Size	Version	Clamping range	Anodised
4405000	30	Cut to size (max. 6000 mm)	3 - 6 mm	Clear
4405001	30	6000 mm bar	3 - 6 mm	Clear
4455100	40	Cut to size (max. 6000 mm)	0 - 6 mm	Clear
4455101	40	6000 mm bar	0 - 6 mm	Clear
4455000	40	Cut to size (max. 6000 mm)	4 - 10 mm	Clear
4455001	40	6000 mm bar	4 - 10 mm	Clear

Clamping profile K LW-30



Code No.	Size	Version	Clamping range	Anodised
4415000	30	Cut to size (max. 6000 mm)	3 - 6 mm	Clear
4415001	30	6000 mm bar	3 - 6 mm	Clear
4465100	40	Cut to size (max. 6000 mm)	0 - 6 mm	Clear
4465101	40	6000 mm bar	0 - 6 mm	Clear
4465000	40	Cut to size (max. 6000 mm)	4 - 10 mm	Clear
4465001	40	6000 mm bar	4 - 10 mm	Clear

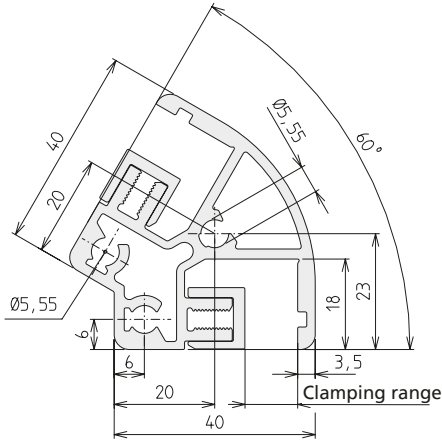
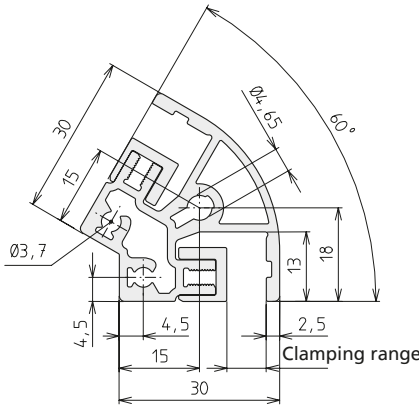
Clamping profile K LW-45



Code No.	Size	Version	Clamping range	Anodised
4425000	30	Cut to size (max. 6000 mm)	3 - 6 mm	Clear
4425001	30	6000 mm bar	3 - 6 mm	Clear
4475100	40	Cut to size (max. 6000 mm)	0 - 6 mm	Clear
4475101	40	6000 mm bar	0 - 6 mm	Clear
4475000	40	Cut to size (max. 6000 mm)	4 - 10 mm	Clear
4475001	40	6000 mm bar	4 - 10 mm	Clear

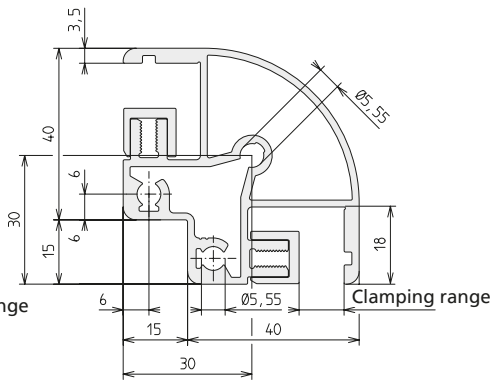
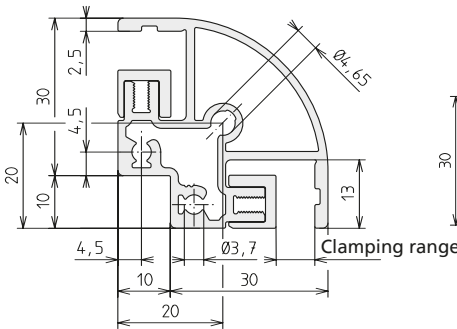
Profiles

Clamping profile K LW-60



Code No.	Size	Version	Clamping range	Anodised
4445000	30	Cut to size (max. 6000 mm)	3 - 6 mm	Clear
4445001	30	6000 mm bar	3 - 6 mm	Clear
4495100	40	Cut to size (max. 6000 mm)	0 - 6 mm	Clear
4495101	40	6000 mm bar	0 - 6 mm	Clear
4495000	40	Cut to size (max. 6000 mm)	4 - 10 mm	Clear
4495001	40	6000 mm bar	4 - 10 mm	Clear

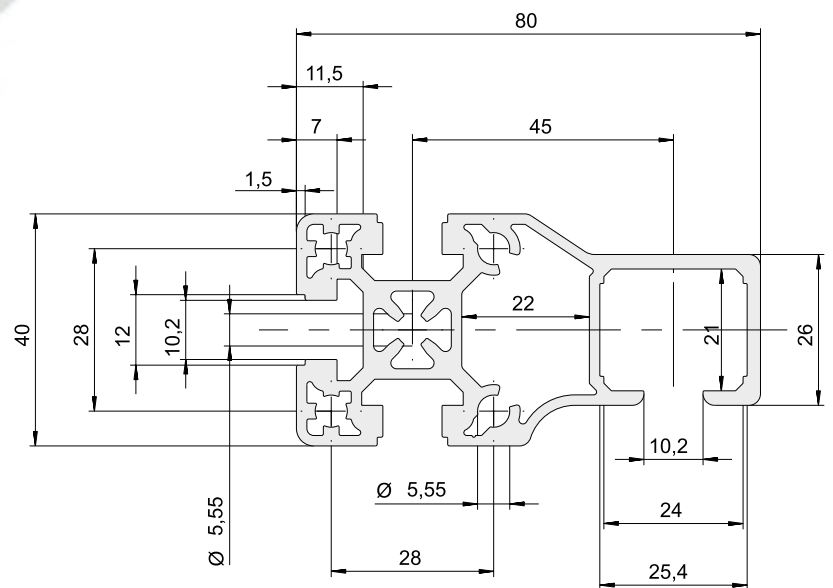
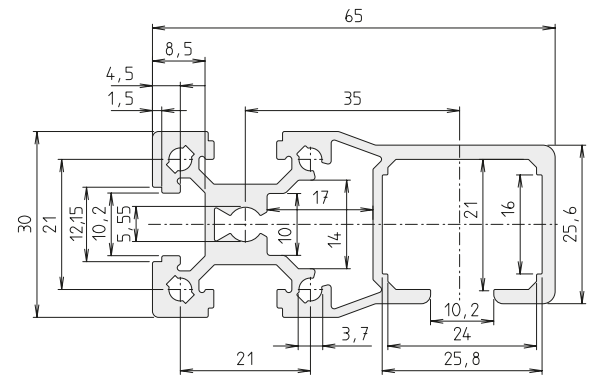
Clamping profile K LW-90



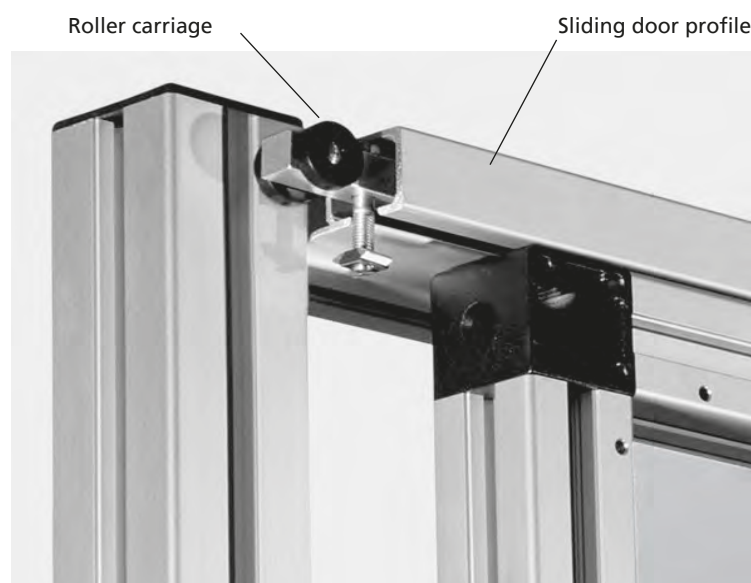
Code No.	Size	Version	Clamping range	Anodised
4435000	30	Cut to size (max. 6000 mm)	3 - 6 mm	Clear
4435001	30	6000 mm bar	3 - 6 mm	Clear
4485100	40	Cut to size (max. 6000 mm)	0 - 6 mm	Clear
4485101	40	6000 mm bar	0 - 6 mm	Clear
4485000	40	Cut to size (max. 6000 mm)	4 - 10 mm	Clear
4485001	40	6000 mm bar	4 - 10 mm	Clear



Sliding door profile STP



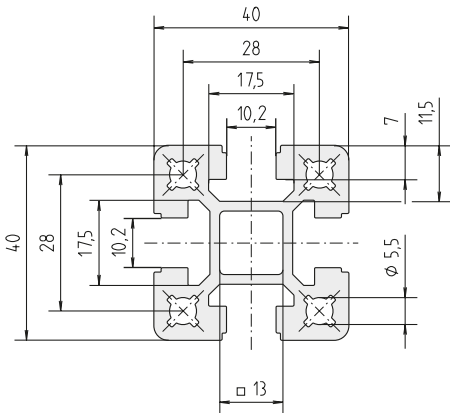
Code No.	Size	Version	Anodised
4175000	30	Cut to size (max. 6000 mm)	Clear
4175001	30	6000 mm bar	Clear
4185000	40	Cut to size (max. 6000 mm)	Clear
4185001	40	6000 mm bar	Clear



Application example sliding door profile

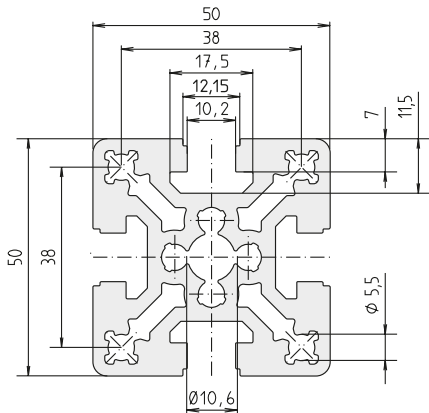
Profiles

Pillar profile S-40x40



Code No.	Size	Version	Anodised
4015000	40	Cut to size (max. 6000 mm)	Clear
4015001	40	6000 mm bar	Clear

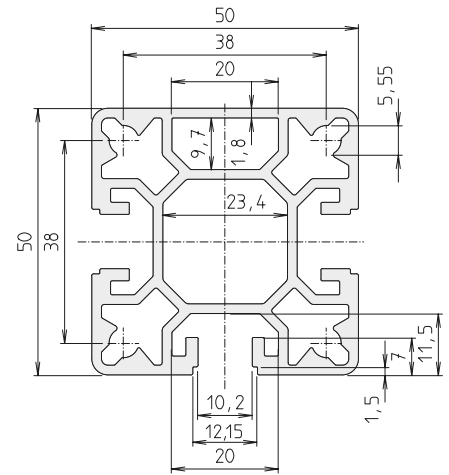
Pillar profile F-50x50



Code No.	Size	Version	Anodised
4085000	50	Cut to size (max. 6000 mm)	Clear
4085001	50	6000 mm bar	Clear



Pillar profile SP-50x50



Code No.	Size	Version	Anodised
4635000	50	Cut to size (max. 6000 mm)	Clear
4635001	50	6000 mm bar	Clear



Pillar profile see page 438–439

Base clamp, page 440

Complete pillars, page 418

Accessories

Base clamp FVV

- Clamp to take size 40 and 50 pillar profiles. See pag 438–439.
- Set screws can be used to compensate for unevenness.
- Levelling shims give the base clamp a full contact surface.

Base clamp

Material: Gravity die-cast aluminium

Includes:

Clamp, set screw and clamping screws

Supporting shim

Material: Steel

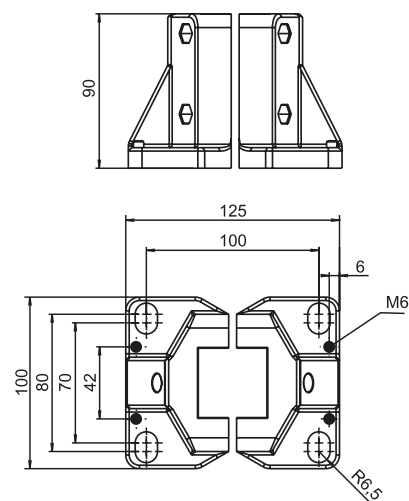
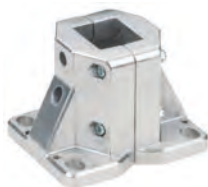
Includes: One 1-mm shim

Levelling shims

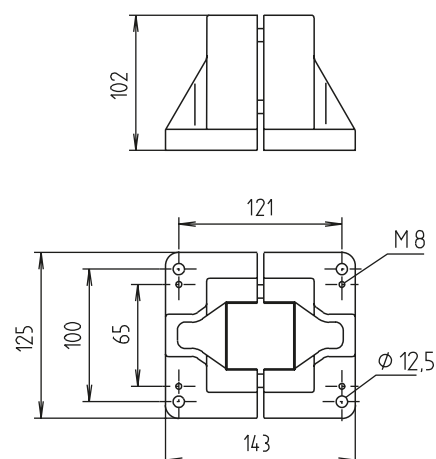
Material: Aluminium

Includes: The Code No. includes one set of 4 1-mm shims and 1 0.5-mm shim.

For pillar profile S-40x40



For pillar profile 50, F-50x50



Code No.	Type
4014312	Base clamp FVV-S 40
4084300	Base clamp FVV-S 50
4080500	Supporting shim for FVV 50
40143011	Levelling shims for FVV 40
40143021	Levelling shims for FVV 50

Order instruction:

- Purchase only in lot sizes and a multiple of that see product table below

- For fixing type 1 and 2 base versions (see page) and the 60° support (see below) to the substrate.

Material:
Galvanised steel.

Fixing bolt

HLA



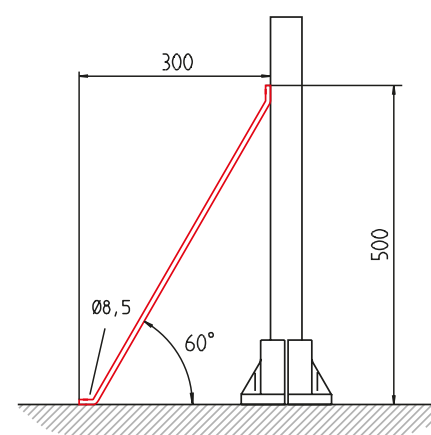
BA

Code No.	Type	lot sizes	length	Hole diameter
4016611	HLA	4, 8, 12... pcs	110	12
4016612	BA	4, 8, 12... pcs	115	8

[mm]

Support

Material:
Black powder-coated steel,
Galvanised fastenings.
Includes:
Comple with fixing for pillar profile.
(For floor fixing, see above)



Code No.	Type
4082561	Support 60°

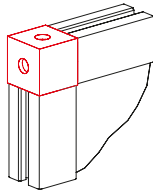
Accessories

Order instruction:

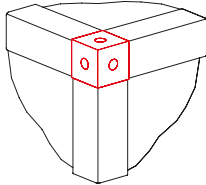
- Purchase only in lot sizes and a multiple of that see product table below

Corner joint

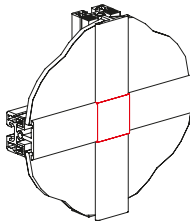
Version KL



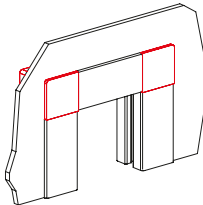
Version KLE



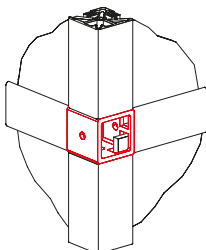
Version KLK



Version KLA



Version KLV



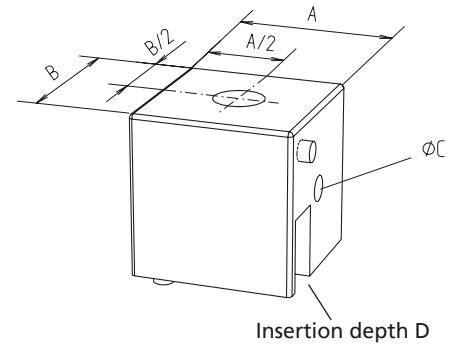
- Connection element for right-angled connections for clamping and inserting profiles (see page 428–429).
- The fixing screws are inserted directly into the profile. Centring pins prevent profile torsion.
- With versions KL/KLE, the screw holes can optionally be sealed with a plastic cap.

Material:

Die-cast zinc, gravity die-cast aluminium (see table)

Includes:

Includes all parts required to fully assemble one corner joint



[mm]

Code No.	Type	lot sizes	For profile	A	B	C	D
Die-cast zinc							
4202409	KLA 30	4, 8, 12...pcs	KL,ESP,ESP-2	30	30	5,4	13
4212409	KLA 40	4, 8, 12...pcs		40	40	6,4	18
Gravity die-cast aluminium							
4202408	KLK 30	4, 8, 12...pcs	KLD	30	30	5,4	13
4212408	KLK 40	4, 8, 12...pcs	KLD	40	40	6,4	18
4202407	KLV 30	4, 8, 12...pcs	KLE,KLD	30	30	5,4	13
4212407	KLV 40	4, 8, 12...pcs		40	40	6,4	18
Code No.	Type	lot sizes	For profile	A	B	C	D
Die-cast zinc							
4202406	KL 30	4, 8, 12...pcs	KL,ESP,ESP-2, F-/G/GG/2G/3G	30	30	5,4	20
4212406	KL 40	4, 8, 12...pcs		40	40	6,4	27
4702406	KLE 30	4, 8, 12...pcs	KLE,F-/G/GG, 2G/3G	30	30	5,4	13
4712406	KLE 40	4, 8, 12...pcs		40	40	6,4	18
Stopper (black)							
40185971	KL/KLE 30	100, 200, 300... pcs	-				
40185981	KL/KLE 40	100, 200, 300... pcs					
Cap (black)							
4000421	KL 30	10, 20, 30... pcs	-				
4010421	KL 40	10, 20, 30... pcs					

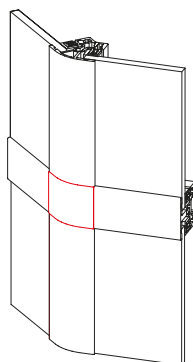
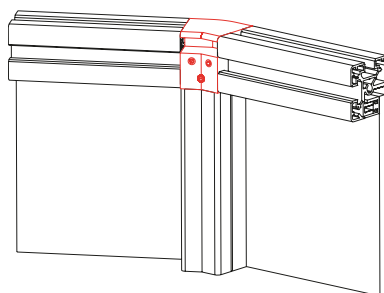


Corner joint

Corner joint KLW



Corner joint KLWK



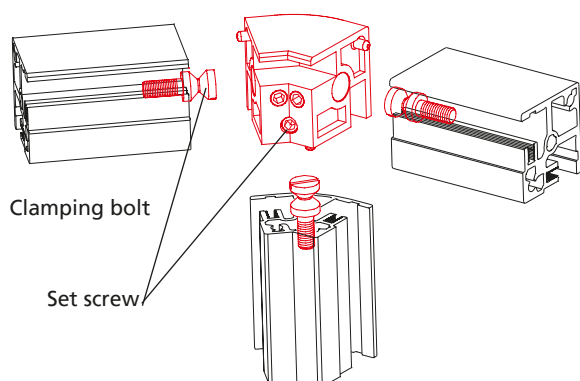
- Connection element for assembling profile angle brackets and clamping profiles
- Centring pin provides rotation locking

Material:

Die-cast zinc, black powder-coated aluminium (see table)

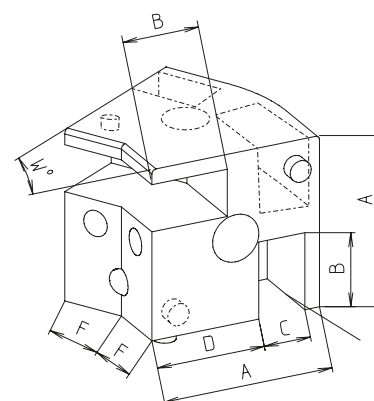
Includes:

Includes all parts required to fully assemble one corner joint



Assembly steps

1. Screw clamping bolt into profile
2. Put together with corner joint
3. Tighten set screw on corner joint – done!

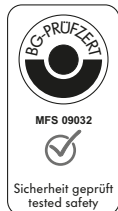


*If using W-profiles, the corners of panels may have to be notched.

Code No.	Type	For profile*	A	B	C	D	F	W
Die-cast zinc								
4412406	KLW 30-30	KLW 30-30, KL, KLE, ESP 30	30	13	8	19.5	11.0	30°
4422406	KLW 30-45	KLW 30-45, KL, KLE, ESP 30	30	13	8	19.5	8.8	45°
4622406	KLW 30-60	KLW 30-60, KL, KLE, ESP 30	30	13	8	19.5	8	60°
4432406	KLW 30-90	KLW 30-90, KL, KLE, ESP 30	30	13	8	19.5	10.0	90°
4472406	KLW 40-45	KLW 40-45, KL, KLE, ESP 40	40	18	11	25.5	11.7	45°
4632406	KLW 40-60	KLW 40-60, KL, KLE, ESP 40	40	18	11	25.5	11.5	60°
4482406	KLW 40-90	KLW 40-90, KL, KLE, ESP 40	40	18	11	25.5	15.0	90°
Black powder-coated aluminium								
4402406	KLW 30-15	KLW 30-15, KL, KLE, ESP 30	30	13	8	19.5	13.0	15°
4452406	KLW 40-15	KLW 40-15, KL, KLE, ESP 40	40	18	11	25.5	17.4	15°
4462406	KLW 40-30	KLW 40-30, KL, KLE, ESP 40	40	18	11	25.5	14.6	30°
4422407	KLWK 30-45	KLW 30-45, KLD 30	30	13	8	19.5	8.8	45°
4472407	KLWK 40-45	KLW 40-45, KLD 40	40	18	11	25.5	11.7	45°

Accessories

Connection element -S- (Click&Safe)



- Operation complies with EU Machinery Directive 2006/42/EC
- Extremely quick and simple assembly without tools and without fastenings
- Angle compensation ± 5 degrees between post and frame
- Disassembly only possible with a special unlocking tool according to the machinery directive

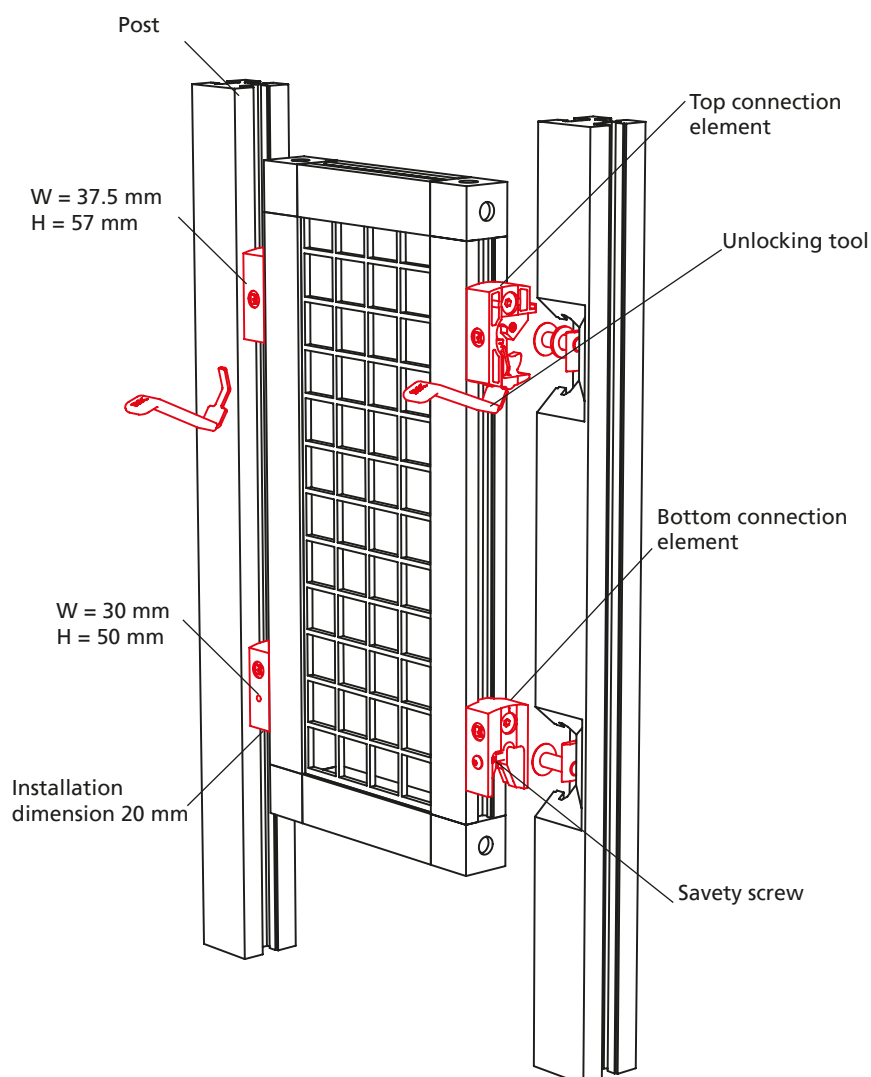
Material:
Black plastic, galvanised steel fastenings

Includes:
Connection elements to take one profile frame (2 tops, 2 bottoms, fastenings)

Connection element



Unlocking tool



According to the machinery directive
2006/42/EC (valid from 29/12/2009)

Code No.	Type	Slot geometry
4000657	Connection element 30	30
4010657	Connection element 40	40
4000658	Connection element 30-40	30 to 40
4016697	Unlocking tool, set of 2	



Assembly:

- 1) Insert frame into the lower holder.



- 2) Press frame into the holder at the top.
The safety guard element automatically engages and locks.

Done!



A safety guard element is disassembled with a special unlocking tool according to the machinery directive.

Accessories

Bracing plate



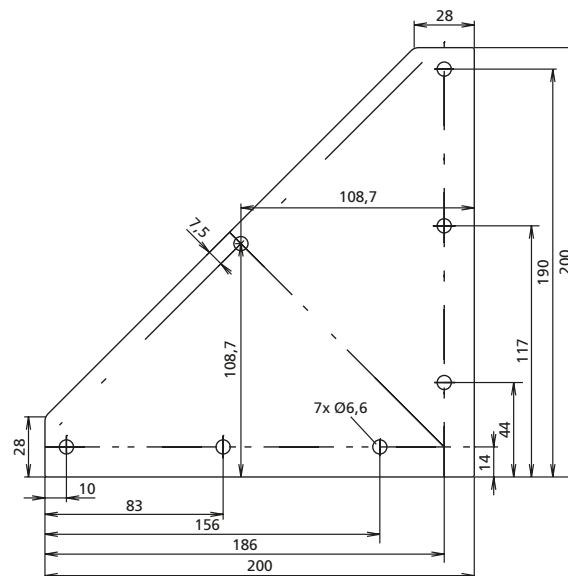
- For additional reinforcement if required

Material:

Black powder-coated steel, galvanised fastenings

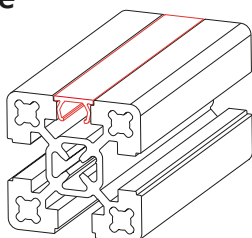
Includes:

Complete with fixing set



Code No.	Slot geometry
4012112	40

Cover profile



- For the flush covering of longitudinal slots.
- Due to the geometry of type 1, it is possible to route leads in the slot. Type 2, on the other hand, is easier to take out of the profile slot (without leaving residues).

Material:

Plastic, further special colours available on request

White
RAL 9006



Grey
RAL 7035



Yellow
RAL 1021



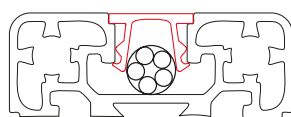
Red
RAL 3020



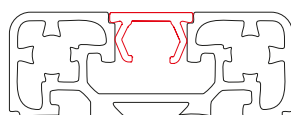
Blue
RAL 5005



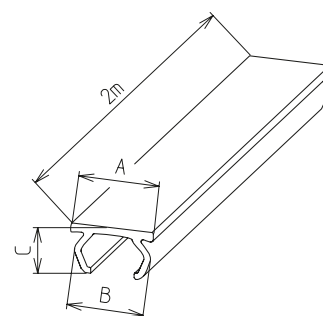
Black
RAL 9005



Type 1



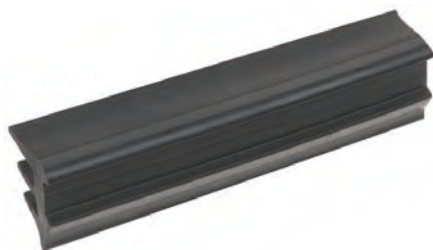
Type 2



Code No.	Type	Colour	A	B	C
4000575	2	Grey	12	11.2	6.4
4000577	2	White	12	11.2	6.4
4000579	2	Yellow	12	11.2	6.4
4000581	2	Red	12	11.2	6.4
4000583	2	Blue	12	11.2	6.4
4000570	2	Black	12	11.2	6.4
4000585	1	Yellow	12	11.2	6.4
4008570	1	Black	12	11.2	6.4
4000586	1	Transparent	12	11.2	6.4

Please note that, for typographical reasons, the colours illustrated here are only an approximation of the RAL colours.

Profile seal



- For sealing panels (see page „Panels“ on page 463). The clampable wall thickness is reduced by 2 mm.

Material:
Black plastic

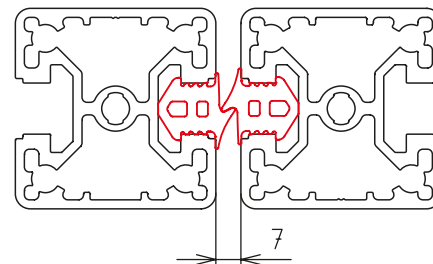
Code No.	Sealing	For panel thickness	Slot geometry	Length
421857110000	1-sided	*For all clamping profiles	30, 40	10 m
421857150000				50 m
4218571100000				100 m

Door gap seal



- Acts as a door stop
- Compensates for variation in the door gap width

Material:
Black plastic
Shore hardness:
55 Shore



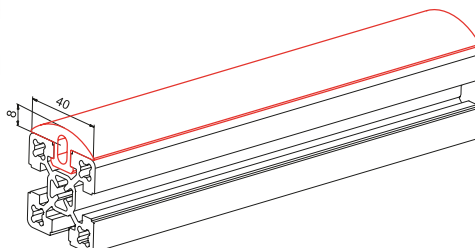
Code No.	Type	Slot geometry
401851810000	Door gap seal, 10 m roll	40
401851850000	Door gap seal, 50 m roll	40
4018518100000	Door gap seal, 100 m roll	40

Rim



- The rim is simply pressed into the profile slot and protects the structure against damage.
- Application examples include door stop protection or as edge protection when handling structures.
- The profile is available to cut to size or on a roll.

Material: Black plastic
Shore hardness: 70 Shore



Code No.	Type	Slot geometry
4018594	Rim, 30 m roll	40
401859910000	Rim, 10 m roll	40

Accessories

Hinges

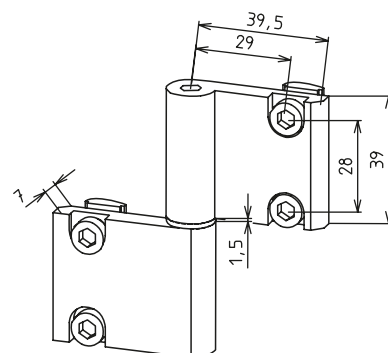
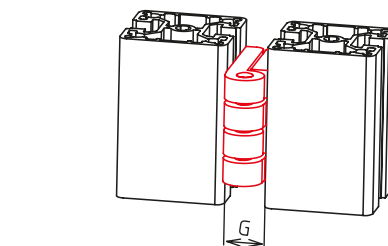
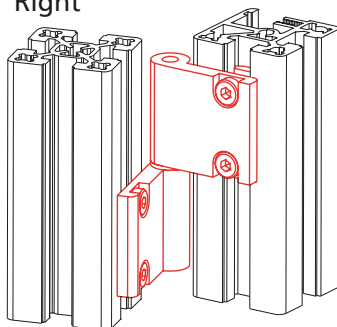
Material:
Black anodised aluminium,
galvanised steel parts

Includes:
With fixing set

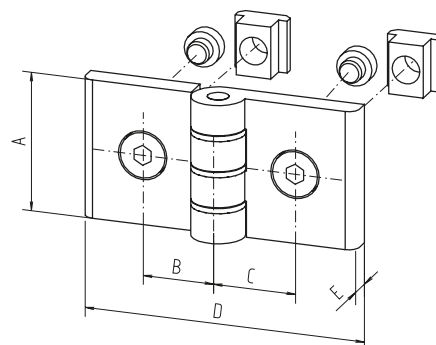
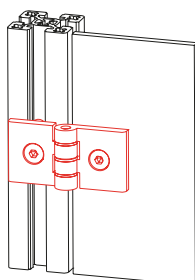
Lift off hinge (narrow)



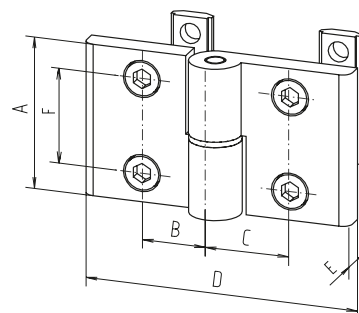
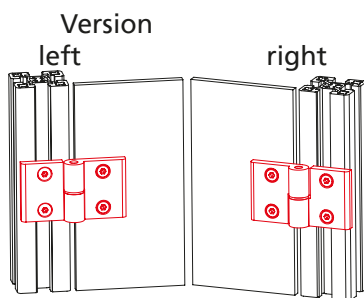
Version
Right



Butt hinge



Lift off hinge



*For further versions,
please see section III

Code No.	Type	A	B	C	D	E	F	G
4015525	Butt hinge, 40 slot geometry	40	22	22	79	7	–	15
4015520	Lift off hinge, 40 slot geometry, left	45	22	22	79	7	28	15
4015521	Lift off hinge, 40 slot geometry, left	45	22	22	79	7	28	15
4015523	Lift off hinge, narrow, 40 slot geometry, left					See diagram		7.5
4015522	Lift off hinge, narrow, 40 slot geometry, right							7.5

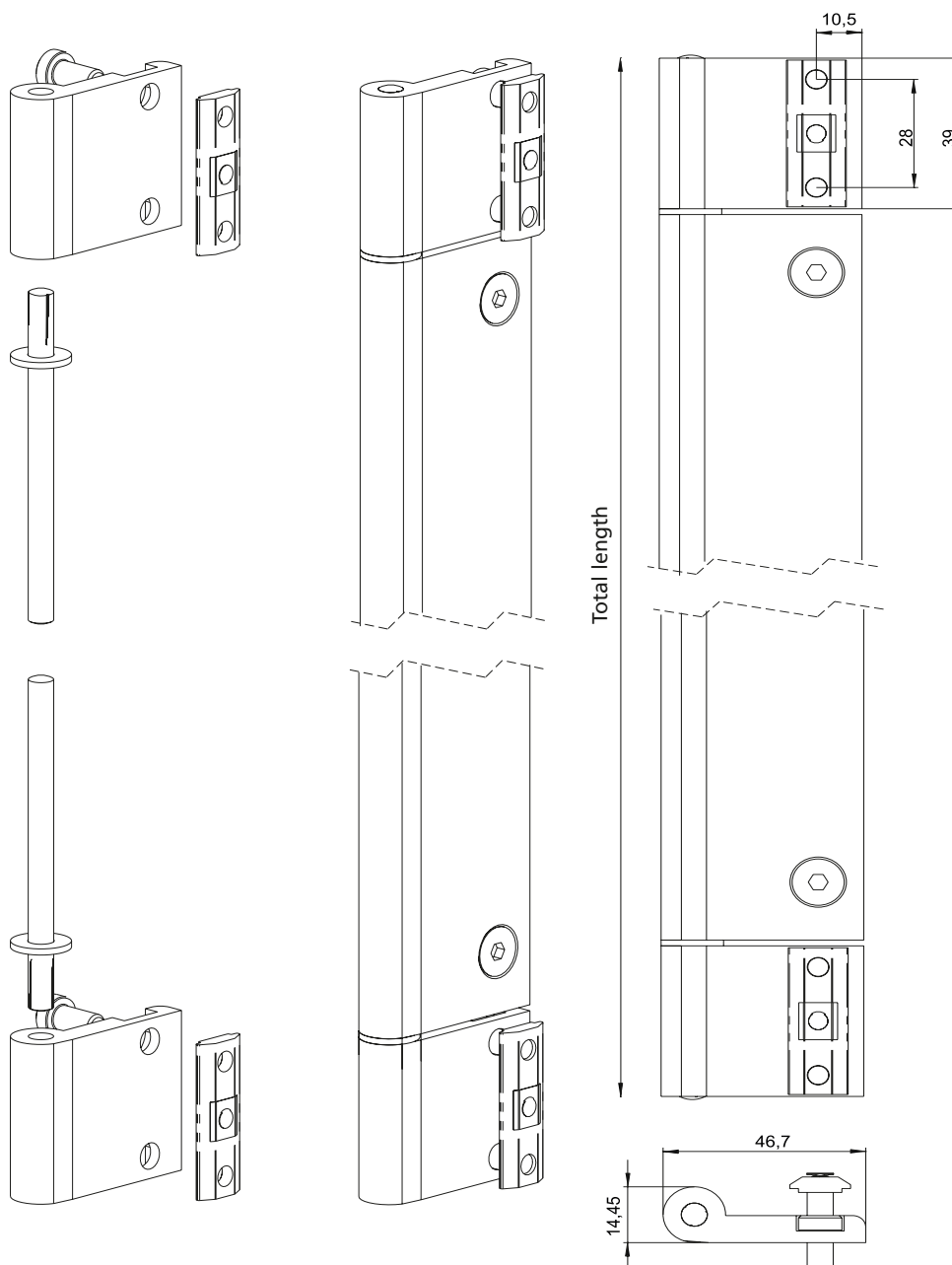


Piano hinge

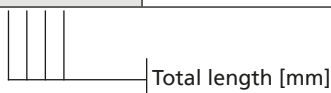
- Variable in length
- Taylor-made orderable

Material:
aluminium clear anodized
sliding disks plastic
dowel pins, galvanised steel

Includes:
complete with fixing set



Code No.	Type	length	Max. length	Slot geometry
4010627 _ _ _ _	Band hinge complete	200	2500	40

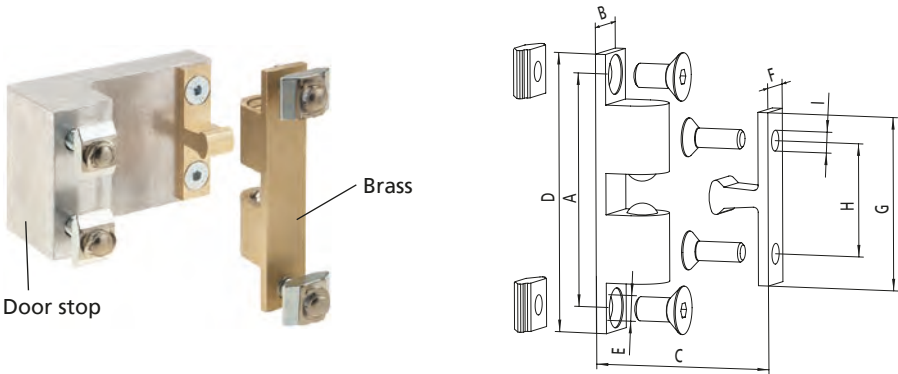


Accessories

Ball catch

Material:
Aluminium, brass

Fixing:
Galvanised steel.



Code No.	Type	A	B	C _{min}	D	E	F	G	H	I
4010606	Without door stop	48.5	12	11.6	58	5.3	8.5	36	23.5	4.3
4000608	With door stop for fixing profile 30 to 30									
4010607	With door stop for fixing profile 30 to 40									
4010608	With door stop for fixing profile 40 to 40									
4000609	With door stop for fixing profile 50 to 50									

Magnetic lock

- Suitable from profile size 40.
Complete with fixing set.

Material:
Plastic, galvanised steel parts.

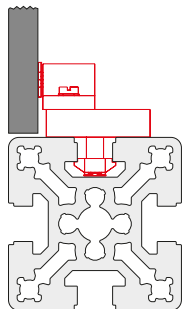
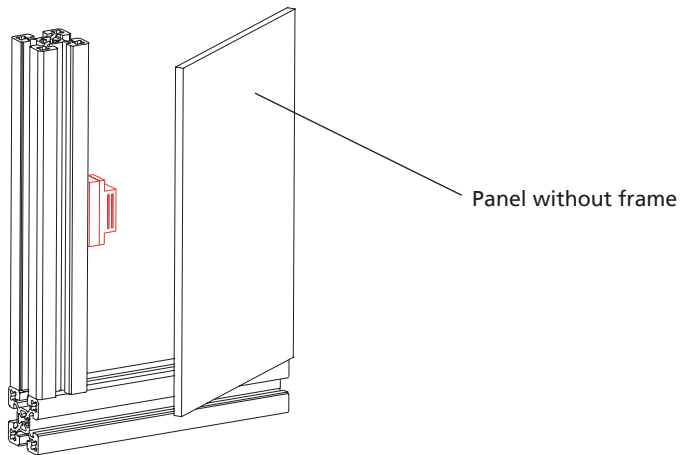


Fig. 1

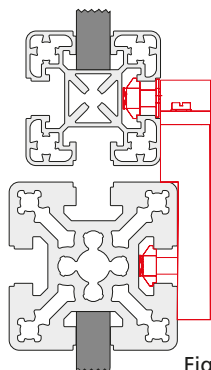


Fig. 2

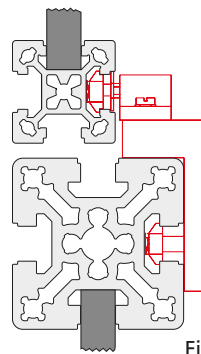
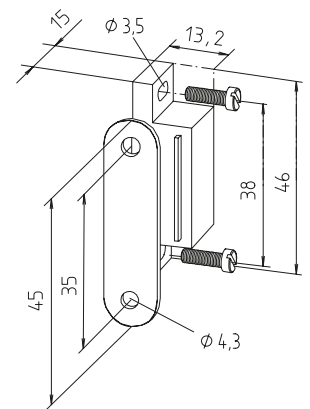


Fig. 3



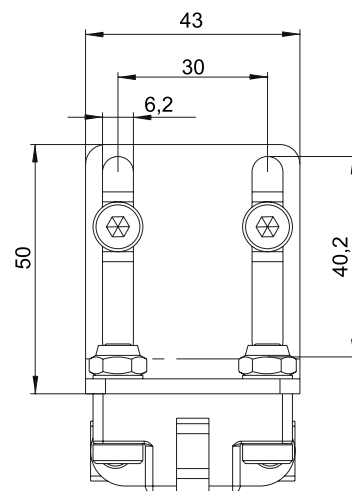
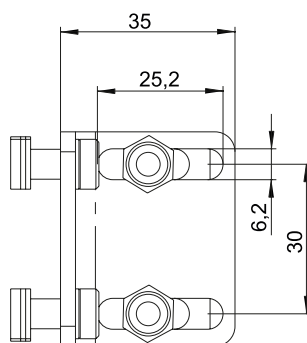
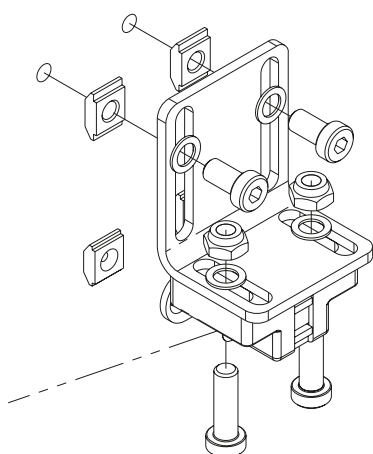
Code No.	Profile assembly	Installation	Sim. to fig.
4010605	From 30	Without frame	1
4010604	From 30	Profiles centr.	2
4000610	30 to 30	Profiles centr.	2
4010611	40 to 30	Profiles centr.	2
4010612	40 to 30	Profiles flush	3
4080603	50 to 30	Profiles flush	3
4080606	50 to 40	Profiles centr.	2
4080604	50 to 40	Profiles flush	3

Accessories

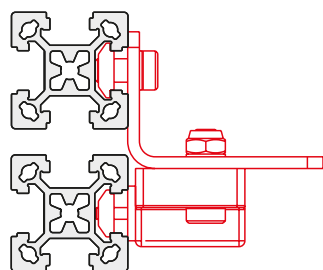
Magnetic lock universal

- Suitable from profile size 30 for all assembly versions
- Holding force 10/20 N depends on mounting direction

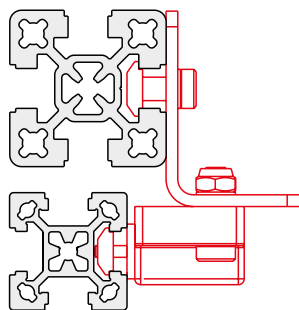
Material:
polyamide glasfibre reinforced
steel parts zincplated



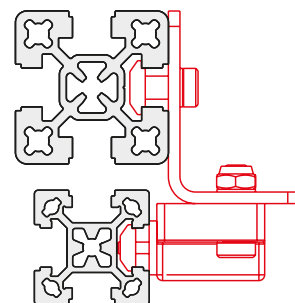
■ Assembly versions



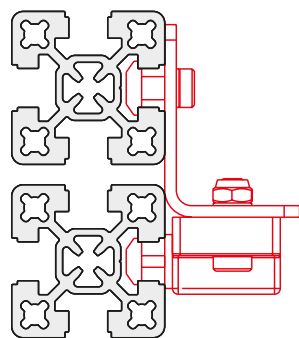
30 to 30 - Profile



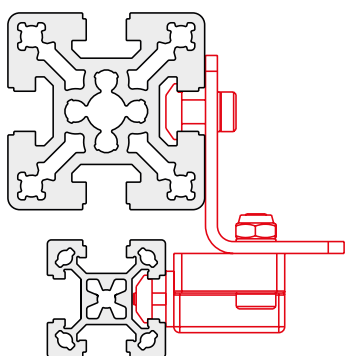
30 to 40 - Profile flush



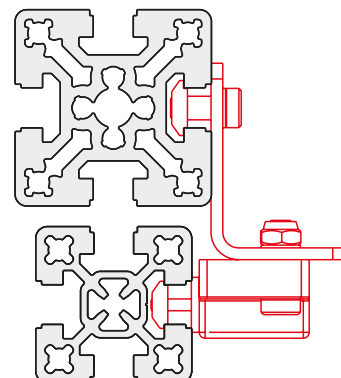
30 to 40 - Profile centred



40 to 40 - Profile



30 to 50 - Profile centred



40 to 50 - Profile centred

Code No.	Type	Slot geom.
4010625	Magnetic lock universal with fixing set	30/40
4010626	Magnetic lock universal without fixing set	—

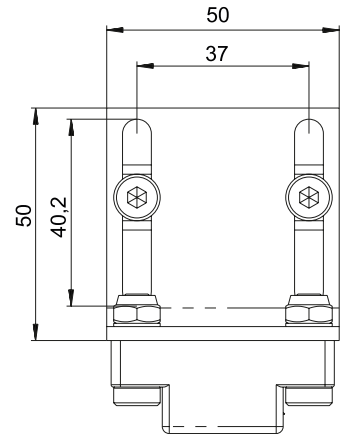
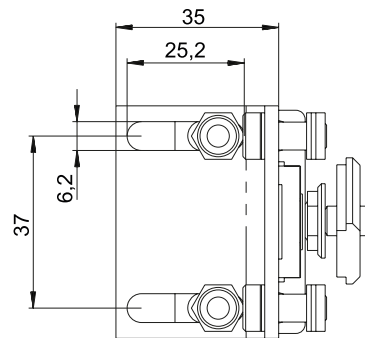
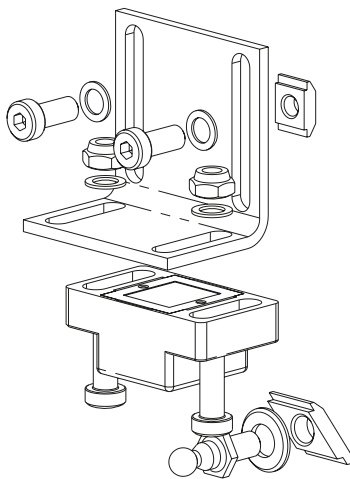


RK ROSE+KRIEGER

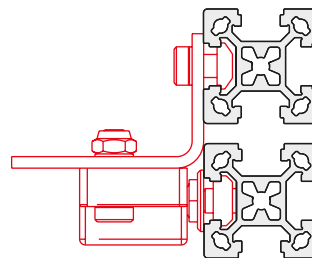
Ball catch universal

- Suitable from profile size 30 for all assembly versions
- Holding force 50 N

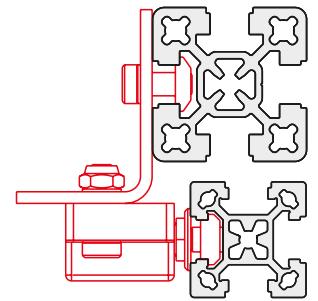
Material:
polyamide glasfibre reinforced
steel parts zincplated



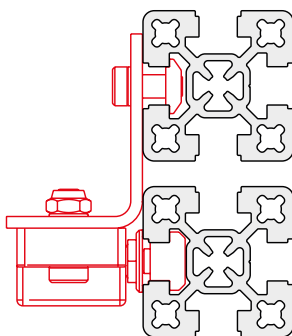
• Assembly versions



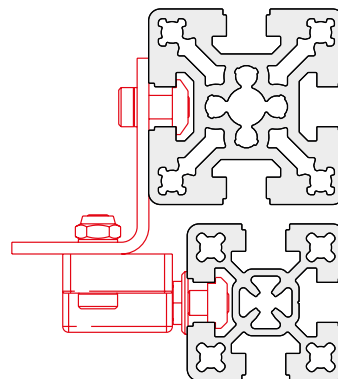
30 to 30 - Profile



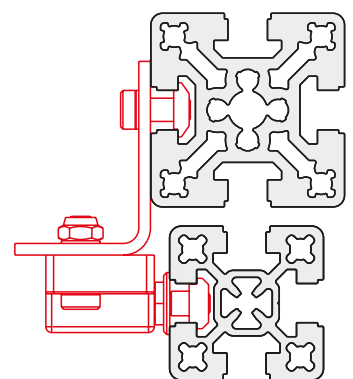
30 to 40 - Profile flush



40 to 40 - Profile



40 to 50 - Profile flush



40 to 50 - Profile centred

Code No.	Type	Slot geom.
4010630	Ball catch universal with fixing set	30/40
4010631	Ball catch universal without fixing set	—

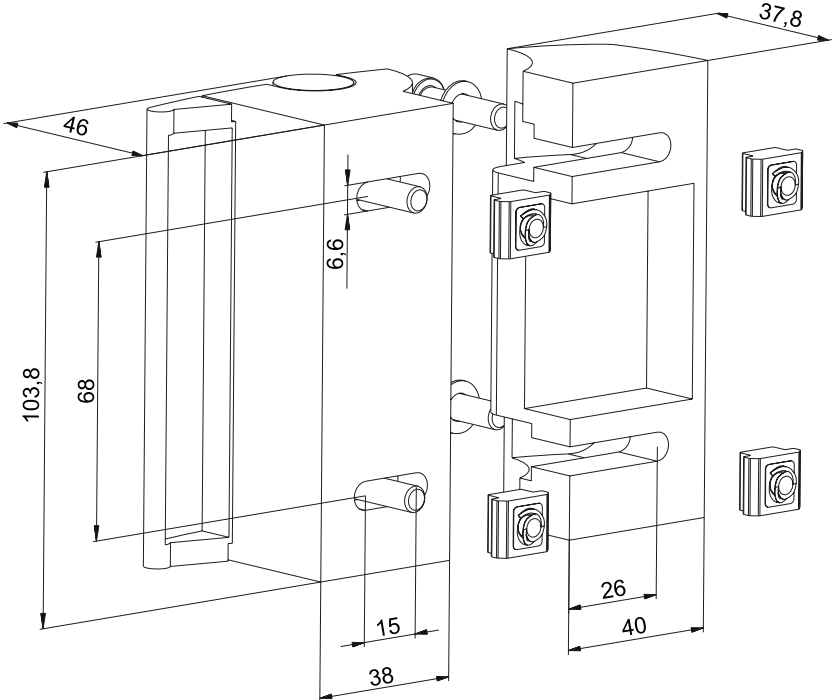
Safety guards

Accessories

Slam Latch PRO



Material: die-cast aluminium
black powder-coated
Includes:
complete with fixing set.

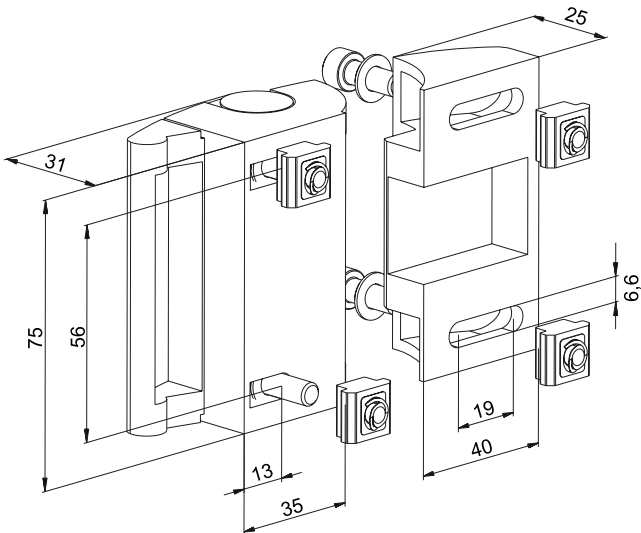


Code No.	Slot geometry
401A530	40

Slam Latch Compact



Material:
die-cast aluminium
black powder-coated
Includes:
complete with fixing set.



Code No.	Slot geometry
401A531	40

Door stopper

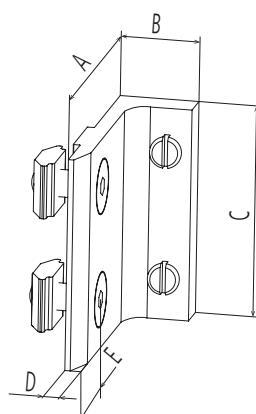
- Suitable from profile size 40.

Material:
Black plastic

Includes:
With fastenings,
galvanised steel



Set screws for fine adjustment of the door



Code No.	Slot geometry	A	B	C	D	E
4008650	30	34	14.7	40	3	11
4018650	40	44	14,7	40	3	16

[mm]

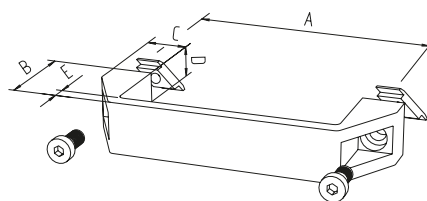
Handle

Material size 150 and 197:
Black plastic, fibreglass-reinforced

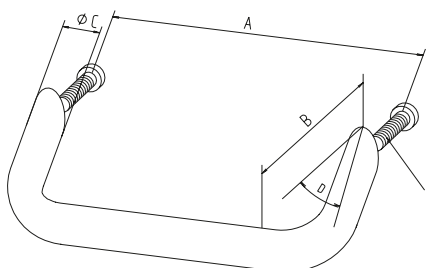
Includes:
With fastenings,
galvanised steel.

Material size 152:
Black powder-coated aluminium

Size 150 and 197



Size 152



Code No.	Size	Slot geometry	A	B	C	D	E
4005596	152	Drill	128	50	20	35°	M6x30
4015598	152	Drill	128	50	20	35°	M6x40
4008596	150	30	131	44	21	27	7
4015596	150	40	131	44	21	27	7
4015597	197	40	178	50	22	28	7

[mm]

Accessories

Door lock -KL-

- Installation between two clamping profiles without additional profile machining
- Version available with door handle or panic lock

Material:

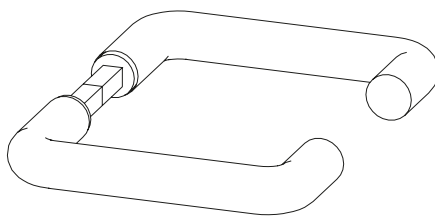
Gravity die-cast aluminium, galvanised steel

Includes:

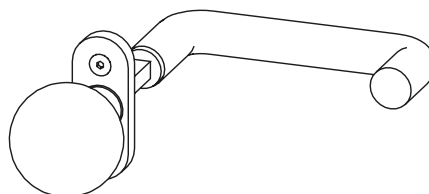
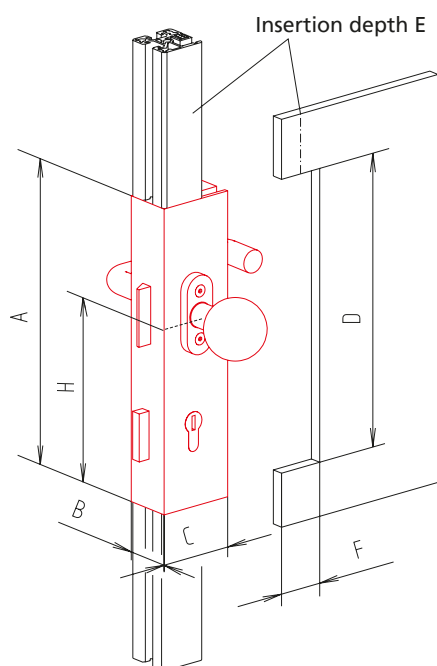
complete door lock with cylinder lock, handle set and fastenings



Sliding door version



Handle set with hinged door and sliding door



Handle set with hinged door with panic lock (one fixed knob, one door handle)

[mm]

Code No.	Version	A	B	C	D	E	F	H
4210630	For hinged door KL 40, right	255	40	65	242	15	32	161.5
4210631	For hinged door KL 40, left	255	40	65	242	15	32	161.5
4210632	For hinged door KL 40 with panic lock, right	255	40	65	242	15	32	161.5
4210633	For hinged door KL 40 with panic lock, left	255	40	65	242	15	32	161.5
4210636	For sliding door KL 40, right	255	40	65	242	15	32	132
4210637	For sliding door KL 40, left	255	40	65	242	15	32	132

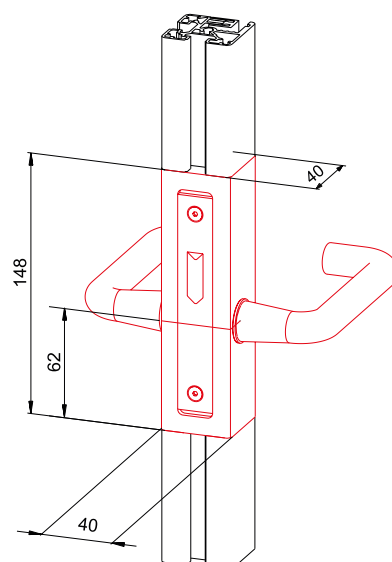


Door lock Typ 2 - KL 40

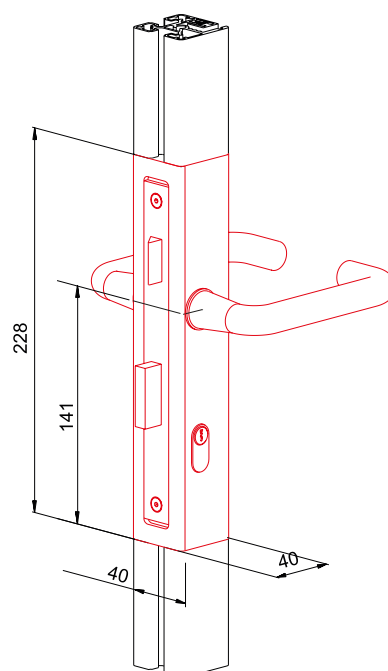
- Installation between clamping profiles no additional required machining

Material: aluminium clear anodized, galvanised steel

Includes:
complete door lock with housing,
handle set and fastenings



Code No.	Type
4215632	Door lock Typ 2 - KL 40 right without cylinder lock
4215633	Door lock Typ 2 - KL 40 left without cylinder lock



Code No.	Type
4215630	Door lock Type 2 - KL 40 right with cylinder lock
4215631	Door lock Typ 2 - KL 40 left with cylinder lock

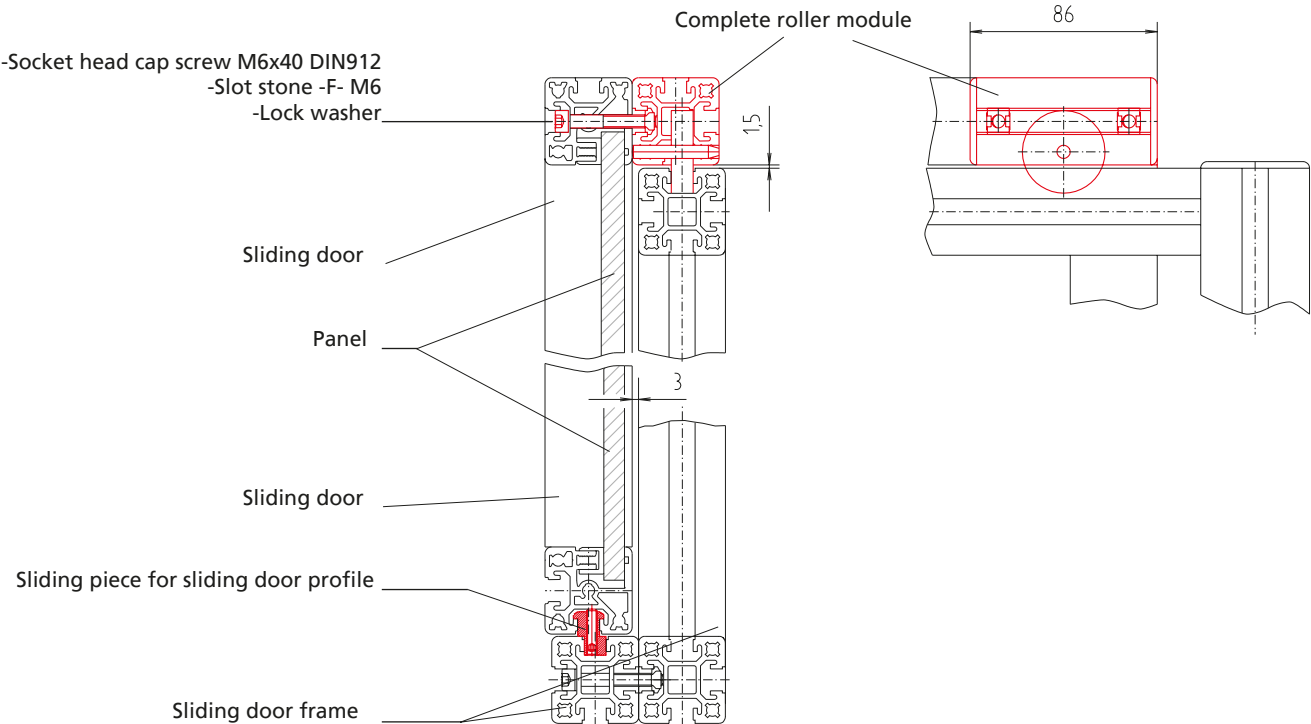
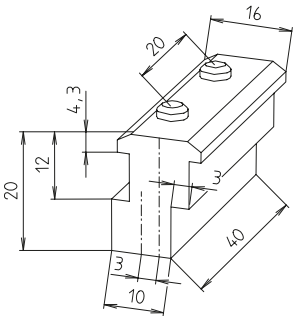
Accessories

Roller module / sliding piece

- Primarily for use in sliding doors
- Profile slot fixation
- Very good running properties thanks to large roller diameter
- Sliding pieces act as a guide at the bottom of the sliding doors

Material:
Plastic roller, plastic sliding piece

Includes:
Roller module complete with roller, cover plates and fastenings.
Sliding piece with set screws



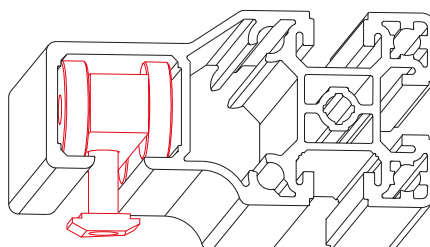
Code No.	Version
4018649	Complete roller carriage, from profile 40x40
4018648	Sliding piece for sliding door guide, from profile 40x40



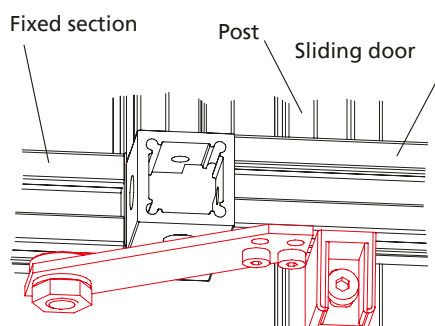
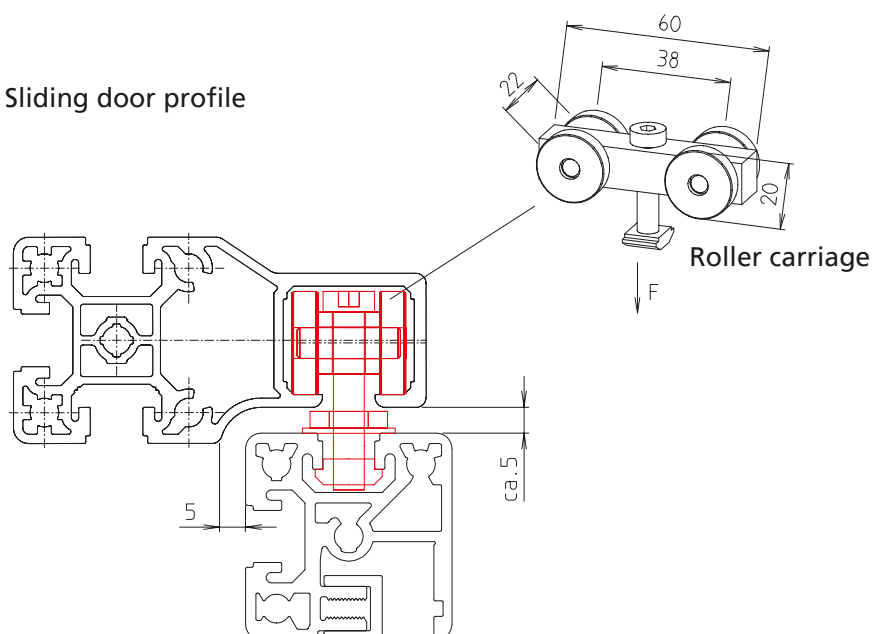
Roller carriage

- Geared to sliding door profiles 30 and 40 (page 437)
- Can also be used as single components in structures

Material:
Aluminium base body with slide bush, black plastic rollers



Sliding door profile



Bottom guide

Code No.	Type	Version	F
4170601	30	Complete roller carriage	150 N
4180601	40	Complete roller carriage	150 N
4008660	30	Bottom guide	
4018660	40	Bottom guide	

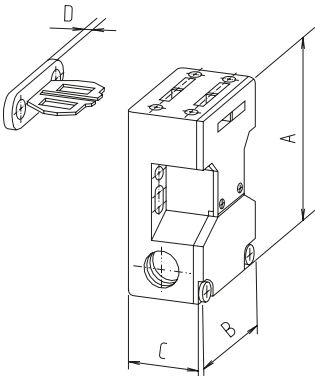
Accessories

Safety switch AZ 15zvr

- For safely switching off circuits
- Suitable for hinged, flap, sliding and lifting doors

Technical data: Self-extinguishing fibreglass-reinforced thermoplastic
Actuator key: Stainless spring steel
Degree of protection: IP67 to IEC 529/EN 60529/DIN VDE 0470-1
Contact material: Fine silver
Contact type: One-pin, double-breaking, positively driven NC to VDE 001
Pivot radius: R_{min} 450 mm
Rated isolation voltage: VI 500 V approx. 25-60 Hz.

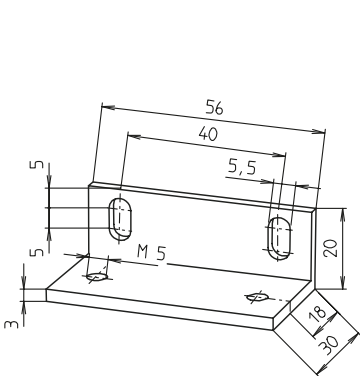
Constant current: 10 A
Rated operating current I_u AC 11h 4 A (230V), 2,5 A (380 V), 1A (500 W)
Short circuit resistance: 10 A (slow) 16 A (fast).
Contact gap 2 x 3 mm.
Positive opening travel/force: 8 mm / approx. 30 N
Mech. lifetime: 10x10⁶ switching cycles
Operating temperature: -30 to +80°C.



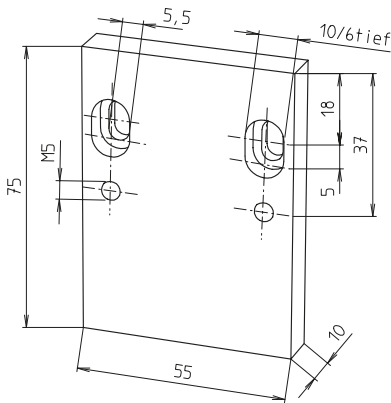
						[mm]
Code No.	Type	A	B	C	D	
4010610	AZ 15 zvr for sliding door / lifting door	72	52	30	5	
4010613	AZ 15 zvr for sliding door	72	52	30	5	
4010614	AZ 15 zvr for flap door	72	52	30	5	
4015610	Fixing set for sliding door, hinged door		Fig. 1, 2, 3		40 slot geometry	
4015602	Fixing set for lifting door		Fig. 4			

Further fixing sets available on request

Fixing set for sliding and hinged door.
See fig. 1-3 on the next page.



Fixing set for lifting door
See fig. 14 on the next page.



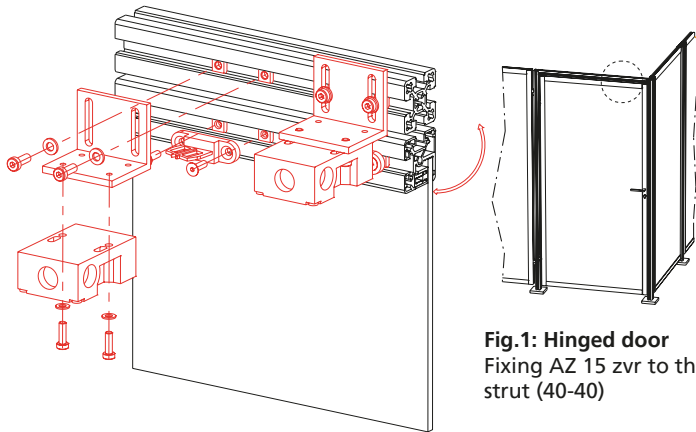


Fig. 1: Hinged door
Fixing AZ 15 zvr to the top strut (40-40)

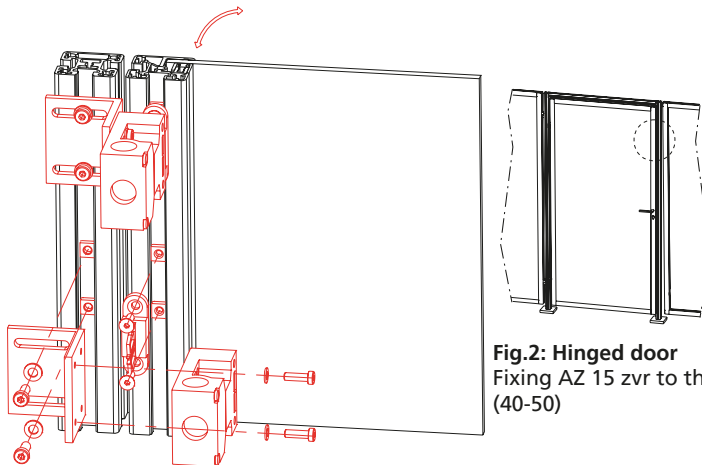


Fig. 2: Hinged door
Fixing AZ 15 zvr to the side strut (40-50)

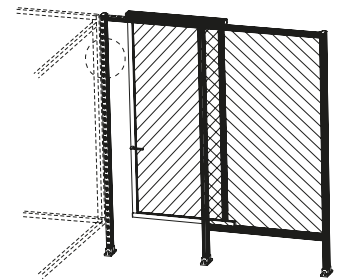


Fig. 3: Sliding door
Fixing AZ 15 zvr to the side strut (50-40)

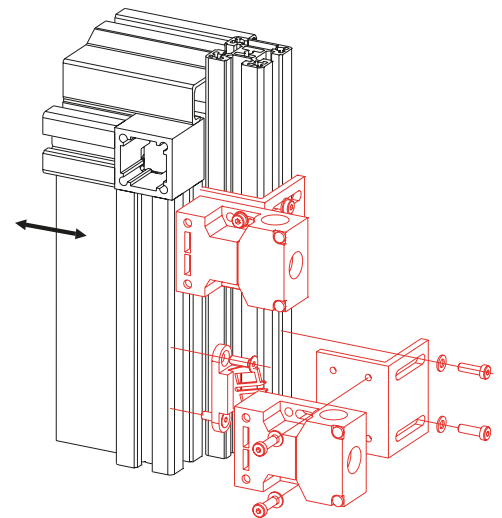
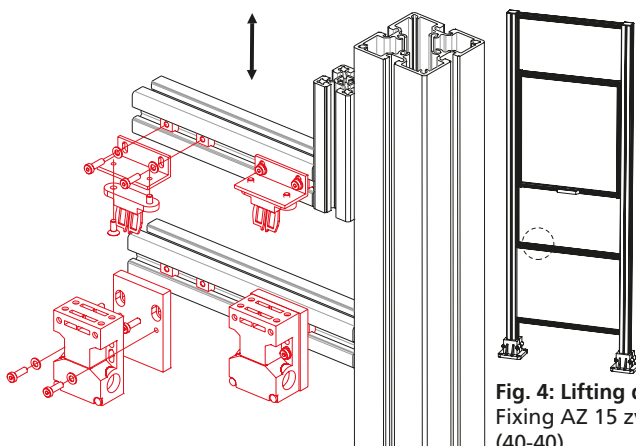


Fig. 4: Lifting door
Fixing AZ 15 zvr to the cross strut (40-40)



Accessories

Safety switch AZM 161

- For safely switching off circuits. Suitable for hinged, sliding and lifting doors.

Technical data:

Self-extinguishing fibreglass-reinforced thermoplastic.

Degree of protection: IP67 to IEC 529/EN 60529/DIN VDE 0470-1

Contact type: One-pin, double-breaking, positively driven NC to VDE 001, additional contacts for signal purposes

Pivot radius: $R_{\min}$ 900 mm

Constant current:

10 A Rated operating current
1u AC 11h 2 A (230 V)

Short circuit resistance:

6 A (slow) as positively driven NC position switch

Contact type: One-pin, double-breaking, positively driven NC to VDE 001, additional contacts for signal purposes

Pivot radius: $R_{\min}$ 900 mm

Constant current: 10 A Rated operating current
1u AC 11h 2 A (230 V)

Short circuit resistance:

6 A (slow) as positively driven NC position switch

Positive opening travel/force:

8.8 mm / 10 N

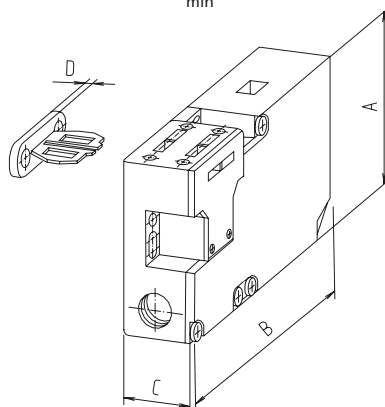
Locking force $F_{\max}$: 2000 N

Mech. lifetime:

10×10^6 switching cycles

Operating temperature:

-25 to +60°C.



Code No.	Type	A	B	C	D
4010650	Switch AZM 161, for sliding door/lifting door/hinged door	90	130	30	5

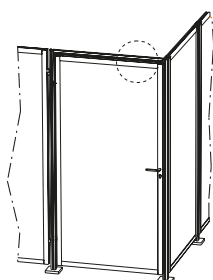
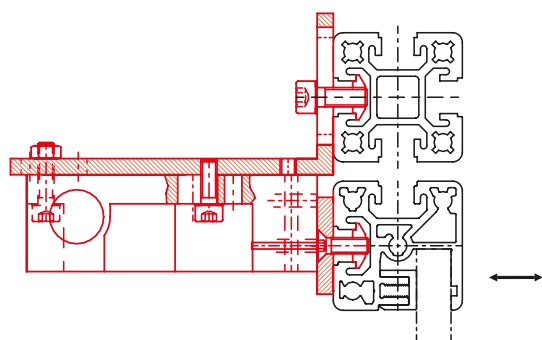


Fig.1: Hinged door
Fixing AZM 161 to the top
strut (40-40)

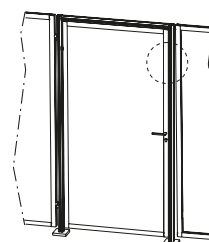
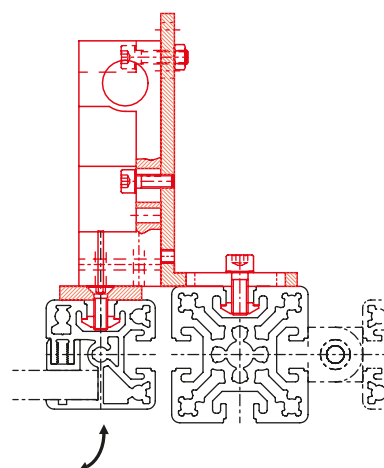
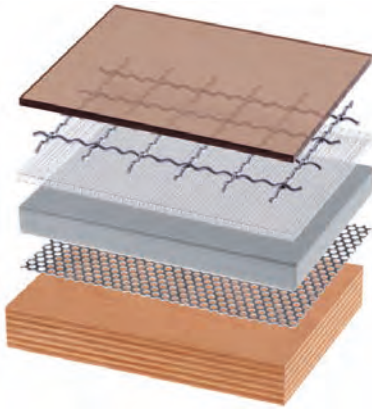


Fig.2: Hinged door
Fixing AZM 161 to the side
strut (40-50)

Panels

- For doors, cladding, safety and table tops
- Cut to specification
- Further panels available on request



Code No.	Type	Thickness	Version	Max. size [mm]	Weight [kg/m ²]
4018584	Makrolon	2 mm	Clear	3.050 x 2.050	2.40
4018586	Makrolon	4 mm	Clear	3.050 x 2.050	4.80
4018576	Makrolon	6 mm	Clear	3.050 x 2.050	8.00
4018579	Makrolon	6 mm	Brown tinted	3.050 x 2.050	8.00
4018578	Makrolon	10 mm	Clear	3.050 x 2.050	13.00
4018582	Acrylic glass	4 mm	Clear	3.050 x 2.050	4.80
4018595	Acrylic glass	5 mm	Clear	3.050 x 2.050	6.00
4018563	Acrylic glass	5 mm	Blue, transparent	3.050 x 2.030	6.00
4018575	Acrylic glass	6 mm	Clear	3.050 x 2.050	7.20
4018577	Acrylic glass	10 mm	Clear	3.050 x 2.050	13.00
4012576	Trespa	6 mm	Brown	2.050 x 2.130	8.40
4012586	Trespa	6 mm	Silver-grey	3.050 x 1.530	8.40
4012587	Trespa	10 mm	Silver-grey	3.050 x 1.530	13.00
4018570	Koematex	6 mm	White	3.050 x 2.030	4.20
4018571	Koematex	8 mm	White	3.050 x 2.030	5.60
4018572	Koematex	10 mm	White	3.050 x 2.030	6.00
4012579	Multiplex	30 mm	Untreated	2.500 x 1.500	27.00
4015573	Aluminium	2 mm	Clear anodised	2.000 x 1.000	5.40
4012582	Table top	19 mm	Grey plastic-coated, glued edges	2.000 x 2.075	14.70
4012577	Composite	6 mm	Clear anodised	3.050 x 1.500	7.30
4012511	MDF panel	6 mm	Untreated	2.000 x 2.075	5.00
4012512	MDF panel	8 mm	Untreated	2.000 x 2.075	6.60
4016576	Perforated plate	1 mm	Round holes in staggered rows, galvanised steel	1.000 x 2.000	4.30
4016577	Wire mesh 20x20	2.5 mm	Galvanised steel	2.000 x 1.000	2.40
4016578	Wire mesh 30x30	3 mm	Galvanised steel	2.000 x 3.000	3.70
4016579	Wire mesh 40x40	3.8 mm	Galvanised steel	2.000 x 3.000	4.70



RK ROSE+KRIEGER
26 Faraday Road
Aylesbury
Buckinghamshire
HP19 8RY

Tel: 01296 611 674

Email: rk@pmgb.co.uk

Web: pmgb.co.uk/safety-guards