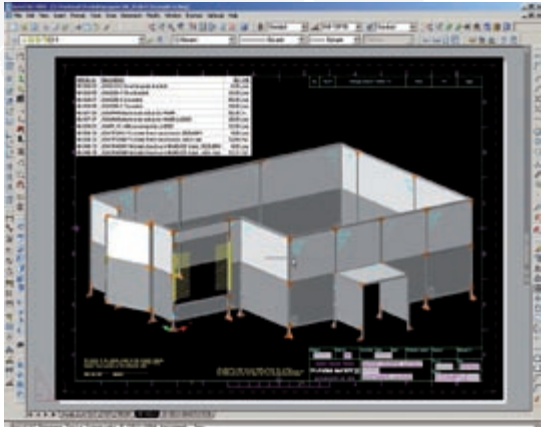


# Fencing system

## Quick-Guard® and Safety Roller Door



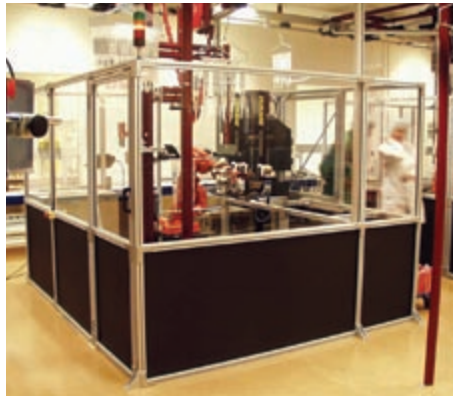
<b>Contents</b>	<b>Page</b>
<b>Quick-Guard® fencing system</b>	<b>13:2</b>
<b>Quick-Guard® is supplied in three possibilities</b>	<b>13:5</b>
<b>Quick-Guard® E</b>	<b>13:6</b>
<b>Quick-Guard® E - can be ordered in sections</b>	<b>13:7</b>
<b>Quick-Guard® standard and SafeCAD®</b>	<b>13:10</b>
<b>Assembly using NL2 and NL3 Net-locks on welded mesh</b>	<b>13:12</b>
<b>Dimensions for aluminium profile lengths and panels</b>	<b>13:13</b>
 <b>Components</b>	
▪ Aluminium profiles	<b>13:14</b>
▪ Fittings	<b>13:18</b>
▪ Door Components	<b>13:21</b>
▪ Fittings for Switches	<b>13:31</b>
▪ Terminal Caps and Strips	<b>13:34</b>
▪ Accessories	<b>13:35</b>
▪ Surfaces	<b>13:36</b>
 <b>Safety Roller Door</b>	 <b>13:38</b>

Descriptions and examples in this book show how the products work and can be used. This does not mean that they can meet the requirements for all types of machines and processes. The purchaser/user is responsible for ensuring that the product is installed and used in accordance with the applicable regulations and standards. We reserve the right to make changes in products and product sheets without previous notice. For the latest updates, refer to [www.jokabsafety.com](http://www.jokabsafety.com). 2011.

# Quick-Guard<sup>®</sup> - fencing system



Quick-Guard Standard assembled with mesh.



Quick-Guard Standard with black and transparent Polycarbonate in-fill panels as used for medical applications.



Quick-Guard E with few components and easy to angle at up to 45°.

## Adaption and Modification

Quick-Guard is a very flexible fencing system consisting of a minimum of different components, e.g. aluminium profiles, patented brackets, net-locks, mesh, solid or noise reduction panels. Using these components there are almost no limitations as to what can be built. Quick-Guard fencing costs little to assemble and modify.

## Assembly

Due to our patented screw-lock system, we can supply all brackets pre-mounted with fixing screws and nuts. No holes need to be drilled in the profiles and all cutting is straight. This makes assembly and modification very easy.

## Two versions of Quick-Guard

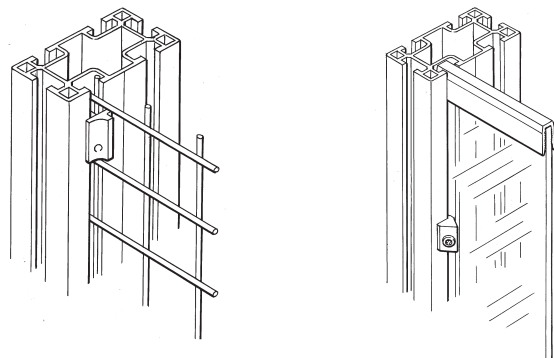
The Quick-Guard fencing system is available in two versions, Quick-Guard (Standard) and Quick-Guard E which also can be combined. The fencing systems are also easy to adjust when production equipment is modified and/or moved.

## Proposal and ordering

By utilising our AutoCAD-based SafeCAD program we are able to make system designs in 3-D very quickly. Drawings, cutting lists, etc. are generated from SafeCAD and the drawings can also be used for installation purposes.

## Our policy - To create systems that are environmentally friendly and provide ergonomic working conditions

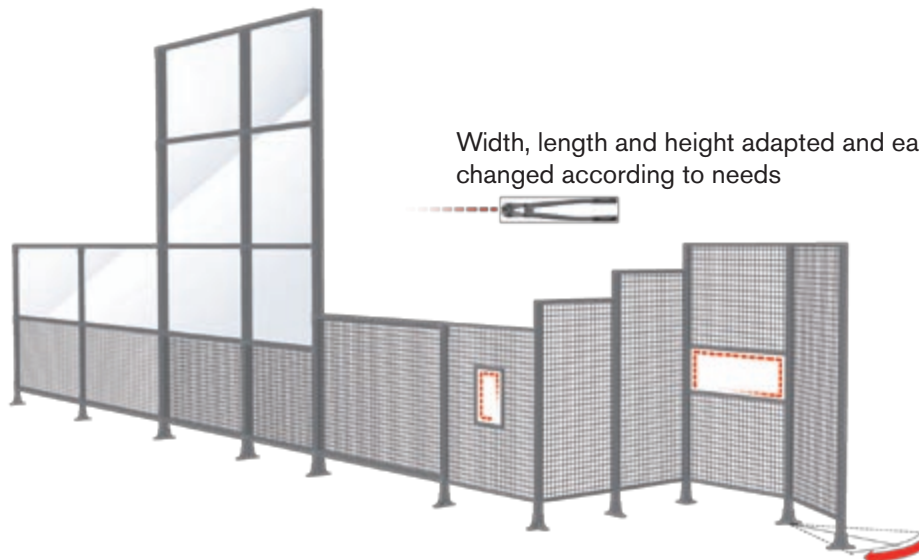
Quick-Guard is environmentally friendly. All components in the Fencing System can easily be disassembled and reused. All materials in the Fencing System are 100% recyclable. Quick-Guard can also provide a pleasing ergonomic working environment.



# A flexible and stable fencing system which is easy to install



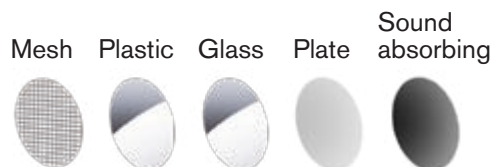
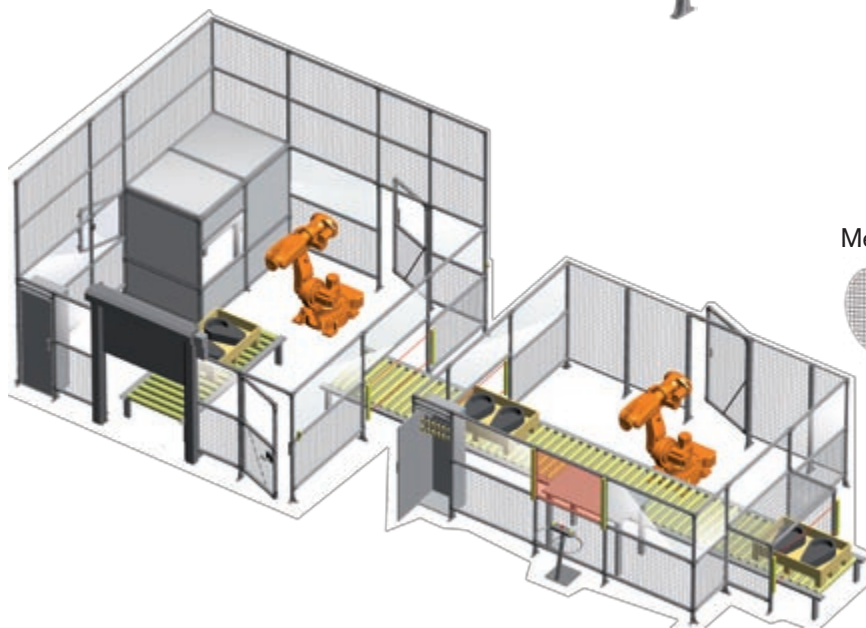
Fixings with pre-mounted screws and nuts mean easy assembly



Width, length and height adapted and easily changed according to needs



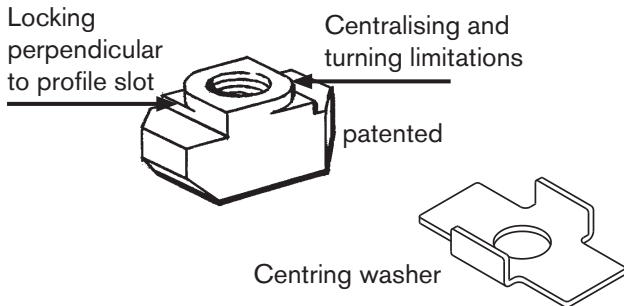
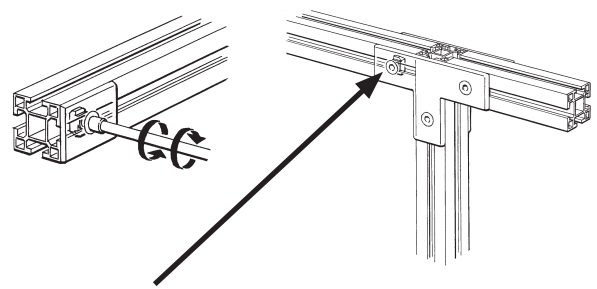
Välj mellan ett stort antal automatiska och manuella luckor och dörrar





# Patented assembly function

The ABB Jokab Safety patented guide and locking method makes it simple to assemble and dismantle the fencing system. The nut has several advantages, it can easily be located into the profile and automatically positions itself when the screw is turned 90 degrees clockwise. When in this position the bracket being fixed can be adjusted as required and locked by turning the screw further clockwise. To remove the bracket the fixing screw is turned anti-clockwise until the nut is in line with the profile slot.



Mount the fixtures by first slackening the screw 3/4 turn anti-clockwise. Then tighten the screw clockwise in the usual way. The nut will then automatically mechanically lock the fixture into the profile.

All fittings are supplied Pre-assembled. Fittings that do not have a cast-in tab can be provided with a centring washer.



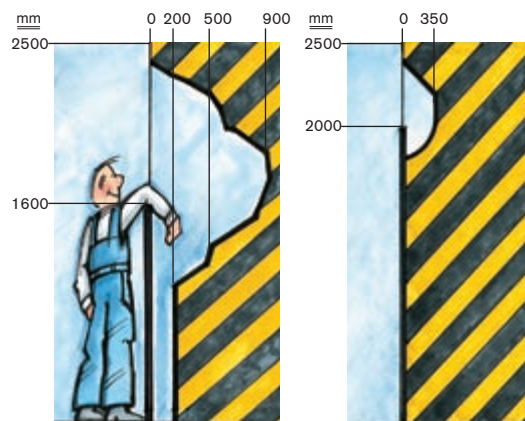
The T-slot and patented nut makes it easy to attach fittings to the fencing profiles

## What does the standard say?

EN ISO 13857 applies as safety distance for the risk zones. The standard includes the dimensions that apply for safety distances in various risk situations. The adjacent figure shows examples of dimensions for safety distances for two different fence heights where the risk of injury is relatively small when you reach in.

With respect to mesh, you specify a minimum distance of 200 mm (for people 14 and above) for mask size 40 x 40 mm. For shorter distances and for noise reduction we use fully fitting panels. When the fence is to protect a robot cell, for example, the fence protection should be placed at a minimum distance of 500 mm between the fence protection and the moving machine part that reaches furthest out (as per EN 349). When test running or programming there must be a space between the fencing and any moving parts to ensure the operator does not become wedged between them.

For protection that needs to be mounted and removed again, for example for maintenance, the Machinery Directive requires that fasteners remain in place on the protection. We normally deal with this using interlocked doors/gates for faster and safer access.



Safety distance for 1600 mm guarding with standard mesh. Safety distance for 2000 mm guarding with solid screens (e.g. polycarbonate sheet).

Safety distance for 1600 mm guarding with standard mesh. Safety distance for 2000 mm guarding with solid screens (e.g. polycarbonate sheet).

# Quick-Guard® is supplied in three ways

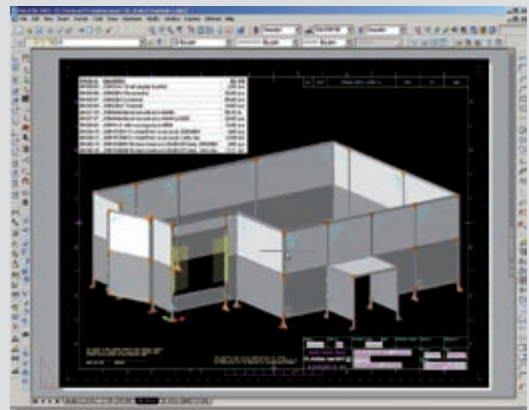
## 1. To be designed on site

You only order sections consisting of a few components. Then the fencing system is built on site. A manual mesh clipping tool, for easy cutting of the mesh, is provided with the delivery if needed. The profiles are easily cut with a crosscut saw. The advantage of using aluminium is that it is not flammable when cut. Compared to iron which require a fire-watcher in many industries.



## 2. Cut to size according to drawing

You give us a simple sketch or a AutoCAD® file of how you want the fencing system to look. We input this information into SafeCAD and design the fence in 3D. From this drawing, cutting and component lists and a quotation are generated automatically.



## 3. Pre-mounted or assembled on site

We can deliver full/partially pre-assembled fencing systems or we can assemble them on site.

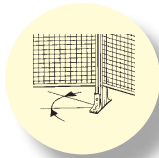
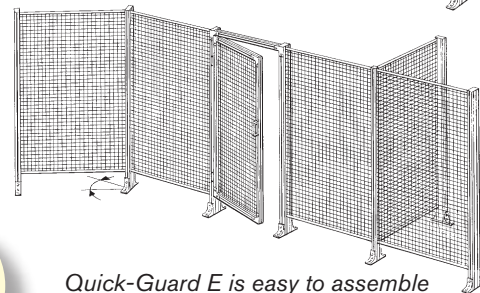
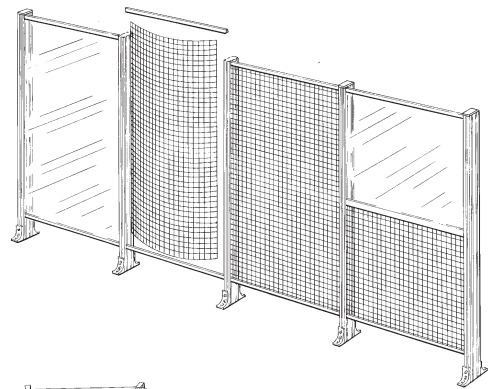


# Quick-Guard® E - design directly on site

Quick-Guard E is installed quickly and cost effectively because it only consists of patented net-locks, welded mesh, panels of polycarbonate, u-profiles and fence posts (profiles with floor-brackets). All parts for Quick-Guard and pre-assembled doors are delivered immediately from stock. The few components of the fencing system make it easy for you to custom build and install the fencing system yourselves.

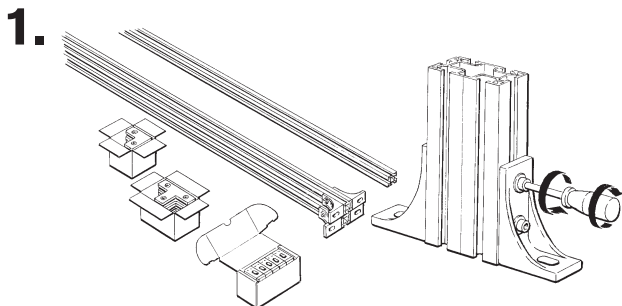
The strength of the fencing system originates from the fact that the welded mesh and/or panels of polycarbonate are 'locked' into the profile. The outer wire of the mesh is locked by uniquely designed 'netlocks' into the profile making the fixing virtually as strong as being welded. The polycarbonate panels are locked in with specially designed infill-locks which, according to our tests, have been as strong as the mesh netlock system. If you want more stable fencing posts, you can choose a sturdier profile measuring 44 x 88 mm instead of the standard 44 x 44 mm profile.

It is always easy to combine Quick-Guard E with Quick-Guard standard to achieve a complete system. It is also easy to adjust and modify the guarding system when production equipment is modified and/or moved.

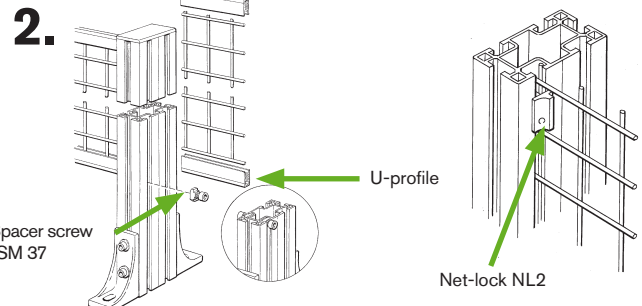


Quick-Guard E is easy to assemble and to angle 45°.

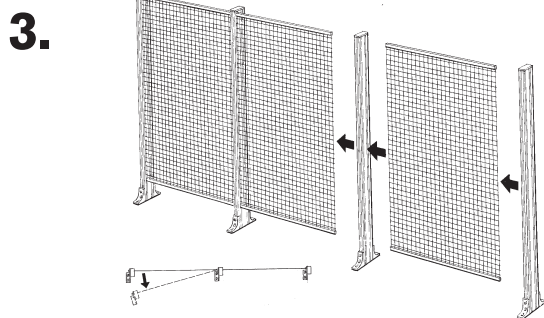
## Assembly of Quick-Guard E



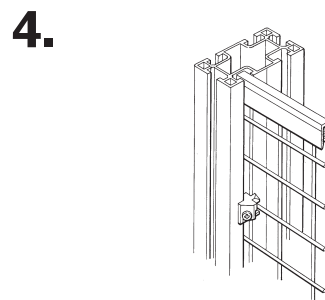
1. Premount floor fixtures on vertical posts. Mount fixtures by first slackening the screw anti-clockwise. Then tighten the screw clockwise in the usual way, the nut will then automatically locate into the correct position and mechanically lock the fixture into the profile. Make sure that the nut has turned correctly.



1. Insert spacer screw into the post profiles.
2. Place the lower u-profile on the mesh.
3. Push the mesh into the profile and fix the mesh with NL2 netlocks.
4. Fix top u-profile in place either before or after inserting the mesh.



3. Assemble the next section. The distance between the posts can be adjusted some mm after the mesh is locked in with the Net-locks. The mesh can be angled up to 45° without using hinges (JSM 35-K).

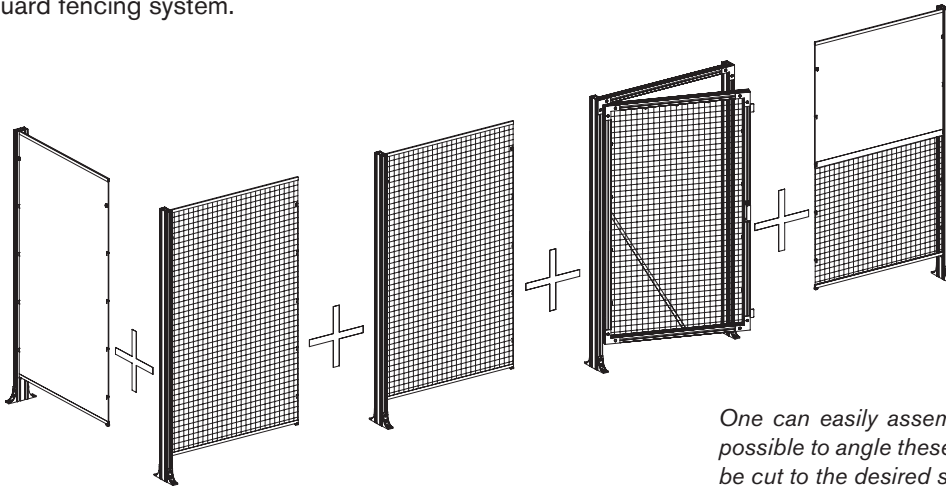


4. Lock the top of the mesh using NL3 netlocks; this way the mesh is secured, stabilised and electrically grounded. Grounding is needed when electrical devices or cables are assembled on the mesh.

# Quick-Guard® E

## - can be ordered in sections

Quick-Guard Express can be ordered in different sections consisting of a few components. By adding the different sections, one can easily build a guard fencing system.



One can easily assemble the Express sections. It is also possible to angle these sections (45°). The mesh can easily be cut to the desired size with a simple clipping tool.

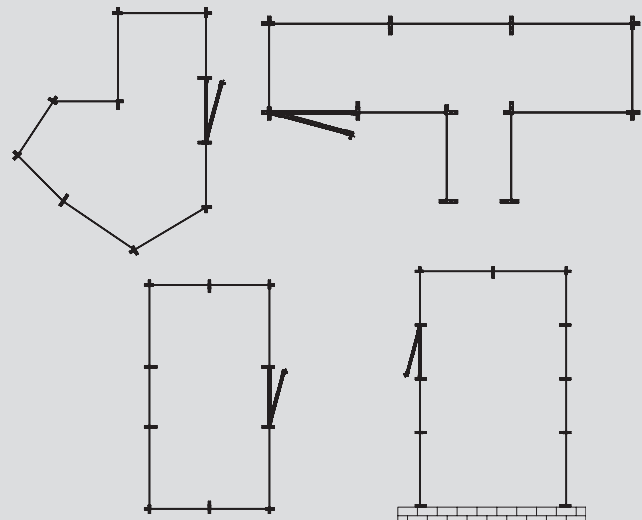
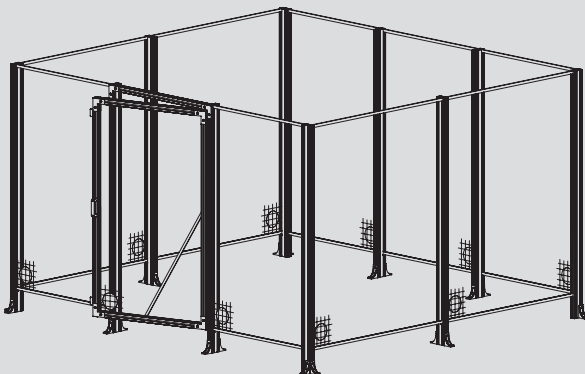


Measure the number of metres of fencing that are required and determine the number of doors. Our two standard sections have a cc width of 1100 mm and 1500 mm. The cc for the door is 1100 mm and fits anywhere the cc is 1100 mm between the posts.

If dimensions other than the standard dimensions are needed, just cut the mesh to the correct size with a bolt cutter.

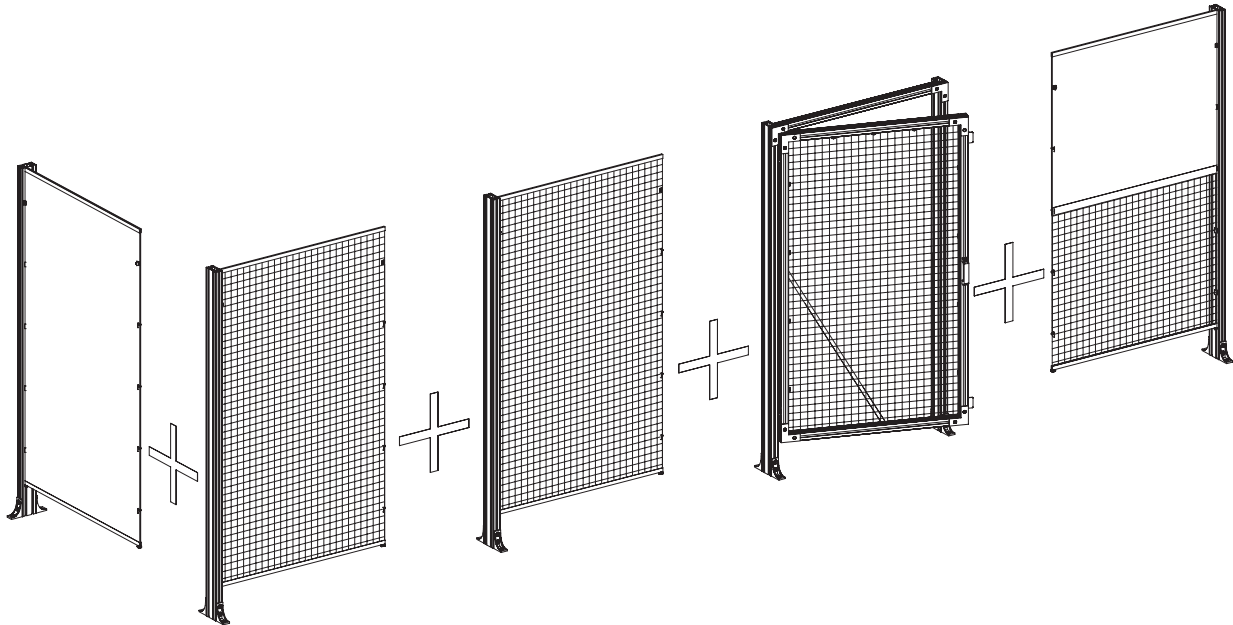
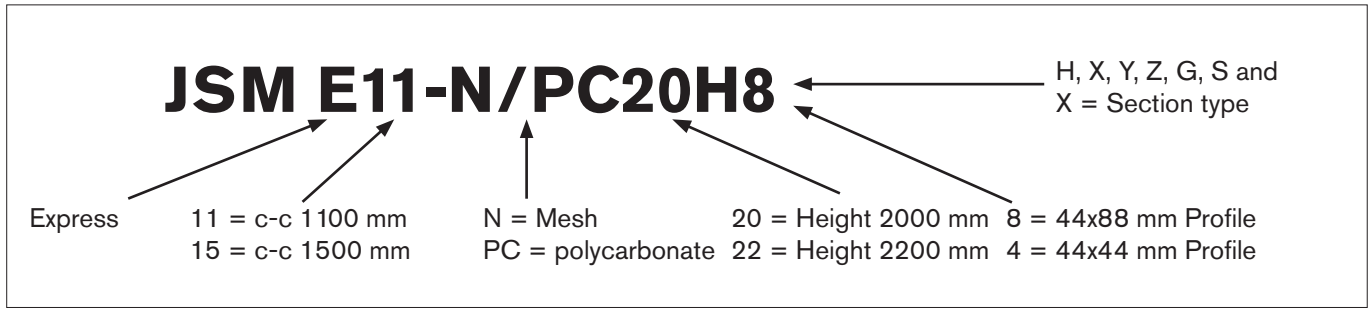
### The same fencing sections can be erected in several ways.

- 4 pcs 1500 sections
- 5 pcs 1100 sections
- 1 pc door





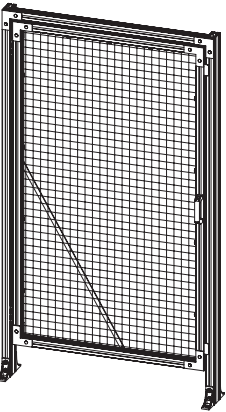
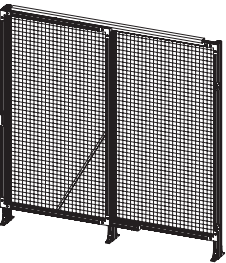


Designation explanation.



One can easily assemble the Express sections. It is also possible to angle these sections (45°). The mesh can easily be cut to the desired size with a simple clipping tool.

IMAGE	DESIGNATION	ART.NO.	DESCRIPTION
<b>Section X</b>			
	JSM E11-N14X4	2TLJ040106R0200	Components for an additional section with only one post. The height can be varied between 2000 mm or 2200 mm. The section is supplied unassembled.
	JSM E11-N20X8	2TLJ040101R0300	
	JSM E11-N22X8	2TLJ040102R0300	
	JSM E11-N/PC20X8	2TLJ040104R0100	
	JSM E11-N/PC22X8	2TLJ040105R0100	Included parts: Floorbracket, netlocks/panel locks, support screws, edge protection, Aluminum profile and welded steel mesh/panel sheet.
	JSM E11-PC20X8	2TLJ040101R5300	
	JSM E11-PC22X8	2TLJ040102R5300	
	JSM E15-N14X4	2TLJ040106R1000	
	JSM E15-N20X8	2TLJ040101R0900	
	JSM E15-N22X8	2TLJ040102R0800	

IMAGE	DESIGNATION	ART.NO.	DESCRIPTION
<b>Section Y</b>			
	JSM E11-14Y4 JSM E11-20Y8 JSM E11-22Y8	2TLJ040106R8000 2TLJ040103R2100 2TLJ040103R4100	Components for a complete post with floor bracket to finalize the additional sections. The height can be varied between 2000 mm or 2200 mm. The section is supplied un-assembled.  Included parts: Floorbracket, support screw, and Aluminum profile.
<b>Section Z</b>			
	JSM E11-N14Z JSM E11-N20Z JSM E11-N22Z JSM E11-N/PC20Z JSM E11-N/PC22Z JSM E11-PC14Z JSM E11-PC20Z JSM E11-PC22Z JSM E15-N14Z JSM E15-N20Z JSM E15-N22Z	2TLJ040106R0400 2TLJ040101R0400 2TLJ040102R0400 2TLJ040104R0200 2TLJ040105R0200 2TLJ040106R5400 2TLJ040101R5400 2TLJ040102R5400 2TLJ040106R0800 2TLJ040101R1000 2TLJ040102R0900	Components for a complete section without fence posts and floor brackets. The height can be varied between 2000 mm or 2200 mm. The section is supplied unassembled.  Included parts: Netlocks/panel locks, edge protection and welded steel mesh/panel sheet.
<b>Section G</b>			
	JSM E11-N20G* JSM E11-N22G* JSM E11-N/PC20G JSM E11-N/PC22G JSM E11-PC14G JSM E11-PC20G JSM E11-PC22G  * The door leaf is supplied pre-mounted.	2TLJ040101R0500 2TLJ040102R0500 2TLJ040104R0300 2TLJ040105R0300 2TLJ040106R5500 2TLJ040101R5500 2TLJ040102R5500	Components for complete conventional door with outer profile 44x88 mm. The height can be varied between 2000 mm or 2200 mm. The section is supplied unassembled. The size of the door can easily be adjusted on site.  Included parts: L-brackets, floorbrackets, netlocks/panel locks, handle, hinges, door stop, crossbar, aluminum profiles and welded steel mesh/panel sheet.
<b>Section S</b>			
	JSM E11-N20S JSM E11-N22S JSM E11-N/PC20S JSM E11-N/PC22S JSM E11-PC20S JSM E11-PC22S  JSM E15-N20S JSM E15-N22S	2TLJ040101R0600 2TLJ040102R0600 2TLJ040104R0400 2TLJ040105R0400 2TLJ040101R5700 2TLJ040102R5600  2TLJ040101R1 100 2TLJ040102R1000	Components for a complete sliding door with outer profile 44x88 mm. The height can be varied between 2000 mm or 2200 mm. The section is supplied unassembled. The size of the door can easily be adjusted on location.  Included parts: L-brackets, T-brackets, floorbrackets, netlocks/panel locks, handle, suspension wheels, guiding components, door stop, crossbar, endcaps, aluminum profiles and welded steelmesh/panel sheet.

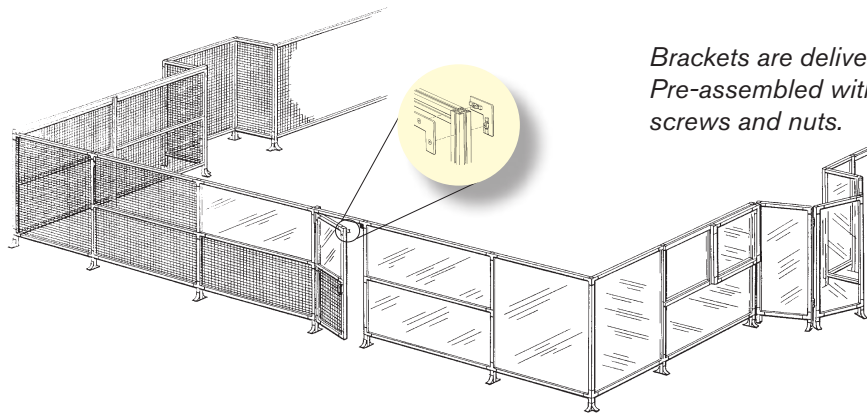
# Quick-Guard® standard and SafeCAD®

Quick-Guard consists of a minimum of different components, such as aluminum profiles, patented assembly parts, net-locks, mesh, solid or noise reduction panels. Furthermore the cost for assembly and modification of the system is low. Thanks to our patented screw-lock system, we can supply all brackets pre-mounted with fixing screws and nuts. No holes need to be drilled in the profiles and all cuts are made straight. Assembly and modification is therefore very easy.

To be able to quickly and easily custom design practical safety solutions, we have developed a computer programme,

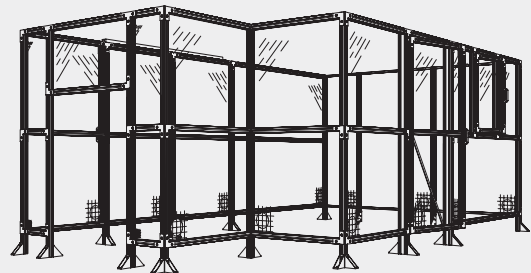
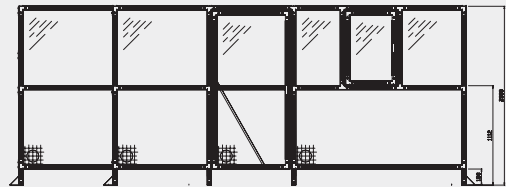
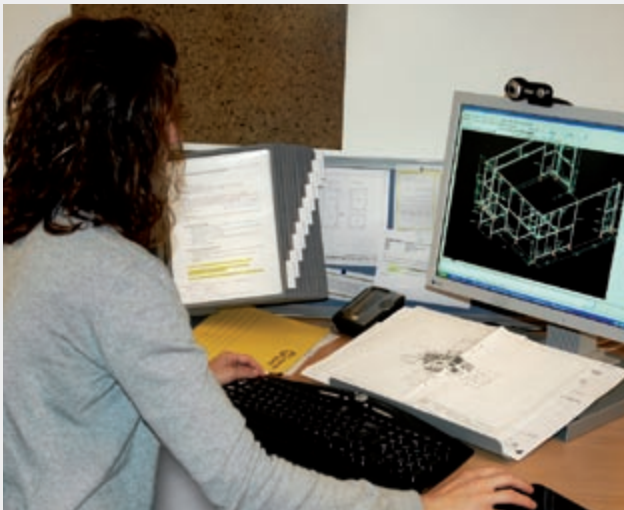
SafeCAD. This is a 'plug-in' program for AutoCAD®. A simple sketch of the guarding system that is required is used as the program input. The positions of doors and hatches, choice of mesh, polycarbonate, aluminum/steel sheet or noise reduction panels are typed in. The program automatically generates 3D drawings along with component and cutting lists. These drawings are also used as the basis for assembly/ installation.

It is always easy to combine Quick-Guard E with Quick-Guard to achieve a complete system. It is also easy to adjust and modify when the production equipment is modified and/ or moved.

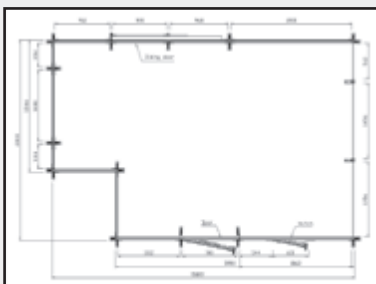


*Brackets are delivered Pre-assembled with screws and nuts.*

**Using SafeCAD® it is easy for both us and yourself to customize the safety solution for your needs**



**Example of component and cutting list print-outs from SafeCAD.**



Article no	Description	Qty	Unit
40-030-06	JSM 30B-K Floorbracket	26,00	pcs
40-030-07	JSM 32B-K L-bracket	72,00	pcs
40-030-08	JSM 33B-K T-bracket	18,00	pcs

Cutlist Polycarbonate					
Article no	Description	Qty	Length	Width	Sum m <sup>2</sup>
40-039-10	JSM YPC5A1 Pc sheet 5mm uncoloured 2020x864	1	864	2020	1,75
40-039-12	JSM YPC5A9 Pc sheet 5mm uncoloured, cut to size	1	532	1020	0,54
40-039-12	JSM YPC5A9 Pc sheet 5mm uncoloured, cut to size	1	756	504	0,38

Cutlist Welded Mesh					
Article no	Description	Qty	Length	Width	Sum m <sup>2</sup>
40-040-13	JSM YN40W1 Welded steelmesh 40x40x3,5 black, 2020x864	1	864	2020	1,75
40-040-14	JSM YN40W2 Welded steelmesh 40x40x3,5 black, 1074x1816	2	1820	1074	3,91
40-040-16	JSM YN40W9 Welded steelmesh 40x40x3,5 black, cut to size	2	864	354	0,61
40-040-16	JSM YN40W9 Welded steelmesh 40x40x3,5 black, cut to size	1	864	804	0,69
40-040-16	JSM YN40W9 Welded steelmesh 40x40x3,5 black, cut to size	1	864	920	0,79
40-040-16	JSM YN40W9 Welded steelmesh 40x40x3,5 black, cut to size	2	864	932	1,61

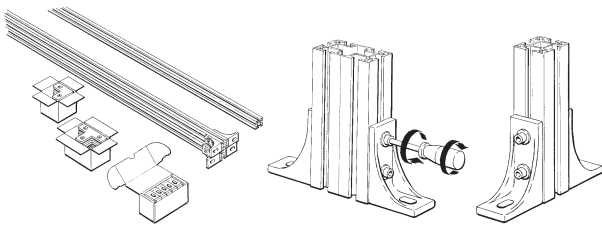
## Quick-Guard® Assembly, standard version



Assembly of the Quick-Guard® system is very easy. All components are very light in weight and ergonomic in design. This enables, in most cases, one man to be able to assemble both simple and complex structures with ease using very few different types of fixing components. All fixtures can be mounted easily from "outside" by using the specially

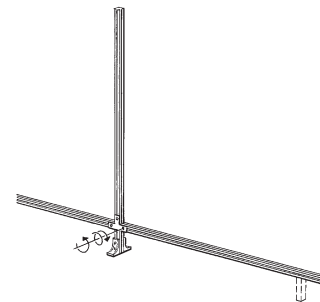
designed "locking nut" which can be located anywhere in the extrusion channel. The fixture components, by means of integral locating keys, ensure that correct angles are achieved and enable the number of bolts/nuts to be reduced to half the number that would otherwise be required.

**1.**



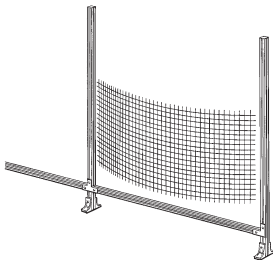
Pre-mount floor fixtures by first slackening the screw anti-clockwise. Then tighten the screw clockwise in the usual way. The nut will then automatically locate into the correct position and mechanically lock the fixture into the profile.

**2.**



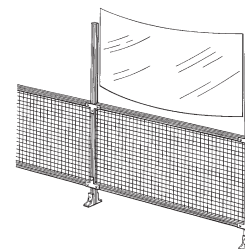
Attach lower horizontal extrusion between vertical posts. Use a spacing block to ensure the correct distance from the floor.

**3.**



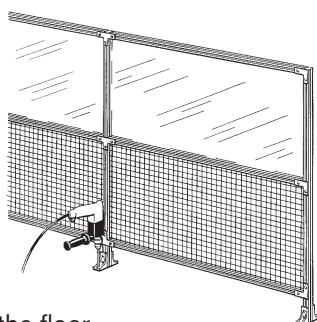
Insert infill panel and fix middle horizontal profile. The distance between the profiles is the width of the infill minus 20 mm.

**4.**



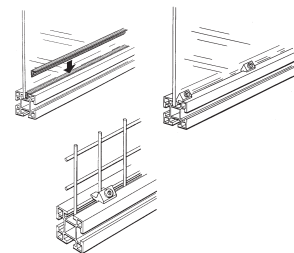
Insert top infill panel. Fix top profile with fittings on the top on both sides.

**5.**



Fix the poles to the floor.

**6.**

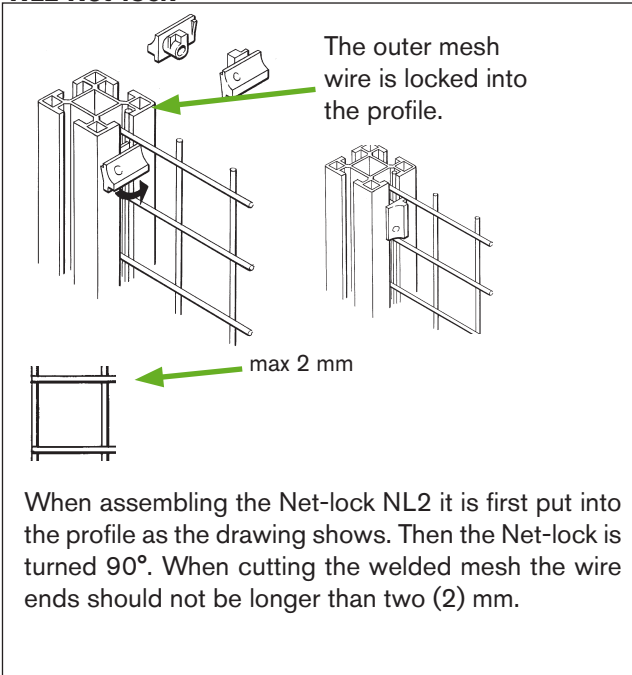


Secure infill sheet with plastic strip or Net-lock fixings. Easy, fast and quick. See more under Assembly of netlocks. If there is a risk of the robot striking the polycarbonate, JSM PL3 panel locks must be used.

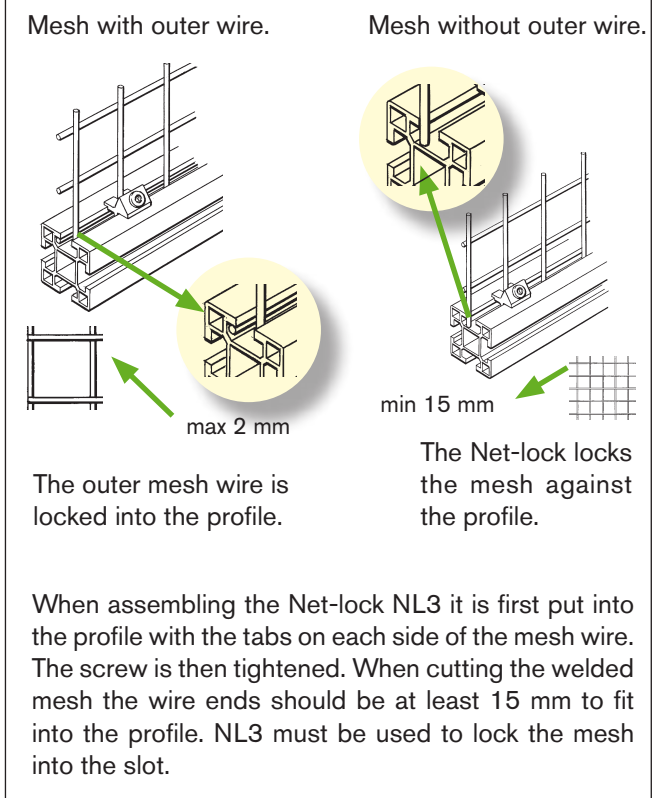


## Assembly using NL2 and NL3 Net-locks on welded mesh

### NL2 Net-lock



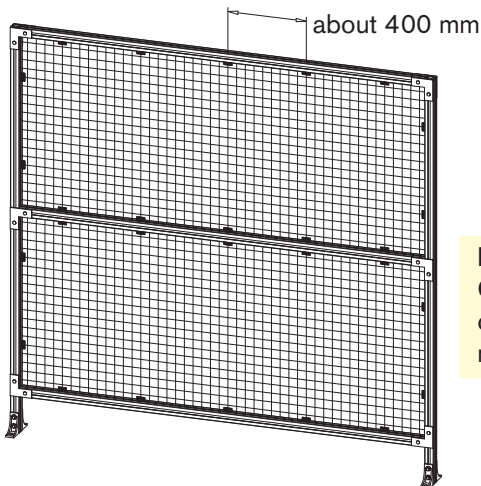
### NL3 Net-lock



## Number of Net-locks

### Number of Net-locks Quick-Guard standard version

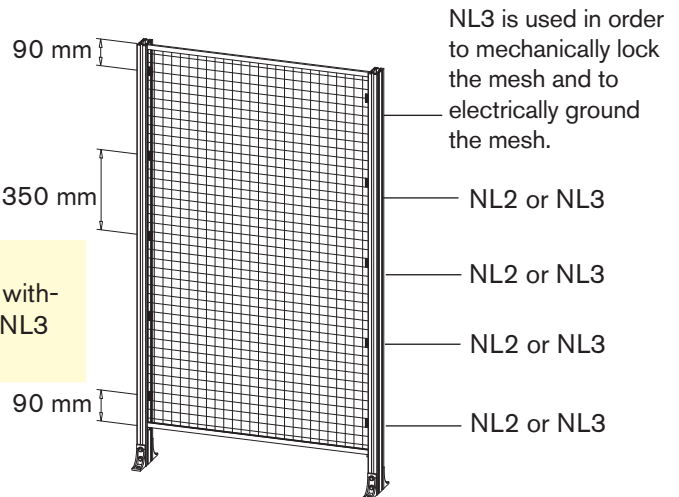
On Quick-Guard standard version NL3 is recommended as it can handle mesh with and without an outer wire.



**Note!**  
On welded mesh without an outer wire NL3 must be used.

### Number of Net-locks Quick-Guard E

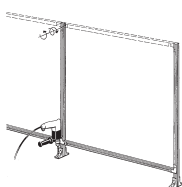
On Quick-Guard E both Net-lock NL2 and NL3 can be used. For mesh edges without outer wire NL3 must be used instead of NL2.



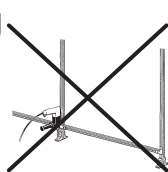
**NOTE!** On both Quick-Guard Standard and Quick-Guard E at least two NL3 should be used in order to mechanically lock the mesh and to electrically ground the mesh. NL3 should only be used on doors.

## Fixing posts to the floor when mesh is required to be fitted at a later date.

**Right**



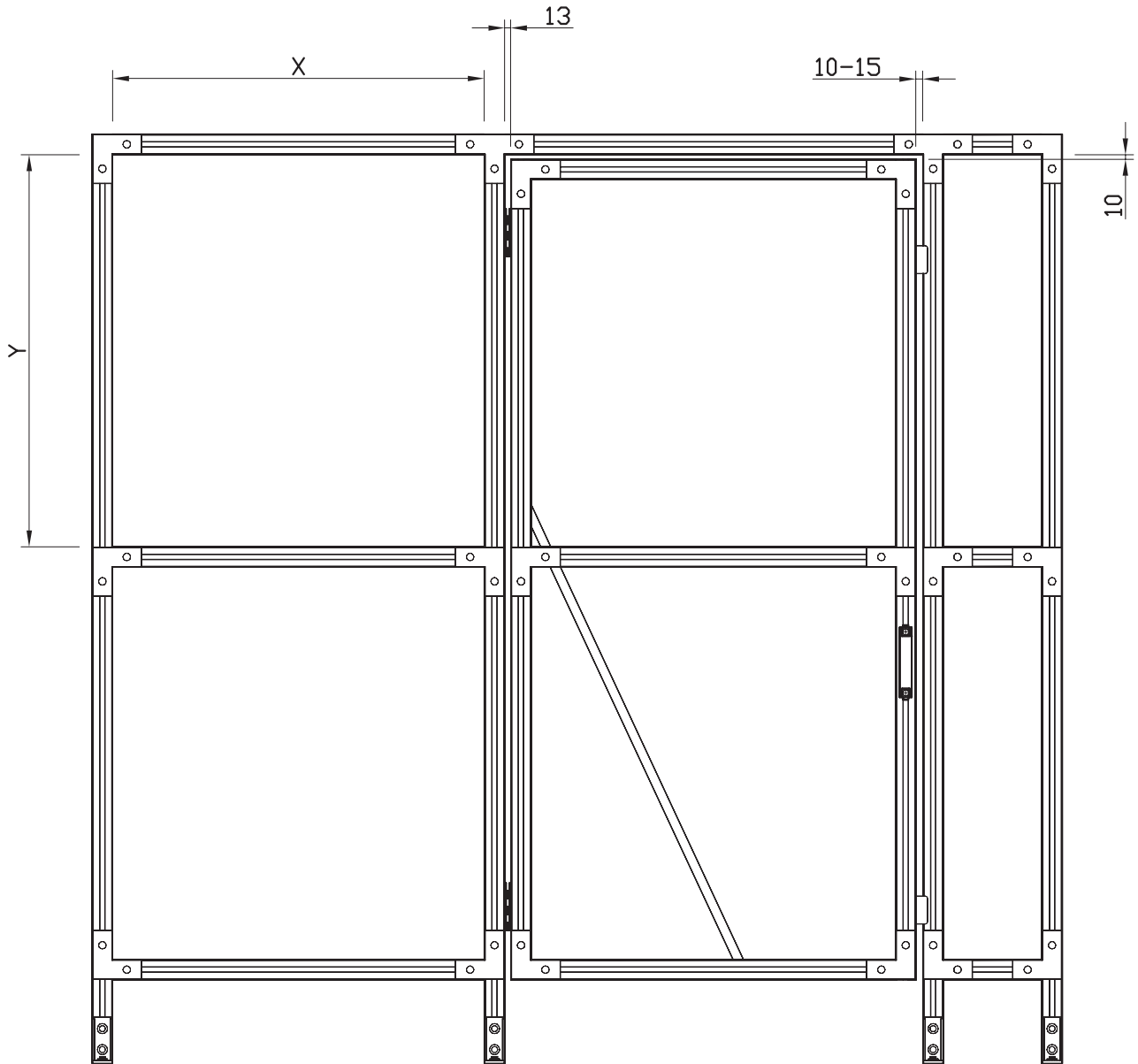
**Wrong**



Temporarily mount at least two middle profiles before drilling and fixing posts to the floor. This method is used when infill mesh or panels are to be fitted at a later date.

**Note!** Never attempt to fix the posts to the floor without first connecting at least two middle profiles to ensure the posts are parallel to each other and vertical.

## Dimensions for aluminum profile lengths and panels.



### Material

Polycarbonate  
 Welded mesh  
 Steel panel  
 Sound-absorbing panel 25mm  
 Sound-absorbing 50 mm  
 Laminated glass  
 Double Pc  
 Sound absorbent panel profile JSM AS1  
 Sound-absorbing profile JSM AS3  
 Double Pc profile JSM AS2

### Width

$X+20$  mm  
 $X+20$  mm  
 $X+20$  mm  
 $X-37$  mm  
 $X-37$  mm  
 $X+15$  mm  
 2 pcs.  $X-7$   
 2 pcs.  $L=X$   
 2 pcs.  $L=X$  (mitred 2 x 45 degrees)  
 2 pcs.  $L=X$

### Height

$Y+20$  mm  
 $Y+20$  mm  
 $Y+20$  mm  
 $Y-37$  mm  
 $Y-37$  mm  
 $Y+15$ mm  
 2 pcs.  $Y-7$   
 2 pcs.  $L=Y-73$   
 2 pcs.  $L=Y$  (mitred 2 x 45 degrees)  
 2 pcs.  $L=Y-33$

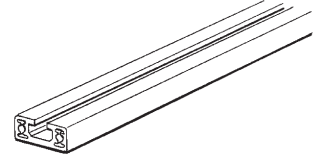
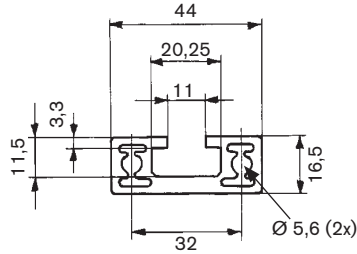
## ALUMINUM PROFILES

A wide range of aluminium profiles are available and include, fencing profile, guide rails, and cable ducting. The cable ducting is available in three sizes, and can be delivered with or without mounting holes. The cable ducting is easy to open and can be provided with end caps. Cover strips of plastic are also available, including fencing profiles making the entire groove cross section utilisable as 'installation conduit' for cables. The Aluminium profiles have integral "V" grooves to aid in centring any drilling that may be necessary.

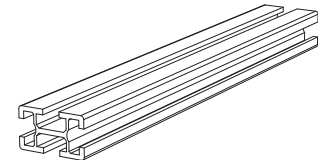
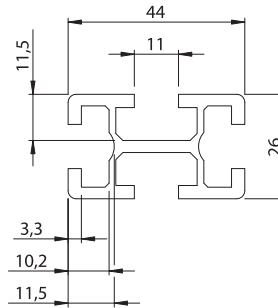
Alloy: 6063 and 6060F22. Natural anodized aluminium 10µm

### Fencing Profile

Designation: JSM A4416  
 Article numbers: 2TLJ040037R7000 (cut to length)  
 2TLJ040037R7400 (L=6000)  
 Material: Naturally anodized aluminium  
 Dimensions: 16,5x44 mm

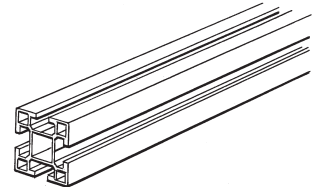
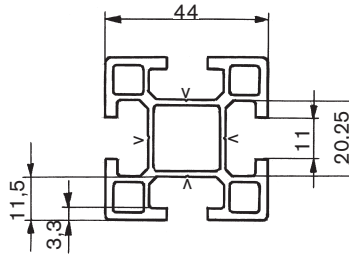


Designation: JSM A4426  
 Article numbers: 2TLJ040037R8000 (cut to sizes)  
 2TLJ040037R8100 (L=6000)  
 Material: Naturally anodized aluminium  
 Dimensions: 44x26 mm



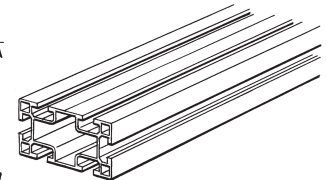
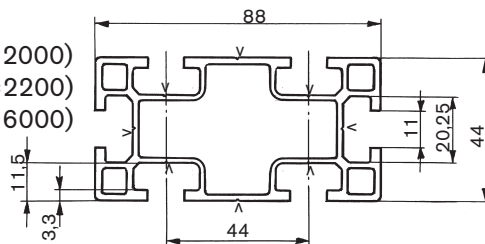
Designation: JSM A44A  
 Article numbers: 2TLJ040037R3500 (cut to sizes)  
 2TLJ040037R3600 (L=1100)  
 2TLJ040037R9800 (L=1400)  
 2TLJ040037R3700 (L=2000)  
 2TLJ040037R3800 (L=2000)  
 2TLJ040037R3900 (L=2400)  
 2TLJ040037R4000 (L=2500)  
 2TLJ040037R4100 (L=6000)

Material: Natural anodized aluminium  
 Dimensions: 44x44 mm  
 Order Unit: 10 pcs/box

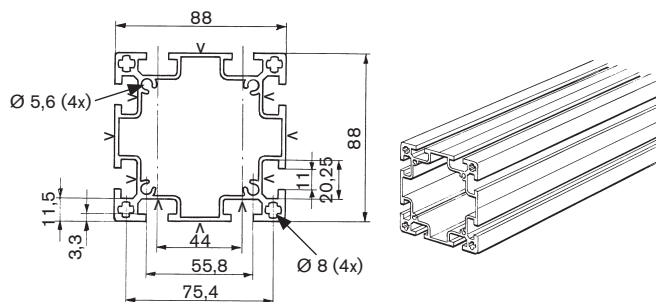


Designation: JSM A4488A  
 Article numbers: 2TLJ040037R4200  
 (cut to sizes)  
 2TLJ040037R4300 (L=2000)  
 2TLJ040037R4400 (L=2200)  
 2TLJ040037R4500 (L=6000)

Material: Natural anodized aluminium  
 Dimensions: 44x88 mm  
 Order Unit: 5 pcs/box



Designation: JSM A8888  
 Article numbers: 2TLJ040037R7500 (cut to length)  
 2TLJ040037R7900 (L=6000)  
 Material: Natural anodized aluminium  
 Dimensions: 88x88

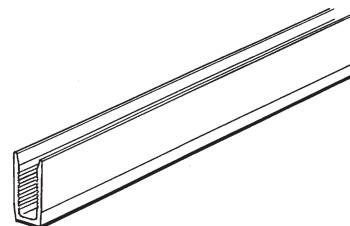
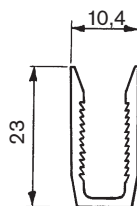


### Technical data – fencing profile

Typ	Vikt (kg/m)	Angular moment		Flexural resistance	
		$I_x$ (mm <sup>4</sup> x10 <sup>4</sup> )	$I_y$ (mm <sup>4</sup> x10 <sup>4</sup> )	$W_x$ (mm <sup>3</sup> x10 <sup>3</sup> )	$W_y$ (mm <sup>3</sup> x10 <sup>3</sup> )
JSM A4416	1.040	1.1	7.6	1.19	3.43
JSM A4426	1,023	3,2	7,4	2,47	3,36
JSM A44A	1.504	12.4	12.4	5.64	5.64
JSM A4488A	2.379	79.6	21.6	18.1	9.8
JSM A8888	3.632	143.0	143.0	32.5	32.5

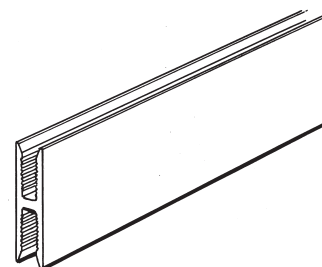
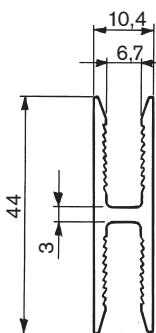
### Fencing U-Profile

Designation: JSM A12  
 Article numbers: 2TLJ040037R2800  
 (cut to sizes, max 2.0 m)  
 2TLJ040037R2700 (L=1076)  
 2TLJ040037R4600 (L=1476)  
 2TLJ040037R4700 (L=2000)  
 Material: Natural anodized aluminium  
 Weight: 0.230 kg/m



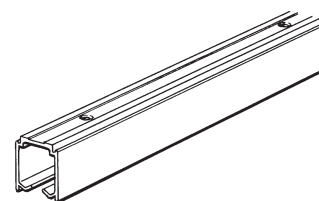
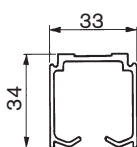
### H-profile

Designation: JSM A13  
 Article numbers: 2TLJ040037R5000  
 (JSM A13 cut to sizes)  
 2TLJ040037R5100 (L=1076)  
 2TLJ040037R5200 (L=1476)  
 2TLJ040037R5300 (L=2020)  
 Material: Natural anodized aluminium  
 Weight: 0.452 kg/m



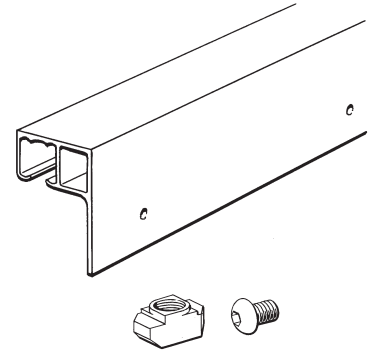
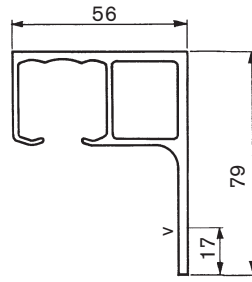
### Guide Rails

Designation: JSM A3130B  
 Article number: 2TLJ040037R2600  
 Material: Natural anodized aluminium  
 Holes: c-c = 275 mm, ø = 6 mm  
 Standard Length: 4,0 m (max)  
 Weight: 0.530 kg/m



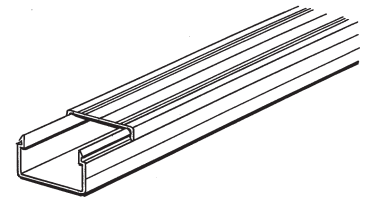
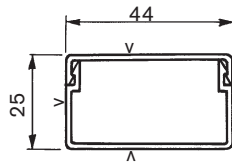


Designation: JSM A56  
 Article number: 2TLJ040037R4900  
 (Cut to sizes incl. screws)  
 2TLJ040037R0800  
 (Length 2.0 m, incl. screws)  
 2TLJ040037R4800  
 (Length 6.0 m, incl. screws)  
 Delivered with: Screw JSM S8E  
 Nut JSM M8B  
 Material: Natural anodized aluminium  
 Holes: c-c = 450 mm,  $\varnothing = 8.5$  mm  
 Standard Length: 2.0; 6.0 m  
 Weight: 1.585 kg/m

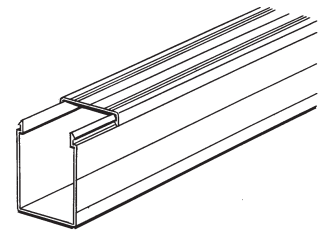
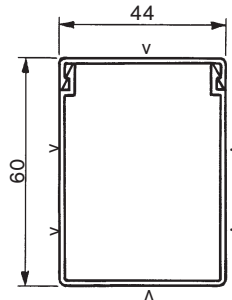


### Cable Ducting

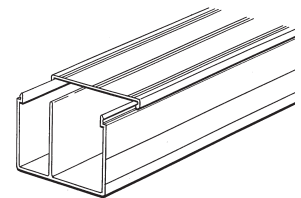
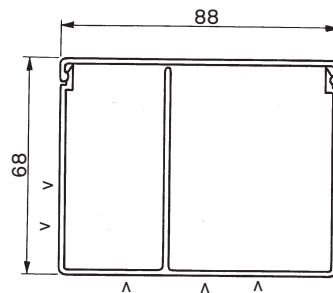
Designation: JSM A25\_  
 Article numbers: 2TLJ040037R1300 (JSM A25A)  
 2TLJ040037R1400 (JSM A25B)  
 Material: Natural anodized aluminium  
 Dimensions: 44x25 mm  
 Standard Length: 2.0 m  
 JSM A25A: with holes c-c = 500 mm  
 $\varnothing = 5$  mm  
 JSM A25B: without holes  
 Order Unit: 10 pcs/box  
 Weight: 0.545 kg/m JSMA25A  
 0.567 kg/m JSMA25B



Designation: JSM A60\_  
 Article numbers: 2TLJ040037R1500 (JSM A60A)  
 2TLJ040037R1600 (JSM A60B)  
 Material: Natural anodized aluminium  
 Dimensions: 44x60 mm  
 Standard Length: 2.0 m  
 JSM A60A: with holes c-c = 500 mm  
 $\varnothing = 5$  mm  
 JSM A60B: without holes  
 Order Unit: 10 pcs/box  
 Weight: 0.923 kg/m JSMA60A  
 0.950 kg/m JSMA60B



Designation: JSM A88  
 Article number: 2TLJ040037R3300  
 Material: Natural anodized aluminium  
 Dimensions: 88x68 mm  
 Standard Length: 2.0 m  
 Weight: 1,844 kg/m



### Cable tie

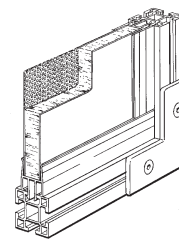
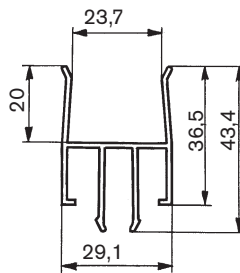
Designation: JSM X1  
 Article number: 2TLJ040033R4300  
 Pre-assembled with: Screws and Nuts  
 Order Unit: 10 pcs/box  
 Material: Nylon 6/6 black



## Profiles for installation of acoustic damping

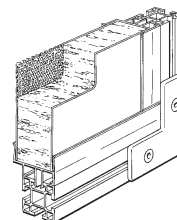
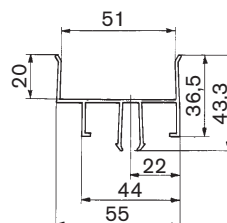
### Profile for 25 mm sound-absorbing panel, JSM YLA25A\_

Designation: JSM AS1  
 Article numbers: 2TLJ040037R9500  
 (cut to length)  
 2TLJ040037R0900 (L=2000)  
 Material: Naturally anodized aluminium  
 Dimensions: 29x43 mm  
 Weight: 0,545 kg/m



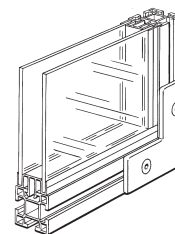
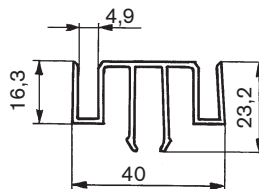
### Profile for 50 mm sound-absorbing panel, JSM YLA50A

Designation: JSM AS3  
 Article numbers: 2TLJ042021R8000  
 (cut to length)  
 2TLJ042021R8100 (L=6000)  
 Material: Naturally anodized aluminium  
 Dimensions: 43x56 mm  
 Weight: 0,694 kg/m



### Profile for double 5mm Polycarbonate panel, JSM YPC5\_

Designation: JSM AS2  
 Article numbers: 2TLJ040037R9600  
 (cut to length)  
 2TLJ040037R1000 (L=2000)  
 Material: Naturally anodized aluminium  
 Dimensions: 40x23 mm  
 Weight: 0,510 kg/m

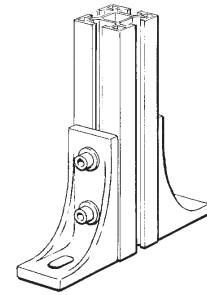
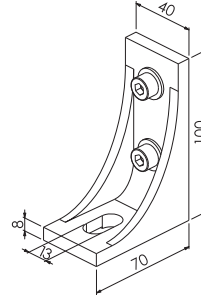


## FITTINGS

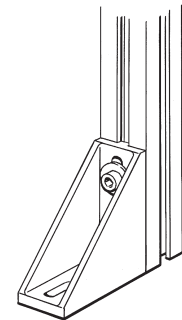
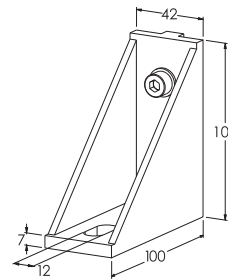
ABB Jokab Safety's fencing system is put together with various types of fitting. Uprights are anchored to the floor with floor angle fittings. With a small angle fitting it is possible to hang an electrical enclosure and strengthen the corners of free-standing walls. Corners and joints are constructed with the aid of T, L and I fittings. If angles different to 90° between the fence sections are required, a JSM 35-K angle fitting can be used. This hinge has a distance between centres of 47 mm, which means that the gap between uprights will always be less than 20 mm. According to EN ISO 13857, the minimum permitted protection distance is 120 mm for a gap narrower than 20 mm.

### Floor/Angle fitting

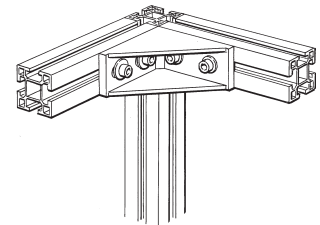
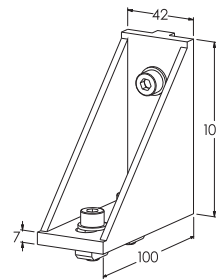
Designation: JSM 39-K  
 Article numbers: 2TLJ040030R1400  
 Pre-assembled with: Screw JSM S8C (x 2)  
 Washer 9 x 18 x 1,5 (x 2)  
 Nuts JSM M8B (x 2)  
 Material: Aluminium  
 Quantity: 10 pcs/box



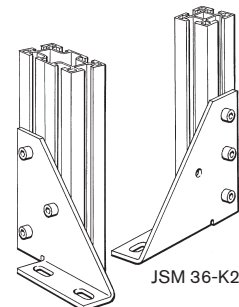
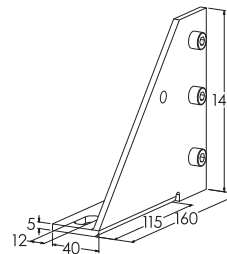
Designation: JSM 30B-K  
 Article number: 2TLJ040030R0600  
 Pre-assembled with: Screw JSM S8C (x 2)  
 Washer 9 x 18 1,5 (x 2)  
 Nut JSM M8B (x2)  
 Material: Aluminium  
 Order Unit: 10 pcs/box



Designation: JSM 30B-K1  
 Article numbers: 2TLJ040030R1100  
 Pre-assembled with: Screws JSM S8C (x 4)  
 Washers 9 x 18 x 1,5 (x 4)  
 Nuts JSM M8B (x 4)  
 Washers JSM B8B (x 2)  
 Material: Aluminium  
 Quantity: 10 pcs/box



Designation: JSM 36-K1  
 Article number: 2TLJ040030R0900  
 Pre-assembled with: Screw JSM S8D (x 3)  
 Nut JSM M8B (x 3)  
 Article number: 2TLJ040030R1000  
 Designation: JSM 36-K2  
 Pre-assembled with: Screw JSM S8D (x 3)  
 Nut JSM M8B (x 3)  
 Material: Zinc-plated steel  
 Order Unit: 10 pcs/box

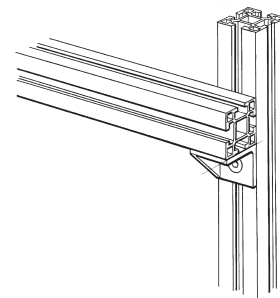
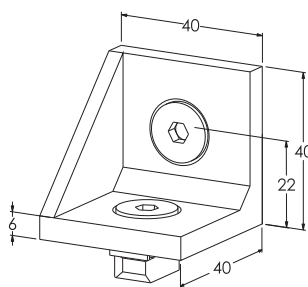


JSM 36-K1

JSM 36-K2

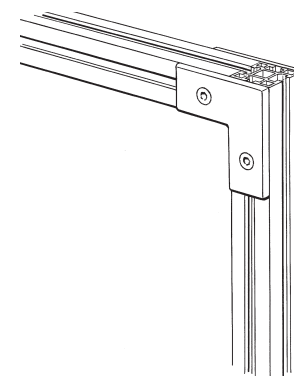
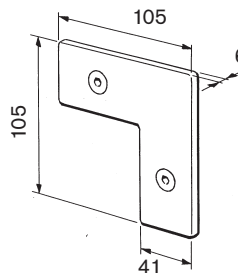
### Small Angle fitting, e.g. Electrical cabinet fitting

Designation: JSM 31B-K  
Two counter sunk holes  
JSM31A1-K  
One counter sunk hole  
Article number: 2TLJ040030R1300 (JSM 31B-K)  
2TLJ040030R0400 (JSM 31A1-K)  
Pre-assembled with: Screw JSM S8C  
Nut JSM M8B  
Material: Aluminium  
Order unit: 10 pcs/box



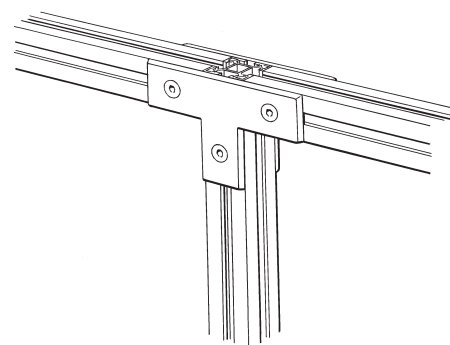
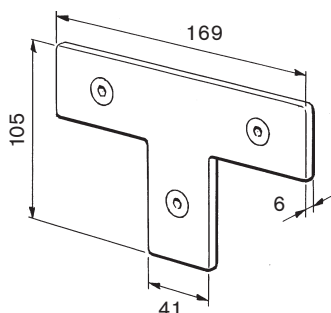
### L-bracket

Designation: JSM 32B-K  
Article number: 2TLJ040030R0700  
Pre-assembled with: Screw JSM S8A  
Nut JSM M8B  
Material: Aluminium  
Order Unit: 10 pcs/box



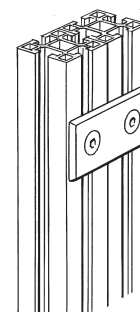
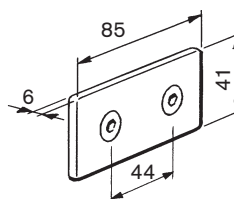
### T-bracket

Designation: JSM 33B-K  
Article number: 2TLJ040030R0800  
Pre-assembled with: Screw JSM S8A  
Nut JSM M8B  
Material: Aluminium  
Order Unit: 10 pcs/box



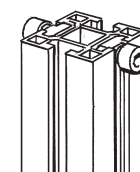
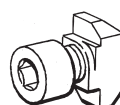
### I-bracket, joint

Designation: JSM 34B-K  
Article number: 2TLJ040030R1500  
Pre-assembled with: Screw JSM S8A  
Nut JSM M8B  
Material: Aluminium  
Order Unit: 10 pcs/box



### Distance screw

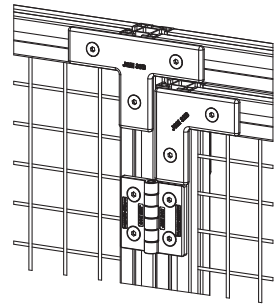
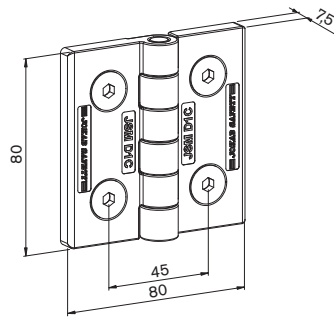
Designation: JSM 37  
Article number: 2TLJ040033R3100  
Material: Zinc-plated steel  
Order unit: 100 pcs/box



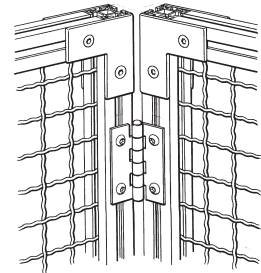
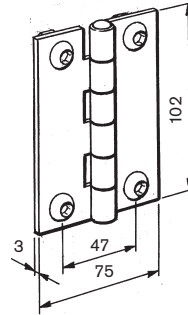


## Angle bracket

Designation: JSM D1C Hinge  
Article number: 2TLJ040033R4800  
Pre-assembled with: JSM M8B  
JSM B8C  
JSM S8A  
Material: Polyamide, glass fibre reinforced  
Color: Black  
Order unit: 2pcs/bag, 10pcs/box



Designation: JSM 35-K  
Article number: 2TLJ040033R1400  
Pre-assembled with: Screw JSM S6A  
Nut JSM M6B  
Material: Zinc-plated steel  
Hole: c-c = 47 mm  
Order unit: 2 pcs/box

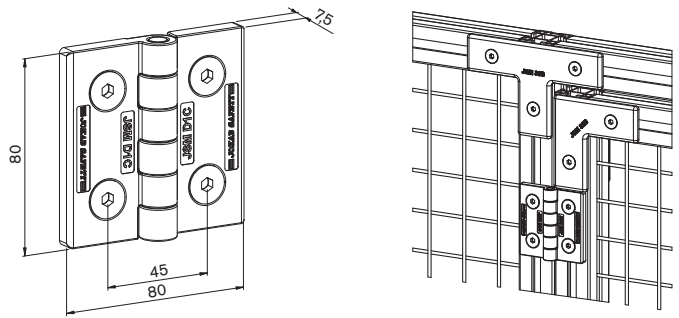


**Note!** The JSM 35-K must only be used for making fence angles.



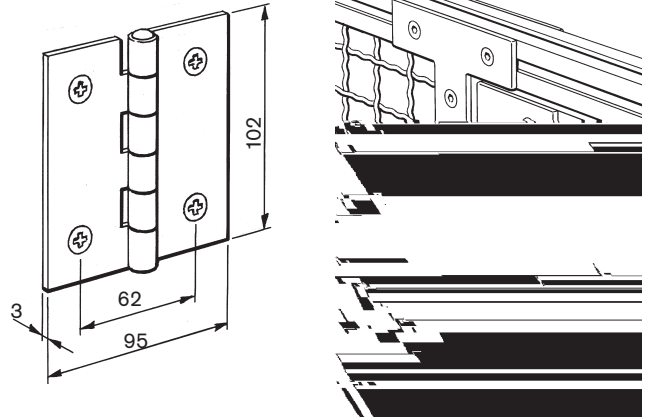
## Hinge kit

Designation: JSM D1C Hinge  
 Article number: 2TLJ040033R4800  
 Pre-assembled with: JSM M8B  
 JSM B8C  
 JSM S8A  
 Material: Polyamide, glass fibre reinforced  
 Color: Black  
 Order unit: 2pcs/bag, 10pcs/box



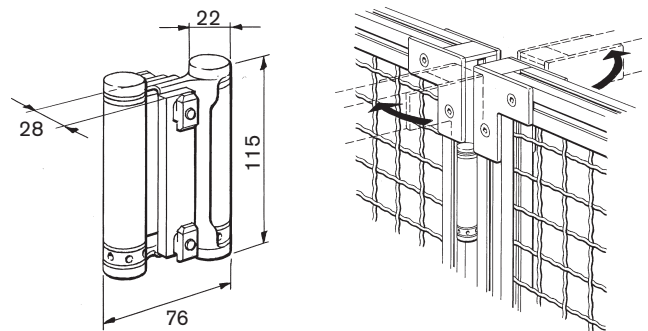
Designation: JSM D1A Hinge  
 Article number: 2TLJ040033R1500  
 Pre-assembled with: Screw JSM S6A  
 Nut JSM M6B  
 Material: Zinc-plated steel  
 Fixing Holes : c-c = 62 mm  
 Order Unit: 2 pcs/box

**Note!** JSM D1A must not be used as a fencing angle fitting because its gap can exceed 20 mm.



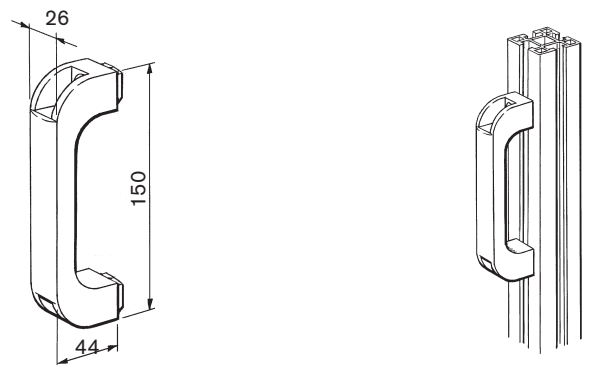
Designation: JSM D1B Spring hinge  
 Article numbers: 2TLJ042020R4700  
 Pre-assembled with: Spacer plate, screws & nuts  
 Material: Zinc-plated steel

**NOTE!** The door gap will be 28 mm when installed.



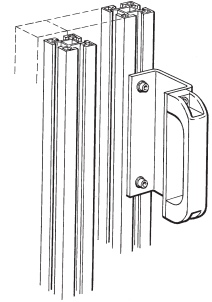
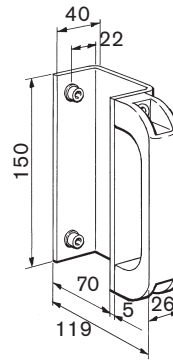
## Handle

Designation: JSM D2 Handle  
 Article number: 2TLJ040033R0100  
 Pre-assembled with: Screw JSM S8D  
 Nut JSM M8B  
 Material: Thermoplastic, black



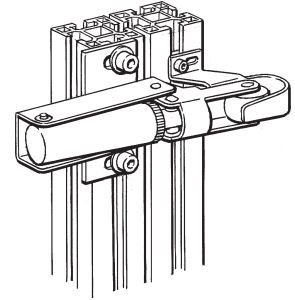
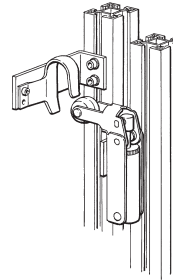
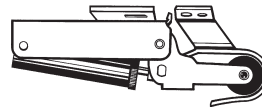
Designation: JSM D18 Handle  
 Article number: 2TLJ042020R5000  
 Material  
 Handle: Thermoplastic, black  
 Fittings: Aluminum  
 Pre-assembled with: Screws and Nuts

Suitable for sliding door on the inside of the fence.



### Door closer

Designation: JSM D3  
 (conventional door)  
 Material: Door closer - steel  
 Bracket - Aluminum  
 Article number: 2TLJ040033R0200  
 Pre-assembled with: Screws and Nuts  
 Designation: JSM D19 (sliding door)  
 Article number: 2TLJ042020R5600  
 Material: Zinc-plated steel  
 Pre-assembled with: Screws and Nuts



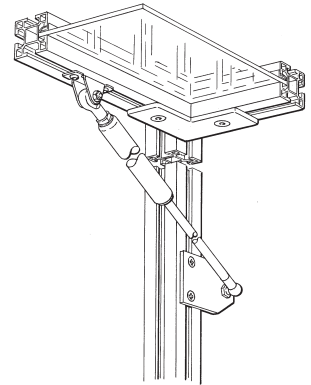
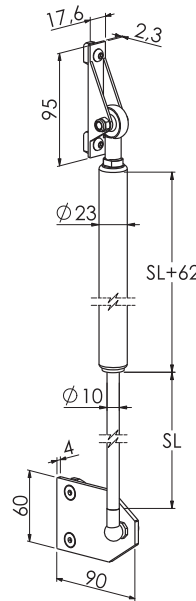
### Gas spring

Designation: Gas spring including mount  
 Article numbers: 2TLJ042024R1000  
 Stroke length: 300 mm  
 Material: Steel  
 Pre-assembled with: Screws and Nuts

Designation: JSM D22A Gas spring including mount  
 Article numbers: 2TLJ042024R1100  
 Stroke length: 350 mm  
 Material: Steel  
 Pre-assembled with: Screws and Nuts

*Fixing details included:*  
 Side fastener (2TLJ042021R2700)  
 U fitting (2TLJ042021R2800)

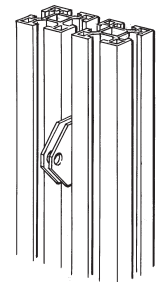
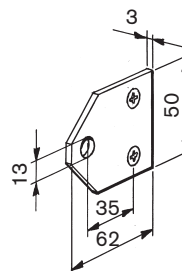
Specify the required force when ordering



### Securing plate for padlock

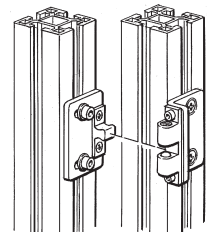
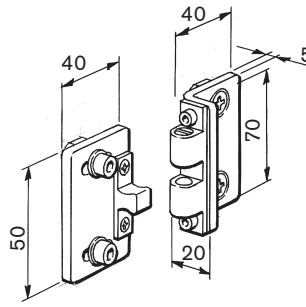
Designation: JSM D17 Bracket for Padlock  
 hasp  
 Article number: 2TLJ040020R2200  
 Material: Zinc-plated steel

**Note!** Two pieces are required for one complete unit.

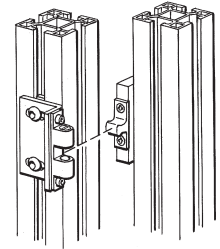
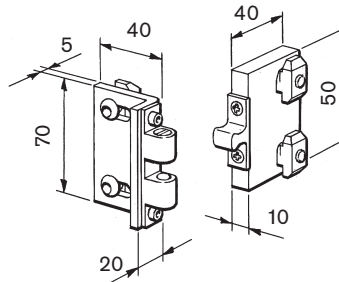


## Ball Catch

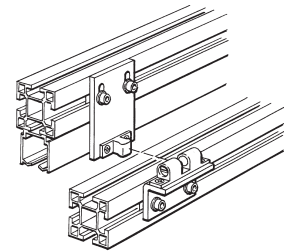
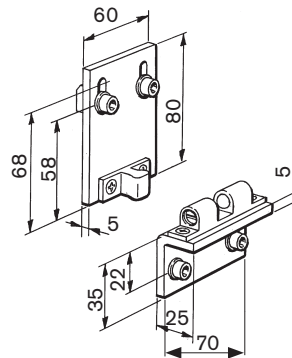
Designation: JSM D11B (conventional door)  
Article number: 2TLJ040033R4100  
Pre-assembled with: Screws and Nuts  
Material  
Brackets: Aluminium  
Ball Catch: Nickel-plated brass



Designation: JSM D11C (sliding door)  
Article number: 2TLJ040033R4200  
Pre-assembled with: Screws and Nuts  
Material  
Brackets: Aluminium  
Ball Catch: Nickel-plated brass



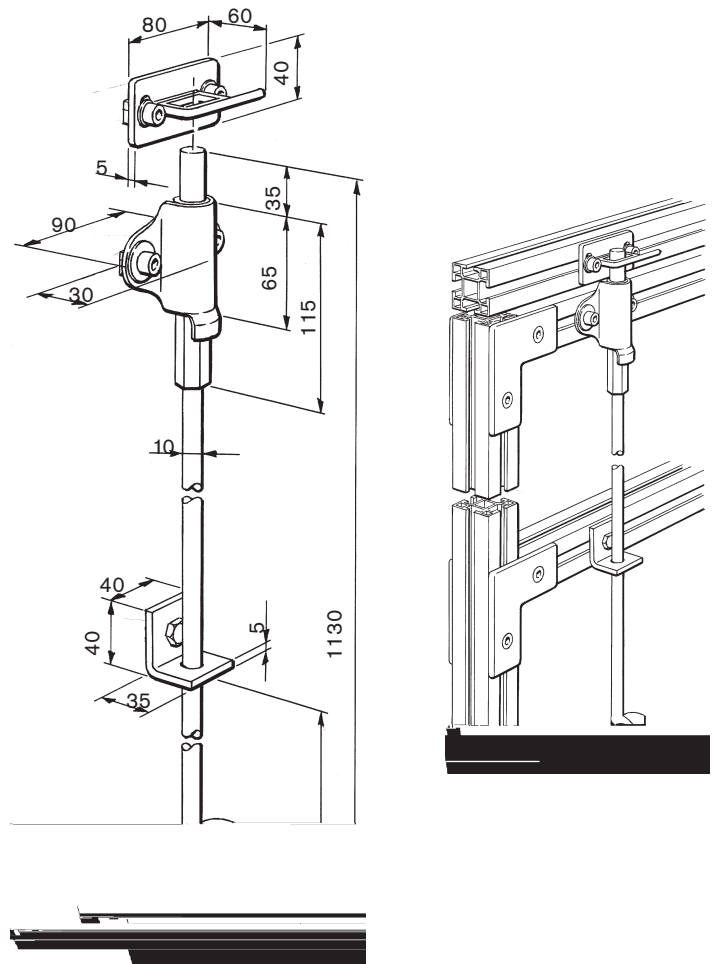
Designation: JSM D11D (folding door)  
Article number: 2TLJ042020R5200  
Pre-assembled with: Screws and Nuts  
Material  
Brackets: Aluminium  
Ball Catch: Nickel-plated brass





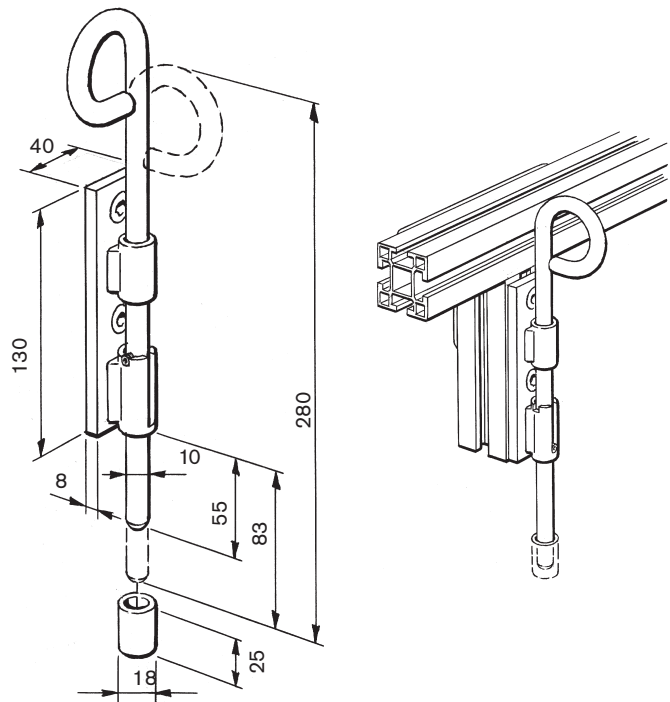
## Upper Door bolt

Upper Door bolt  
Designation: JSM D10A  
Article number: 2TLJ040033R2100  
Pre-assembled with: Screws and Nuts  
Material  
Brackets: Zinc-plated steel  
Rod: Stainless steel



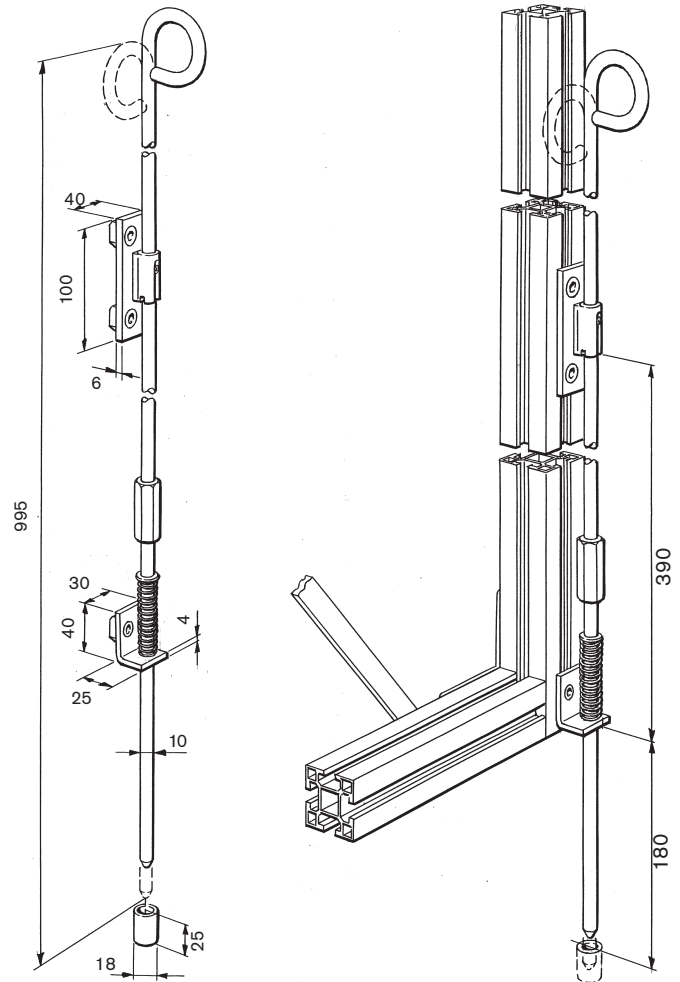
## Lower Door bolt

Designation: JSM D10  
Article number: 2TLJ040033R2000  
Pre-assembled with: Screws and Nuts  
Material  
Brackets: Zinc-plated steel  
Rod: Stainless steel



## Lower Door bolt

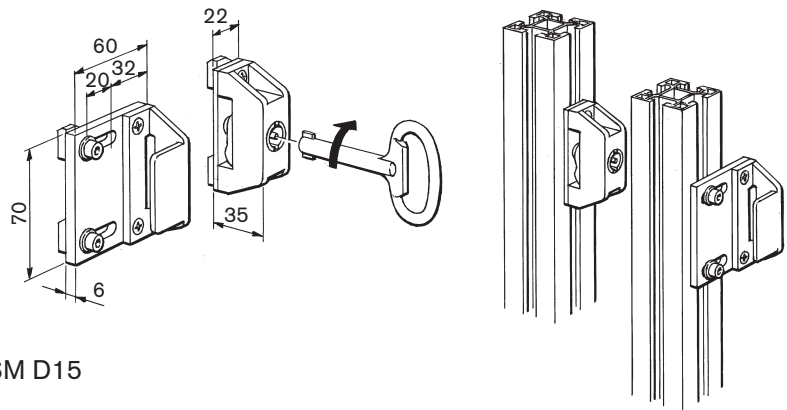
Lower Door bolt  
 Designation: JSM D10B  
 Article number: 2TLJ040033R3800  
 Pre-assembled with: Screws and Nuts  
 Material  
 Brackets: Zinc-plated steel  
 Rod: Stainless steel



## Cam lock

**Cam lock**  
 Designation: JSM D15  
 Article number: 2TLJ040033R3900  
 Pre-assembled with: Screws and Nuts  
 Material  
 Brackets: Aluminium  
 Lockunit: Polyamide black

Delivered without key.



### Key to cam lock

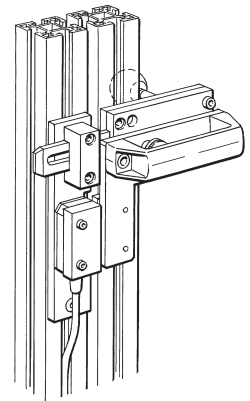
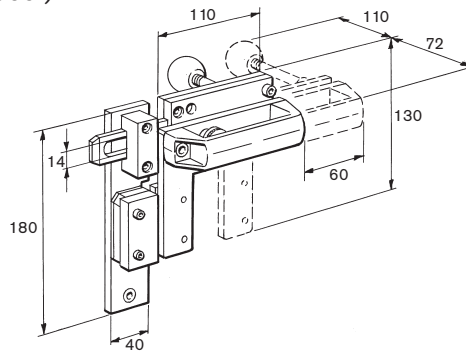
Designation: JSM D16 for cam lock JSM D15  
 Article number: 2TLJ040033R4400  
 Material: Zinc, black

## Sliding bolt for Eden

Designation: JSM D20 (for hinged door)  
Article numbers: 2TLJ020302R1000  
Material: Steel, painted yellow

Supplied without an Eden

*For installation on hinged doors.*

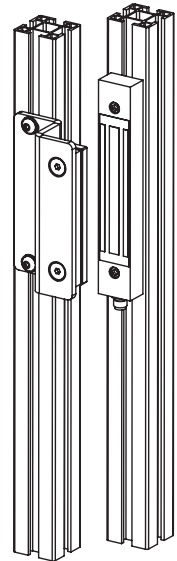
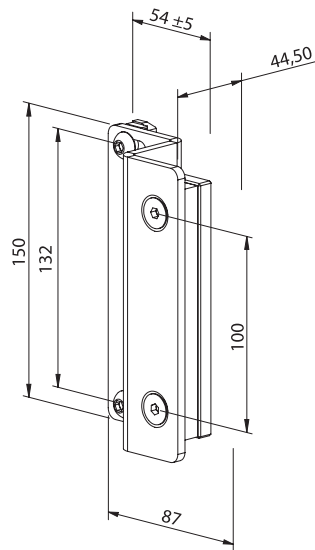


## Magne 1A mount

Designation: JSM D21  
Article numbers: 2TLJ042023R0000  
Material: Zinc-plated steel

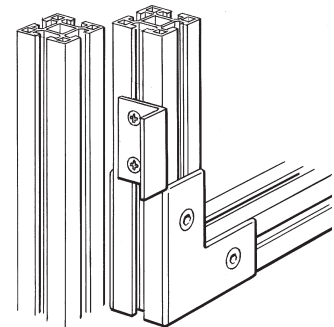
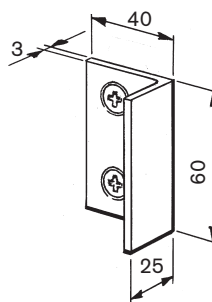
Supplied without Magne 1A Magnetic lock

*For installation on hinged doors*



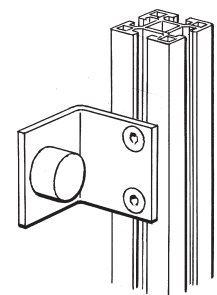
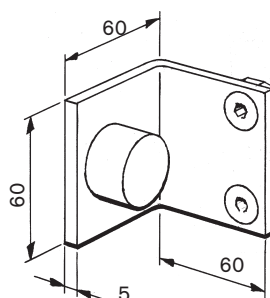
## Door stop

Designation: JSM D13A  
Article number: 2TLJ040033R2600  
Pre-assembled with: Screws and Nuts  
Material: Natural anodized aluminium



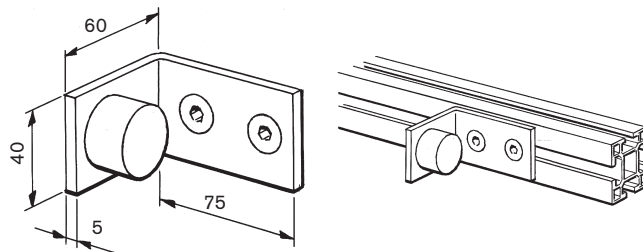
Designation: JSM D13  
Article number: 2TLJ040033R2500  
Pre-assembled with: Screws, Nuts and vibration damper  
Material: Zinc-plated steel

*For mounting on vertical profiles.*



Designation: JSM D13B  
 Article number: 2TLJ040033R2700  
 Pre-assembled with: Screws, Nuts and vibration damper  
 Material: Zinc-plated steel

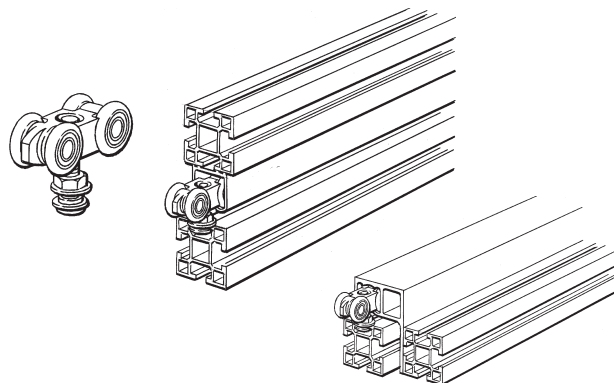
*For mounting on horizontal profiles.*



### Suspension wheels

Designation: JSM D5  
 Article number: 2TLJ040033R0400

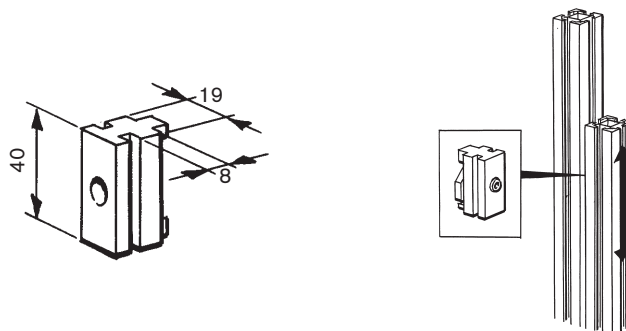
For aluminium profile guide rails JSM A3130B and JSM A56



### Sliding elements

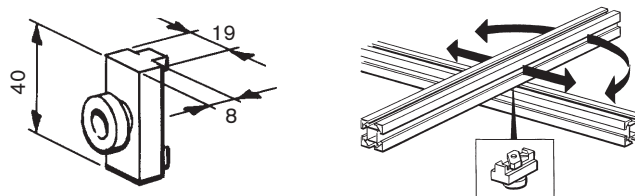
#### Sliding element, (rectangular)

Designation: JSM D6  
 Article number: 2TLJ040033R0500  
 Pre-assembled with: Screw and Nut  
 Material: Polyamid



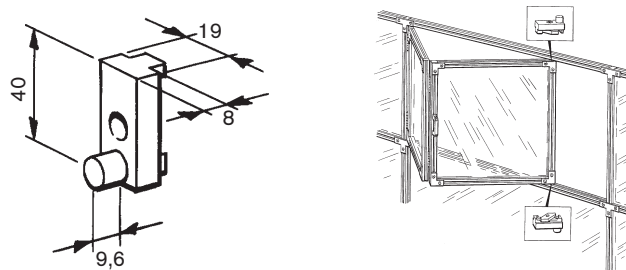
#### Sliding element, (round)

Designation: JSM D7  
 Article number: 2TLJ040033R0600  
 Pre-assembled with: Screw and Nut  
 Material: Polyamid



#### Sliding element, (guide)

Designation: JSM D8  
 Article number: 2TLJ040033R0700  
 Pre-assembled with: Screw and Nut  
 Material: Polyamid

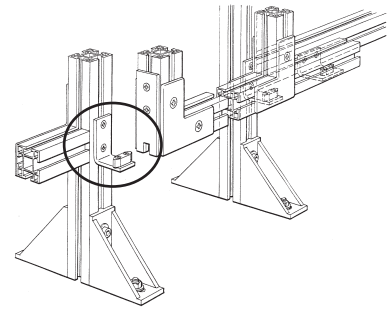
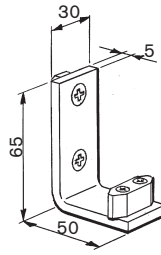


## Guide Components for Sliding Door

### Guide Bracket for Sliding Door

Designation: JSM D12  
Article number: 2TLJ040033R2200  
Pre-assembled with: Screws and Nuts  
Material: Aluminium and PA6-6

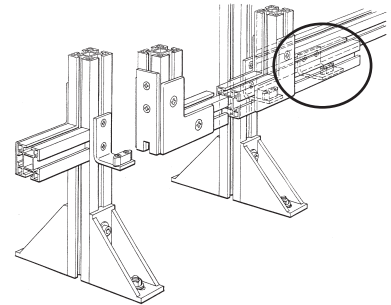
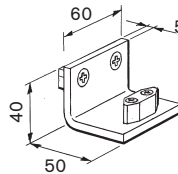
*For mounting on vertical profiles.*



### Guide Bracket for Sliding Door

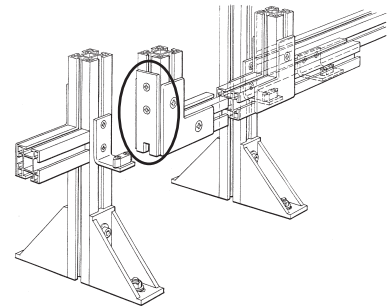
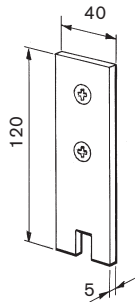
Designation: JSM D12A  
Article number: 2TLJ040033R2300  
Pre-assembled with: Screws and Nuts  
Material: Aluminium and PA6-6

*For mounting on horizontal profiles.*



### Bracket for Guide Pin

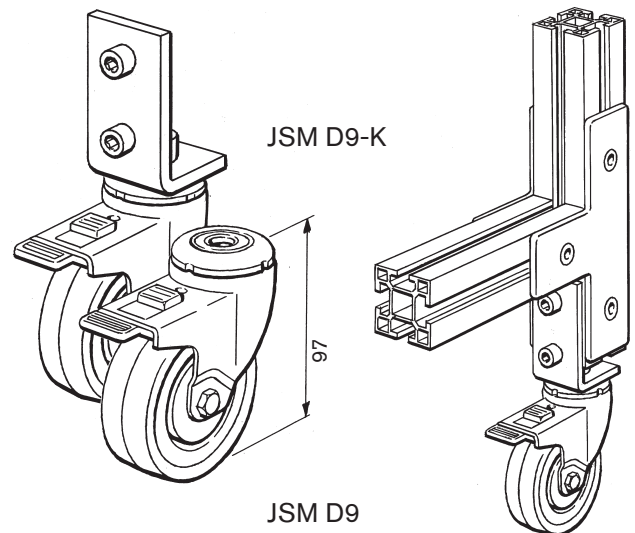
Designation: JSM D12B  
Article number: 2TLJ040033R2400  
Pre-assembled with: Screws and Nuts  
Material: Aluminium



## Guide roller

### Guide roller for conventional door with locking mechanism

Designation: JSM D9  
JSM D9-K - Pre-assembled with angle bracket  
Article numbers: 2TLJ040033R0800 (JSM D9)  
2TLJ040033R1100 (JSM D9-K)  
Diameter: 75 mm  
Max. load: 60 kg



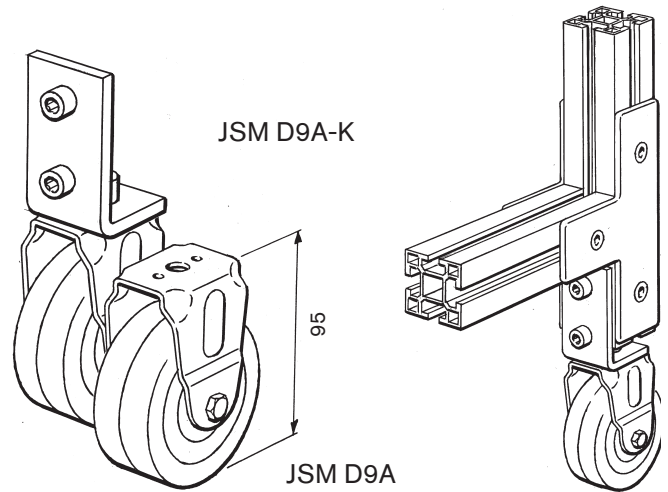


### Guide roller for sliding door

Designation: JSM D9A  
JSM D9A-K - Pre-assembled  
with angle bracket

Article numbers: 2TLJ040033R1200 (JSM D9A)  
2TLJ040033R1300 (JSM D9A-K)

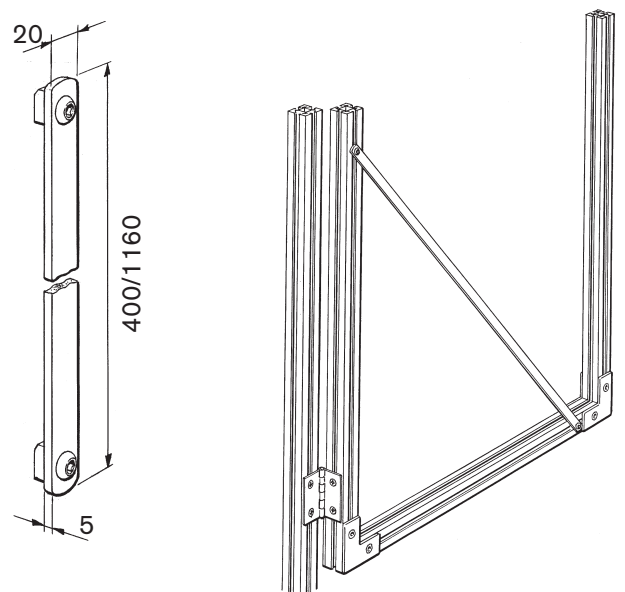
Diameter: 75 mm  
Max. load: 70 kg



### Diagonal bar for door

Designation: JSM D14  
Article numbers: 2TLJ040033R2800  
Length: 1160 mm  
Pre-assembled with: Screws and Nuts  
Material: Naturally anodized aluminium

Designation: JSM D14A  
Article numbers: 2TLJ042021R7300  
Length: 400 mm  
Pre-assembled with: Screws and Nuts  
Material: Naturally anodized aluminium



## FITTINGS FOR SWITCHES

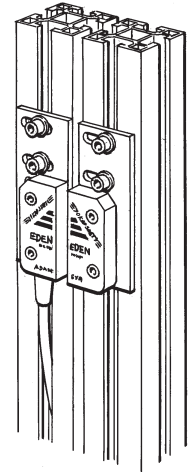
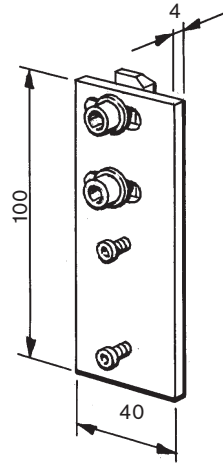
### Eden fittings

#### Fittings for Eden, adapted for sliding and conventional doors

Designation: JSM D4H  
Article number: 2TLJ040033R3600  
Pre-assembled with: Screws and Nuts  
Material: Aluminium

#### Note!

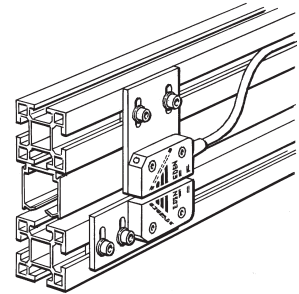
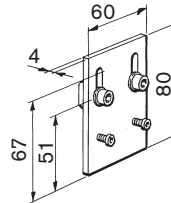
Two fittings are needed for a complete Eden.



#### Eden Fitting for sliding door (flush with fence)

Designation: JSM D4J  
Article number: 2TLJ042020R4000  
Pre-assembled with: Screws and Nuts  
Material: Aluminium

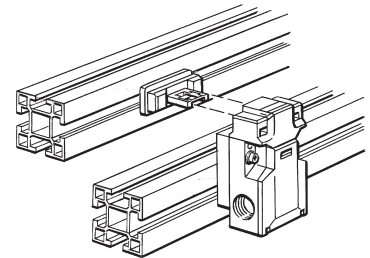
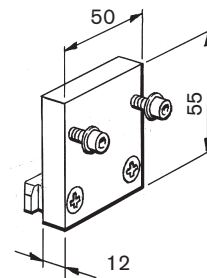
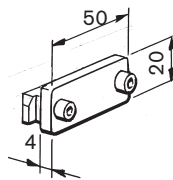
Note! One JSM D4H and one JSM D4J are needed for a complete unit.



### Fittings for JSNY5 Interlock Switches

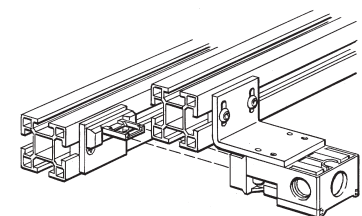
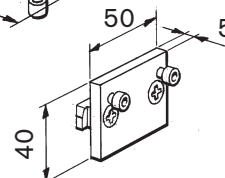
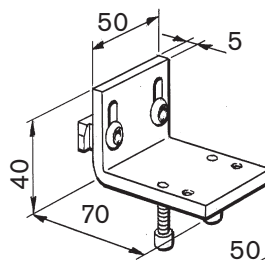
#### Conventional opening door Interlock Switch Fittings.

Designation: JSM D4A  
Article number: 2TLJ040033R0900  
Pre-assembled with: Screws and Nuts  
Material: Zinc-plated steel



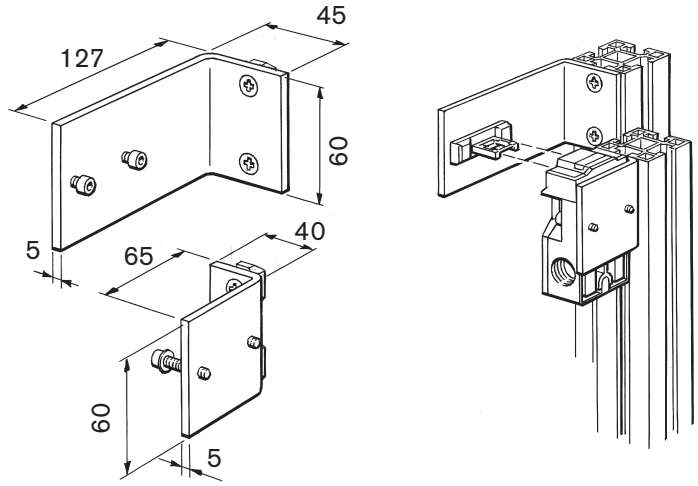
#### Conventional opening door Interlock Switch Fittings.

Designation: JSM D4AA  
Article number: 2TLJ040033R3400  
Pre-assembled with: Screws and Nuts  
Material: Zinc-plated steel



### Sliding Door Interlock Switch Fittings

Designation: JSM D4B  
Article number: 2TLJ040033R1000  
Pre-assembled with: Screws and Nuts  
Material: Zinc-plated steel

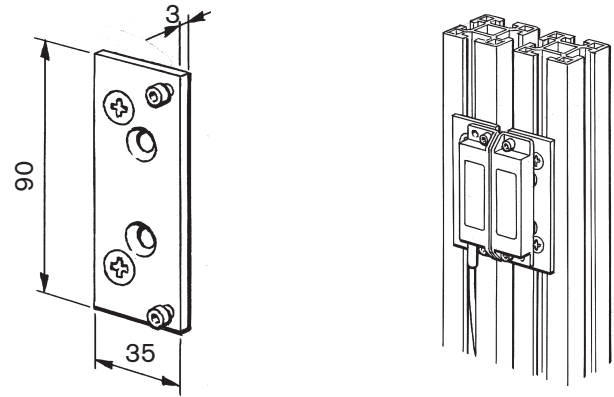


### Fittings for Magnet Switches JSNY7

#### Hinged door Magnet Switch Fittings

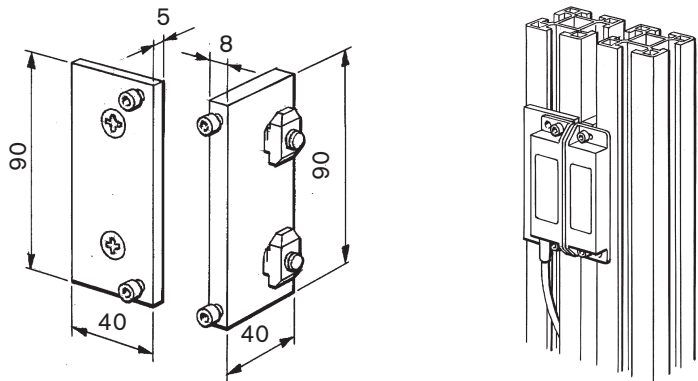
Designation: JSM D4E  
Article number: 2TLJ040033R1800  
Pre-assembled with: Screws and Nuts  
Material: Aluminium

**Note!** Two fittings are needed for a complete JSNY7.



#### Sliding Door Magnet Switch Fittings

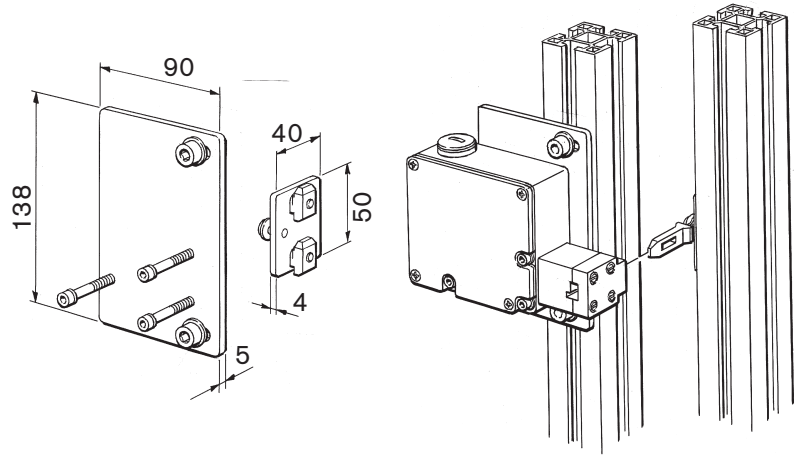
Designation: JSM D4G  
Article number: 2TLJ040033R3300  
Pre-assembled with: Screws and Nuts  
Material: Aluminium



## Fittings for Interlock Switches JSNY8 and JSNY9

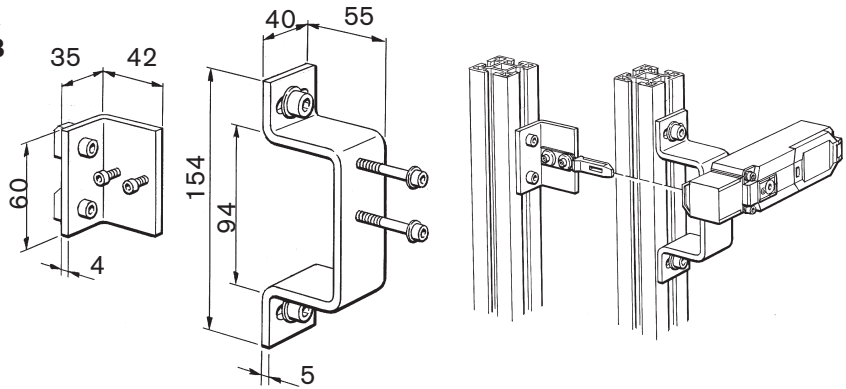
### Sliding Door Interlock Switch for JSNY8 Fittings.

Designation: JSM D4D  
Article numbers: 2TLJ040033R1700  
Pre-assembled with: Screws and Nuts  
Material: Zinc-plated steel



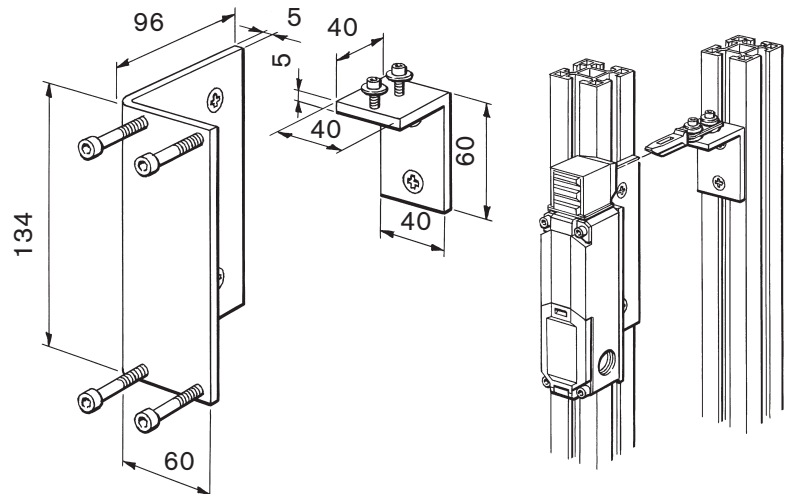
### Conventional opening door Interlock Switch Fittings for JSNY9 and JSNY8

Designation: JSM D4C  
Article number: 2TLJ040033R1600  
Pre-assembled with: Screws and Nuts  
Material: Zinc-plated steel



### Sliding door Interlock Switch Fittings for JSNY9

Designation: JSM D4F  
Article number: 2TLJ040033R3000  
Pre-assembled with: Screws and Nuts  
Material: Zinc-plated steel



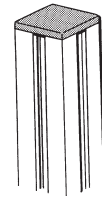
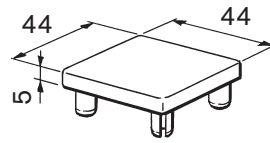
## TERMINAL CAPS AND STRIPS

Terminal caps are available to cover profile ends, thus eliminating sharp edges. Strips are also available, both narrow and wide, to cover the side of the fencing profile.

### Terminal Caps

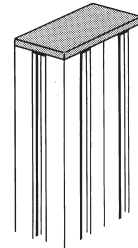
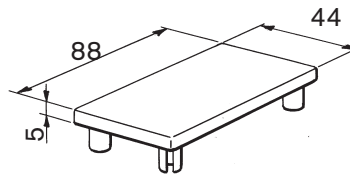
#### Terminal Cap for JSM A44A

Designation: JSM L1A (yellow)  
JSM L1B (grey)  
Article numbers: 2TLJ040034R0000 (JSM L1A)  
2TLJ040034R0300 (JSM L1B)  
Material: Polyamide  
Dimensions: 44x44 mm



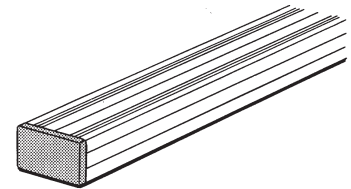
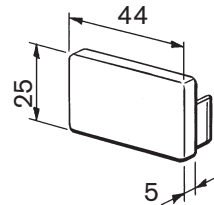
#### Terminal Cap for JSM A4488A

Designation: JSM L4A (yellow)  
JSM L4B (grey)  
Article numbers: 2TLJ040034R0400 (JSM L4A)  
2TLJ040034R0500 (JSM L4B)  
Material: Polyamide  
Dimensions: 44x88 mm



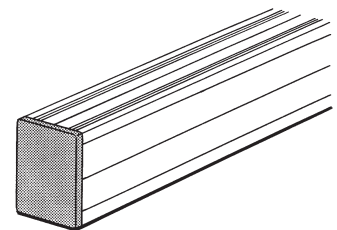
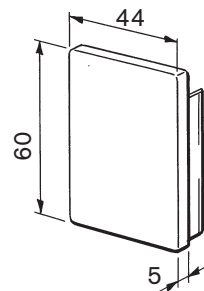
#### Terminal Cap for JSM A25

Designation: JSM L2  
Article number: 2TLJ040034R0100  
Material: Polyamide, grey  
Dimensions: 44x25 mm



#### Terminal Cap for JSM A60

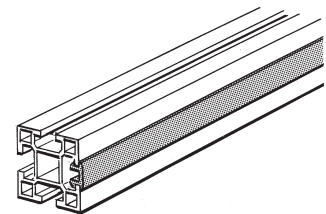
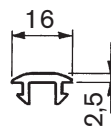
Designation: JSM L3  
Article number: 2TLJ040034R0200  
Material: Polyamide, grey  
Dimensions: 44x60 mm



### Cover Strip

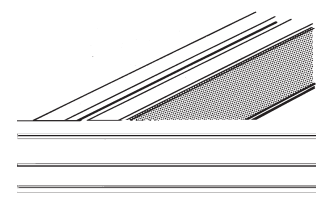
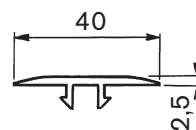
#### Narrow Cover Strip, for JSM A44A, JSM A44A, JSM A4488A and JSM A8888

Designation: JSM T3: Yellow\*  
JSMT3B: Grey\*  
Article numbers: 2TLJ040037R3100 (JSM T3A)  
2TLJ040037R3200 (JSM T3B)  
Material: ABS  
Dimensions: 16 mm  
Order Unit: 2 m



#### Wide Cover Strip, for JSM A44A, JSM A44A, JSM A4488A and JSM A8888

Designation: JSM T2A  
Article number: 2TLJ040037R1900  
Material: PVC, yellow\*, soft material  
Dimensions: 40 mm  
Order Unit: 25 m/coil





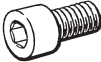















\* Other colours available upon request.



## ACCESSORIES

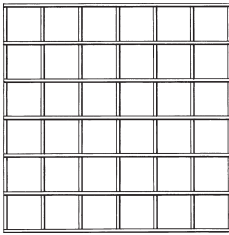
All fittings and door components are delivered complete with screws, washers and nuts pre-mounted.  
For cable ducting the screws, S5B, and nuts, M5B, have to be ordered separately (4 pcs/2m).

Designation	Article number	Description	Dimension	Material	Order Unit
JSM S5B 	2TLJ041039R0100	Screw to cable ducting	M5x12	Zinc Plated Steel	100 pcs/box
JSM S6A 	2TLJ041039R0200	Screw for hinge cross-slotted Z (pozidrive)	M6x12	Zinc Plated Steel	100 pcs/box
JSM S8A 	2TLJ041019R0000	Fixing screw countersunk.	M8x16	Zinc Plated, Dacrolit	100 pcs/box
JSM S8C 	2TLJ041014R0200	Fixing screw for floor fitting and small angle	M8x20	Zinc Plated Steel	100 pcs/box
JSM S8D 	2TLJ041014R0100	Fixing screw	M8x16	Zinc Plated Steel	100 pcs/box
JSM S8E 	2TLJ041019R0100	Fixing screw for Guide rail JSM A56	M8x12	Zinc Plated Steel	100 pcs/box
JSM M4B 	2TLJ040035R0700	Locking nut	M4	Zinc Plated Steel	100 pcs/box
JSM M5B 	2TLJ040035R0400	Locking nut	M5	Zinc Plated Steel	100 pcs/box
JSM M6B 	2TLJ040035R0500	Locking nut	M6	Zinc Plated Steel	100 pcs/box
JSM M8B 	2TLJ040035R0600	Locking nut	M8	Zinc Plated Steel	100 pcs/box
JSM X1 	2TLJ040033R4300	Cable tie	2,5–7,8 mm	Nylon black UV-resistant	10 pcs/box
JSM X2 	2TLJ041900R4300	Expansion-shell bolt	M10x68	Zinc Plated Steel	50 pcs/box
JSM X3 	2TLJ041910R0000	Window cleaning fluid (Antistatic) for polycarbonate sheets. Actuator head 0.5 L.			per can
JSM X4 	2TLJ041911R0100	Mesh clipping tool	L=300		each
JSM B4C 	2TLJ040035R5000	Centring washer steel	Ø4,2	Zinc Plated Steel	100 pcs/box
JSM B5C 	2TLJ040035R5100	Centring washer steel	Ø5,2	Zinc Plated Steel	100 pcs/box
JSM B6C 	2TLJ040035R5200	Centring washer steel	Ø6,2	Zinc Plated Steel	100 pcs/box
JSM B8C 	2TLJ040035R5300	Centring washer steel	Ø8,2	Zinc Plated Steel	100 pcs/box

## SURFACES

The choice of net and surfaces depends, among other things, on the protection distance. In the case of netting, a minimum distance of 200 mm (for anyone aged 14 or older) with a mesh size of 40x40 mm in accordance with EN ISO 13857. For closer protection distances and for noise reduction, solid panels are used. Panels are available in different materials. For protection of welding cells, polycarbonate welding transparencies are used.

### Welded net



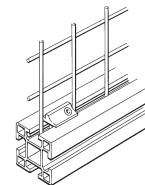
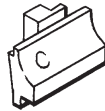
Designation: JSM YN40W\_/WE\_  
 Stitch: 40x40 mm  
 Thread: 3,5 mm

Article no.	Name	Material	Dimensions	Type
2TLJ040040R1300	JSM YN40W1	Steel, black powder coated	2020 x 864 mm	Welded
2TLJ040040R1400	JSM YN40W2	Steel, black powder coated	1074 x 1816 mm	Welded
2TLJ040040R1500	JSM YN40W3	Steel, black powder coated	1074 x 2016 mm	Welded
2TLJ040040R2000	JSM YN40W4	Steel, black powder coated	1474 x 2016 mm	Welded
2TLJ040040R2100	JSM YN40W5	Steel, black powder coated	1474 x 1816 mm	Welded
2TLJ040040R2600	JSM YN40W6	Steel, black powder coated	2020 x 754 mm	Welded
2TLJ040040R2700	JSM YN40W7	Steel, black powder coated	2020 x 1174 mm	Welded
2TLJ040040R1600	JSM YN40W9	Steel, black powder coated	Cut to size	Welded
2TLJ040040R2800	JSM YN40W10	Steel, black powder coated	1474 x 1216 mm	Welded
2TLJ040040R2900	JSM YN40W11	Steel, black powder coated	1074 x 1216 mm	Welded
2TLJ040040R2500	JSM YN40WE1	Stainless steel, SS 2333	2020 x 864 mm	Welded
2TLJ040040R1800	JSM YN40WE2	Stainless steel, SS 2333	1074 x 1816 mm	Welded
2TLJ040040R1900	JSM YN40WE9	Stainless steel, SS 2333	Cut to size	Welded

Other colours, hot-dip galvanized mesh or woven wire mesh netting supplied on request.

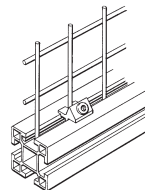
### Net locking for welded netting with outer wire

Designation: JSM NL2  
 Article numbers: 2TLJ040031R0600  
 Material: PA/ABS  
 Quantity: 100 pcs/box

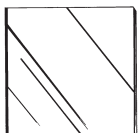


### Net locking for welded and woven wire mesh netting, with or without outer wires

Designation: JSM NL3  
 Article numbers: 2TLJ040031R0800  
 Pre-assembled with: Screws  
 Material: Zinc  
 Quantity: 100 pcs/box



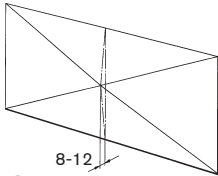
### Shockproof panelling



Plastic panels  
 name: JSM Y\_  
 Other materials can be supplied on request.

### Plastic panel name: JSM Y\_

Article no.	Name	Material	Dimensions	Type
2TLJ040039R1000	JSM YPC5A1	Polycarbonate, uncoloured	5 mm	2020 x 864
2TLJ040039R1100	JSM YPC5A2	Polycarbonate, uncoloured	5 mm	2020 x 1174
2TLJ040039R1200	JSM YPC5A9	Polycarbonate, uncoloured	5 mm	Cut to size
2TLJ040039R2400	JSM YPC3AC9	Polycarbonate, dark tint, weld-protected	3 mm	Cut to size
2TLJ040039R2500	JSM YPC3AC1	Polycarbonate, dark tint, weld-protected	3 mm	2050x3000
2TLJ042150R0600	JSM YG6A9	Laminated glass	6,4 mm	Cut to size



Cross-bent sheet metal panel  
Other materials are available on request.

### Steelplate

Article no.	Name	Material	Thickness	Dimensions
2TLJ040039R0700	JSM YGP1A9	Galvanised sheet metal, x-cracked	1 mm	Cut to size
2TLJ040039R0900	JSM YGP2A9	Galvanised sheet metal, x-cracked	1,5 mm	Cut to size

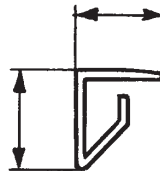
Painted sheet metal can be supplied on request.

### Panel fixings

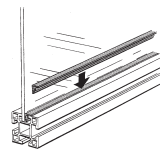
Designation: JSM PL1 (for 5 mm panels)  
JSM PL2 (for 4 mm panels)

Material:  
JSM PL1: PVC, black  
JSM PL2: PVC, black

Quantity: 50 pcs/package



Article no.	Name	Length
2TLJ040038R0100	JSM PL1A	842 mm
2TLJ040038R0200	JSM PL1B	1152 mm
2TLJ040038R0300	JSM PL1C	2000 mm
2TLJ040038R0400	JSM PL1D	732 mm
2TLJ040038R0700	JSM PL2A	842 mm
2TLJ040038R0800	JSM PL2B	1152 mm
2TLJ040038R0900	JSM PL2C	2000 mm
2TLJ040038R1000	JSM PL2D	732 mm



### For metal panel fixings

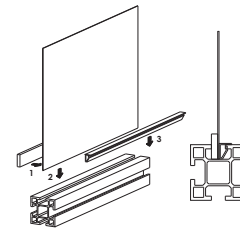
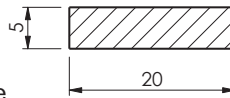
Designation: JSM G2

Article numbers: 2TLJ040038R0600

Material: Cell rubber, self-adhesive

Dimension: 5 x 20 mm

Standard package: 10m/roll



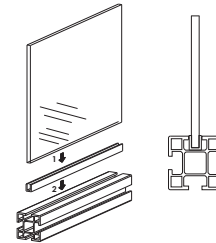
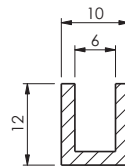
### Sheet securing glass

Designation: JSM G3

Article numbers: 2TLJ041930R0600

Material: EPDM

Standard package: 50m/roll



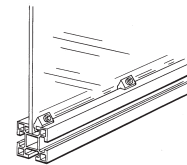
### Panel lockings

Designation: JSM PL3 (for 5 mm panels)

Article numbers: 2TLJ040038R1100

Pre-assembled with: Screws

Material: Zinc



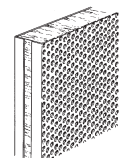
### Soundabsorbing

Article no.	Name	Material	Thickness	Dimensions	Kg/m <sup>2</sup>
2TLJ040037R1100	JSM YLA25A9	outside – painted sheet metal inside - galvanised preformed sheet metal core – steel wool	25 mm	Cut to size	13,8
2TLJ040039R2600	JSM YLA25A1	check out art.nr 2TLJ040037R1100 above	25 mm	1963x1200	13,8
2TLJ042150R2300	JSM YLA50A9	check out art.nr 2TLJ040037R1100 above	50 mm	Cut to size	21,0

Cut to size – max dimension 2000 x 1200

#### NOTE!

Mounting profile JSM AS1 used for JSM YLA25A\_ and mounting profile  
JSM AS3 used for JSM YLA50A\_



# Safety Roller Door

## Approvals:



## Applications:

Allowing access to risk areas

Protection from ejected particles, e.g chips and welding splash

## Features:

Highest safety level according to EN ISO 13849-1

Prevents unintentional start

Withstands harsh environments

Quick operation

High reliability

Noise absorbing



## Roller door for short safety distances and narrow spaces

Safety Roller Doors make it possible to have a short safety distance to the machine. The noise absorbing roller door is compact and it can therefore be placed in narrow spaces. It is easy and quick to access the machine or gain access for servicing with the Safety Roller Door.

It demands a minimum of maintenance and offers reliable operation. To be able to start the machine/plant the door has to be completely closed. The closed position is monitored by the Eden non-contact sensor from ABB Jokab Safety. As soon as the door begins to open the Eden sends a signal to the machine/plant via the Pluto Safety-PLC from ABB Jokab Safety. The roller door fulfills safety category 4 together with Eden and Pluto.

### Protects against welding splash

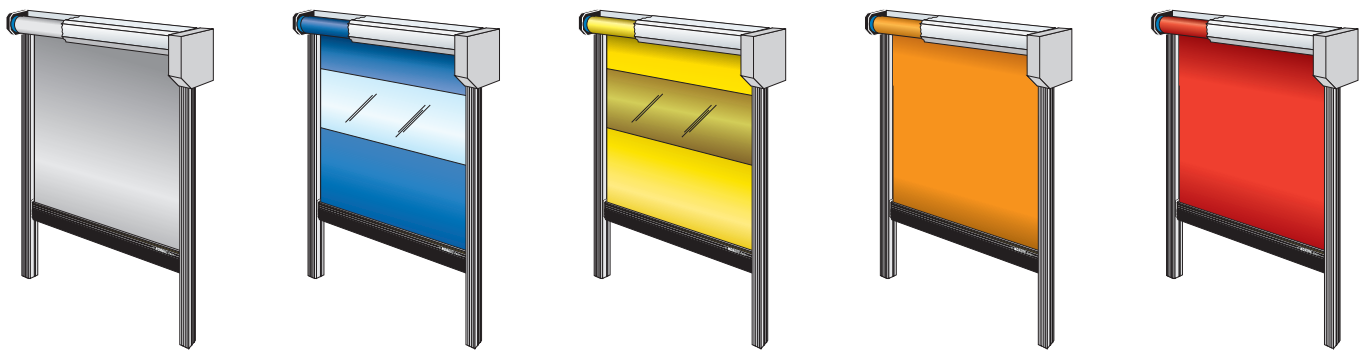
The roller door protects against ejected particles, such as chips and welding splash. The roller door fabric is also resistant towards a great number of chemicals, which permits it to be installed in harsh environments.

### Simple assembly

The Safety Roller Door is simple to assemble because it consists of few components and it is supplied partly pre-assembled. It can be integrated into the Quick-Guard fencing system from ABB Jokab Safety as well as in other types of fencing systems. It can also be installed on the machine or other permanent construction.

### Customized roller door

This door design is easy to customize. The largest possible opening width is 4000 mm and the largest possible opening height is 3500 mm. The maximum size of the door fabric is 10 m<sup>2</sup>. If a larger door fabric is desired, contact ABB Jokab Safety. The door is supplied as standard with a light-grey door fabric. Other colours can also be supplied. The roller door can be supplied with a viewing window in full width and at an optional height. The viewing window can also be made in a special material that protects against welding splash.



## Function

### Highest protection in accordance with EN ISO 13849-1

The monitoring of the door's position by two Eden sensors together with a Pluto monitoring unit fulfills kat. 4/PL e enligt EN ISO 13849-1. These units are certified by TÜV.

### Functions

The door protects against access to moving parts in the machine/plant. The production process can begin when the door is fully closed. The closed position is monitored by an Eden sensor on both sides of the door. Because the door is monitored by Eden sensors at both sides of the door it is impossible to lift one side of the door and reach into the risk area without the machine/plant stopping. When the door has moved a maximum of 10 mm upwards a stop signal is sent to the protected machine/plant. The Eden sensors are monitored by a Pluto Safety-PLC which has failsafe outputs for stopping the machine/plant in the risk area and to control the door.

The door also protects from particles ejected by the production process, e.g. chips and welding splash. It has a good sound absorbing ability. Because the door operates quickly, at 0.8-1.0 m/s, the operator has a good access to the machine area. The door is equipped with a safety

contact strip in the bottom preventing it from causing personal injury on any person. When the safety contact strip is affected the door is compressed, the door movement reverses to move upwards. The opening and closing of the door can be controlled via the buttons or via the signals from the control system of the machine.

### Prevents an unintentional start

When the door is located in front of the machine/plant, where the operator can enter the area with his entire body, safe interlocking of the door's downward movement is needed. This is to prevent the machine from being started from the outside when somebody is inside the roller door.

One way to solve this is to use a horizontal light curtain which covers the area which the operator can occupy within the risk area. Another solution is to place double light beams in the opening, combined with a reset facility. Yet another solution is to use time-reset. A time-reset button is placed inside the risk area and a button is placed outside the risk area. First, the button in the risk area should be pressed and thereafter (within a certain amount of time, e.g. 5 seconds) the button outside should be pressed. After this the door can be manoeuvred downwards.

## Safety distances & standards

### Minimum safety distance

For the roller door to be able to provide good protection it has to be installed a sufficient distance away from moving machine parts.

### Useful standards

EN ISO 13857 Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs.

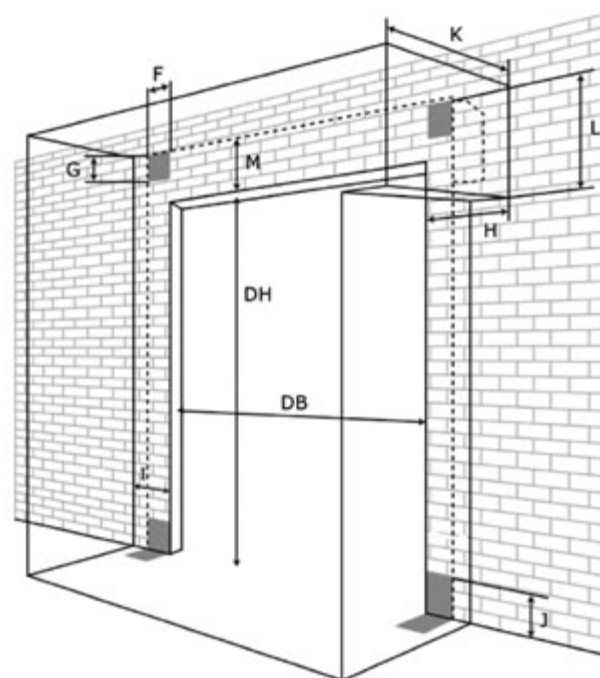
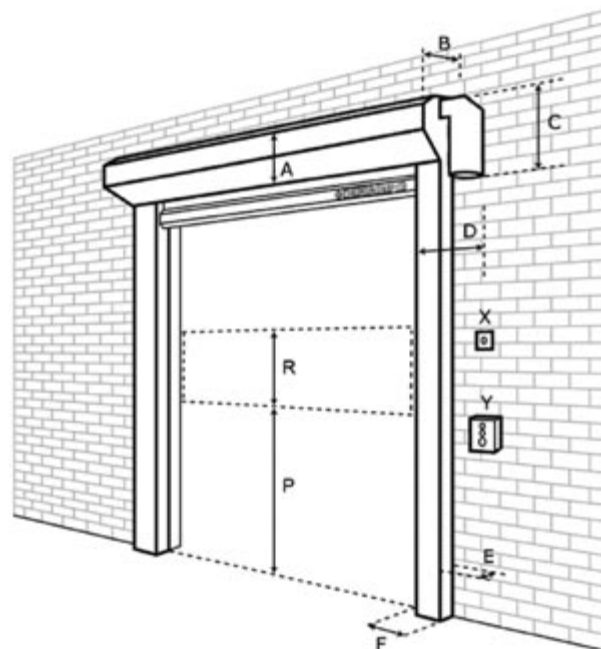
EN ISO 13855 Safety of machinery – Positioning of safeguards with respect to the approach speeds of parts of the human body.

**Note.** The roller door has good protection against welding splash and smaller ejected particles from the the production area. The roller door is not intended to act as collision protection. The installer of the roller door has the responsibility of ensuring that sufficient safety distance against moving machine parts is provided.



## Technical data – Safety Roller Door

<b>Manufacturer</b>	ABB AB/Jokab Safety, Sweden
<b>Colour</b>	Frame - aluminium, door cloth - grey Other colours available on request.
<b>Ordering data</b>	Safety Roller door + viewing window. Viewing window with weld splash protection. Daylight height & Daylight width.
<b>Maximum size, door cloth</b>	10 m <sup>2</sup> If a larger size is needed, contact ABB Jokab Safety AB.
<b>Maximum width</b>	4000 mm
<b>Maximum height</b>	3500 mm
<b>Driving unit</b>	Three-phase motor 200-415 VAC 50-60 Hz
<b>Speed, roller door</b>	0.8 – 1.0 m/s up/down
<b>Max. number of cycles/minute</b>	3 (during continuous operation 24 hours a day)
<b>Door fabric material</b>	Multi-layer polyester fabric cloth with PVC, 2 mm thick or transparent PVC. The viewing window can also be supplied with protection against welding flash light. (Removes 99% of the UV-transmission from the welding process)
<b>Door fabric colour</b>	Grey (RAL 7038), can be supplied with recessed window (only in full width). Other colours are available.
<b>Material frames</b>	Aluminum extrusion
<b>Material upper bracket</b>	4 mm steel painted black
<b>Sound absorption</b>	approx. 10 dB
<b>Ambient temperature</b>	0°C to +55° When operating in temperatures below -5°C, the oil in the gear-box should be replaced with an oil suitable to withstand cold temperatures.
<b>Safety level</b>	Category 4/PL e, in accordance with EN ISO 13849-1
<b>Durability towards chemicals</b>	Ammoniac, sodium hydrate, phosphoric acid, tartaric acid, oxalic acid, hydrochloric acid, citric acid, acetic acid, oil, detergent, calcium chloride (contact ABB Jokab Safety for more specifications)
<b>Control monitoring unit for roller door</b>	ABB Jokab Safety's Safety-PLC, Pluto
<b>Outputs</b>	4 safe outputs for connection to machine/plant.
<b>Monitoring of position of the roller door</b>	2 Eden sensors one on each side of the door.
<b>Contact strip</b>	Mounted on the bottom frame of the door fabric. The door motion is reversed if the contact strip is compressed.



A	260
B	270
C	400
D	200
E	120
F	80
P	Optional
R	Optional

DB	
DH	
F	80
G	250
H	320
I	150
J	100
K	500
L	500
M	450

