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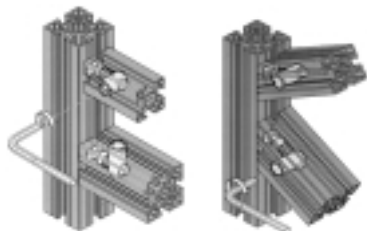
## Overview



Extruded Aluminium profiles, service proven over many years, for do-it-yourself assembly of bespoke structures. All the profiles feature apertures for accommodating standard threads and connectors, and consequently jointing arrangements can be configured to suit your application's specific requirements.



MHS280



Assembly is completed once the parts have been bolted together, forming perfectly fitting rigid constructions of exceptional strength. Structures can easily be adapted to suite changing requirements, for optimum utilisation. The comprehensive range of standard accessories ideally supplements the modular profile construction kit. It adds enormous flexibility to the build system, enabling it to be utilised for an extensive range of different applications.

### 'T' slot connector technology

- Quick and simple assembly/disassembly method reduces build time and requires standard hand tools only. Significant savings on total build cost can be obtained when compared to conventional methods

### Anodised to E6/EV1

- No requirement to paint. Reduced labour/material costs, and less of an environmental concern

### Produced to DIN 17675/Part 31

- This standard guarantees quality and repeatability of components

### Modularity with large accessory range

- Flexible and adaptable structures can be designed and installed

### Internal connection chambers

- Allows media (AIR) to be transferred along extrusion length and consequently reduces supply pipe work requirements and exposure

### High Capacity Star Bearings available for system

- Proven bearing design that can be mounted directly reduces design and build costs

MHS281

## Profile Types

- Extruded Aluminium – Length to 6m
- Produced to DIN 17615 Part 3
- Anodised to E6/EV1
- Optimum Section Design
- 18 Profile Types

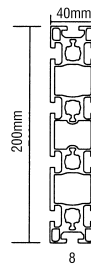
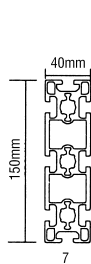
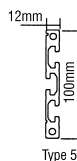
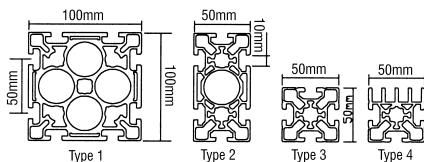


18 Aluminium profiles are available. These can be supplied in standard lengths (1 metre, 2 metre or 3 metre options) with square ends, or alternatively in a cut length format, to your specific mm requirement (6000mm maximum – 100mm minimum), with either square end or specified bevel end options.

All profiles are attributed to a group (i.e. PB50, PB40, PB35 or PB25). This classification is important when selecting the joint connector.

MHS282

### PB50 Group Sections



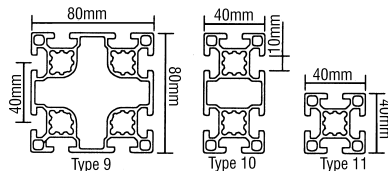
#### Sizes within the Group

- Type 1 100 x 100mm
- Type 2 50 x 100mm
- Type 3 50 x 50mm
- Type 4 50 x 50mm guide
- Type 5 12 x 100mm
- Type 6 40 x 100mm
- Type 7 40 x 150mm
- Type 8 40 x 200mm

BAS106

Type	Length (m)	Order Code	Price Each		
			1+	3+	5+
1	1	724-0934			
1	2	724-1112			
1	3	724-1290			
2	1	724-0946			
2	2	724-1124			
2	3	724-1306			
3	1	724-0958			
3	2	724-1136			
3	3	724-1318			
4	1	724-0960			
4	2	724-1148			
4	3	724-1320			
5	1	724-0971			
5	2	724-1150			
5	3	724-1331			
6	1	724-0983			
6	2	724-1161			
6	3	724-1343			
7	1	724-0995			
7	2	724-1173			
7	3	724-1355			
8	1	724-1008			
8	2	724-1185			
8	3	724-1367			

### PB40 Group Sections



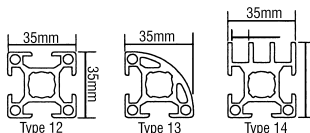
#### Sizes within the Group

- Type 9 80 x 80mm
- Type 10 40 x 80mm
- Type 11 40 x 40mm

BAS107

Type	Length (m)	Order Code	Price Each		
			1+	3+	5+
9	1	724-1010			
9	2	724-1197			
9	3	724-1379			
10	1	724-1021			
10	2	724-1203			
10	3	724-1380			
11	1	724-1033			
11	2	724-1215			
11	3	724-1392			

### PB35 Group Sections



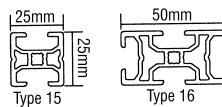
#### Sizes within the group

- Type 12 35 x 35mm
- Type 13 35 x 35mm quadrant
- Type 14 35 x 40mm guide

BAS108

Type	Length (m)	Order Code	Price Each		
			1+	3+	5+
12	1	724-1045			
12	2	724-1227			
12	3	724-1409			
13	1	724-1057			
13	2	724-1239			
13	3	724-1410			
14	1	724-1069			
14	2	724-1240			
14	3	724-1422			

### PB25 Group Sections



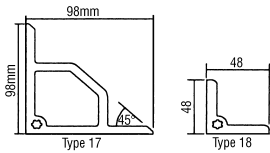
#### Sizes within the group

- Type 15 25 x 25mm
- Type 16 25 x 50mm

BAS109

Type	Length (m)	Order Code	Price Each		
			1+	3+	5+
15	1	724-1070			
15	2	724-1252			
15	3	724-1434			
16	1	724-1082			
16	2	724-1264			
16	3	724-1446			

## Gusseted Angle and Angle Section



**Sizes within the group**  
 Type 17 98 x 98mm angle  
 Type 18 48 x 48mm angle

BAS110

Type	Length (m)	Order Code	Price Each		
			1+	3+	5+
17	1	724-1094			
17	2	724-1276			
17	3	724-1458			
18	1	724-1100			
18	2	724-1288			
18	3	724-1460			

## Connectors

### Connectors

- All profile joints are bolted together
- A connector is used to provide perfect fitting, rigid and exceptionally strong joints

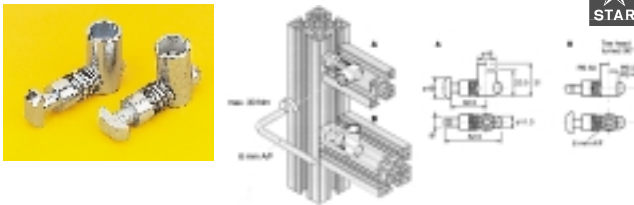
The number of jointing connectors required per joint can be estimated using the following calculation:

Number of slots on wide side x number of slots on narrow side

Please note that for some section combinations this rule of thumb does not apply.

MHS333

### Basic Connector

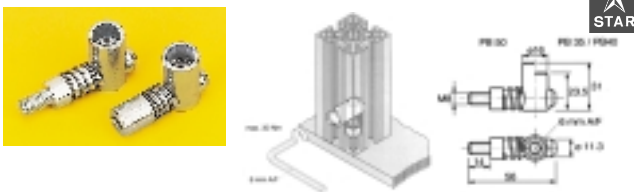


This high-tensile connector is employed for basic integrated rectangular joints, with a choice of two cylindrical nut positions. The size PB 50 connector (long cylindrical nut) can only be employed for profiles of the same category. (Note: Generally, connectors based on the size PB 35 and 40 sections can also be used for size PB 50 profiles.) The resultant joints are equivalent in terms of strength and function.

MHS286

Description	Order Code	Price Each		
		1+	5+	10+
Connector PB 25/50	724-1732			
Connector PB 25/50, at 90°	724-1744			
Connector PB 40/35	724-1756			
Connector PB 40/35, at 90°	724-1768			

### Threaded Connector

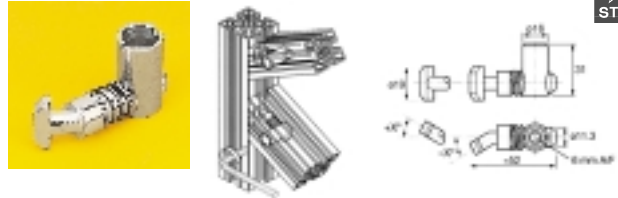


These M8 threaded connectors (male and female options) are designed for size PB 50, 40 and 35 selections. They offer enormous adaptability and can be used to connect the profile to any type of element which can be provided with a tapped hole of appropriate size. The joint can be subjected to tensile, compression or bending loads, but is not twist-resistant.

MHS287

Description	Order Code	Price Each		
		1+	5+	10+
Male PB25/50	724-1999			
Male PB25/35/40	724-2001			
Male PB25/35/40/50	724-2116			
Female PB25/50	724-2098			
Female PB25/35/40	724-2104			
Female PB25/35/40/50	724-2128			

## Angle Connector

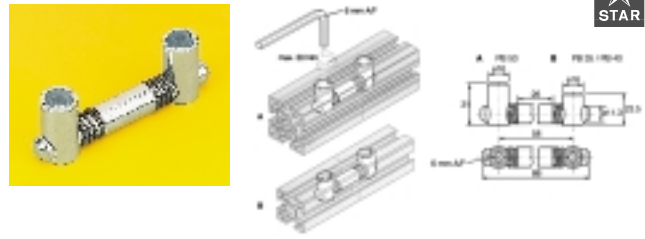


There is a range of angle connectors available with angle increments of 15° for securing angled section joints. These connectors can be employed for all profiles of the same basic size.

MHS288

Description	Order Code	Price Each		
		1+	5+	10+
Angled PB 25/50, +45°	724-1770			
Angled PB 25/50, +30°	724-1781			
Angled PB 25/50, +15°	724-1793			
Angled PB 25/50, -45°	724-1800			
Angled PB 25/50, -30°	724-1811			
Angled PB 25/50, -15°	724-1823			
Angled PB 25/35/40, +45°	724-1835			
Angled PB 25/35/40, +30°	724-1847			
Angled PB 25/35/40, +15°	724-1859			
Angled PB 25/35/40, -45°	724-1860			
Angled PB 25/35/40, -30°	724-1872			
Angled PB 25/35/40, -15°	724-1884			

## Linear Connector



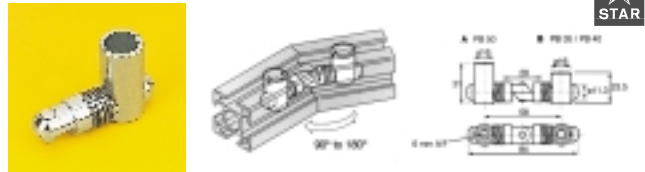
These are straight profile connectors for size PB 35, 40 and 50 sections. With these linear connectors, any number of profiles of the same type can be joined end to end, an even simple joints offer high loading and anti-twist capacities. As a result, your construction can be ideally matched to the application requirements.

Note: These connectors are also recommended if bulky constructions are to be dismantled into easily transported units.

MHS289

Description	Order Code	Price Each		
		1+	5+	10+
PB 50	724-1896			
PB 35/40	724-1902			

## Variable Connector



This variable profile connector enables you to connect sections of the same basic size end to end at any angle between 90° and 180°. Even simple joints offer high loading and anti-twist capacities. As a result, your construction can be ideally matched to the application requirements.

MHS290

Description	Order Code	Price Each		
		1+	5+	10+
Variable PB 25/50	724-1914			
Variable PB 25/35/45	724-1926			

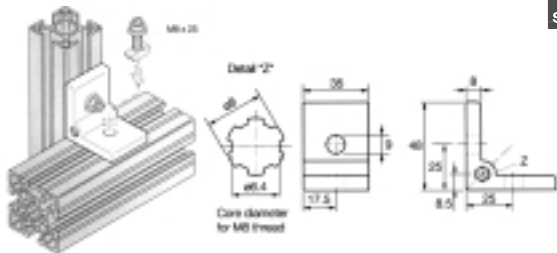
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## Connectors — continued

### Angle Cleat 48 48 35



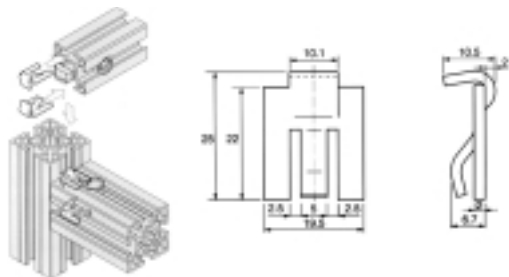
The 48 48 35 angle cleat cut from the corresponding Aluminium profile is a multi-purpose connector. Its drill hole dimensions allow combinations of different types of profile.

MHS303

	Order Code	1+	5+	10+
48x48x35 Angle cleat	724-2207			

	Order Code	1+	10+	20+
Tee Bolt Set, M8 x 25	724-2025			

### Twist Lock

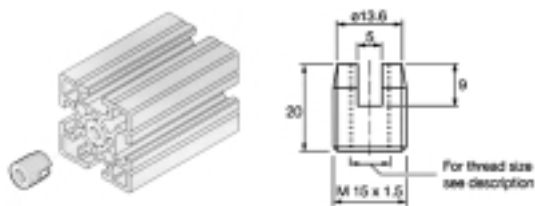


This twist lock provides profile connections of a higher quality. The profile joints are positively locked against twisting. In addition, assembly is easier as the twist lock aligns the profile sections flush with each other.

MHS304

Order Multiple = 50	Order Code	50+	100+	200+
Twist Lock	724-2219			

### Thread Reducer Insert



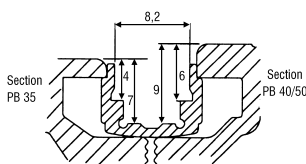
This self-tapping thread reducer insert can be wound into the central profile aperture using one of the insert drivers described on page 1476. This provides a female thread alternative of M5, M8 or M10 in the end of a profile.

MHS305

Size	Order Code	1+	5+	10+
M6	724-5610			
M8	724-5609			
M10	724-5622			

## Accessories

### Slot Profile



This plastic profile can be employed for various applications:  
 - as a glazing/panel rail  
 - screen surround  
 - slot liner or slot closer



As a glazing/panel rail, it is suitable for element thickness of 6 mm and 8 mm. Panels of 10 mm in thickness can be directly inserted into the Aluminium profile slot. Functioning as a slot closer, this profile effectively covers and retains cables and leads ducted along the slots.

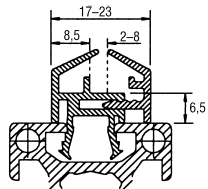
Important: Please note that the panel size required will vary according to thickness (different location depths in the slot).

Applications example: partitions, screens and guards, panelling, slot closers. The slot profile material can be cut to length as required using a hacksaw.

MHS306

	Order Code	1+	5+	10+
Slot profile, 2m	724-1653			

### Protective Panel Profile



This protective panel profile can be employed for various applications:

- as a glazing/panel rail
- screen surround
- protective panel frame

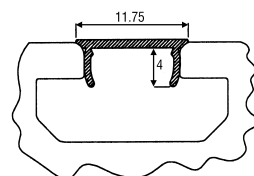
As a protective panel frame, it is suitable for element thickness of 2 mm to 8 mm. Panes or panels of 10 mm in thickness can be directly inserted into the Aluminium profile slot.

Application examples: partitions, panelling, screens and guards. The profile material can be cut to length as required using a hacksaw.

MHS307

	Order Code	1+	3+
Panel Profile, 2m	724-1665		

### Aluminium Slot Closure Profile



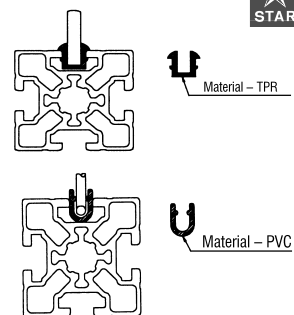
Aluminium slot closure profile to seal off profile slots. The tight fitting profile snaps into place and is particularly suited for dirty and dusty environment, design enhancement and as covers for data cables.

MHS308

	Order Code	1+	3+	5+
Slot Closure, 3m	725-5986			

### Panel and Mesh In-fills

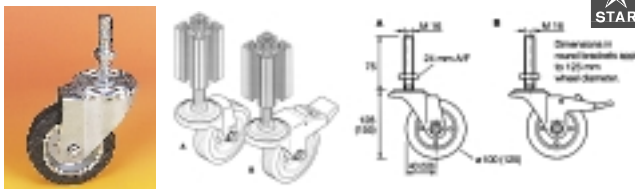
- Panel 'u' in-fill is used to locate panels 4-5mm thickness
- Panel 'wedge' in-fill is used to locate panels 4-5mm thickness
- Mesh in-fill is used to locate wire mesh 4mm thickness



MHS309

Description	Order Code	1+	3+	5+
Mesh in-fill, 1m	724-5660			
Panel 'u' in-fill, 1m	724-5671			
Panel 'wedge' in-fill, 1m	724-5683			
Mesh in-fill, 10m	724-5695			
Panel 'u' in-fill 10m	724-5701			
Panel 'wedge' in-fill, 10m	724-5713			
Mesh in-fill, 50m	724-5725			
Panel 'u' in-fill, 50m	725-5962			
Panel 'wedge' in-fill, 50m	725-5974			

### Swivel and Fixed Castor

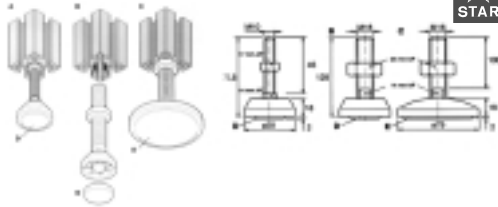
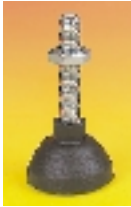


Swivel and fixed castors are available in two sizes for construction of your wheeled frames, benches or trolleys. The fixed castors should be employed for the non-steering axes. Loading capacities are 700N (100mm dia.) and 1000N (125mm).

MHS310

Description	Order Code	Price Each		
		1+	2+	4+
Fixed, 100mm dia.	724-4927			
Fixed, 125mm dia.	724-4939			
Swivel, 100mm dia.	724-4940			
Swivel, 125mm dia.	724-4952			
Swivel, 100mm dia. and brake	724-4964			
Swivel, 125mm dia. and brake	724-4976			

## Adjustable Plastic Footpad

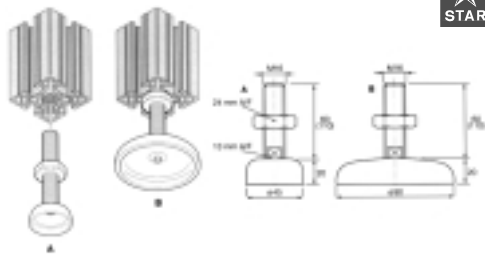


This adjustable, self-levelling footpad is needed when constructing stands, frames and benches. There are various pad sizes and spindle lengths available.

MHS311

Description	Order Code	Price Each		
		1+	2+	4+
M10 45, 39mm $\varnothing$ foot	724-4988			
M16 100, 39mm $\varnothing$ foot	724-4990			
M16 100, 79mm $\varnothing$ foot	724-5002			
39mm $\varnothing$ pad rest	724-5142			
79mm $\varnothing$ pad rest	724-5154			

## Adjustable Steel Footpad

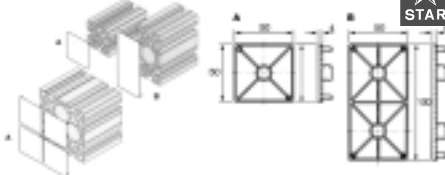


This adjustable, self-levelling footpad is needed when constructing stands, frames and benches. There are various pad sizes and spindle lengths available.

MHS312

Description	Order Code	Price Each		
		1+	2+	4+
M16 60, 45mm $\varnothing$ foot	724-5014			
M16 110, 45mm $\varnothing$ foot	724-5026			
M16 60, 90mm $\varnothing$ foot	724-5038			
M16 110, 90mm $\varnothing$ foot	724-5040			

## Profile End Closers



These are the end closers, or caps, which can be employed for size PB 50 profiles. In applications requiring flush end faces, please remember that the closers extend a distance of 4mm beyond the profile ends so that the lengths of the sections involved have to be correspondingly shortened.

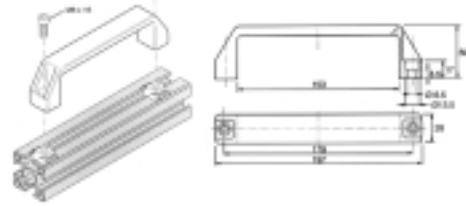
MHS313

Description	Order Code	Price Each		
		1+	10+	20+
50 x 50	724-5051			
50 x 100	724-5063			
40 x 40	724-5130			
35 x 35	724-5075			
35 x 35 quadrant	724-5087			
40 x 100	724-5300			
40 x 150	724-5312			
80 x 80	724-5324			
100 x 100	724-5336			
25 x 25	724-5348			
25 x 50	724-5350			

## Handle



This handle can be fitted to maintenance doors, flaps and hinged panels. In addition to the mounting method shown in the illustration, it can also be bolted directly onto the flat surfaces (door leaf or door frame).



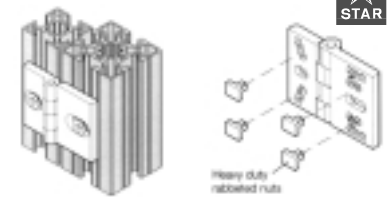
MHS314

Description	Order Code	Price Each		
		1+	3+	5+
Plain Handle	724-5208			
Handle	724-5099			

Description	Order Code	Price Each		
		1+	10+	20+
Button Nut, M8	724-5567			

Description	Order Code	Price Each		
		100+	200+	500+
Cap, Head Screw	724-5415			

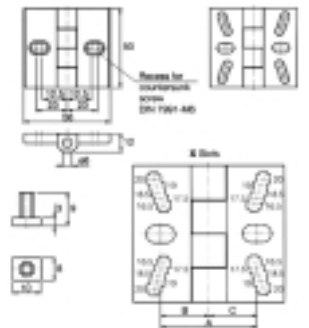
## Universal Hinge



Universal hinge with various locating slots in the leaves to accommodate various profile types and their combinations. The bolted joints together with precise location in the slots by means of heavy duty rabbeted nuts provide for secure, anti-twist mounting.

- Hinge 01: Recommended for joining PB35 section profiles to each other.
- Hinge 02: Recommended for joining PB35 section profiles to PB 40 and PB 50 sections.
- Hinge 03: Recommended for joining PB40 and PB 50 section profiles.

All hinges supplied with rabbeted nuts.



MHS315

Description	Order Code	Price Each		
		1+	3+	5+
Hinge 01	724-5105			
Hinge 02	724-5117			
Hinge 03	724-5129			

Description	Order Code	Price Each		
		1+	10+	20+
Button Nut, M6	724-5531			
Spring Registered Nut, M6	724-5555			

Description	Order Code	Price Each		
		50+	100+	200+
Plain Insertion Nut, M6	724-5464			

Description	Order Code	Price Each		
		10+	20+	50+
Reg. spring for ins. nut	724-5580			

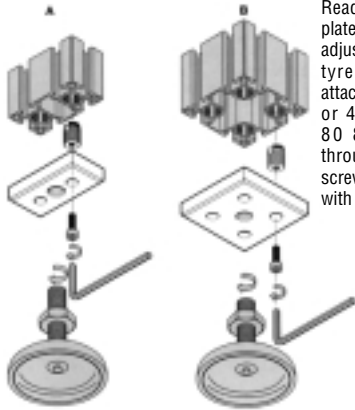
Description	Order Code	Price Each		
		100+	200+	500+
M6 x 12 screw PB35	724-5427			
M6 x 16 screw PB40/50	724-5439			



### Order Multiple=10

Spacers	Order Code	10+	20+	50+
01-2mm	724-5245			
01-3mm	724-5257			
01-5mm	724-5269			
02-2mm	724-5270			
02-3mm	724-5282			
02-5mm	724-5294			

### Foot Plates



Ready to mount Aluminium foot plates with M16 tapped holes for adjustable steel or plastic footpads, rubber tyre fixed or swivel castors, or other attachments. The foot plates come with 2 or 4 holes to suit Aluminium profiles 80 80, 40 80 and 50 100. These through holes accommodate socket head screws for mounting onto profiles provided with self-tapping thread inserts.

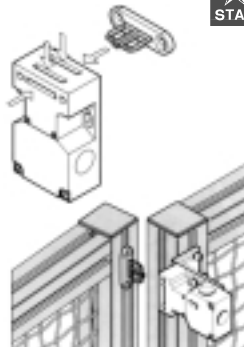
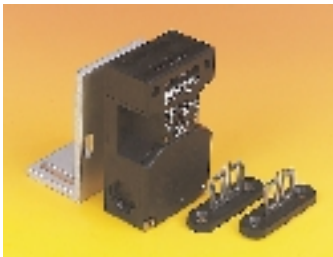


MHS323

Description	Order Code	1+	3+	5+
Foot plate 50x100	724-5210			
Foot plate 40x80	724-5180			
Foot plate 80x80	724-5191			

	Order Code	1+	5+	10+
Mounting kit	724-2311			

### Safety Switch



The safety switches comply with the test principles for position switches with positive opening operation for the safety function BG-GS-ET-15. These switches can be mounted on protective grids, hoods and doors. The safety contacts close when the actuating clip is pushed in (positive opening after 8mm travel.) The switch housing must not be used as a stop.

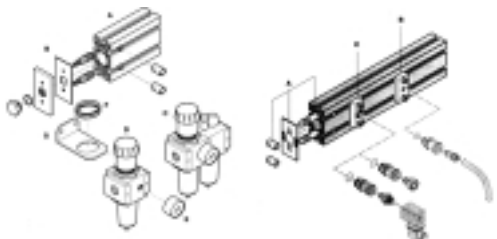
Safety switch 01 with positive operation safety contact and one normally open contact. Resetting force is 3N.

Safety switch 02 with two positive operation safety contacts without resetting force, but with a holding force on 5 N when the clip is inserted.

MHS324

Description	Order Code	1+	3+	5+
Type 01 with clip	724-5646			
Type 02 with clip	724-5658			
Mounting kit	724-2359			

### Compressed Air Duct and Distributor System

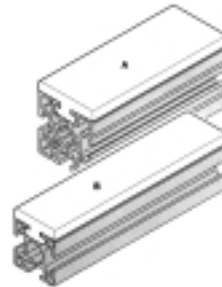


These components can be fitted to a 50x100mm extrusion to produce an air distribution system, reducing the quantity and exposure of pneumatic pipe work.

MHS325

Description	Order Code	1+	3+
Flange mounting kit	724-2360		
Extension kit incl. flange seal	724-2372		
G ¼" consumer port	724-2384		
G ½" consumer port	724-2396		

### Cheek Profile



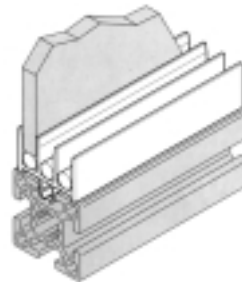
Cheek profiles for easy insertion into the profile slot. The extra wide cheek profile protects the surface on three sides from abrasion or damage. It is also suitable for use as a lateral guide rail.



MHS326

Description	Order Code	1+	3+
PB50, 3m	724-1677		
PB35, 3m	724-1689		

### Plastic Guide Profile



Guide profile with 3 guides. Snap fits into all profile slots. The round bars guarantee good sliding properties while the guides support the panel elements.



MHS327

Description	Order Code	1+	3+
Plastic guide 2m	724-1690		
Bar, plastic, 8mm Ø, 2m	724-1707		
Bar, steel, 8.2mm Ø, 2m	724-1719		

### Anchor Strip (Guide fixing)



This is used to easily mount proven, Star linear guide systems to the profile (see Section 5.3 for details.) Pre-drilled versions are utilised to fix size 20 and size 25 ball rail systems. Cam rail guides can be fixed to the profiles using either the un-drilled version (requires drilling and tapping of fixing holes at a pitch to suit selected cam rail's 'T' dimension.) or rabbeted insertion nuts, see page 1470.



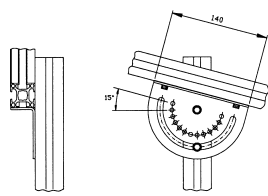
MHS328

Description	Order Code	1+	3+
Undrilled, 3050mm	724-1720		
17xM5 holes, 1m, Size 20	725-6012		
17xM6 holes, 1m, Size 25	725-6024		

continued

## Accessories — continued

### Swivel bracket



The short bracket limb is provided with oblong holes for connection of profiles. On the long bracket limb the profile is bolted down at the bracket pivot and the semi-circular slot. The holes on the pitch circle allow the profile to be locked into position in steps of 15 degrees.

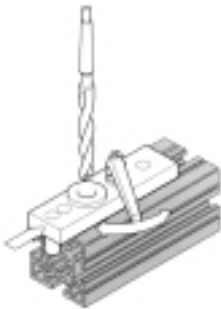
MHS329

Description	Order Code	Price Each	
		1+	3+
Bracket	724-2220		
Mounting Kit	724-2323		

Description	Order Code	Price Each		
		1+	10+	20+
Tee bolt set, M8 20	724-2013			

## Tooling and Matching Details

### Profile Drilling Jig and Twist Drill



The profile drilling jig helps you to position your drilled holes (required to accommodate connectors.) with absolute accuracy on the square-cut profiles. Simply place the drilling jig on the cut-to-size profile and then proceed as follows:

- Slide the drilling jig into the slot until the stop pin contacts the end face of the profile.
- Clamp jig in position.
- Drill connector hole.

The twist drill is designed to ensure a clean hole with no damage to the profile surface.



MHS330

Description	Order Code	Price Each		
		1+	3+	5+
Drilling jig	724-5361			
Twist drill, 16.1mm Ø	724-5385			

### Thread Reducer Insert Driver



With this driver, you can screw self-tapping thread reducer inserts (see "connectors") into profile apertures with a 14 mm core diameter. Screw the thread reducer insert onto the driver and then wind into the profile aperture (14 mm dia.), ensuring correct alignment with the aperture axis. Once the required insertion depth has been reached, turn the driver counter-clockwise to release it from the insert. You will also need a standard commercial tap wrench for the driver.

MHS331

Description	Order Code	Price Each		
		1+	3+	5+
Driver, M6	724-5397			
Driver, M8	724-5373			
Driver, M10	724-5403			

## Cutting the profiles

### Cutting the profiles



Always use a precision circular saw blade similar to that specified below and lubricate regularly to ensure optimum cutting performance and blade life.

Cutting speed	4.000 m/min
Number of teeth	108
Saw blade	350 mm dia.
Rake angle	negative
Precision saw blade	carbide-tipped
Lubricant	Shell Dromus "B" or Micro 3000-S

### Drilling the profiles

16.1 mm diameter holes for profile connectors

Drill speed	n = 2800 rpm
Lubricant	Shell Dromus "B" or Micro 3000-S

MHS332