TECHNOLOGY GROUP

mk Profile Technology

One construction kit – many options

Base Technology

Profile Technology

Conveyor Technology

Factory Equipment

Linear Motion

Advantages of the mk modular system

- Everything comes from one source: interchangeable modules and components for profile, conveyor and linear technology, as well as factory equipment
- Outsourcing of various project functions at a fixed price helps integrators to minimize their project costs and risks
- Coverage of all basic mechanical functions for modern factory automation
- The widest profile range on the market reduces the need for specialized design and therefore provides a cost benefit due to standardization
- High material quality, solid connecting technology and high-quality accessories guarantee high loading capacity and long service life
- The highest flexibility for system extensions or alterations due to the reusability of individual components and modules
- The degree of assembly of our products can be freely selected, guaranteeing optimum adaptation to the existing utilization of resources at all times
- The modular construction is subject to constant optimization and extension because mk itself uses it daily for the preparation of customer-specific solutions

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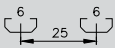
Quick-Reference

Structural Profiles

Series 25



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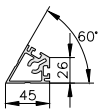

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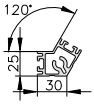

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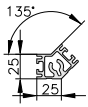

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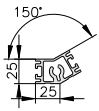

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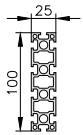

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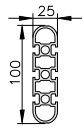

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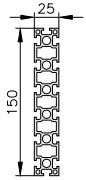

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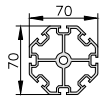

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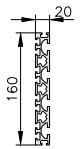

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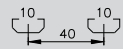

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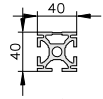

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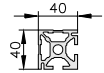

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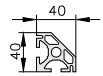

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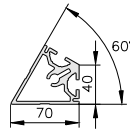

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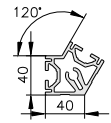

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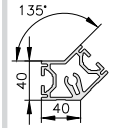

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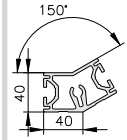

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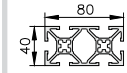

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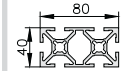

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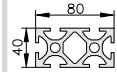

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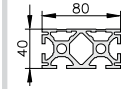

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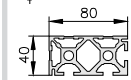

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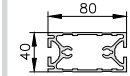

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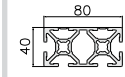

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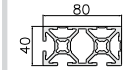

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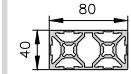

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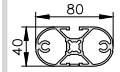

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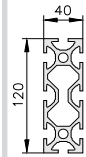

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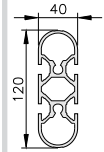

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....* Profile length in mm

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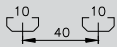

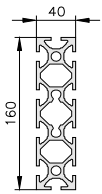

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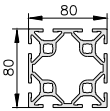

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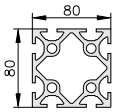

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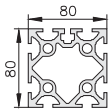

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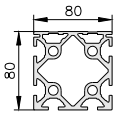

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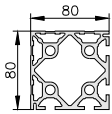

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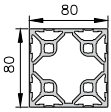

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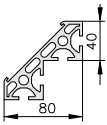

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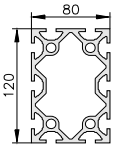

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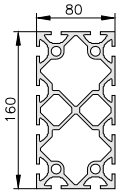

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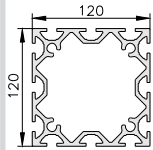

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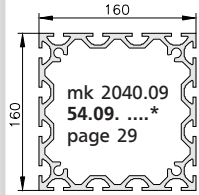

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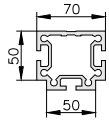

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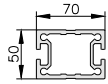

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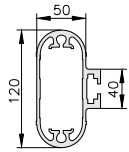
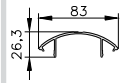


mk 2040.30
54.30. ....*
page 38

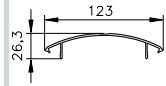
mk 2244
52.44. ....*
page 39

mk 2245
52.45. ....*
page 39

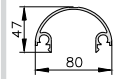
mk 2040.43
54.43. ....*
page 42



mk 2040.42
54.42. ....*
page 42



mk 2040.44
54.44. ....*
page 42



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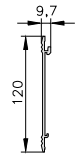
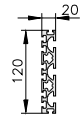
54.32. ....*
page 42



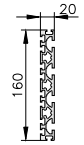
mk 2040.85
54.85. ....*
page 43

mk 2025.41
25.41. ....*
page 40

mk 2025.42
25.42. ....*
page 40



mk 2025.43
25.43. ....*
page 40



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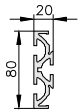
page 40



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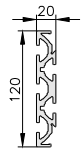
54.80. ....*
page 41



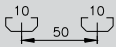
mk 2040.86
54.86. ....*
page 41

....* Profile length in mm

Quick-Reference

Structural Profiles

Series 50



mk 2001
51.01. ....*
page 45

mk 2030
51.30. ....*
page 45

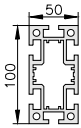
mk 2000
51.00. ....*
page 45

mk 2014
51.14. ....*
page 45

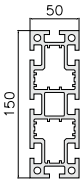
mk 2002
51.02. ....*
page 45

mk 2003
51.03. ....*
page 46

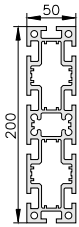
mk 2017
51.17. ....*
page 47



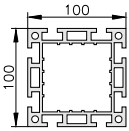
mk 2004
51.04. ....*
page 46



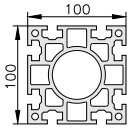
mk 2006
51.06. ....*
page 46



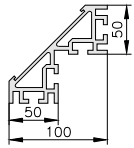
mk 2008
51.08. ....*
page 46



mk 2005
51.05. ....*
page 46

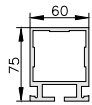


mk 2011
51.11. ....*
page 46



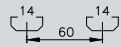
mk 2072
51.72. ....*
page 46

mk 2033
51.33. ....*
page 48



mk 2031
51.31. ....*
page 48

Series 60



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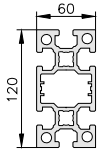
60.01. ....*
page 51



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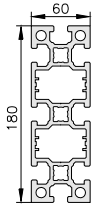
60.02. ....*
page 51



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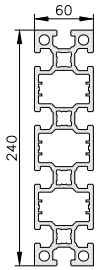
60.03. ....*
page 51



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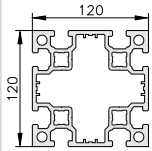
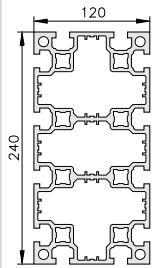
60.04. ....*
page 52



mk 2060.05
60.05. ....*
page 52



mk 2060.07
60.07. ....*
page 52

....* Profile length in mm

Profiles for Sliding Windows

mk 2240
52.40. ....*
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mk 2241
52.41. ....*
page 53

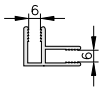
Edge Profiles for Paneling

mk 2206
52.06. ....*
page 54

mk 2207
52.07. ....*
page 54

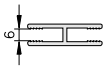
mk 2203
52.03. ....*
page 54

mk 2210
52.10. ....*
page 54



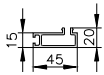
mk 2211
52.11. ....*
page 54

mk 2214
52.14. ....*
page 54



mk 2215
52.15. ....*
page 54

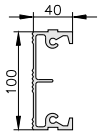
Door Stop Profiles for Swing Doors



mk 2040.88
54.88. ....*
page 55

mk 2040.25
54.25. ....*
page 55

Profiles for Platforms and Steps



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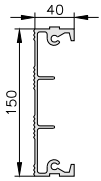
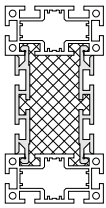
54.68. ....*
page 56



mk 2040.69
54.69. ....*
page 56

Foamed Profiles



Foamed Profiles
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Profile Services

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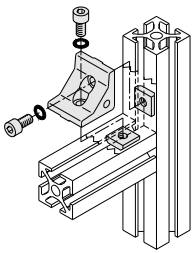
....* Profile length in mm

Quick-Reference

Assembly Components

Angles for 90°



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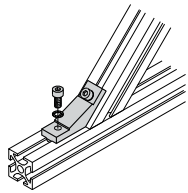
Angles for 30°/45°/60°



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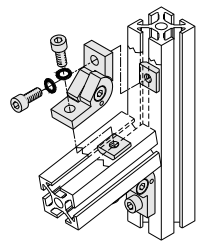
Adjustable Angles



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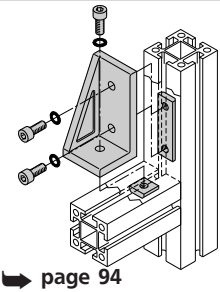
Consoles



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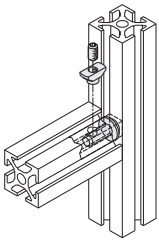
Internal Fasteners



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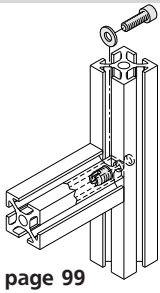
Internal Fastener Series 40 light



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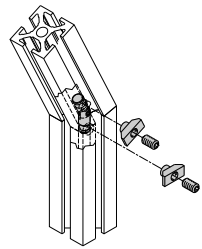
Swivel Tension Plug



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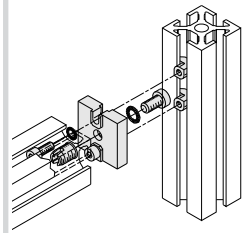
Connecting plates for assembly at profile ends



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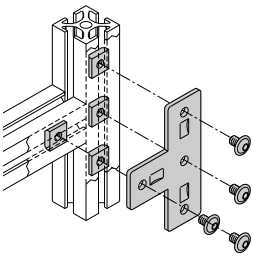
Plates Light version



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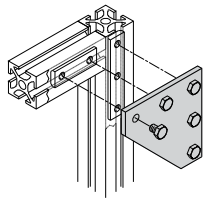
Plates Heavy duty version



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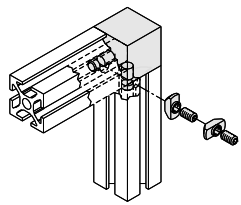
Corner Connections



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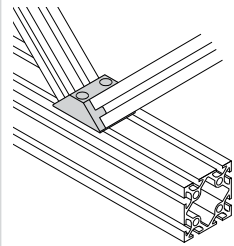
Truss Joints



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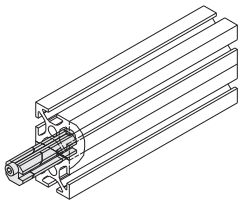
Parallel Connectors



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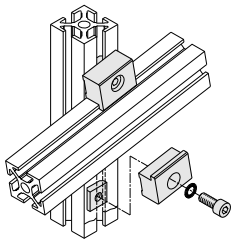
Clamps



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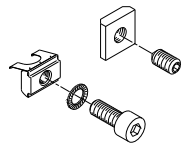
Screws, Nuts and Spring Washers



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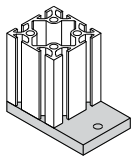
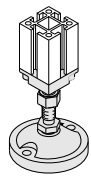
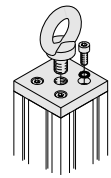
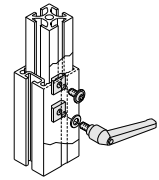
Quick-Reference

Accessory Components

Floor Mounting Plates	**Leveling Pads**	**Hoists**	**Operating elements**
			
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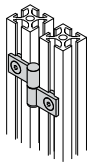
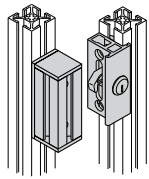
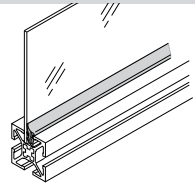
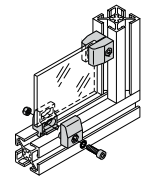
Door Components, Hinges	**Door components, Latches, Locks**	**Closure and Seal Strips**	**Paneling and Accessories**
			
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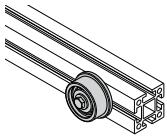
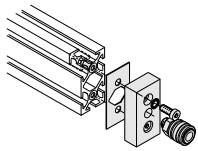
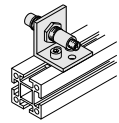
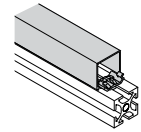
Rollers	**Pneumatic Components**	**Sensor Brackets**	**Wireways**
			
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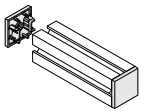
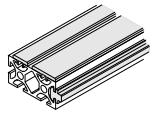
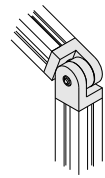
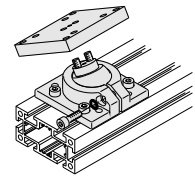
End Caps	**Wear Strips**	**Swivel Joints**	**Ball Bases**
			
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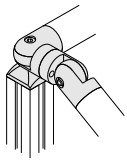
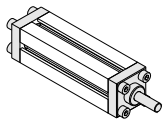
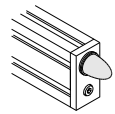
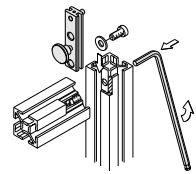
Accessory Components for Guardrails	**Glides and Bushings**	**Bumpers**	**Tools**
			
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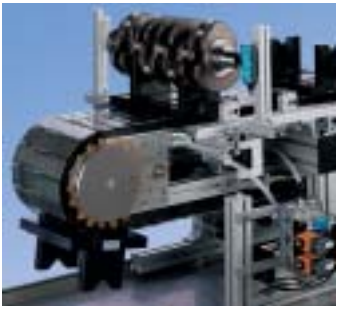
Introducing mk

„We live our passion for technology – that shapes us for over 40 years“

Maschinenbau Kitz GmbH, was founded in 1966 and is headquartered in Troisdorf, Germany, and also operates internationally; together with its subsidiaries and sales parteners as the “mk Technology Group”. Backed by over 40 years of experience, mk sells mechanical modules, components for profile, conveyor and



linear technology, as well as factory equipment. These products are based on more than 250 different aluminum profiles and extensive stainless steel sheet metal work. The modular construction principle these products offer ensures full compatibility between all products. The resulting benefits include considerable cost savings during installation of the system, as well as a high degree of flexibility for future extensions and re-configurations. Our most important target markets include original machine constructions, as well as work in the automotive, electrical, packaging, pharmaceutical and food industries.

How to use the catalog

Series Icons

The following symbols identify the suitability of a particular component to its respective Profile Series. Any component not so identified is typically compatible to all of the Profile Series.

Symbol for Profile Series 25 — **25** 40 50 60

Symbol for Profile Series 40 — 25 **40** 50 60

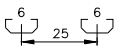
Symbol for Profile Series 40, limited use in Series 50 — 25 **40** 50 60

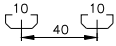
Symbol for Profile Series 50, limited use in Series 40 — 25 40 **50** 60

Symbol for Profile Series 50 — 25 40 **50** 60

Symbol for Profile Series 60 — 25 40 50 **60**

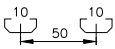
Symbols used for base dimensions and T-slot widths

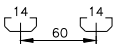




The symbols shown describe the profile series.

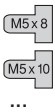
- The base dimension shows the square dimension of the smallest profile of the series. Larger profiles are always a multiple of the base dimension.



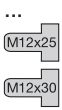


- The distance between two parallel T-slots is also equal to the base dimension.
- Each base dimension is associated with a standard T-slot width.

Symbols used for screws



The symbols shown within this text describe the recommended dimensions of the screws (thread and screw length).



If special screws are required for the function, the appropriate norm is stated along with the screw symbol.

Cross-references for additional information

A blue bar with a cross-reference arrow indicates that additional information about the product or topic is available in another part of the catalog.

Reference in this chapter to another chapter.

see information on page XXX

Pointers to additional information on this product that can be found in another chapter.

P. XXX

Order number system

The numbering system is used to identify cut-to-length as well as stock length profiles.

Description
Profile mk 2040.01

- Profile number in the series (01)
- Profile series (40)
- Profile System 2000 (20)

Order Number for Stock Length Profiles
54.01.5100

- available stock length in mm

Order Number for Cut-to-Length Profiles
54.01. ....*

- Profiles (four-digit) with the length in mm
- Number in the series
- Profile Series number

Information about Profile Technology

Advantages of mk Profile Technology

- It has one of the widest ranging profile systems on the market with more than 250 different profiles
- High load capacity connecting methods
- A comprehensive range of accessories
- Seamless connections between mk profiles through the small edge radius of 1 mm
- Easy assembly
- Use of high-quality materials
- Reusability of dismantled components
- The degree of assembly is customer selectable: mk supplies components or finished modules
- Online CAD library
- Competent advice from mk sales engineers
- Series 50 and 60 profiles of especially high-quality alloy

General advantages of Profile Technology

The use of mk aluminum profile technology in mechanical engineering offers a large number of advantages compared to other systems:

■ On the one hand, the use of standard elements enables short planning, design and assembly times.

■ On the other hand, the use of removable connectors ensures that the disassembled elements can be reused.

■ And last, but not least, use of high-quality aluminum alloys results in high load-bearing capacity despite the low weight of the profiles themselves.

No flame cutting and welding necessary

- Smart connections using threaded connectors
- Profiles and components can be reused after disassembly

No grinding and polishing necessary

- Braces and beams can be easily removed or relocated
- Assembly changes can be made without visible traces and damage

No painting necessary

- Clean surfaces
- Attractive finish

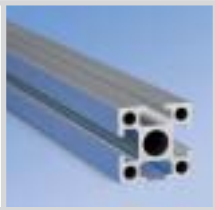
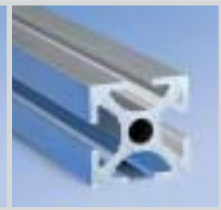
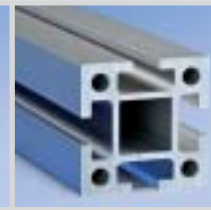
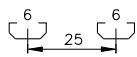
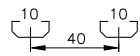
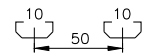
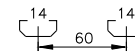
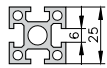
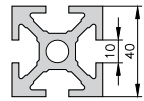
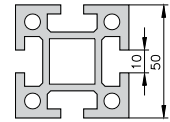
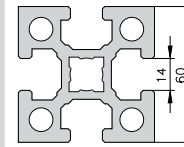
Advantages of the mk connection methods

mk profile technology sets itself apart, among other things, by various modern connection methods. Unlike other systems, mk is a proponent of the "cut and assemble" philosophy. Therefore, simply cut to the needed length, bolt together – finished. Besides cutting the profiles to the desired lengths, you may at most need a standard hand drill and/or tap. You do not need to purchase expensive specialty tools. The user can easily cut to length, prepare, and assemble the profiles themselves. The mk production team would, of course, be happy to take on this task for you.

Working with the profile technology construction kit

1. Selecting the profile

The mk 2000 profile system consists of four profile series that are compatible with each other and are designed for different applications. The choice of profile series will depend on the type of application, the load-bearing capacity and design requirements as well as the spatial conditions on site. See the table below for more detailed information.

				
	Series 25	*Series 40*	*Series 50*	*Series 60*
Symbols				
Versions	Normal	Normal, light, extra light	Normal, light	Normal
Material	EN AW 6063 T66 AlMgSi 0.5 F25	EN AW 6063 T66 AlMgSi 0.5 F25	EN AW 6005A T6 AlMgSi 0.7 F28	EN AW 6005A T6 AlMgSi 0.7 F28
Classic applications	Lightweight frames, display cases, display cabinets, fixtures, measuring and test equipment, control and electronic cabinets	Light to medium duty machine, frames, guarding, assembly workstations, show booths, work platforms	Heavier machine frames, load-bearing structures	Machine frames with maximum loads, mezzanines
Base dimensions	 25 x 25 mm	 40 x 40 mm	 50 x 50 mm	 60 x 60 mm
Largest dimensions	25 x 150 mm or 50 x 50 mm	160 x 160 mm	50 x 200 mm or 100 x 100 mm	120 x 240 mm
Standard mounting hardware	M5	M8	M8	M12

2. Selecting the connectors

mk connection technology offers you freedom in design. Both 90° connections and variable angle connections can be used, based on your application requirements. The following table lists the most important criteria for selecting the right connector for your design. mk does not require, for example, any system-specific screws in its construction kit. Standard screws can be used for all assembly work.

	Tension plugs	*Angles*	*Corner blocks*	*Plates*	*Clamps*
Locking element	no	yes	no	yes	no
T-slots remain free	yes	no	no	no	no
Loading capacity	average	high	average	high	average
Service required	yes	no	yes	no	no

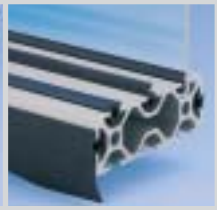
3. Selecting the accessory components

Accessory components from mk fit perfectly into the mk construction kit system. The comprehensive assortment includes floor mountings, fixed and swivel casters, various operating elements, elements for doors, paneling for guarding, elements for closing and sealing profiles, as well as pneumatic and electric components. As a result, profile designs can be configured based on the customer's requirements.

Floor mounting

Operating elements

Door components



Closure and seal strips

Paneling

mk Structural Profiles

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System 2000 Series 40 26

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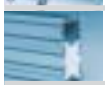
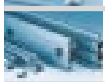
Profiles for Sliding Windows 53

Edge Profiles for Paneling 54

Door Stop Profiles for Swing Doors 55

Profiles for Platforms and Steps 56

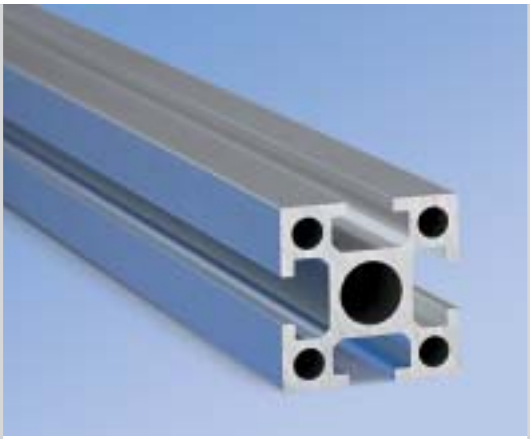

Foamed Profiles 58


Profile Services

Curved Profiles 62

End Services 64

Threads and Inserts 71

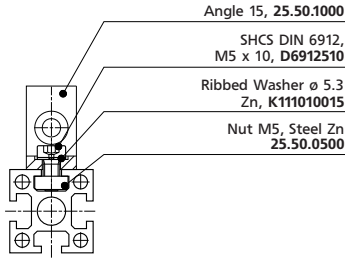


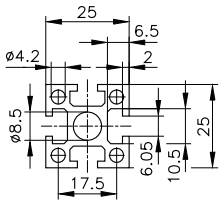
System 2000 Series 25

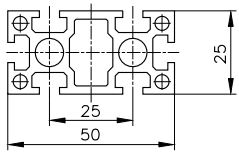
Series 25 Profile Geometry and Threads

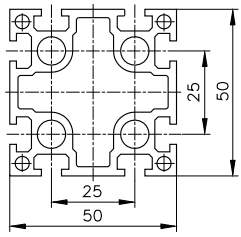
Series 25 is designed on a 25 x 25 mm base dimension. The 6 mm T-slots are spaced at 25 mm. Threads can be cut into the extruded holes.

Profile services see page 64

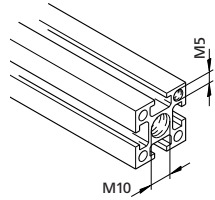






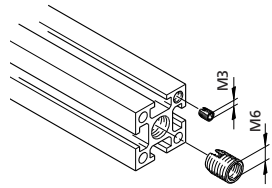


Profile ends can be tapped directly. P. 214



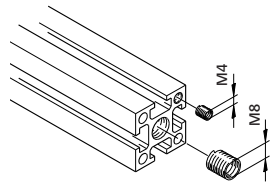
Recommended screw length = $2 \cdot d_N$

Other threads possible with inserts. P. 71



Threaded Insert M3
K112030002

Threaded Insert M6
K112030006

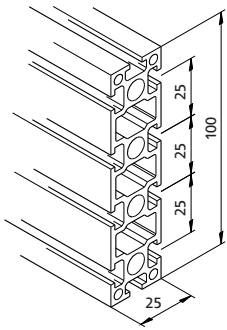


Helicoil M4
K112030104

Helicoil M8
K112030109

d_N = Thread diameter

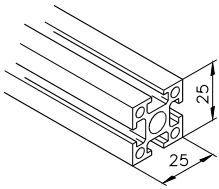
Series 25



Profile mk 2025.03

2.55 kg/m
AlMgSi 0.5 F25

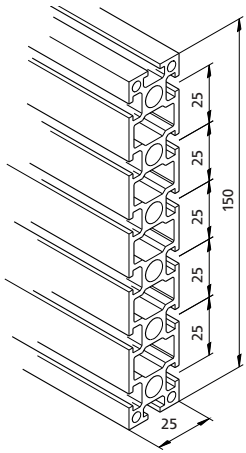
Stock length	**25.03.5100**
Cut	**25.03. ....***



Profile mk 2025.01

0.75 kg/m
AlMgSi 0.5 F25

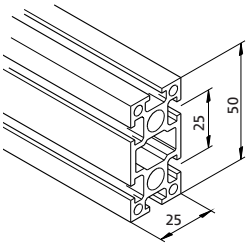
Stock length	**25.01.5100**
Cut	**25.01. ....***
Services	from page 64



Profile mk 2025.04

3.75 kg/m
AlMgSi 0.5 F25

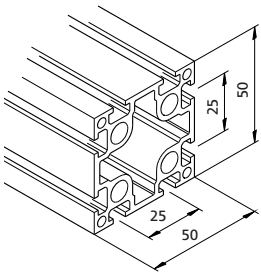
Stock length	**25.04.5100**
Cut	**25.04. ....***



Profile mk 2025.02

1.35 kg/m
AlMgSi 0.5 F25

Stock length	**25.02.5100**
Cut	**25.02. ....***
Services	from page 64

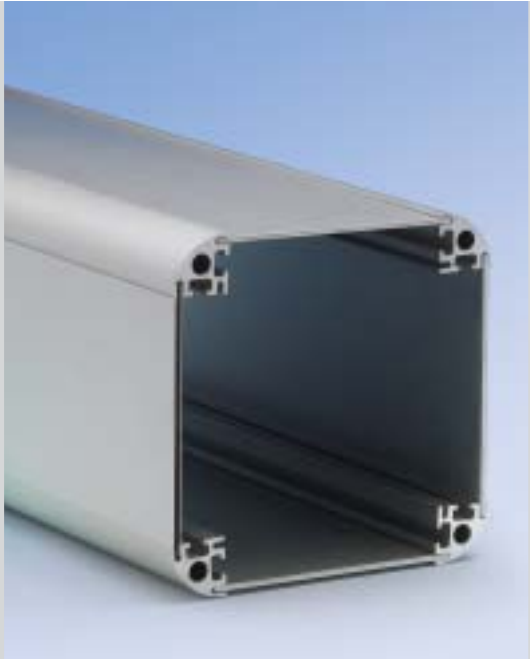


Profile mk 2025.05

2.21 kg/m
AlMgSi 0.5 F25

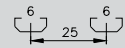
Stock length	**25.05.5100**
Cut	**25.05. ....***
Services	from page 64

....* Profile length in mm



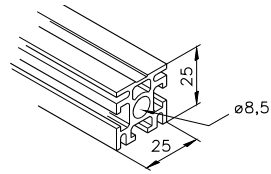
Structural Profiles

System 2000 Series 25



Series 25 with closed T-slots

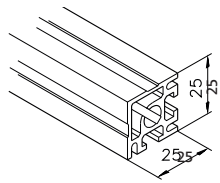
In addition to the standard system T-slot, the profiles of Series 25 with closed T-slots have a second, smaller slot which can accept paneling. This paneling can be recessed or reworked to be flush with the framing.



Profile mk 2025.31

0.77 kg/m
AlMgSi 0.5 F25

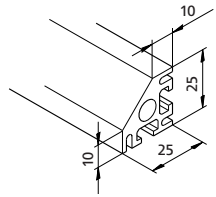
Stock length	**25.31.5100**
Cut	**25.31. ....***
Services	from page 64



Profile mk 2025.35

0.75 kg/m
AlMgSi 0.5 F25

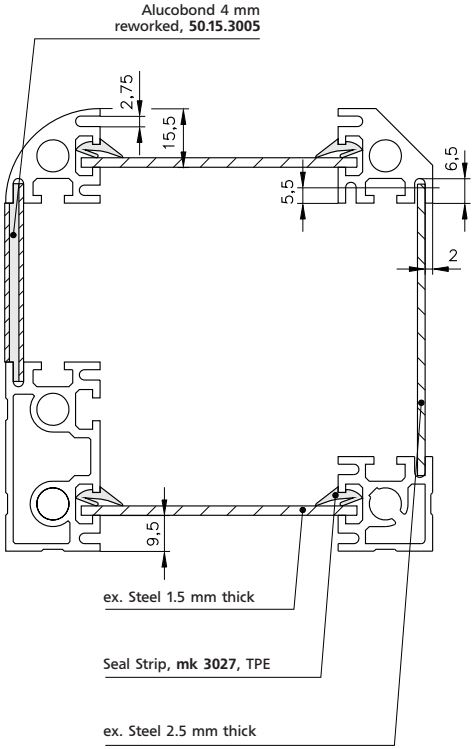
Stock length	**25.35.5100**
Cut	**25.35. ....***
Services	from page 64



Profile mk 2025.38

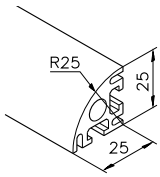
0.79 kg/m
AlMgSi 0.5 F25

Stock length	**25.38.5100**
Cut	**25.38. ....***
Services	from page 64



....* Profile length in mm

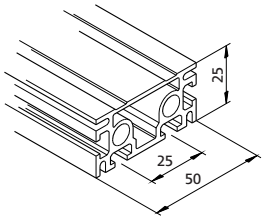
Series 25 with closed T-slots



Profile mk 2025.37

0.73 kg/m
AlMgSi 0.5 F25

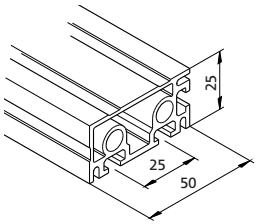
Stock length	**25.37.5100**
Cut	**25.37. ....***
Services	from page 64



Profile mk 2025.32

1.29 kg/m
AlMgSi 0.5 F25

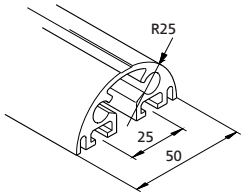
Stock length	**25.32.5100**
Cut	**25.32. ....***
Services	from page 64



Profile mk 2025.36

1.25 kg/m
AlMgSi 0.5 F25

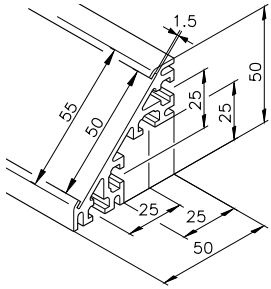
Stock length	**25.36.5100**
Cut	**25.36. ....***
Services	from page 64



Profile mk 2025.39

1.1 kg/m
AlMgSi 0.5 F25

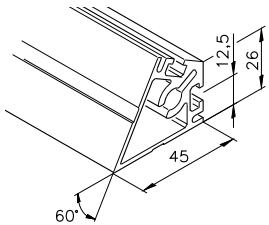
Stock length	**25.39.5100**
Cut	**25.39. ....***
Services	from page 64



Profile mk 2025.25

1.30 kg/m
AlMgSi 0.5 F25

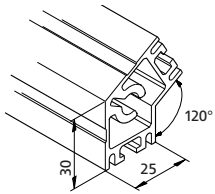
Stock length	**25.25.5100**
Cut	**25.25. ....***



Profile mk 2025.16

1.13 kg/m
AlMgSi 0.5 F25

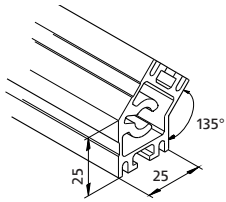
Stock length	**25.16.5100**
Cut	**25.16. ....***



Profile mk 2025.17

1.24 kg/m
AlMgSi 0.5 F25

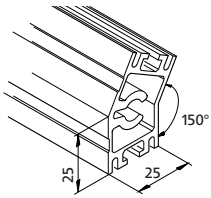
Stock length	**25.17.5100**
Cut	**25.17. ....***



Profile mk 2025.18

1.02 kg/m
AlMgSi 0.5 F25

Stock length	**25.18.5100**
Cut	**25.18. ....***



Profile mk 2025.19

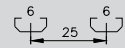
1.23 kg/m
AlMgSi 0.5 F25

Stock length	**25.19.5100**
Cut	**25.19. ....***

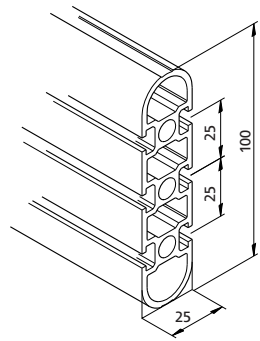
....* Profile length in mm

Structural Profiles

System 2000 Series 25

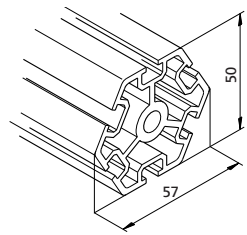


Series 25



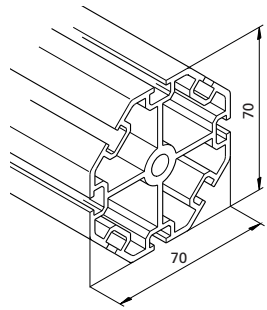
Profile mk 2025.22
2.26 kg/m
AlMgSi 0.5 F25

Stock length	**25.22.5100**
Cut	**25.22. ....***



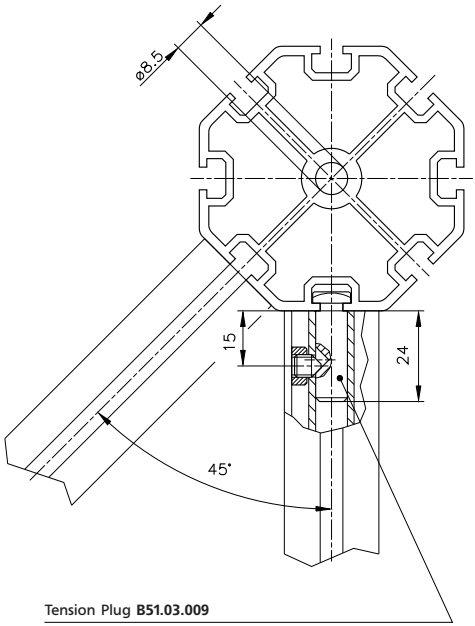
Profile mk 2025.20
2.12 kg/m
AlMgSi 0.5 F25

Stock length	**25.20.5100**
Cut	**25.20. ....***
Services	from page 64



Profile mk 2025.21
2.98 kg/m
AlMgSi 0.5 F25

Stock length	**25.21.5100**
Cut	**25.21. ....***
Services	from page 64



Tension Plug **B51.03.009**

P. 98

....* Profile length in mm

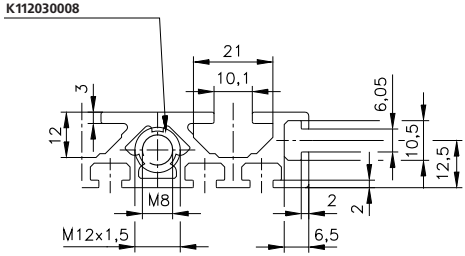
System 2000 Series 25 6 25 6

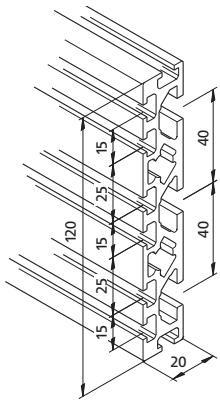
Adapter Profiles from series 25 to series 40

One profile side has series 25 T-slots; the other profile side has series 40 T-slots. This makes it possible to combine elements from series 25 and 40. Applications include:

- Locations within larger frames for small, series 25 access windows.
- As mounting locations for valve banks.

Threaded Insert M8
K112030008

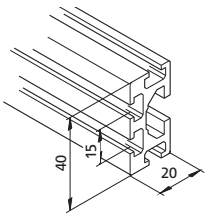




Profile mk 2025.43

2.86 kg/m
AlMgSi 0.5 F25

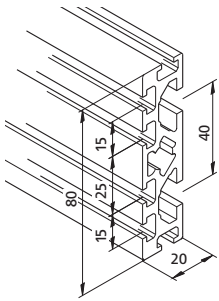
Stock length	**25.43.5100**
Cut	**25.43. ....***
Services	from page 64



Profile mk 2025.41

1.02 kg/m
AlMgSi 0.5 F25

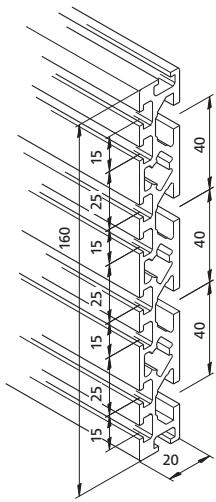
Stock length	**25.41.5100**
Cut	**25.41. ....***



Profile mk 2025.42

1.94 kg/m
AlMgSi 0.5 F25

Stock length	**25.42.5100**
Cut	**25.42. ....***
Services	from page 64

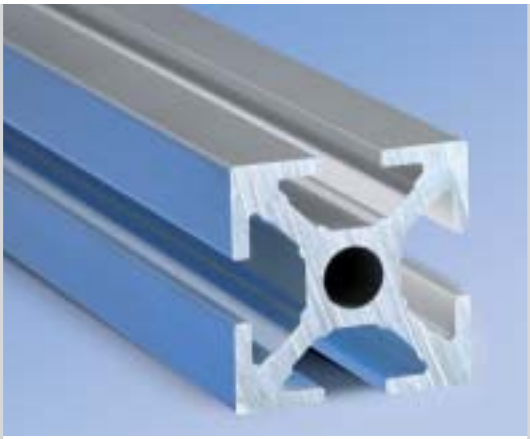


Profile mk 2025.44

3.77 kg/m
AlMgSi 0.5 F25

Stock length	**25.44.6200**
Cut	**25.44. ....***
Services	from page 64

....* Profile length in mm

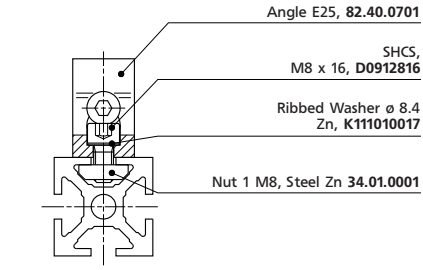


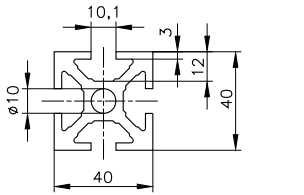
System 2000 Series 40

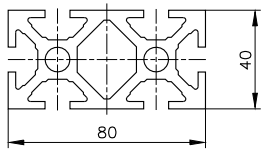
Series 40 Profile Geometry and Threads

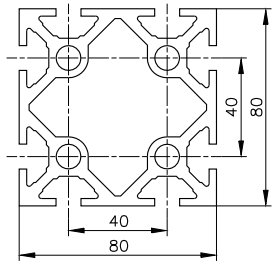
Series 40 is designed on a 40 x 40 mm base dimension. The 10 mm T-slots are spaced at 40 mm. Threads can be cut into the extruded holes.

Profile services see page 64

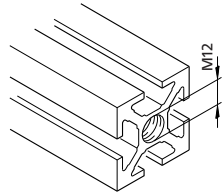






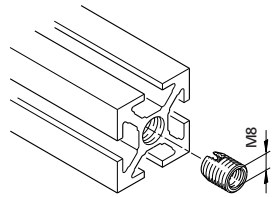


Profile ends can be tapped directly. P. 214

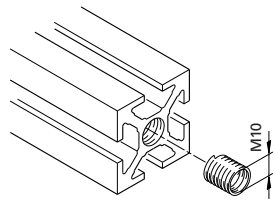


Recommended screw length = 2 . d_N

Other threads possible with inserts. P. 71



Threaded Insert M8
K112030008



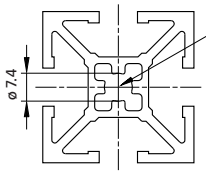
Helicoil M10
K112030110

d_N = Thread diameter

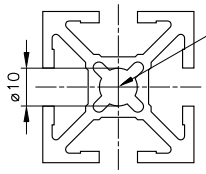
Series 40

P. 214

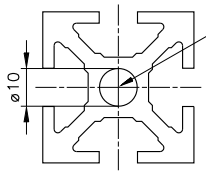
extra light profiles

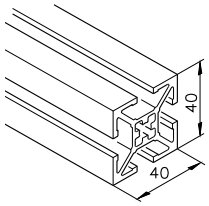


light profiles



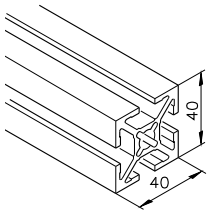
standard profiles





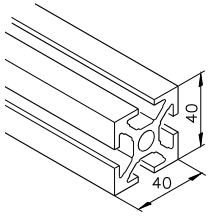
Profile mk 2040.31 (extra light)
1.50 kg/m
AlMgSi 0.5 F25

Stock length	**54.31.5100**
Cut	**54.31. ....***
Services	from page 64



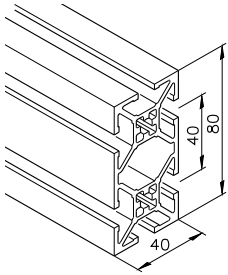
Profile mk 2040.40 (light)
1.64 kg/m
AlMgSi 0.5 F25

Stock length	**54.40.5100**
Cut	**54.40. ....***
Services	from page 64



Profile mk 2040.01
2.00 kg/m
AlMgSi 0.5 F25

Stock length	**54.01.5100**
Stock length	**54.01.6100**
Cut	**54.01. ....***
Services	from page 64

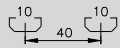


Profile mk 2040.52 (extra light)
2.67 kg/m
AlMgSi 0.5 F25

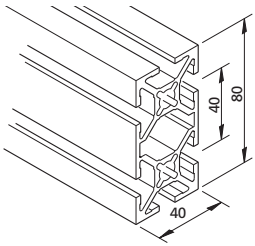
Stock length	**54.52.5100**
Cut	**54.52. ....***
Services	from page 64

....* Profile length in mm

System 2000 Series 40



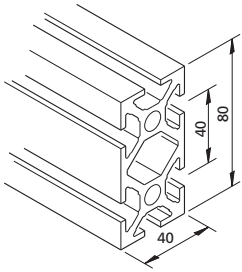
Series 40



Profile mk 2040.41 (light)

2.85 kg/m
AlMgSi 0.5 F25

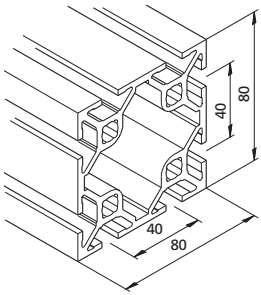
Stock length	**54.41.5100**
Cut	**54.41. ....***
Services	from page 64



Profile mk 2040.02

3.62 kg/m
AlMgSi 0.5 F25

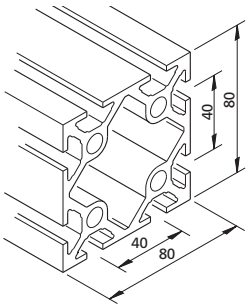
Stock length	**54.02.5100**
Stock length	**54.02.6100**
Cut	**54.02. ....***
Services	from page 64



Profile mk 2040.45 (light)

4.75 kg/m
AlMgSi 0.5 F25

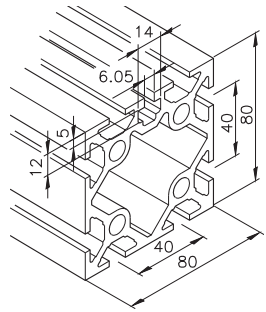
Stock length	**54.45.5100**
Stock length	**54.45.6100**
Cut	**54.45. ....***
Services	from page 64



Profile mk 2040.03

5.57 kg/m
AlMgSi 0.5 F25

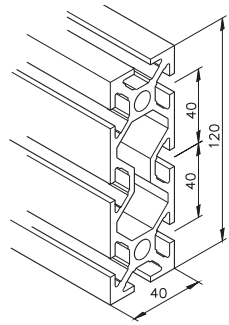
Stock length	**54.03.5100**
Stock length	**54.03.6100**
Cut	**54.03. ....***
Services	from page 64



Profile mk 2040.73

5.72 kg/m
AlMgSi 0.5 F25

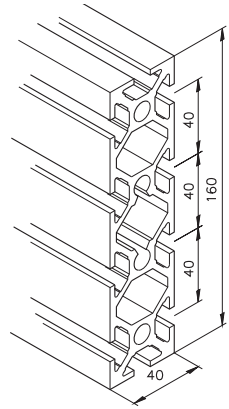
Stock length	**54.73.5100**
Cut	**54.73. ....***



Profile mk 2040.05

4.69 kg/m
AlMgSi 0.5 F25

Stock length	**54.05.5100**
Cut	**54.05. ....***
Services	from page 64



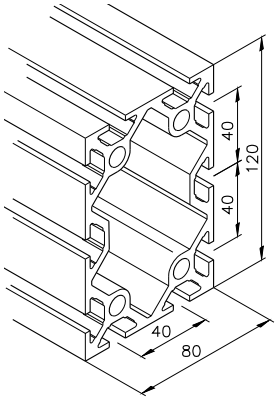
Profile mk 2040.06

6.26 kg/m
AlMgSi 0.5 F25

Stock length	**54.06.5100**
Cut	**54.06. ....***
Services	from page 64

....* Profile length in mm

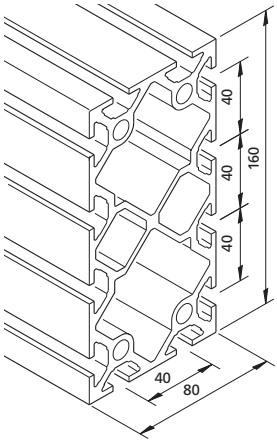
Series 40



Profile mk 2040.07

6.96 kg/m
AlMgSi 0.5 F25

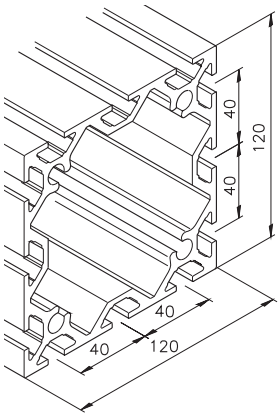
Stock length	**54.07.5100**
Stock length	**54.07.7500**
Cut	**54.07. ....***
Services	from page 64



Profile mk 2040.08

9.46 kg/m
AlMgSi 0.5 F25

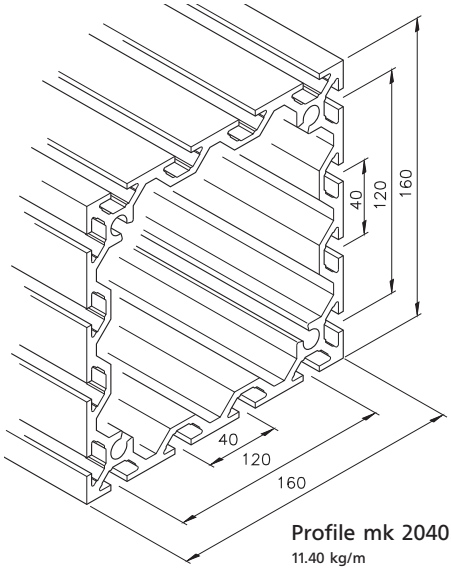
Stock length	**54.08.5100**
Stock length	**54.08.6100**
Cut	**54.08. ....***
Services	from page 64



Profile mk 2040.10

8.26 kg/m
AlMgSi 0.5 F25

Stock length	**54.10.5100**
Cut	**54.10. ....***
Services	from page 64

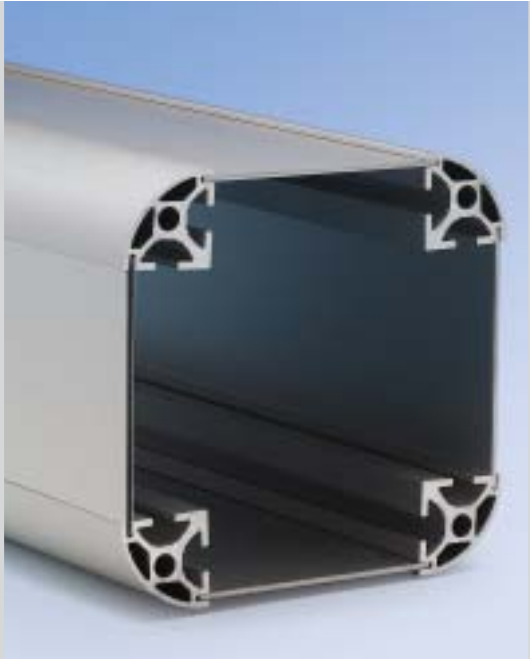


Profile mk 2040.09

11.40 kg/m
AlMgSi 0.5 F25

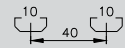
Stock length	**54.09.5100**
Cut	**54.09. ....***
Services	from page 64

....* Profile length in mm



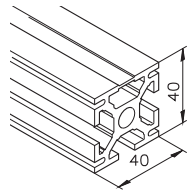
Structural Profiles

System 2000 Series 40



Series 40 with closed T-slots

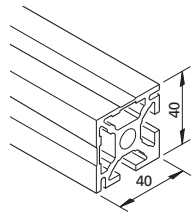
In addition to the standard system T-slot, the profiles of Series 40 with closed T-slots have a second, smaller slot which can accept paneling. This paneling can be recessed or reworked to be flush with the framing.



Profile mk 2040.21

1.84 kg/m
AlMgSi 0.5 F25

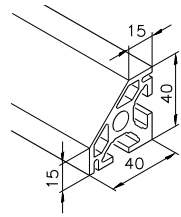
Stock length	**54.21.5100**
Cut	**54.21. ....***
Services	from page 64



Profile mk 2040.11

1.88 kg/m
AlMgSi 0.5 F25

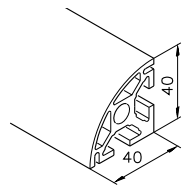
Stock length	**54.11.5100**
Cut	**54.11. ....***
Services	from page 64



Profile mk 2040.14

1.62 kg/m
AlMgSi 0.5 F25

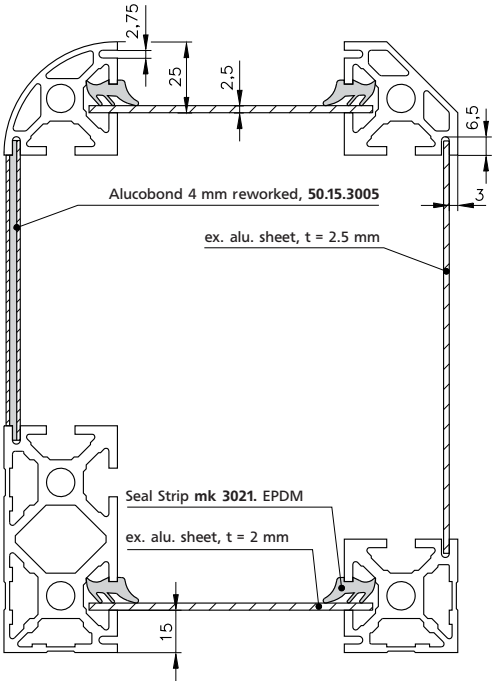
Stock length	**54.14.5100**
Cut	**54.14. ....***
Services	from page 64



Profile mk 2040.15

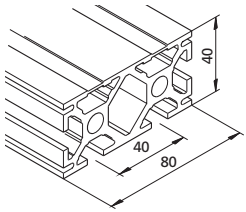
1.51 kg/m
AlMgSi 0.5 F25

Stock length	**54.15.5100**
Cut	**54.15. ....***
Services	from page 64



....* Profile length in mm

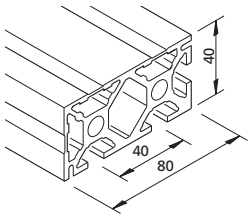
Series 40 with closed T-slots



Profile mk 2040.22

3.43 kg/m
AlMgSi 0.5 F25

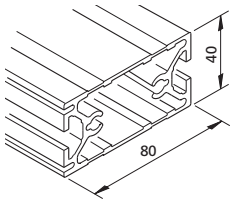
Stock length	**54.22.5100**
Cut	**54.22. ....***



Profile mk 2040.12

3.43 kg/m
AlMgSi 0.5 F25

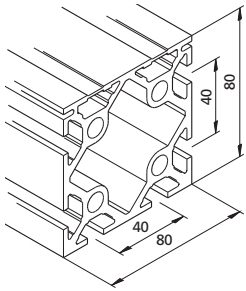
Stock length	**54.12.5100**
Cut	**54.12. ....***
Services	from page 64



Profile mk 2040.24

2.25 kg/m
AlMgSi 0.5 F25

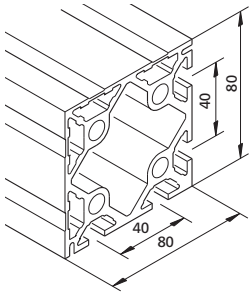
Stock length	**54.24.5100**
Cut	**54.24. ....***



Profile mk 2040.46

5.44 kg/m
AlMgSi 0.5 F25

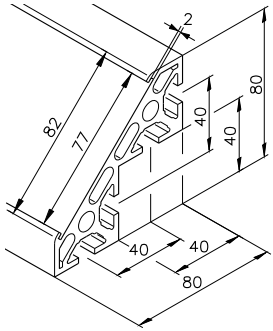
Stock length	**54.46.5100**
Cut	**54.46. ....***
Services	from page 64



Profile mk 2040.13

5.32 kg/m
AlMgSi 0.5 F25

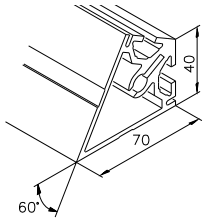
Stock length	**54.13.5100**
Cut	**54.13. ....***
Services	from page 64



Profile mk 2040.04

3.61 kg/m
AlMgSi 0.5 F25

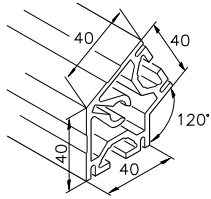
Stock length	**54.04.5100**
Cut	**54.04. ....***



Profile mk 2040.17

2.64 kg/m
AlMgSi 0.5 F25

Stock length	**54.17.5100**
Cut	**54.17. ....***



Profile mk 2040.18

2.45 kg/m
AlMgSi 0.5 F25

Stock length	**54.18.5100**
Cut	**54.18. ....***

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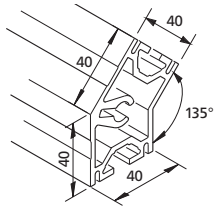

Profile mk 2040.19

2.54 kg/m
AlMgSi 0.5 F25

Stock length	**54.19.5100**
Cut	**54.19. ....***

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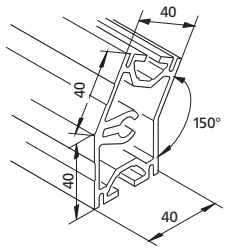

Profile mk 2040.20

2.62 kg/m
AlMgSi 0.5 F25

Stock length	**54.20.5100**
Cut	**54.20. ....***

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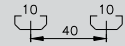
....* Profile length in mm

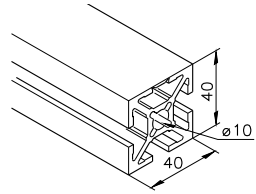
Structural Profiles

System 2000 Series 40



Cleanroom Profiles Series 40

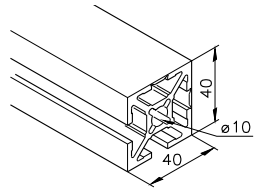
These profiles are identified by their smooth exterior surfaces. The absence of any gaps prevent contaminants from accumulating. The profiles are further designed to be completely standard system profiles, which means that they can be used with all assembly components.



Profile mk 2040.92

1.68 kg/m
AlMgSi 0.5 F25

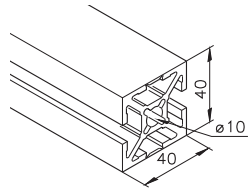
Stock length	**54.92.5100**
Cut	**54.92. ....***



Profile mk 2040.93

1.72 kg/m
AlMgSi 0.5 F25

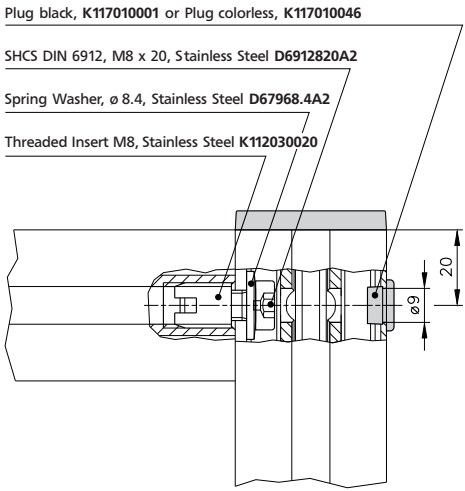
Stock length	**54.93.5100**
Cut	**54.93. ....***



Profile mk 2040.94

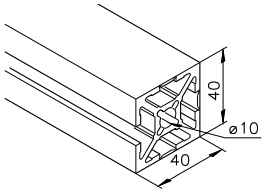
1.72 kg/m
AlMgSi 0.5 F25

Stock length	**54.94.5100**
Cut	**54.94. ....***



....* Profile length in mm

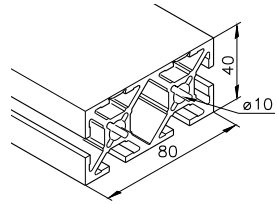
Cleanroom Profiles Series 40



Profile mk 2040.95

1.75 kg/m
AlMgSi 0.5 F25

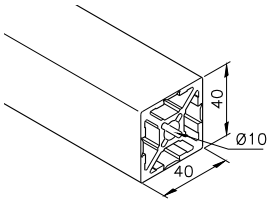
Stock length	**54.95.5100**
Cut	**54.95. ....***



Profile mk 2040.100

2.94 kg/m
AlMgSi 0.5 F25

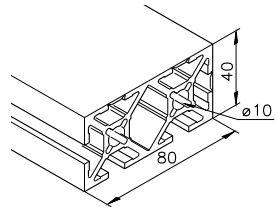
Stock length	**54.100.5100**
Cut	**54.100. ....***



Profile mk 2040.96

1.78 kg/m
AlMgSi 0.5 F25

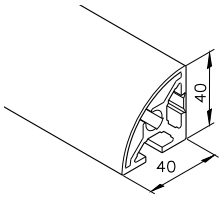
Stock length	**54.96.5100**
Cut	**54.96. ....***



Profile mk 2040.101

2.97 kg/m
AlMgSi 0.5 F25

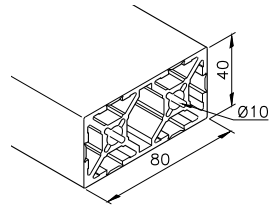
Stock length	**54.101.5100**
Cut	**54.101. ....***



Profile mk 2040.110

1.44 kg/m
AlMgSi 0.5 F25

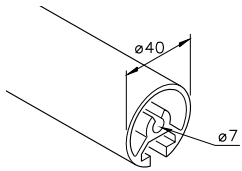
Stock length	**54.110.5100**
Cut	**54.110. ....***



Profile mk 2040.104

3.07 kg/m
AlMgSi 0.5 F25

Stock length	**54.104.5100**
Cut	**54.104. ....***

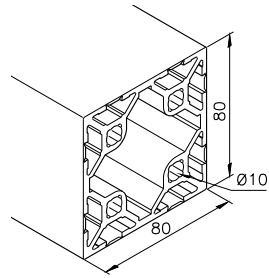


Profile mk 2040.16

1.25 kg/m
AlMgSi 0.5 F25

Stock length	**54.16.5100**
Cut	**54.16. ....***
Services	from page 64

M8 Thread possible



Profile mk 2040.109

5.04 kg/m
AlMgSi 0.5 F25

Stock length	**54.109.5100**
Cut	**54.109. ....***

....* Profile length in mm

Structural Profiles

System 2000 Series 40 10 40 10

Cleanroom Profiles Series 40 Services

USA

The T-slot can be opened, either partially or completely, with very little effort. In this instance, the T-slot cover can be removed with the parting tool. Designed exclusively for use with mk profiles, very little force is required. If a partial removal of the cover is desired, we recommend placing a drilled hole at the exact location using our drill fixtur e.

Drill

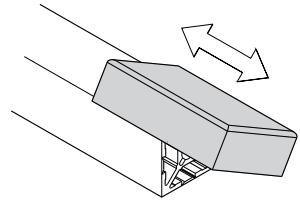
Drill Fixture
Cleanroom 40
B51.03.020

Drill Fixtures see page 218

Deburr

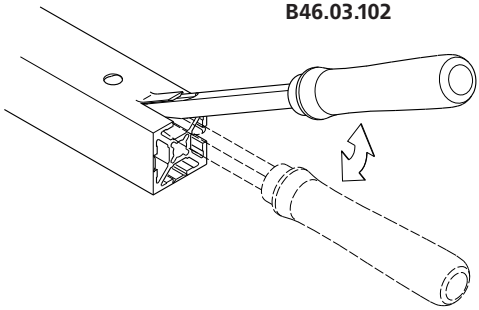
Manual deburring can be easily carried out during the assembly process using a deburring block.

Deburring block
K902030001



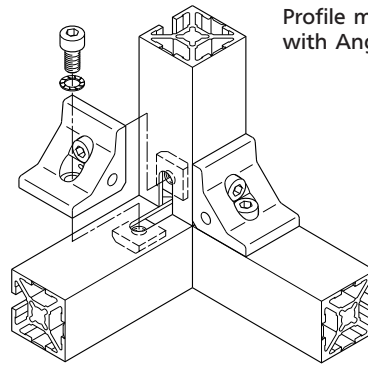
Part

Parting Tool
B46.03.102



Profiles with Angle

Profile mk 2040.95
with Angle E40

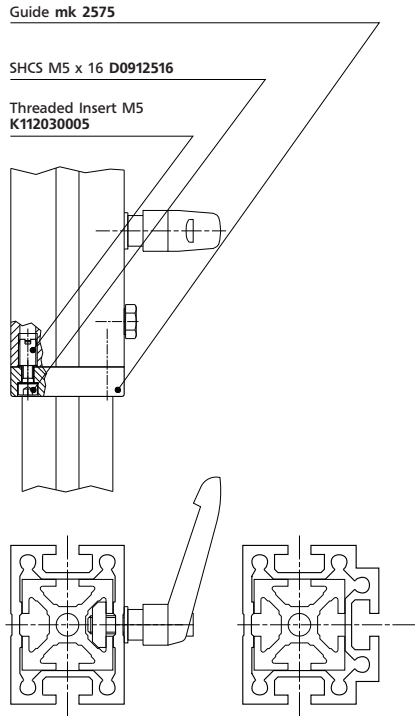


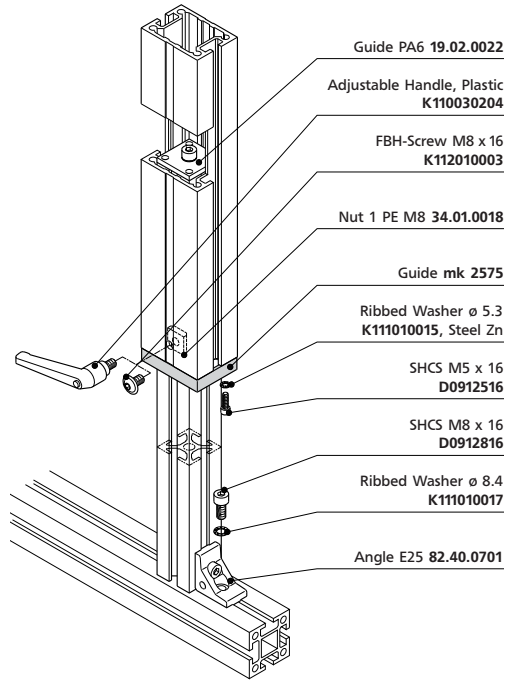
Structural Profiles

System 2000 Series 40

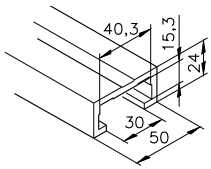
Profiles and Guides for Telescoping Series 40

In combination with base Profile 40 x 40 mm, height adjustment for workstations and frames is quickly and simply accomplished. Profiles can be serviced to your request (cut, drill, tap or mill).





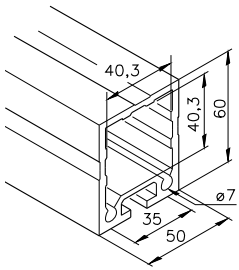
Profiles and Guides for Telescoping Series 40



Profile mk 2040.37

1.17 kg/m
AlMgSi 0.5 F25

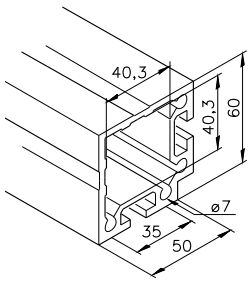
Stock length	**54.37.5100**
Cut	**54.37. ....***



Profile mk 2040.38

2.52 kg/m
AlMgSi 0.5 F25

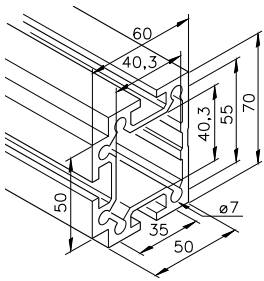
Stock length	**54.38.5100**
Cut	**54.38. ....***



Profile mk 2040.39

3.00 kg/m
AlMgSi 0.5 F25

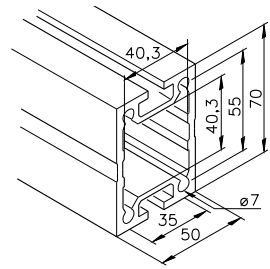
Stock length	**54.39.5100**
Cut	**54.39. ....***



Profile mk 2040.74

3.5 kg/m
AlMgSi 0.5 F25

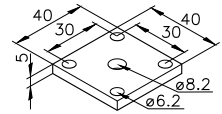
Stock length	**54.74.5100**
Cut	**54.74. ....***



Profile mk 2040.75

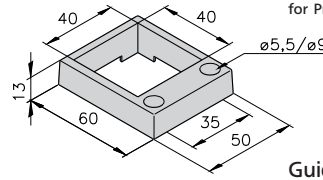
3.01 kg/m
AlMgSi 0.5 F25

Stock length	**54.75.5100**
Cut	**54.75. ....***

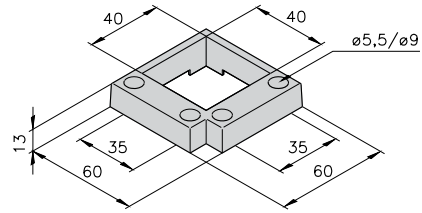


Guide
19.02.0022

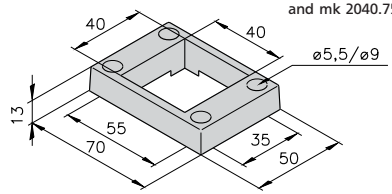
Guide
mk 2538
for Profile mk 2040.38



Guide
mk 2539
for Profile mk 2040.39



Guide
mk 2575
for Profile mk 2040.74
and mk 2040.75

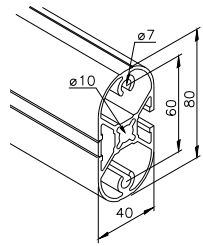


....* Profile length in mm

Structural Profiles

System 2000 Series 40

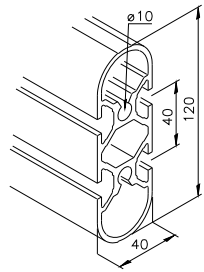
Profiles for Partitions and Workstations



Profile mk 2040.23

2.12 kg/m
AlMgSi 0.5 F25

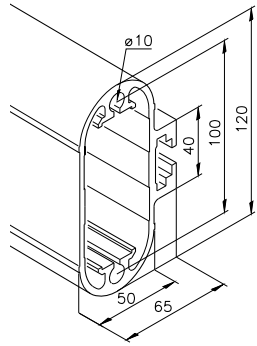
Stock length	**54.23.5100**
Cut	**54.23. ....***



Profile mk 2040.34

3.56 kg/m
AlMgSi 0.5 F25

Stock length	**54.34.7100**
Cut	**54.34. ....***



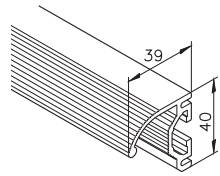
Profile mk 2040.30

4.36 kg/m
AlMgSi 0.5 F25

Stock length	**54.30.5100**
Cut	**54.30. ....***

....* Profile length in mm

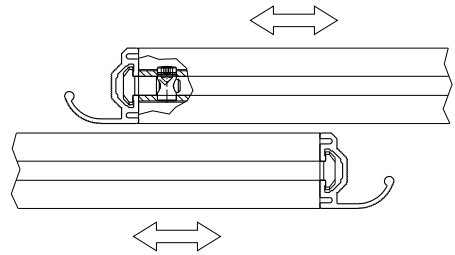
Profiles for Sliding Doors

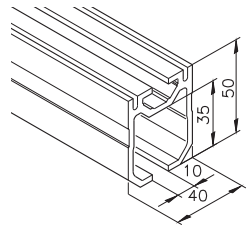


Profile for Handles

Profile mk 2244
0.87 kg/m
AlMgSi 0.5 F25

Stock length	**52.44.5100**
Cut	**52.44. ....***

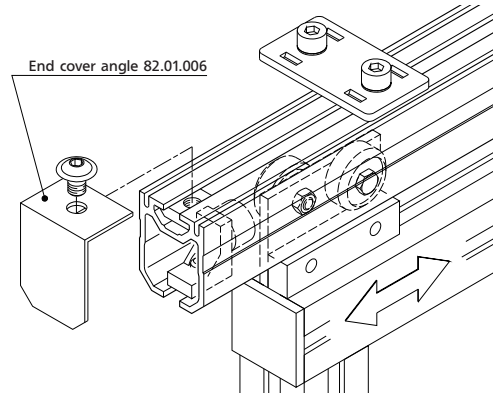




Profile for Track

Profile mk 2245
1.54 kg/m
AlMgSi 0.5 F25

Stock length	**52.45.5100**
Cut	**52.45. ....***



....* Profile length in mm

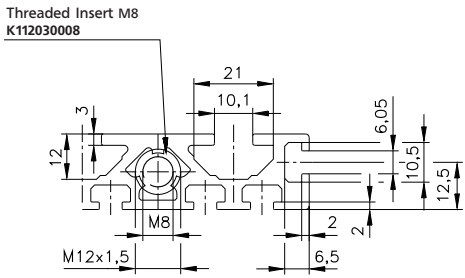
Structural profiles

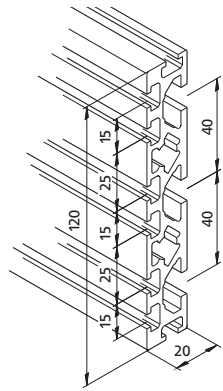
System 2000 Series 40

Adapter Profiles from series 40 to series 25

One profile side has series 40 T-slots; the other profile side has series 25 T-slots. This makes it possible to combine elements from series 25 and 40. Applications include:

- Locations within larger frames for small, series 25 access windows.
- As mounting locations for valve banks.

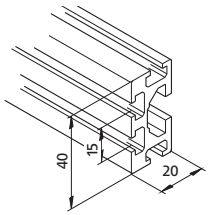




Profile mk 2025.43

2.86 kg/m
AlMgSi 0.5 F25

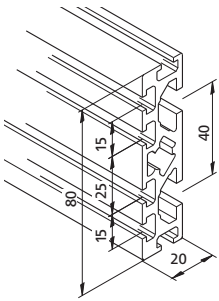
Stock length	**25.43.5100**
Cut	**25.43. ....***



Profile mk 2025.41

1.02 kg/m
AlMgSi 0.5 F25

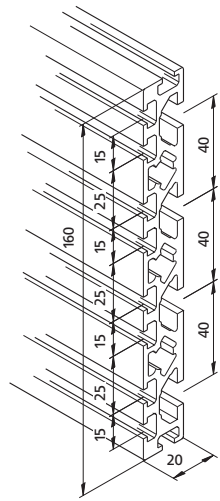
Stock length	**25.41.5100**
Cut	**25.41. ....***



Profile mk 2025.42

1.94 kg/m
AlMgSi 0.5 F25

Stock length	**25.42.5100**
Cut	**25.42. ....***



Profile mk 2025.44

3.77 kg/m
AlMgSi 0.5 F25

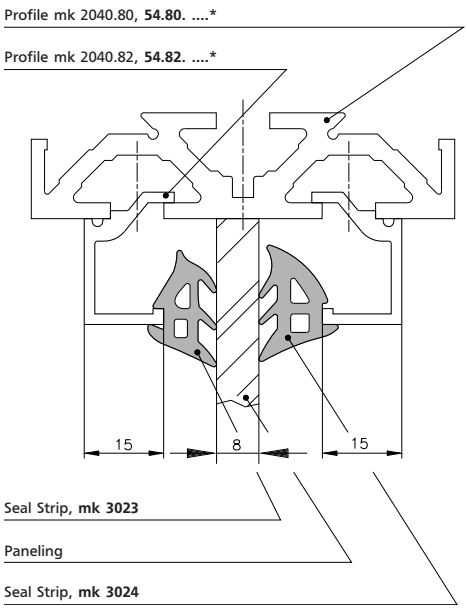
Stock length	**25.44.6200**
Cut	**25.44. ....***

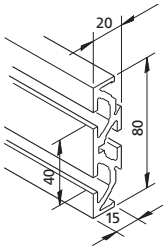
....* Profile length in mm

Adapter Profiles from series 40 to series 40

These adapter profiles allow centrical transitions from profiles with an even to uneven number of nuts and vice versa. A possible application is the fitting of panels with panel profiles in framework constructions of 40 mm width.

For further information see page 181

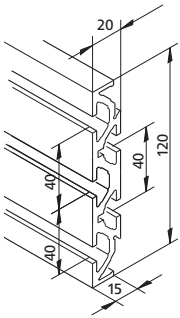




Profile mk 2040.80

1.83 kg/m
AlMgSi 0.5 F25

Stock length	**54.80.5100**
Cut	**54.80. ....***



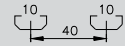
Profile mk 2040.86

2.90 kg/m
AlMgSi 0.5 F25

Stock length	**54.86.5100**
Cut	**54.86. ....***

....* Profile length in mm

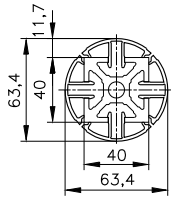
Structural Profiles

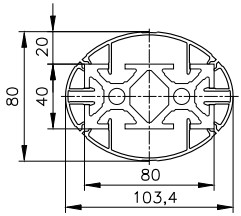
System 2000 Series 40 

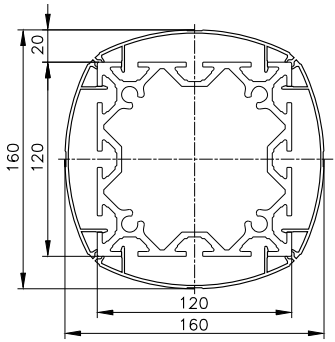
Profile Series 40 Cover Profiles

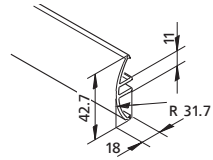
These profiles can be clipped into profile T-slots without additional mounting hardware.
Used in:

- Factory equipment
- Exhibition stand construction
- Power supply columns





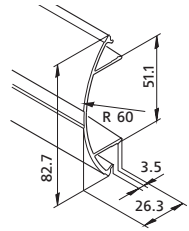




Profile mk 2040.43

0.41 kg/m
AlMgSi 0.5 F25

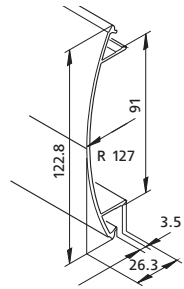
Stock length	**54.43.5100**
Cut	**54.43. ....***



Profile mk 2040.42

0.68 kg/m
AlMgSi 0.5 F25

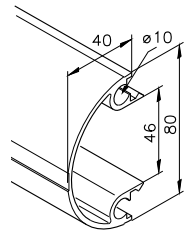
Stock length	**54.42.5100**
Cut	**54.42. ....***



Profile mk 2040.44

0.85 kg/m
AlMgSi 0.5 F25

Stock length	**54.44.5100**
Cut	**54.44. ....***



Profile mk 2040.32

1.26 kg/m
AlMgSi 0.5 F25

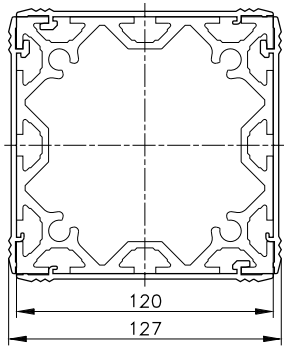
Stock length	**54.32.5100**
Cut	**54.32. ....***

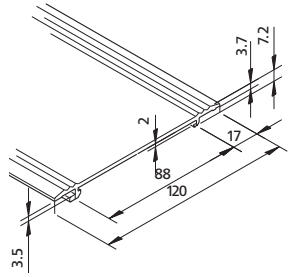
....* Profile length in mm

Profile Series 40 Cover Profiles

The Profile mk 2040.85 are used to cover series 40 structural profiles.
Features include:

- The profiles do not have to be secured with screws.
- T-slots can be closed off so that dirt does not accumulate in them.
- The profile grooves provide slip resistance if the profiles are used on tread surfaces.
- Wireways can be quickly and easily covered.

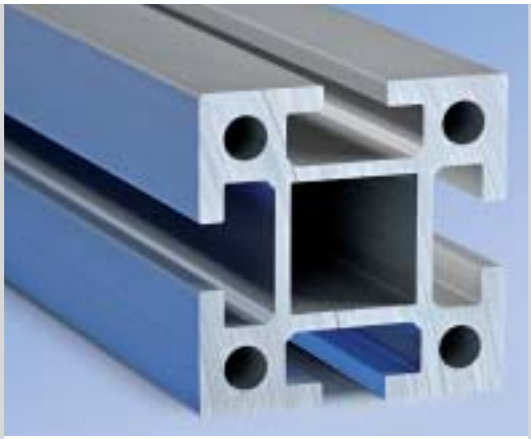




Profile mk 2040.85
0.93 kg/m
AlMgSi 0.5 F25

Stock length	**54.85.5100**
Cut	**54.85. ....***

....* Profile length in mm

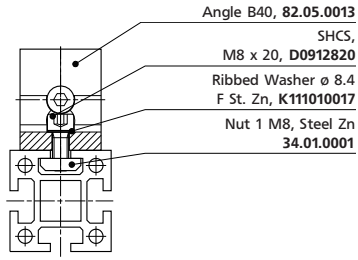


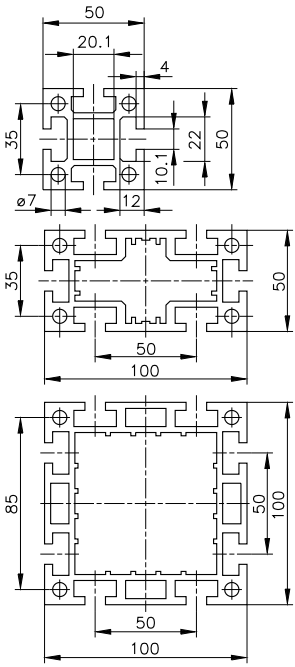
System 2000 Series 50 10 50 10

Series 50 Profile Geometry and Threads

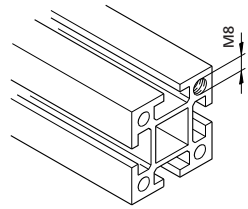
Series 50 is designed on a 50 x 50 mm base dimension. The 10 mm T-slots are spaced at 50 mm. Threads can be cut into the extruded holes.

Profile services see page 64



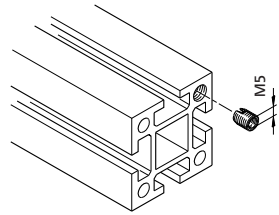


Profile ends can be tapped directly. P. 214

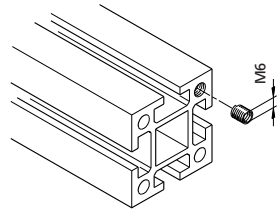


Recommended screw length = 2 · d_N

Other threads possible with inserts. P. 71

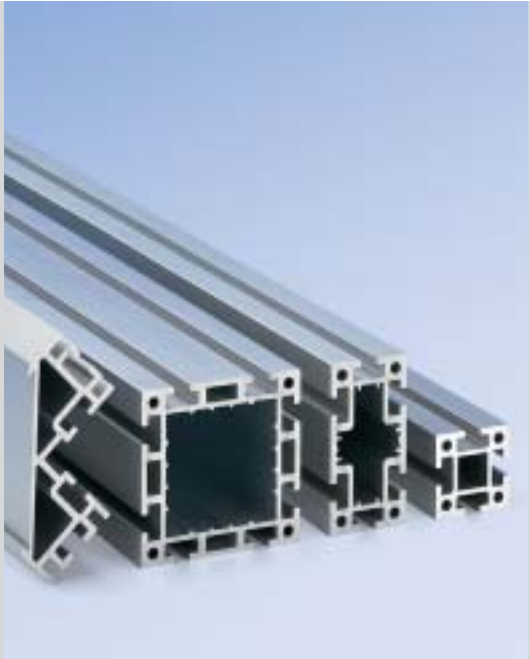


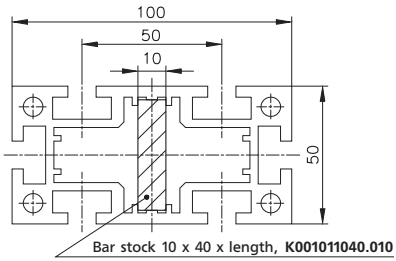
Threaded Insert M5
K112030005

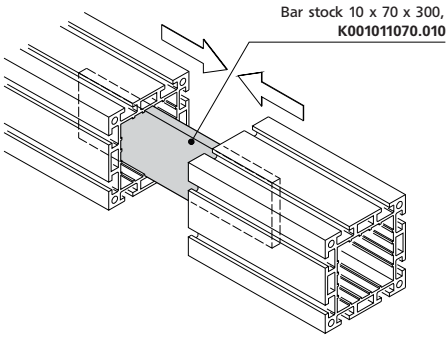


Helicoil M6
K112030106

d_N = Thread diameter

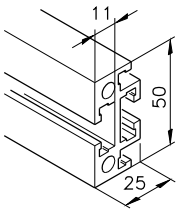






The load-bearing capacity of series 50 structural profiles can be increased by up to 30% using steel (alt. aluminum) bar stock. This is then fixed, i.e. by foaming. Profile joints can also be stabilized in this way. In this case the insertion depth should be at least twice the width of the steel.

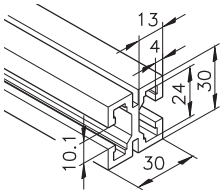
Series 50



Profile mk 2001

1.49 kg/m
AlMgSi 0.7 F28

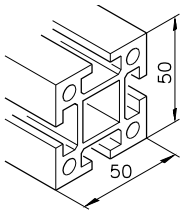
Stock length	**51.01.5100**
Cut	**51.01. ....***
Services	from page 64



Profile mk 2030

1.06 kg/m
AlMgSi 0.7 F28

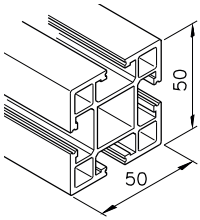
Stock length	**51.30.5100**
Cut	**51.30. ....***



Profile mk 2000

2.85 kg/m
AlMgSi 0.7 F28

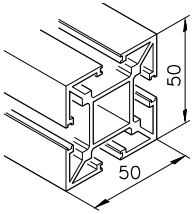
Stock length	**51.00.5100**
Stock length	**51.00.6100**
Cut	**51.00. ....***
Services	from page 64



Profile mk 2014 (light)

1.98 kg/m
AlMgSi 0.7 F28

Stock length	**51.14.5100**
Cut	**51.14. ....***



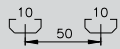
Profile mk 2002 (extra light)

1.75 kg/m
AlMgSi 0.5 F25

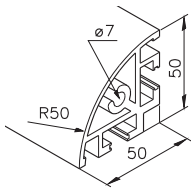
Stock length	**51.02.5100**
Cut	**51.02. ....***

....* Profile length in mm

System 2000 Series 50



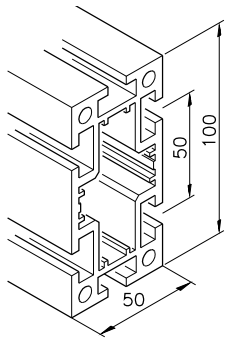
Series 50



Profile mk 2003

2.00 kg/m
AlMgSi 0.5 F25

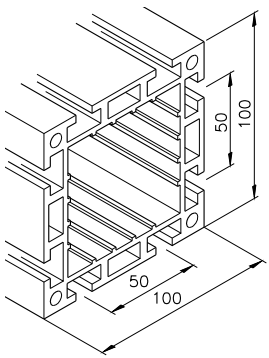
Stock length	**51.03.5100**
Cut	**51.03. ....***
Services	from page 64



Profile mk 2004

4.87 kg/m
AlMgSi 0.7 F28

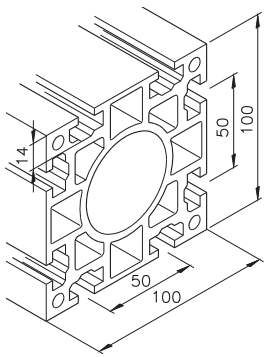
Stock length	**51.04.5100**
Stock length	**51.04.6100**
Cut	**51.04. ....***
Services	from page 64



Profile mk 2005

7.00 kg/m
AlMgSi 0.7 F28

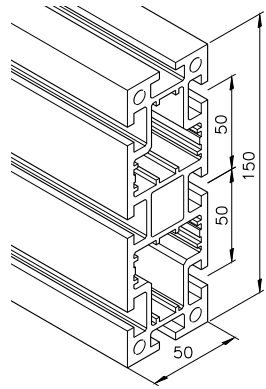
Stock length	**51.05.5100**
Stock length	**51.05.6100**
Cut	**51.05. ....***
Services	from page 64



Profile mk 2011

9.70 kg/m
AlMgSi 0.7 F28

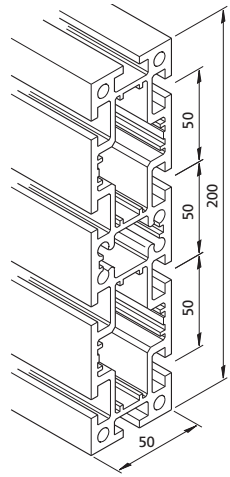
Stock length	**51.11.5100**
Stock length	**51.11.6100**
Cut	**51.11. ....***
Services	from page 64



Profile mk 2006

7.00 kg/m
AlMgSi 0.7 F28

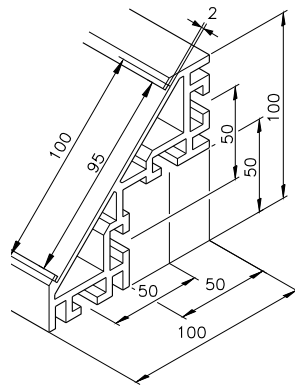
Stock length	**51.06.5100**
Cut	**51.06. ....***



Profile mk 2008

9.09 kg/m
AlMgSi 0.7 F28

Stock length	**51.08.5100**
Stock length	**51.08.6100**
Cut	**51.08. ....***
Services	from page 64



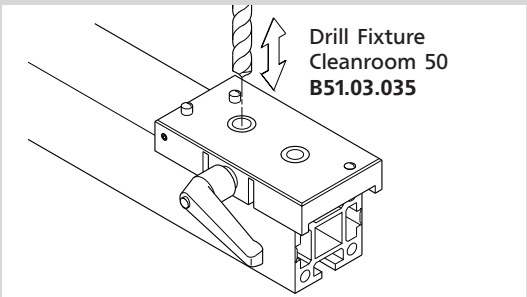
Profile mk 2072

4.62 kg/m
AlMgSi 0.7 F28

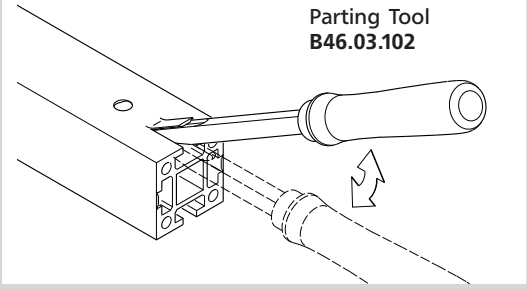
Stock length	**51.72.5100**
Cut	**51.72. ....***

....* Profile length in mm

Drill

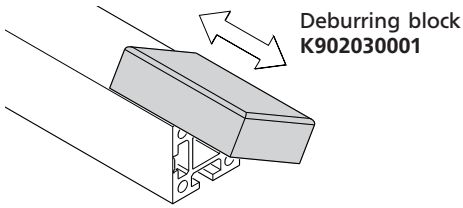


Part



Deburr

Manual deburring can be easily carried out during the assembly process using a deburring block.



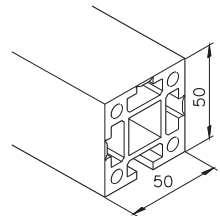
System 2000 Series 50 10 10 50

Cleanroom Profiles Series 50

USA

Profile mk 2017 has been designed to be a completely standard system profile, which is to say that it can be used with all assembly components. The T-slot can be opened, either partially or completely, with very little effort using the parting tool. Designed exclusively for use with mk profiles, very little force is required. If a partial removal of the cover is desired, we recommend placing a drilled hole at the exact location.

Drill Fixtures see page 218



Profile mk 2017
3.03 kg/m
AlMgSi 0.5 F25

Stock length	**51.17.5100**
Cut	**51.17. ....***

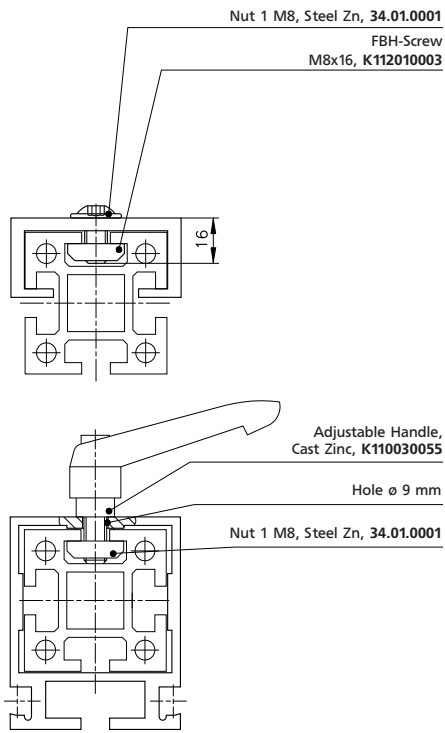
....* Profile length in mm

Structural Profiles

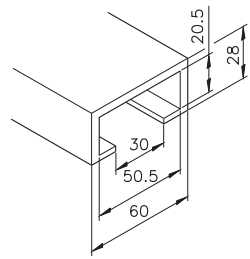
System 2000 Series 50

Profiles for Telescoping Series 50

In combination with the base Profile mk 2000 (50 x 50 mm), height adjustment for work-stations, conveyors and subframes is readily accomplished. These profiles are available with services to your specifications (cut, drilled, milled).



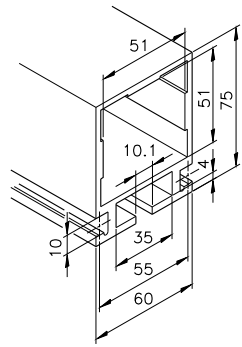
If using adjustable handles, the drilled-hole diameter must be 9 mm.



Profile mk 2033

1.50 kg/m
AlMgSi 0.7 F28

Stock length	**51.33.5100**
Cut	**51.33. ....***

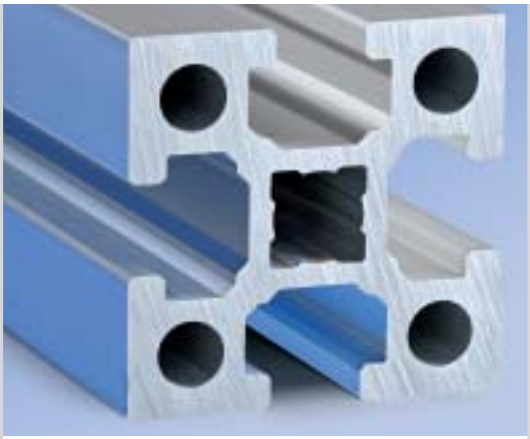


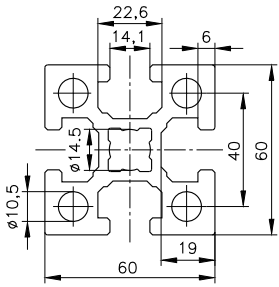
Profile mk 2031

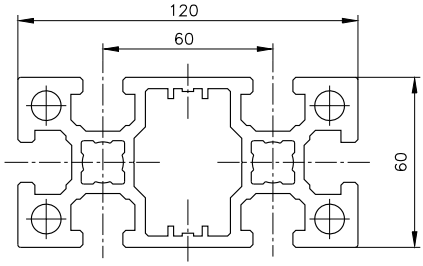
2.85 kg/m
AlMgSi 0.7 F28

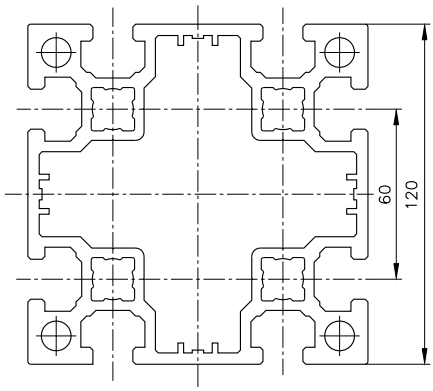
Stock length	**51.31.5100**
Cut	**51.31. ....***

....* Profile length in mm

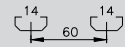








System 2000 Series 60

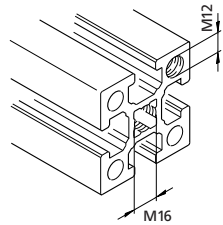


Series 60 Profile Geometry and Threads

Series 60 is designed on a 60 x 60 mm base dimension. The 14 mm T-slots are spaced at 60 mm. Threads can be cut into the extruded holes.

Profile services see page 64

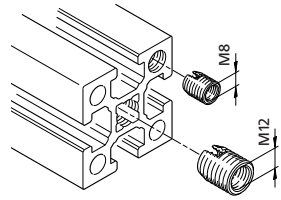
Profile ends can be tapped directly. P. 214



Recommended screw length = 2 . d_N

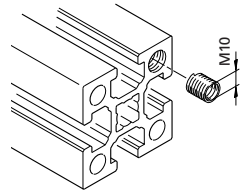
Reduced load bearing capacity if tapping M16 directly.

Other threads possible with inserts. P. 71



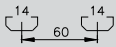
Threaded Insert M8
K112030008

Threaded Insert M12
K112030010

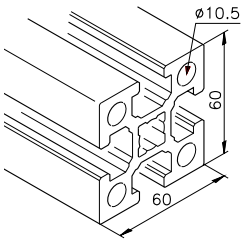


Helicoil M10
K112030110

d_N = Thread diameter



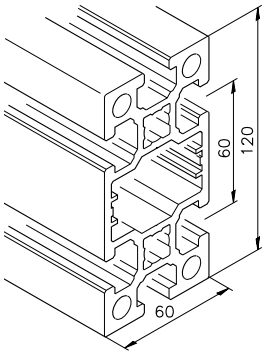
Series 60



Profile mk 2060.01

4.31 kg/m
AlMgSi 0.7 F28

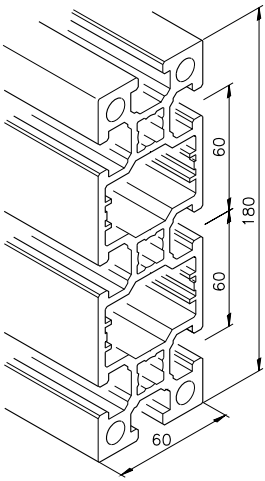
Stock length	**60.01.5100**
Cut	**60.01. ....***
Services	from page 64



Profile mk 2060.02

6.95 kg/m
AlMgSi 0.7 F28

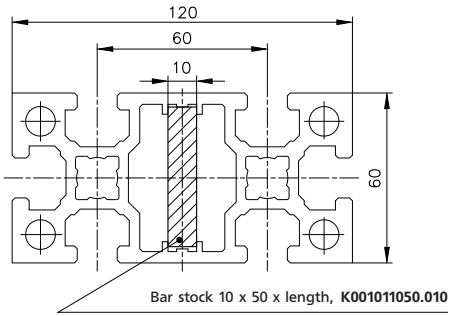
Stock length	**60.02.5100**
Cut	**60.02. ....***
Services	from page 64

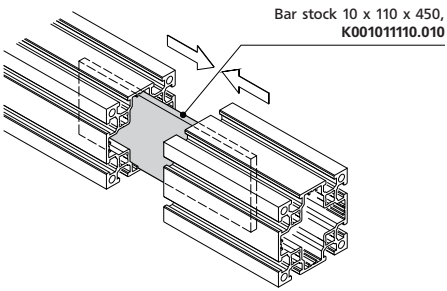


Profile mk 2060.03

9.57 kg/m
AlMgSi 0.7 F28

Stock length	**60.03.5100**
Cut	**60.03. ....***
Services	from page 64

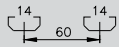




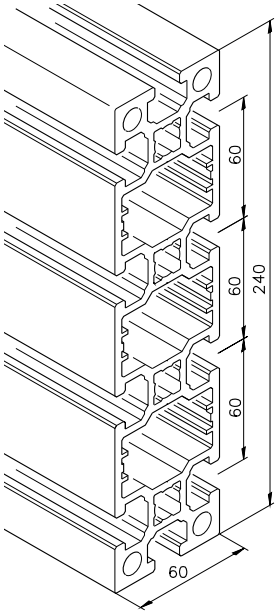
The load-bearing capacity of series 60 structural profiles can be increased by up to 34% using steel (alt. aluminum) bar stock. This is then fixed, i.e. by foaming. Profile joints can also be stabilized in this way. In this case the insertion depth should be at least twice the width of the steel.

....* Profile length in mm

System 2000 Series 60

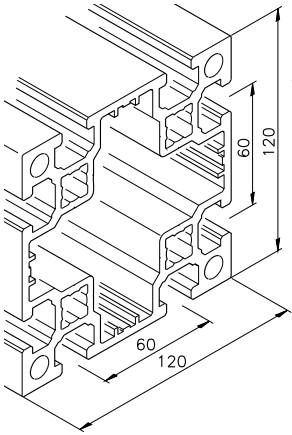


Series 60



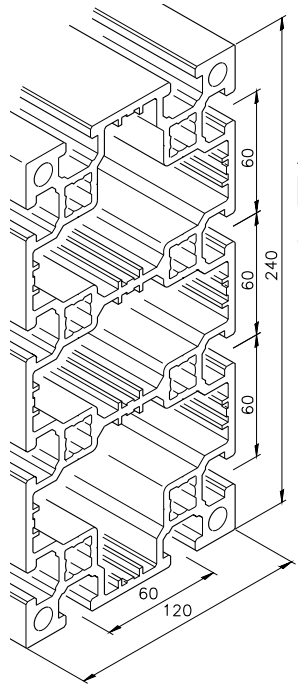
Profile mk 2060.04
12.20 kg/m
AlMgSi 0.7 F28

Stock length	**60.04.5100**
Cut	**60.04. ....***



Profile mk 2060.05
10.30 kg/m
AlMgSi 0.7 F28

Stock length	**60.05.5100**
Cut	**60.05. ....***
Services	from page 64



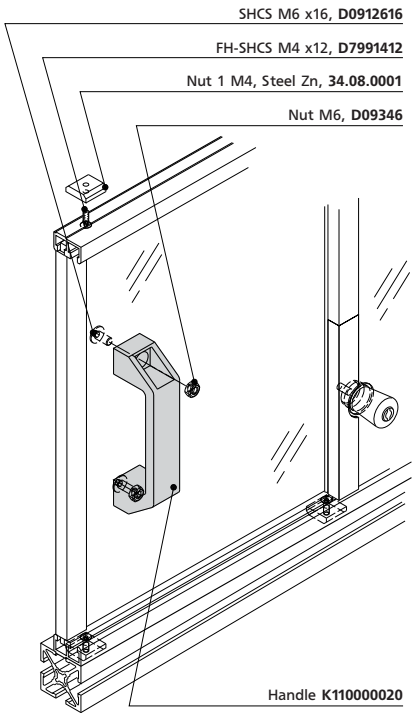
Profile mk 2060.07
18.10 kg/m
AlMgSi 0.5 F25

Stock length	**60.07.5100**
Cut	**60.07. ....***

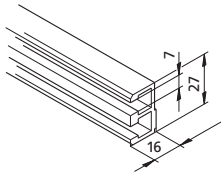
....* Profile length in mm

Profiles for Sliding Windows

Profiles mk 2240 and mk 2241 have multiple uses in Series 40 and 50 applications. To install these profiles, countersunk holes must be placed at appx. 300 mm intervals.



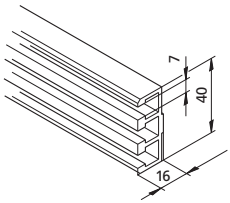
The countersunk hole in the profiles must be made using a D335C 8.3 mm countersink.



Profile mk 2240

0.47 kg/m
AlMgSi 0.5 F25

Stock length	**52.40.5100**
Cut	**52.40. ....***



Profile mk 2241

0.67 kg/m
AlMgSi 0.5 F25

Stock length	**52.41.5100**
Cut	**52.41. ....***

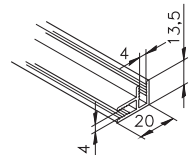
....* Profile length in mm

Structural Profiles

Structural Profiles

Edge Profiles for Paneling

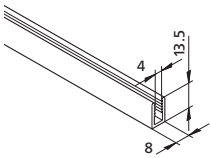
For paneling such as Polycarbonate or Alucobond.



Profile mk 2210

0.25 kg/m
AlMgSi 0.5 F25

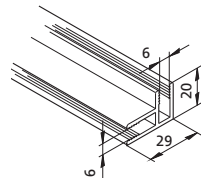
Stock length	**52.10.6000**
Cut	**52.10. ....***



Profile mk 2206

0.14 kg/m
AlMgSi 0.5 F25

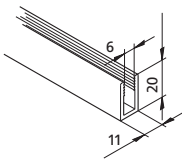
Stock length	**52.06.6000**
Cut	**52.06. ....***



Profile mk 2211

0.47 kg/m
AlMgSi 0.5 F25

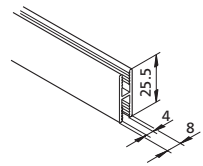
Stock length	**52.11.6000**
Cut	**52.11. ....***



Profile mk 2207

0.27 kg/m
AlMgSi 0.5 F25

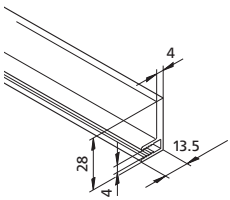
Stock length	**52.07.6000**
Cut	**52.07. ....***



Profile mk 2214

0.25 kg/m
AlMgSi 0.5 F25

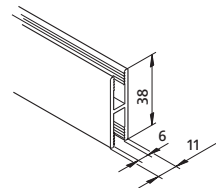
Stock length	**52.14.6000**
Cut	**52.14. ....***



Profile mk 2203

0.35 kg/m
AlMgSi 0.5 F25

Stock length	**52.03.6000**
Cut	**52.03. ....***



Profile mk 2215

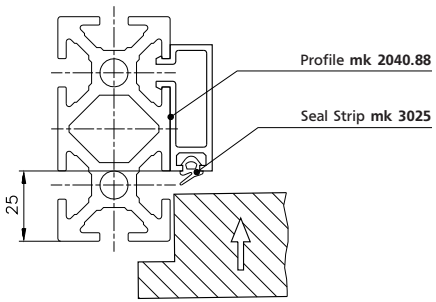
0.47 kg/m
AlMgSi 0.5 F25

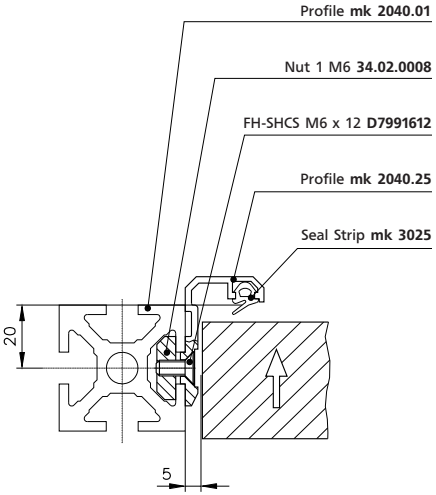
Stock length	**52.15.6000**
Cut	**52.15. ....***

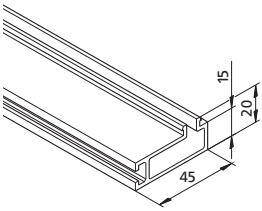
....* Profile length in mm

Door Stop Profiles for Swing Doors

With profiles mk 2040.88 and mk 2040.25 door stops can be placed into partitions or guarding systems for two common door styles. The profiles can be placed around the entire perimeter of the door, and the seal strips serve to both dampen and seal the door upon closing. Profile mk 2040.25 is also used for doors manufactured using Series 40 profiles.





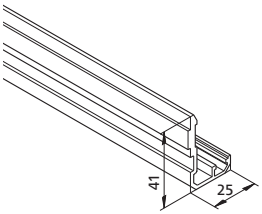


Profile mk 2040.88

for stepped doors
0.67 kg/m
AlMgSi 0.5 F25

Stock length	**54.88.5100**
Cut	**54.88. ....***

USA



Profile mk 2040.25

for straight-edged doors
0.50 kg/m
AlMgSi 0.5 F25

Stock length	**54.25.5100**
Cut	**54.25. ....***

....* Profile length in mm

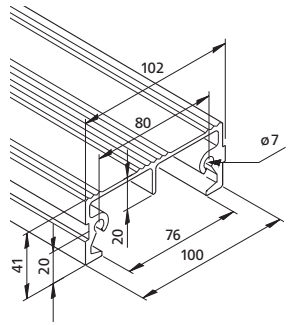
Structural Profiles

Structural Profiles

Profiles for Platforms and Steps

... for the manufacture of steps, machine platforms and mezzanines.

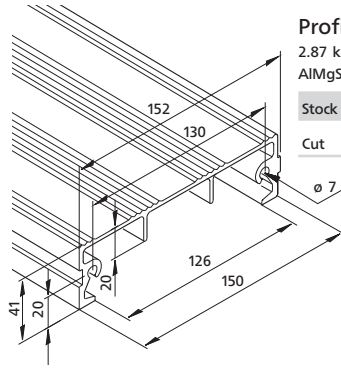
See the Factory Equipment catalog for more information



Profile mk 2040.68

2.37 kg/m
AlMgSi 0.5 F25

Stock length	**54.68.6100**
Cut	**54.68. ....***

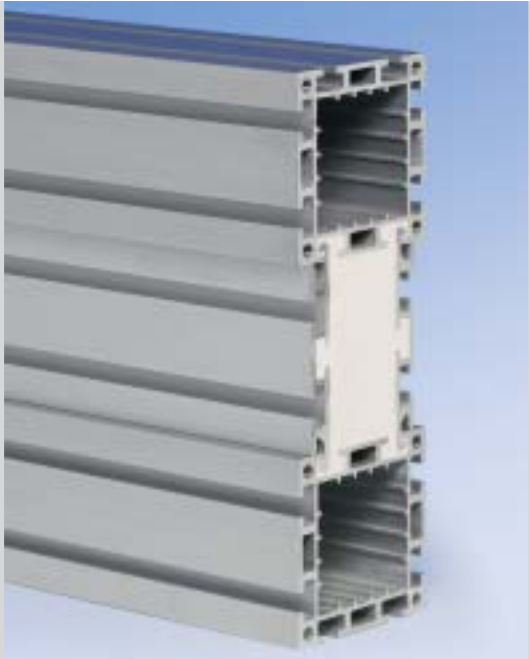


Profile mk 2040.69

2.87 kg/m
AlMgSi 0.5 F25

Stock length	**54.69.6100**
Cut	**54.69. ....***

....* Profile length in mm

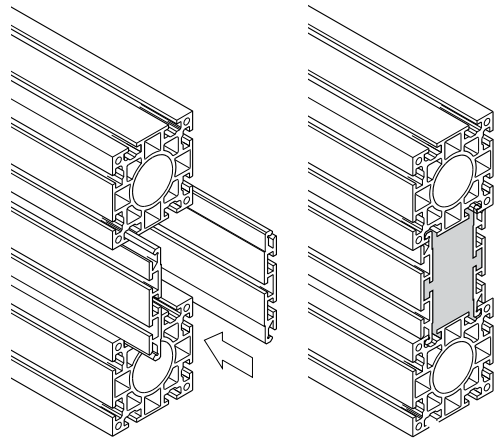


Structural Profiles

Foamed Profiles

A technological advantage unto itself, profile supports using this foam process create beams with enormous stability. They are heavily used as columns or supporting beams for mezzanines and machine frames. Foamed profiles are normally available in lengths of up to 5000 mm. On request, longer lengths may be possible.

Basically, this process is available to all profiles of series 40, 50 and 60. They are manufactured to customer specifications. Once foamed, the profiles can no longer be disassembled, and can also be used where dynamic loads are present.

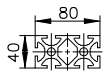


The 300 x 100 mm foamed profile illustrated with mk 2011 and mk 2067 profiles has a deflection properties comparable to that of a steel I beam IPE 220 with 220 x 110 mm.

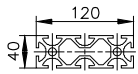
System 2000 Series 40

Any 2 of the following 8 profiles ...

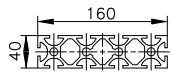
mk 2040.02



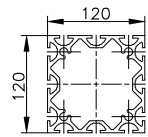
mk 2040.05



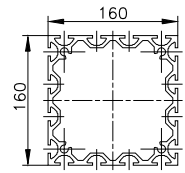
mk 2040.06



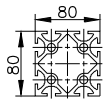
mk 2040. 10



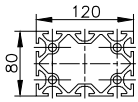
mk 2040.09



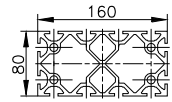
mk 2040.03



mk 2040.07

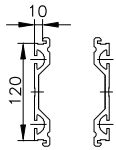


mk 2040.08

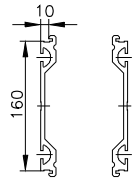


... can be combined with a pair of the following connection profiles ...

mk 2040.72



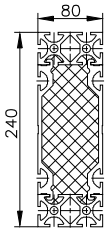
mk 2040.90



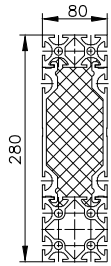
... to create in excess of 270 different foamed profiles.

Examples of frequently used foamed profile configurations

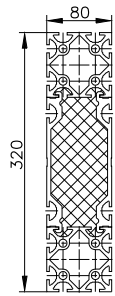
B54.90.002



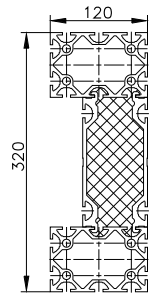
Version 1



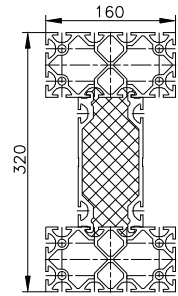
2



3



4

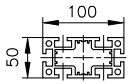


5

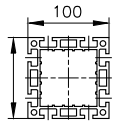
System 2000 Series 50

Any 2 of the following 4 profiles ...

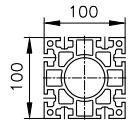
mk 2004



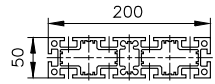
mk 2005



mk 20 11

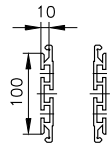


mk 2008



... can be combined with a pair of the following connection profiles ...

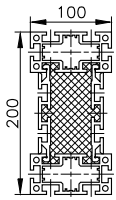
mk 2067

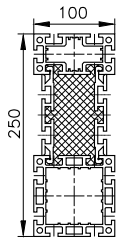


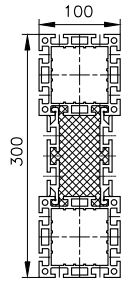
... to create in excess of 30 different foamed profiles.

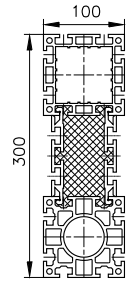
Examples of frequently used foamed profile configurations:

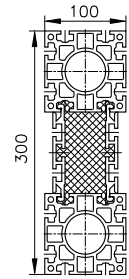
B51.67.002









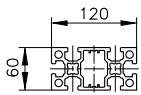


Version	1	2	3	4	5

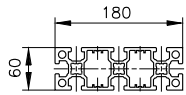
System 2000 Series 60

Any 2 of the following 5 profiles ...

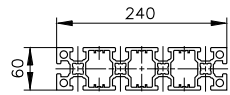
mk 2060.02

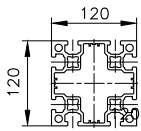


mk 2060.03

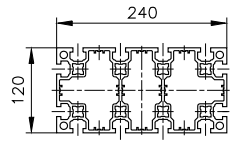


mk 2060.04





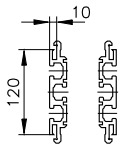
mk 2060.05



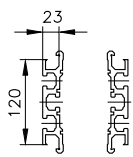
mk 2060.07

... can be combined with a pair of the following connection profiles ...

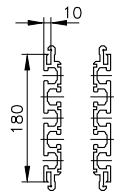
mk 2060.40



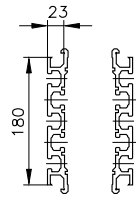
mk 2060.43



mk 2060.4 1



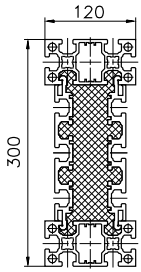
mk 2060.44



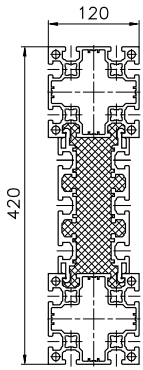
... to create in excess of 140 different foamed profiles.

Examples of frequently used foamed profile configurations:

B60.41.002

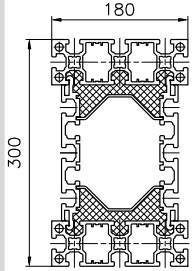


Version 1

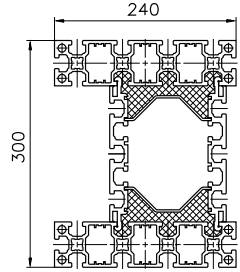


2

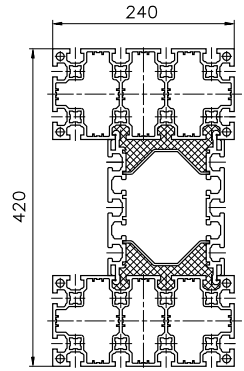
B60.41.003



V ersion 1



4



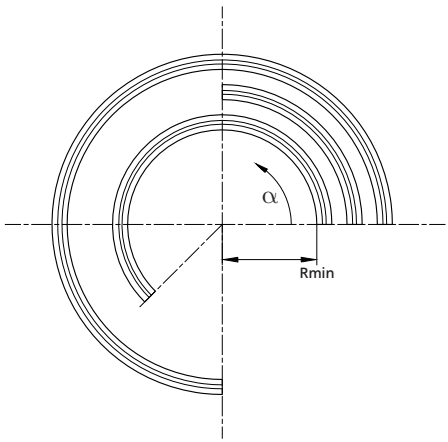
5

Structural Profiles

Profile Services

Curved Profiles

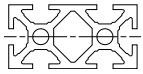
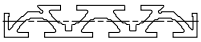
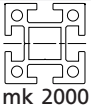
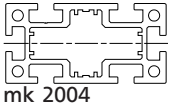
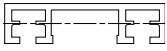
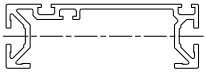
mk offers many profiles in a curved format. Curves with all angles can be produced individually, especially for various conveyor systems, turntables, etc. The minimum radii shown below apply to all applications such as curves, bends, rings or ring elements. Please note the horizontal bending axis. This means that only the narrow profile side can be curved.



Profile	*Dimensions*	*R min*
mk 2025.01	25 x 25 mm	250 mm
mk 2025.02	25 x 50 mm	250 mm
mk 2025.03	25 x 100 mm	250 mm
mk 2025.04	25 x 150 mm	250 mm
mk 2025.22	25 x 100 mm	275 mm
mk 2025.41	20 x 40 mm	250 mm
mk 2025.42	20 x 80 mm	250 mm
mk 2025.43	20 x 120 mm	250 mm

Order example

Profile	**mk 2040.01**
Ident-Nr.	**54.01. ...***
Inner radius	R = ... mm
Angle	α = ... mm

Profile	Dimensions	R min	Profile	Dimensions	R min
mk 2025.44	20 x 160 mm	250 mm	mk 2239	12 x 20 mm	150 mm
mk 2040.01	40 x 40 mm	600 mm			
 mk 2040.02	40 x 80 mm	600 mm			
mk 2040.80	20 x 80 mm	250 mm			
 mk 2040.86	20 x 120 mm	250 mm			
mk 2001	25 x 50 mm	400 mm			
 mk 2000	50 x 50 mm	1200 mm			
 mk 2004	50 x 100 mm	1200 mm			
 mk 2066	25 x 100 mm	550 mm			
 mk 2255	40 x 120 mm	800 mm			
mk 2238	15 x 30 mm	150 mm			

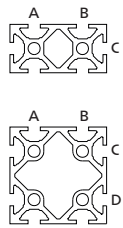
Structural Profiles

Profile Services

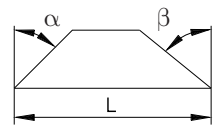
End Services

We provide a large variety of profile end services including cutting, milling, drilling, tapping and placement of threaded inserts. The items listed in the following section are just a selection of the more common services. Individual products made according to design drawings are available on request.

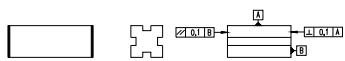
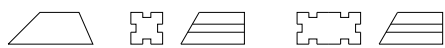
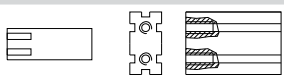
When requesting finishing of profiles to be used with tension plugs, please specify the hole position for the tension plug in mk 2025.02, mk 2040.02, mk 2040.03, mk 2040.41, mk 2040.45 and mk 2040.52 profiles.



For angled cuts, please indicate the following:



Key End Services

Faced			
Angle Cut			
Drill access hole			BA BB for Tension Plug 25 and 40 BF BG for Tension Plug 50
Drill through hole			BV BW for Tension Plug 40/1
Tap			
2x Tap			
Threaded Insert			
Helicoil			

End Services

Series 25

Profile mk 2025.01

Services	Details	
α and β	α, β	**2501AF ....***
ø 5.8		**2501BA ....***
ø 5.8		**2501BB ....***
M10		**2501AA ....***
M10		**2501AB ....***
4x M5		**2501AD ....***
M6		**B25.01.002 ....***
M8		**B25.01.011 ....***

Profile mk 2025.02

Services	Details	
α and β	α, β	**2502AF ....***
ø 5.8	Location	**2502BA ....***
ø 5.8	Location	**2502BB ....***
M10		**2502AC ....***
M10		**2502AD ....***
M6		**B25.02.002 ....***
M8		**B25.02.011 ....***

Profile mk 2025.05

Services	Details	
α and β	α, β	**2505AF ....***
4x M6		**B25.05.002 ....***

Profile mk 2025.31

Services	Details	
ø 5.8	Location	**2531BB ....***
M6		**B25.31.002 ....***

Series 25

Profile mk 2025.35

Services	Details	
ø 5.8		**2535BB ....***
M6		**B25.35.002 ....***

Profile mk 2025.38

Services	Details	
ø 5.8		**2538BB ....***
M6		**B25.38.002 ....***

Profile mk 2025.37

Services	Details	
ø 5.8		**2537BB ....***
M6		**B25.37.002 ....***

Profile mk 2025.32

Services	Details	
ø 5.8	Location	**2532BB ....***
M6		**B25.32.002 ....***

Profile mk 2025.36

Services	Details	
ø 5.8	Location	**2536BB ....***
M6		**B25.36.002 ....***

Profile mk 2025.39

Services	Details	
ø 5.8		**2539BB ....***
M6		**B25.39.002 ....***

....* Profile length in mm

Profile Services

End Services

Series 25

Profile mk 2025.20

Services	Details
M10	2520AB ....*
M6	B25.20.002 ....*
M8	B25.20.011 ....*

Profile mk 2025.21

Services	Details
M10	2521AB ....*
M6	B25.21.002 ....*
M8	B25.21.011 ....*

Profile mk 2025.42

Services	Details
M8	B25.42.002 ....*

Profile mk 2025.43

Services	Details
M8	B25.43.002 ....*

Profile mk 2025.44

Services	Details
3 x M8	B25.44.002 ....*

Series 40

Profile mk 2040.31

Services	Details	
α and β	α, β	5431AF ....*
ø 10		5431BV ....*
ø 10		5431BW ....*
M8		5431AA ....*
M8		5431AB ....*

Profile mk 2040.40

Services	Details	
		5440AI ....*
α and β	α, β	5440AC ....*
ø 10		5440BA ....*
ø 10		5440BB ....*
ø 10		5440BV ....*
ø 10		5440BW ....*
M12		5440AA ....*
M12		5440AB ....*
M8		B54.40.002 ....*
M8		B54.40.001 ....*
M10		B54.40.004 ....*

Profile mk 2040.01

Services	Details	
		5401AI ....*
α and β	α, β	5401AF ....*
ø 10		5401BA ....*
ø 10		5401BB ....*
ø 10		5401BV ....*
ø 10		5401BW ....*

....* Profile length in mm

End Services

Series 40

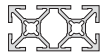
Profile mk 2040.01

Services	Details	
M12		5401AA ....*
M12		5401AB ....*
M8		B54.01.003 ....*
M8		B54.01.002 ....*
M10		B54.01.001 ....*

Profile mk 2040.52

Services	Details	
α and β	α, β	5452AH ....*
ø 10	Location	5452BV ....*
ø 10	Location	5452BW ....*
M8		5452AA ....*
M8		5452AB ....*

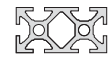
Profile mk 2040.41



Services	Details	
		5441AI ....*
α and β	α, β	5441AH ....*
ø 10	Location	5441BA ....*
ø 10	Location	5441BB ....*
ø 10	Location	5441BV ....*
ø 10	Location	5441BW ....*
M12		5441AC ....*
M12		5441AB ....*
M8		B54.41.002 ....*
M8		B54.41.001 ....*

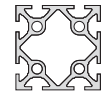
Series 40

Profile mk 2040.02



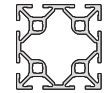
Services	Details	
		5402AI ....*
α and β	α, β	5402AH ....*
ø 10	Location	5402BA ....*
ø 10	Location	5402BB ....*
ø 10	Location	5402BV ....*
ø 10	Location	5402BW ....*
M12		5402AA ....*
M12		5402AB ....*
M8		B54.02.002 ....*
M8		B54.02.001 ....*

Profile mk 2040.03



Services	Details	
α and β	α, β	5403AF ....*
4x M12		5403AA ....*
4x M12		5403AB ....*
4x M8		B54.03.002 ....*
4x M8		B54.03.001 ....*

Profile mk 2040.45



Services	Details	
α and β	α, β	5445AF ....*
4x M12		5445AA ....*
4x M12		5445AB ....*
4x M8		B54.45.002 ....*
4x M8		B54.45.001 ....*

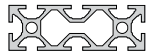
....* Profile length in mm

Profile Services

End Services

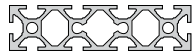
Series 40

Profile mk 2040.05



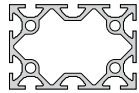
Services	Details	
ø 10	Location	**5405BB ....***
M8		**B54.05.001 ....***

Profile mk 2040.06



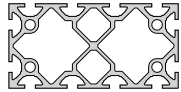
Services	Details	
ø 10	Location	**5406BB ....***
M8		**B54.06.001 ....***

Profile mk 2040.07



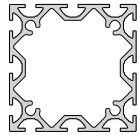
Services	Details	
4x M8		**B54.07.001 ....***

Profile mk 2040.08



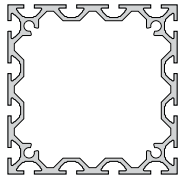
Services	Details	
4x M8		**B54.08.001 ....***

Profile mk 2040.10



Services	Details	
4x M8		**B54.10.001 ....***

Profile mk 2040.09



Services	Details	
4x M8		**B54.09.001 ....***

Series 40

Profile mk 2040.21

Services	Details	
		5421AI ....*
ø 10	Location	**5421BB ....***
ø 10	Location	**5421BW ....***
M12		**5421AA ....***
M8		**B54.21.001 ....***

Profile mk 2040.11

Services	Details	
		5411AI ....*
ø 10		**5411BB ....***
ø 10		**5411BW ....***
M12		**5411AA ....***
M8		**B54.11.001 ....***

Profile mk 2040.14

Services	Details	
ø 10		**5414BB ....***
ø 10		**5414BW ....***
M12		**5414AA ....***
M8		**B54.14.001 ....***

Profile mk 2040.15

Services	Details	
ø 10		**5415BB ....***
ø 10		**5415BW ....***
M12		**5415AA ....***
M8		**B54.15.001 ....***

....* Profile length in mm

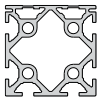
End Services

Series 40

Profile mk 2040.12

Services	Details	
M8		B54.12.001 ....*

Profile mk 2040.46



Services	Details	
4x M8		B54.46.001 ....*

Profile mk 2040.13

Services	Details	
4x M8		B54.13.001 ....*

Profile mk 2040.16

Services	Details	
M8		5416AB ....*

Profile mk 2040.18

Services	Details	
M8		B54.18.002 ....*
M8		B54.18.001 ....*

Profile mk 2040.19

Services	Details	
M8		B54.19.002 ....*
M8		B54.19.001 ....*

Profile mk 2040.20

Services	Details	
M8		B54.20.002 ....*
M8		B54.20.001 ....*

Series 50

Profile mk 2001

Services	Details	
M8		5101AA ....*

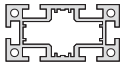
Profile mk 2000

Services	Details	
α and β	α, β	5100AF ....*
ø 10		5100BG ....*
4x M8		5100AC ....*
4x M8		5100AD ....*

Profile mk 2014

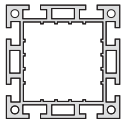
Services	Details	
α and β	α, β	5114AF ....*
ø 10		5114BG ....*
4x M8		B5114.021 ....*
4x M8		B5114.022 ....*

Profile mk 2004



Services	Details	
		5104AI ....*
4x M8		5104AA ....*
4x M8		5104AC ....*

Profile mk 2005



Services	Details	
		5105AI ....*
4x M8		5105AB ....*
4x M8		5105AA ....*

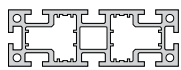
....* Profile length in mm

Profile Services

End Services

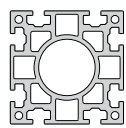
Series 50

Profile mk 2006



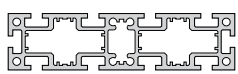
Services	Details
4x M8	**5106AA ....***
4x M8	**5106AB ....***

Profile mk 2011



Services	Details
4x M8	**5111AA ....***
4x M8	**5111AB ....***

Profile mk 2008



Services	Details
4x M8	**5108AA ....***
4x M8	**5108AB ....***

Profile mk 2003

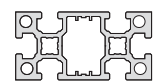
Services	Details
M8	**5103AA ....***

Series 60

Profile mk 2060.01

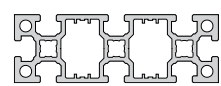
Services	Details	
α and β	α, β	**6001AF ....***
4x M12		**6001AA ....***
4x M12		**6001AB ....***
M12		**B60.01.606 ....***

Profile mk 2060.02



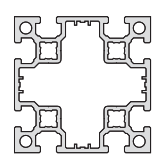
Services	Details
4x M12	**6002AA ....***
4x M12	**6002AB ....***
4x M8	**B60.02.601 ....***

Profile mk 2060.03



Services	Details
4x M12	**6003AB ....***

Profile mk 2060.05



Services	Details
4x M12	**6005AA ....***
4x M12	**6005AB ....***
4x M12	**B60.05.605 ....***

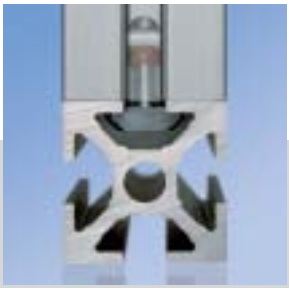
....* Profile length in mm

Threads and Inserts

mk offers services tapping holes or placing inserts. Please refer to the following table for details regarding the recommended tools and available threaded inserts. The services can be performed using a hand drill. The insert tools are designed for manual operation.

Service	for Series	ø Hole	Tools P. 214	Req. Thread length	Order-Nr. Tools	Order-Nr. Threaded Insert
Thread M5	25	4.2 mm	Tap M5	15 mm	K903060005	
Thread M10	25	8.5 mm	Tap M10	30 mm	K903060010	
Threaded Insert M3	25	4.2 mm	Tap M5x0.5 mm, Installation Tool	10 mm	K903060105 K902010004	K112030002
Threaded Insert M6	25	8.5 mm	Tap M9x1 mm, Installation Tool	15 mm	K903060109 K902010010	K112030006
Helicoil M4	25	4.2 mm	Helicoil Tap M4, Installation Tool	10 mm	K903060204 K902010204	K112030104
Helicoil M8	25	8.5 mm	Helicoil Tap M8, Installation Tool	15 mm	K903060208 K902010208	K112030109
Thread M8	40 extra light	7.4 mm	Threadformer M8	20 mm	K903070008	
Thread M12	40	10.0 mm	Tap M12	35 mm	K903060012	
Threaded Insert M8	40	10.0 mm	Tap M12x1.5 mm, Installation Tool	20 mm	K903060113 K902010012	K112030008
Helicoil M10	40	10.0 mm	Helicoil Tap M10, Installation Tool	20 mm	K903060210 K902010210	K112030110
Thread M8	50	7.0 mm	Tap M8	25 mm	K903060008	
Threaded Insert M5	50	7.0 mm	Tap M8x1 mm, Installation Tool	15 mm	K903060108 K902010008	K112030005
Helicoil M6	50	7.0 mm	Helicoil Tap M6, Installation Tool	15 mm	K903060206 K902010206	K112030106
Thread M12	60	10.5 mm	Tap M12	35 mm	K903060012	
Thread M16	60	14.5 mm	Tap M16	45 mm	K903060016	
Threaded Insert M8	60	10.5 mm	Tap M12x1.5 mm, Installation Tool	20 mm	K903060113 K902010012	K112030008
Threaded Insert M12	60	14.5 mm	Tap M16x1.5 mm, Installation Tool	25 mm	K903060116 K902010016	K112030010
Helicoil M10	60	10.5 mm	Helicoil Tap M10, Installation Tool	20 mm	K903060210 K902010210	K112030110

mk Assembly Components



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mk Assembly Components

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Assembly Components

Selection criteria for Assembly Components

Key:
+ Very suitable
+ - Only suitable under certain circumstances
- Not suitable

Selection criteria	Assembly Components	Angle / Console	Tension Plug Series 25, 40, 50	Tension Plug Series 40/1, 40 light	Face Plate	Side Plate	Corner Block	Clamp
F	High load bearing capacity	+	+ -	-	+	+	+	+ -
M	High moment bearing capacity	+	+ -	+ -	+ -	+	+ -	-
M_T	High torsional moment bearing capacity	+	-	-	+ -	+	-	+ -
	Short processing time required	+	+ -	+ -	+ -	+	+ -	+
	Short assembly time required	+	+ -	+ -	+ -	+	+ -	+
€ $	Low material costs	+ -	+	+	-	+ -	-	+ -
	Subsequent assembly between profiles	+	-	-	+	+	-	-
	Subsequent movability	+	+	only 40/1	+	+	-	+
	T-slots free for paneling	-	-	+	-	+	-	-

Assembly Components

Angles

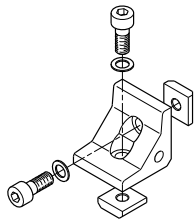
Advantages Angles

Angles

mk Angles are manufactured from extruded aluminum profiles (AlMgSi 0.7 F28) and are milled. They have a tumbled surface finish.

mk Angles are our most popular components. They also offer the possibility of combining profiles of different series.

The mounting hardware for the mk angle is made up of a DIN socket head cap screw, a ribbed washer and an mk nut. The nut holds the connection in the profile slot. The ribbed washer secures the screw against loosening under dynamic loads. **Use of ribbed washers in conjunction with socket or hex head screws is obligatory for mk products.**



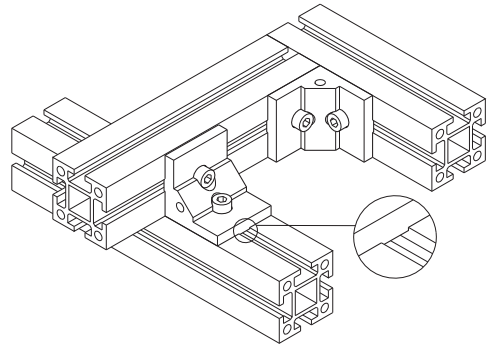
Angle kits including mounting hardware

mk also offers the most common angles as a complete kit including mounting hardware. They are denoted by the preceding T in the ID number.

The mounting hardware for the kits has been selected in such a way that the angles can be universally used for all the normal angled connections and include the required number of screws, ribbed washers and square nuts.

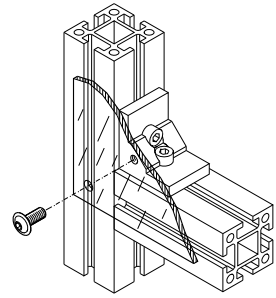
Keyed Angles

The keys in Angles Bs, Cs, Ds, Es, Fs, Gs, Hs, Js, Ks and S firmly hold the angle in the T-slot, thus preventing any rotation of the profile. In an assembly you can be assured of exact 90° connection. Keyed angles also significantly reduce assembly times.



Angles and paneling

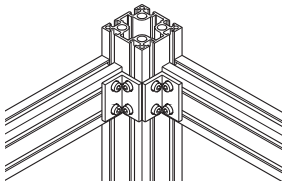
An M8 thread can be cut into the side holes of the angles to accommodate paneling such as Polycarbonate.



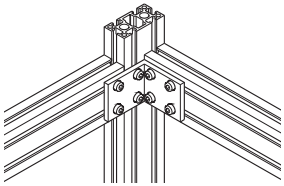
We can also produce special angles to your specifications using our angle profiles.

Examples

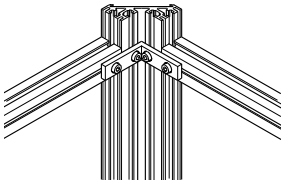
Series 25



Profile mk 2025.05, mk 2025.02
2 x Angle 40

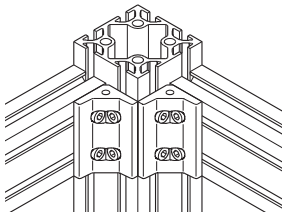


Profile mk 2025.02
Angle A25/40/2

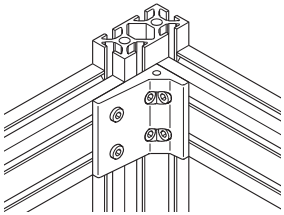


Profile mk 2025.25, 2025.01
Angle A25/15/2

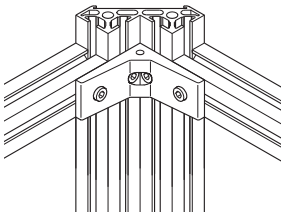
Series 40



Profile mk 2040.02, 2040.03
2 x Angle E80

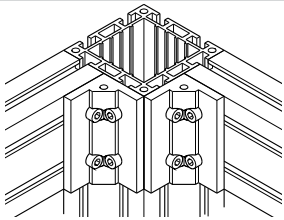


Profile mk 2040.02
Angle F80

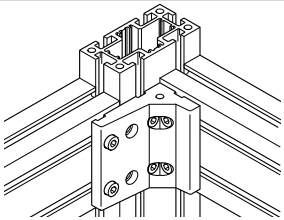


Profile mk 2040.04, 2040.01
Angle G40

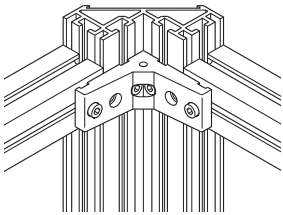
Series 50



Profile mk 2005, mk 2004
2 x Angle B100

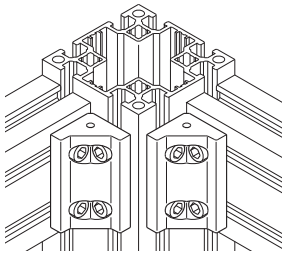


Profile mk 2004
Angle D90/2

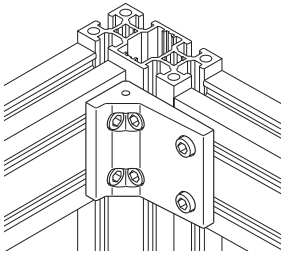


Profile mk 2072, mk 2000
Angle C40/3

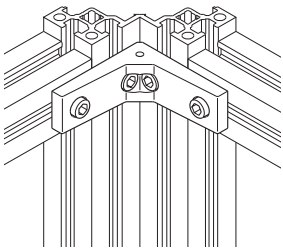
Series 60



Profile mk 2060.02, mk 2060.05,
2 x Angle H100



Profile mk 2060.02,
Angle J100



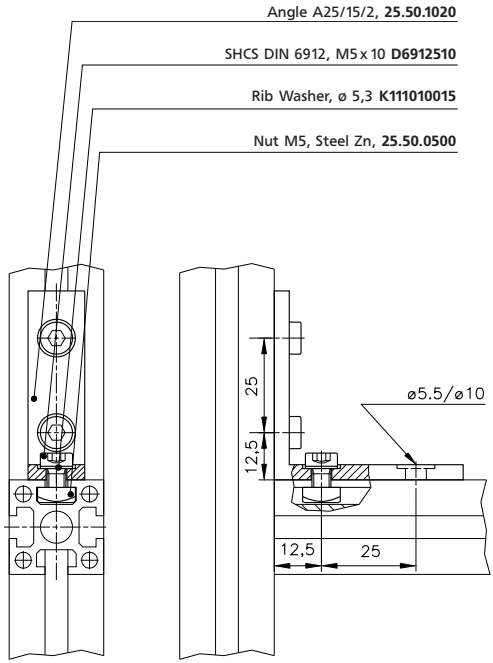
Profile mk 2060.01, mk 2060.22
Angle K40

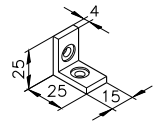
Assembly Components

Angles

Series 25

The angle kits include the necessary mounting hardware as shown in the example below.



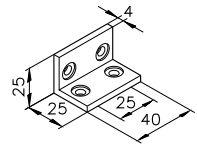


DIN 6912

25 | 40 | 50 | 60

Angle 15
25.50.1000
Al tumbled

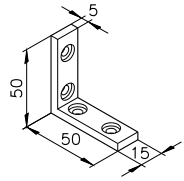
T25.50.1000
includes mounting hardware



25 | 40 | 50 | 60

Angle 40
25.50.1001
Al tumbled

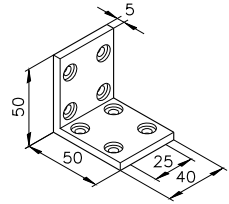
T25.50.1001
includes mounting hardware



25 | 40 | 50 | 60

Angle A25/15/2
25.50.1020
Al tumbled

T25.50.1020
includes mounting hardware

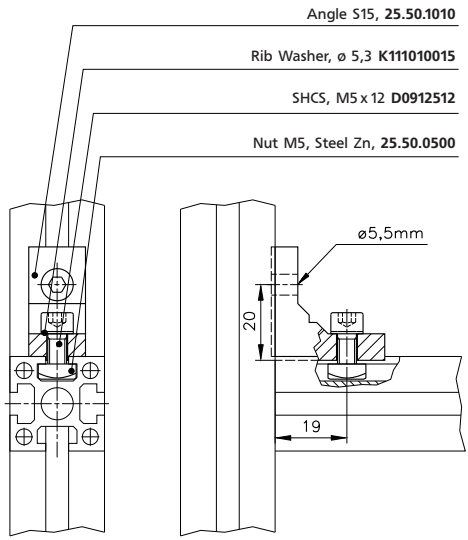


25 | 40 | 50 | 60

Angle A25/40/2
25.50.1021
Al tumbled

T25.50.1021
includes mounting hardware

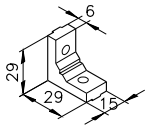
The angle kits include the necessary mounting hardware as shown in the example below.



Angles

Series 25

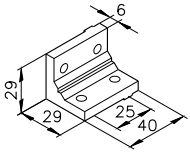
M5 x 12



25 | 40 | 50 | 60

Angle S15
25.50.1010
Al tumbled

T25.50.1010
includes mounting hardware



25 | 40 | 50 | 60

Angle S40
25.50.1012
Al tumbled

T25.50.1012
includes mounting hardware

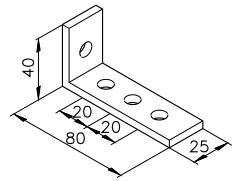
Assembly Components

Angles

Series 40

Angle P

M8 x 16

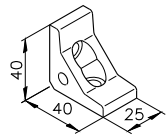


25 | **40** | 50 | 60

Angle P3
82.00.0024
Al tumbled

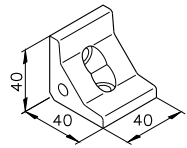
Angle E

M8 x 16



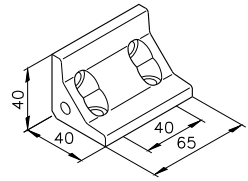
25 | **40** | 50 | 60

Angle E25
82.40.0701
Al tumbled
T82.40.0701
includes mounting hardware



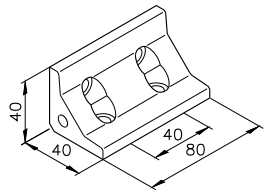
25 | **40** | 50 | 60

Angle E40
82.40.0702
Al tumbled
T82.40.0702
includes mounting hardware



25 | **40** | 50 | 60

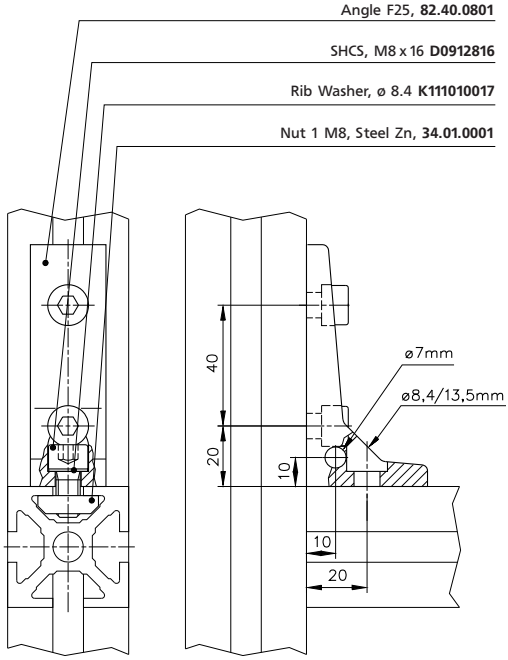
Angle E65
82.40.0704
Al tumbled
T82.40.0704
includes mounting hardware



25 | **40** | 50 | 60

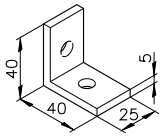
Angle E80
82.40.0703
Al tumbled
T82.40.0703
includes mounting hardware

The angle kits include the necessary mounting hardware as shown in the example below.



Angle P

M8 x 16



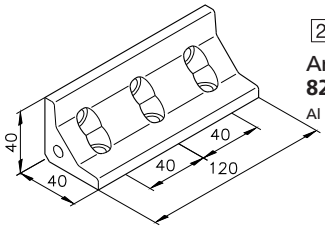
25 | **40** | 50 | 60

Angle P1
82.00.0023
Al tumbled

Series 40

Angle E

M8 x 16

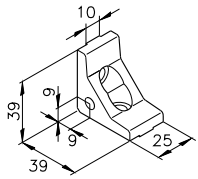


25 | **40** | 50 | 60

Angle E120
82.40.0705
Al tumbled

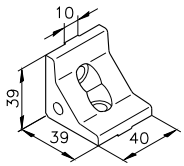
Angle Es

M8 x 16



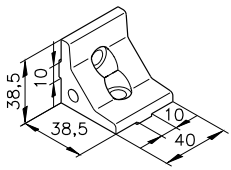
25 | **40** | 50 | 60

Angle E25s
82.40.0741
Al tumbled
T82.40.0741
includes mounting hardware



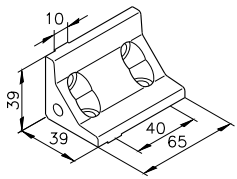
25 | **40** | 50 | 60

Angle E40s
82.40.0742
Al tumbled
T82.40.0742
includes mounting hardware



25 | **40** | 50 | 60

Angle E40s3
82.40.0747
Al tumbled
T82.40.0747
includes mounting hardware

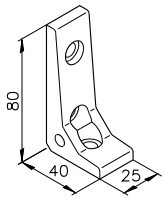


25 | **40** | 50 | 60

Angle E65s
82.40.0744
Al tumbled
T82.40.0744
includes mounting hardware

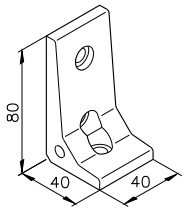
Angle F

M8 x 16



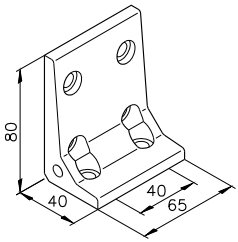
25 | **40** | 50 | 60

Angle F25
82.40.0801
Al tumbled
T82.40.0801
includes mounting hardware



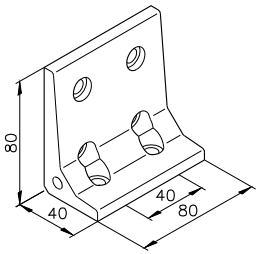
25 | **40** | 50 | 60

Angle F40
82.40.0802
Al tumbled
T82.40.0802
includes mounting hardware



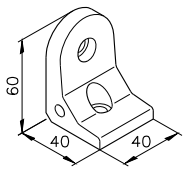
25 | **40** | 50 | 60

Angle F65
82.40.0804
Al tumbled
T82.40.0804
includes mounting hardware



25 | **40** | 50 | 60

Angle F80
82.40.0803
Al tumbled
T82.40.0803
includes mounting hardware



25 | **40** | 50 | 60

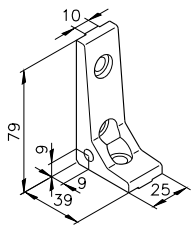
Angle F40/R
82.40.0805
Al tumbled
T82.40.0805
includes mounting hardware
for fixing panels to posts

Angles

Series 40

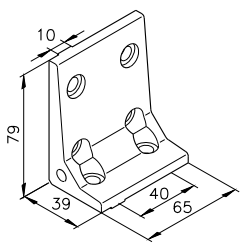
Angle Fs

M8 x 16



25 | **40** | 50 | 60

Angle F25s
82.40.0841
Al tumbled
T82.40.0841
includes mounting hardware

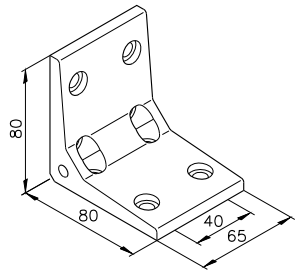


25 | **40** | 50 | 60

Angle F65s
82.40.0844
Al tumbled
T82.40.0844
includes mounting hardware

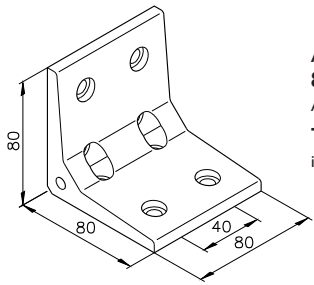
Angle G

M8 x 16



25 | **40** | 50 | 60

Angle G65
82.40.0904
Al tumbled
T82.40.0904
includes mounting hardware

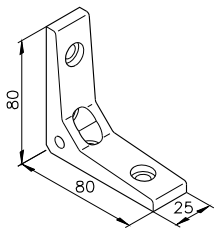


25 | **40** | 50 | 60

Angle G80
82.40.0903
Al tumbled
T82.40.0903
includes mounting hardware

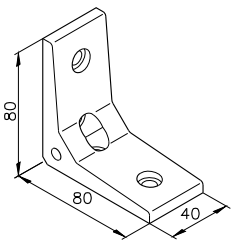
Angle G

M8 x 16



25 | **40** | 50 | 60

Angle G25
82.40.0901
Al tumbled
T82.40.0901
includes mounting hardware

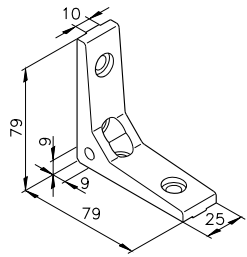


25 | **40** | 50 | 60

Angle G40
82.40.0902
Al tumbled
T82.40.0902
includes mounting hardware

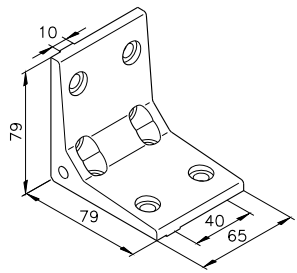
Angle Gs

M8 x 16



25 | **40** | 50 | 60

Angle G25s
82.40.0941
Al tumbled
T82.40.0941
includes mounting hardware



25 | **40** | 50 | 60

Angle G65s
82.40.0942
Al tumbled
T82.40.0942
includes mounting hardware

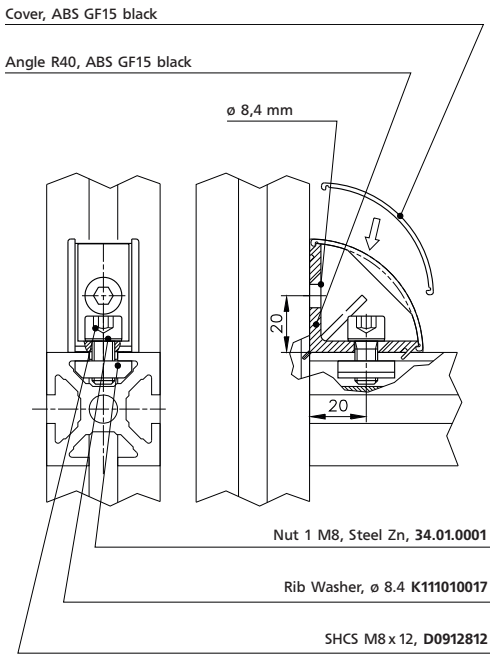
Angles

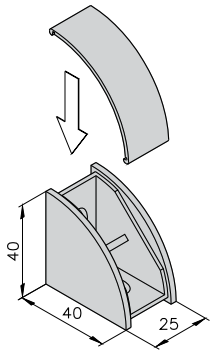
Series 40

Plastic Angle

The plastic angle is used for assemblies where the emphasis is focused more on an attractive design and less on high loads.

Angle R40 feature detents which prevent profile twist. These detents can be easily removed if connecting profiles with closed T-slots.





M8x12

25 | 40 | 50 | 60

Angle R40
B46.00.041
ABS GF15
black

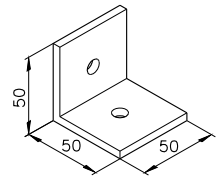
Assembly Components

Angles

Series 50

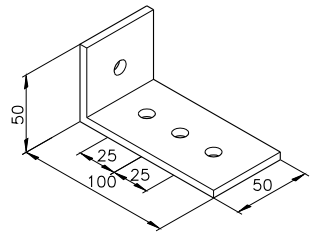
Angle A

M8 x 16



25 | 40 | 50 | 60

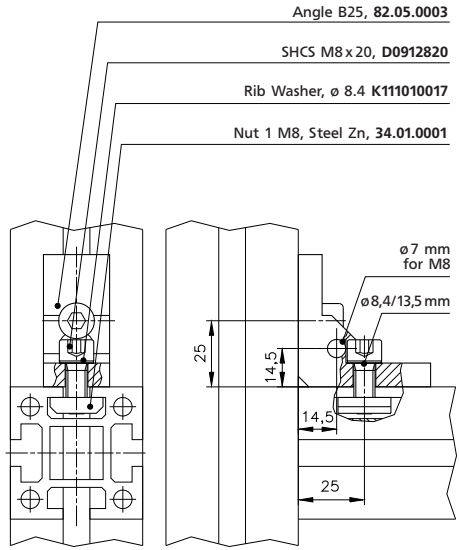
Angle A1
82.02.0001
Al tumbled



25 | 40 | 50 | 60

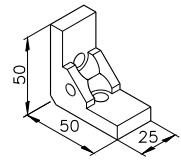
Angle A3
82.03.0001
Al tumbled

The angle kits include the necessary mounting hardware as shown in the example below.



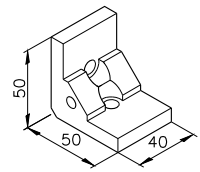
Angle B

M8x20



25 | 40 | 50 | 60

Angle B25
82.05.0003
Al tumbled
T82.05.0003
includes mounting hardware



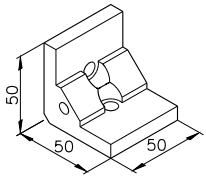
25 | 40 | 50 | 60

Angle B40
82.05.0013
Al tumbled
T82.05.0013
includes mounting hardware

Series 50

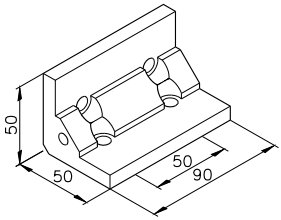
Angle B

M8x20



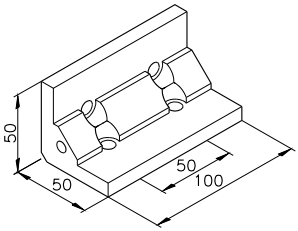
25 | 40 | **50** | 60

Angle B50
82.05.0004
Al tumbled
T82.05.0004
includes mounting hardware



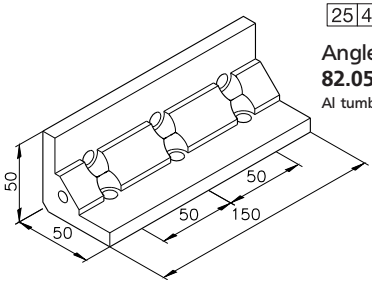
25 | 40 | **50** | 60

Angle B90
82.05.0022
Al tumbled
T82.05.0022
includes mounting hardware



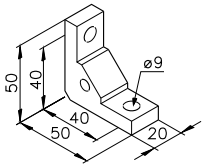
25 | 40 | **50** | 60

Angle B100
82.05.0006
Al tumbled
T82.05.0006
includes mounting hardware



25 | 40 | **50** | 60

Angle B150
82.05.0012
Al tumbled

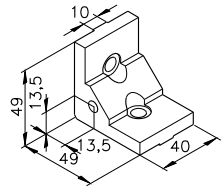


25 | **40** | 50 | 60

Angle B20/40
82.05.0026
Al tumbled
T82.05.0026
includes mounting hardware
for fixing panels to posts

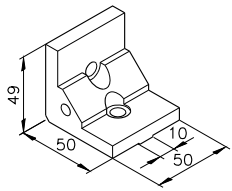
Angle Bs

M8x20



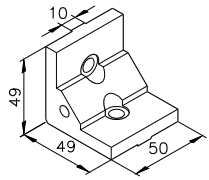
25 | 40 | **50** | 60

Angle B40s2
82.05.0055
Al tumbled
T82.05.0055
includes mounting hardware



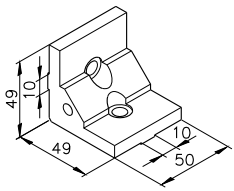
25 | 40 | **50** | 60

Angle B50s1
82.05.0051
Al tumbled
T82.05.0051
includes mounting hardware



25 | 40 | **50** | 60

Angle B50s2
82.05.0052
Al tumbled
T82.05.0052
includes mounting hardware



25 | 40 | **50** | 60

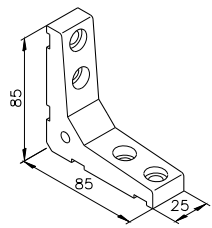
Angle B50s3
82.05.0053
Al tumbled
T82.05.0053
includes mounting hardware

Angles

Series 50

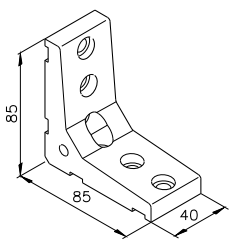
Angle C

M8x20



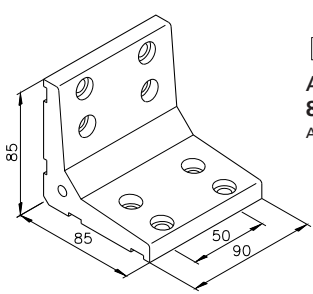
25 | 40 | **50** | 60

Angle C25
82.06.0001
Al tumbled
T82.06.0001
includes mounting hardware



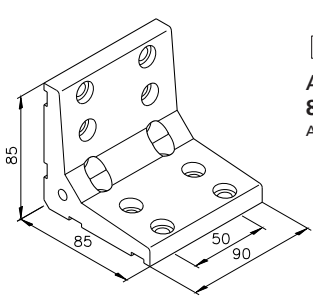
25 | 40 | **50** | 60

Angle C40/3
82.06.0014
Al tumbled



25 | 40 | **50** | 60

Angle C90
82.06.0003
Al tumbled

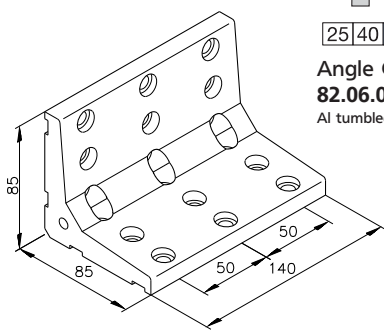


25 | 40 | **50** | 60

Angle C90/2
82.06.0009
Al tumbled

Angle C

M8x20

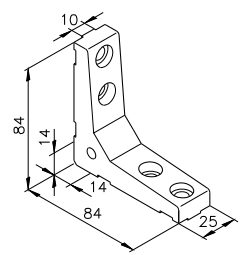


25 | 40 | **50** | 60

Angle C140/2
82.06.0010
Al tumbled

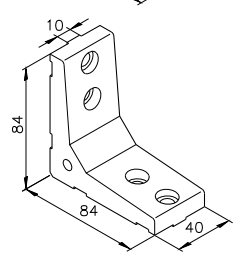
Angle Cs

M8x20



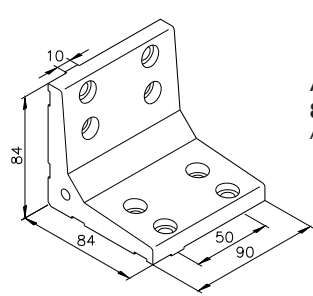
25 | 40 | **50** | 60

Angle C25s
82.06.0040
Al tumbled
T82.06.0040
includes mounting hardware



25 | 40 | **50** | 60

Angle C40s
82.06.0041
Al tumbled
T82.06.0041
includes mounting hardware

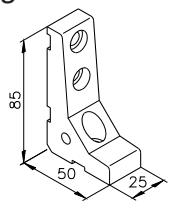


25 | 40 | **50** | 60

Angle C90s
82.06.0042
Al tumbled

Series 50

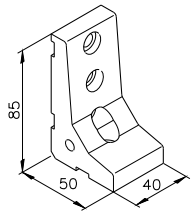
Angle D



M8x20

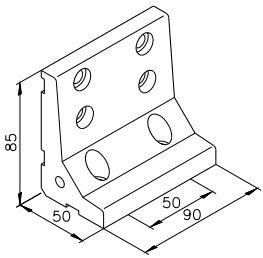
25 | 40 | **50** | 60

Angle D25
82.07.0001
Al tumbled
T82.07.0001
includes mounting hardware



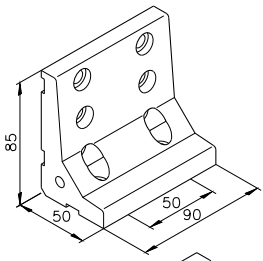
25 | 40 | **50** | 60

Angle D40/3
82.07.0013
Al tumbled



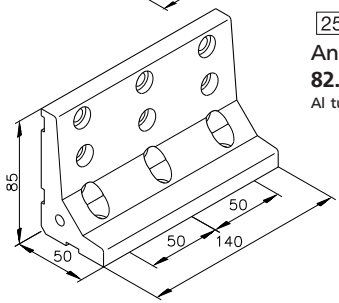
25 | 40 | **50** | 60

Angle D90
82.07.0003
Al tumbled



25 | 40 | **50** | 60

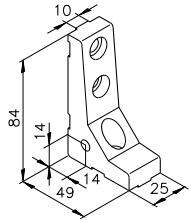
Angle D90/2
82.07.0009
Al tumbled



25 | 40 | **50** | 60

Angle D140/2
82.07.0010
Al tumbled

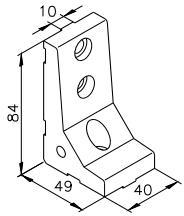
Angle Ds



M8x20

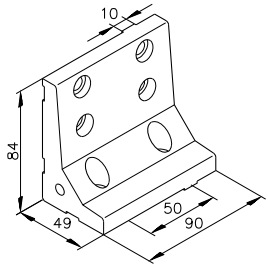
25 | 40 | **50** | 60

Angle D25s
82.07.0040
Al tumbled
T82.07.0040
includes mounting hardware



25 | **40** | **50** | 60

Angle D40s
82.07.0041
Al tumbled
T82.07.0041
includes mounting hardware



25 | 40 | **50** | 60

Angle D90s
82.07.0042
Al tumbled

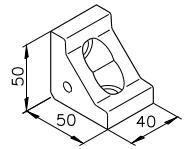
Assembly Components

Angles

Series 60

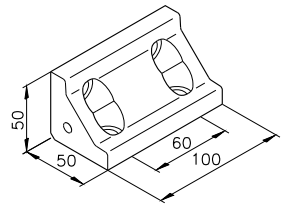
Angle H

M12x25



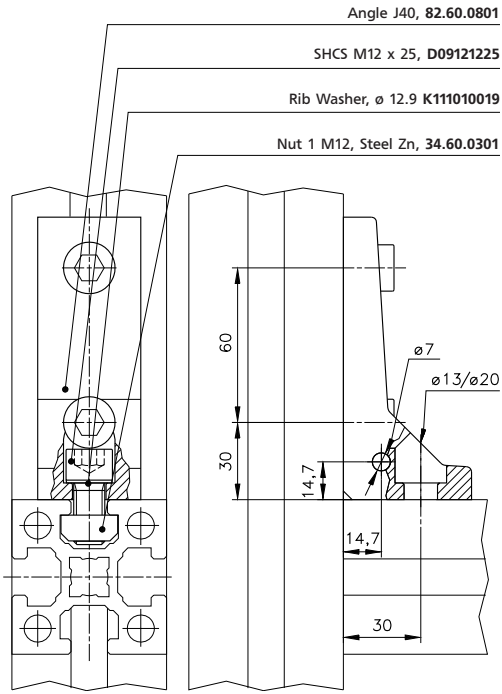
25 | 40 | 50 | **60**

Angle H40
82.60.0701
Al tumbled



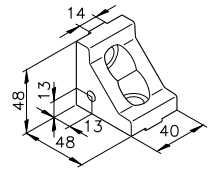
25 | 40 | 50 | **60**

Angle H100
82.60.0702
Al tumbled



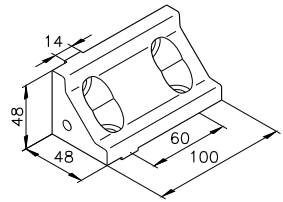
Angle Hs

M12x25



25 | 40 | 50 | **60**

Angle H40s
82.60.0741
Al tumbled



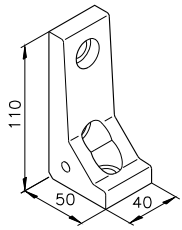
25 | 40 | 50 | **60**

Angle H100s
82.60.0742
Al tumbled

Series 60

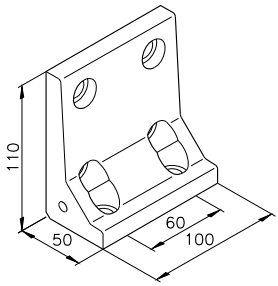
Angle J

M12x25



25 | 40 | 50 | **60**

Angle J40
82.60.0801
Al tumbled

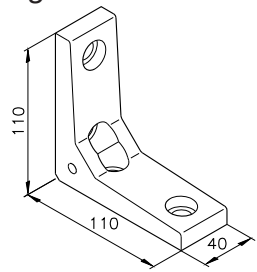


25 | 40 | 50 | **60**

Angle J100
82.60.0802
Al tumbled

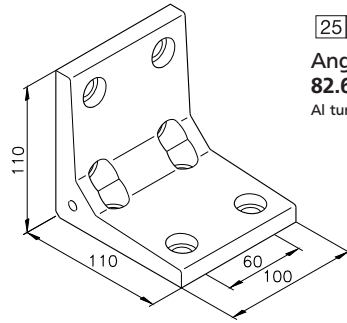
Angle K

M12x25



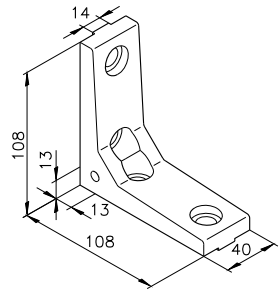
25 | 40 | 50 | **60**

Angle K40
82.60.0901
Al tumbled



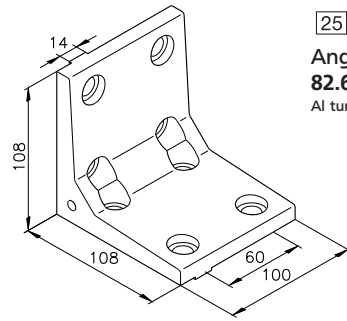
25 | 40 | 50 | **60**

Angle K100
82.60.0902
Al tumbled



25 | 40 | 50 | **60**

Angle K40s
82.60.0941
Al tumbled



25 | 40 | 50 | **60**

Angle K100s
82.60.0942
Al tumbled

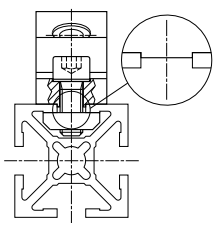
Assembly Components

Angles

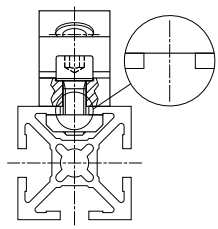
Series 40 and 50

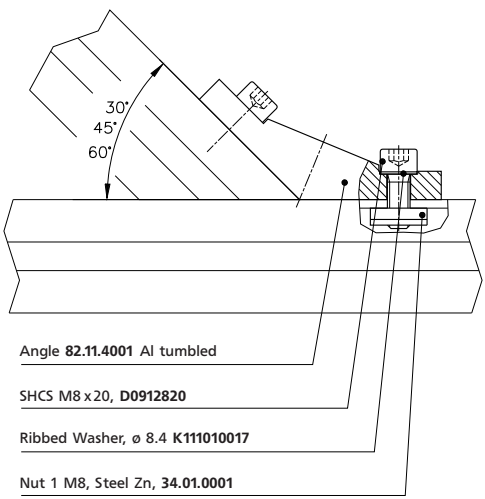
In addition to connecting profiles at standard angles, the L (30°), M (45°) and N (60°) ang les are ideal for corner stiffening. In large, right-angled bracing assemblies, either two M angles or one L and one N angle always correspond to each other. All profiles are thus automatically aligned. The keys in the M25s angle ensure the profiles cannot twist.

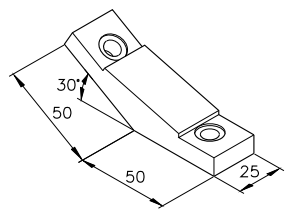
Angle M25s



Angle M25

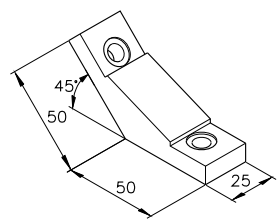






25 | **40** | **50** | 60

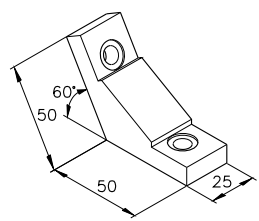
Angle L25
82.10.4001
Al tumbled



25 | **40** | **50** | 60

Angle M25
82.11.4001
Al tumbled

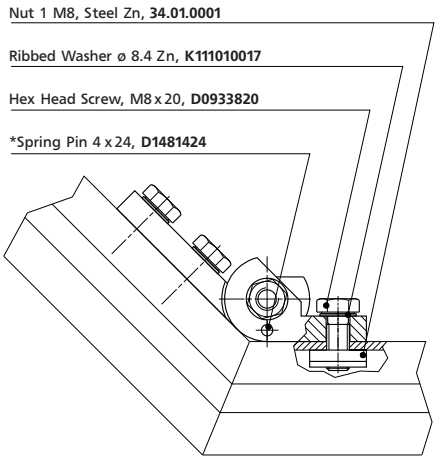
Angle M25s
82.11.4041
Al tumbled
keyed angle



25 | **40** | **50** | 60

Angle N25
82.12.4001
Al tumbled

Installation example Series 40



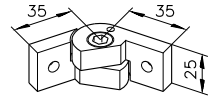
*Order separately. Adjustable Angles can be pinned at pre-set positions.

Assembly Components

Angles

Adjustable Angles

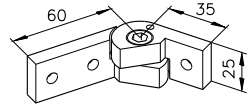
Adjustable Angles attach profiles at non-standard angles. If desired, the angles can be pinned to a preset position prior to assembly. When DIN EN ISO 4017 (hex head) screws are used the adjustment range is 0°-205°.



25 | 40 | 50 | 60

Adjustable Angles
A25/1
B46.00.035
as shown

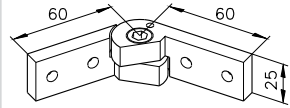
B46.00.025
includes mounting hardware without spring pin



25 | 40 | 50 | 60

Adjustable Angles
A25/2
B46.00.036
as shown

B46.00.026
includes mounting hardware without spring pin

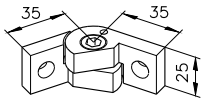


25 | 40 | 50 | 60

Adjustable Angles
A25/3
B46.00.034
as shown

B46.00.024
includes mounting hardware without spring pin

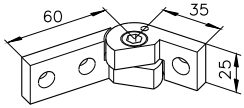
Adjustable Angles



25 | **40** | 50 | 60

Adjustable Angles B25
B46.00.033
as shown

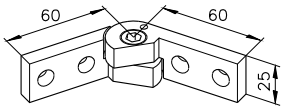
B46.00.021
includes mounting hardware
without spring pin



25 | **40** | 50 | 60

Adjustable Angles C25
B46.00.037
as shown

B46.00.027
includes mounting hardware
without spring pin



25 | **40** | 50 | 60

Adjustable Angles D25
B46.00.032
as shown

B46.00.020
includes mounting hardware
without spring pin

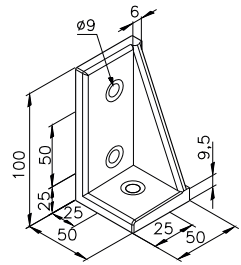
Assembly Components

Consoles

Cast Consoles

Series 50

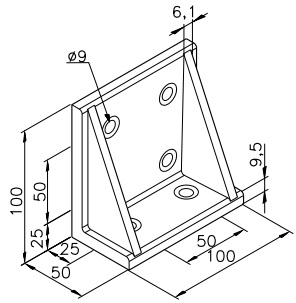
For frames with high static loads, the mk consoles are a sound alternative to the mk angles. The consoles are made of cast aluminum and milled square.



M8x20

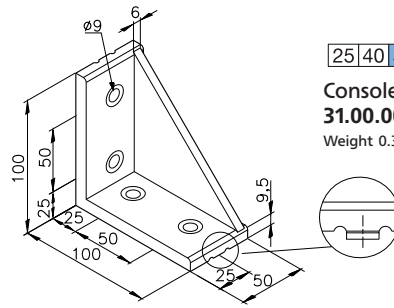
25 | 40 | **50** | 60

Console 1
31.00.0001
Weight 0.25 kg



25 | 40 | **50** | 60

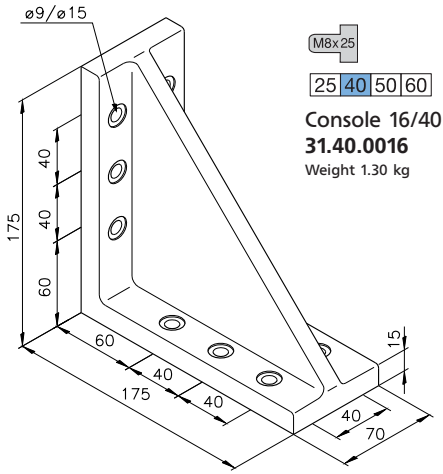
Console 2
31.00.0002
Weight 0.50 kg



25 | 40 | **50** | 60

Console 4
31.00.0004
Weight 0.35 kg

Series 40

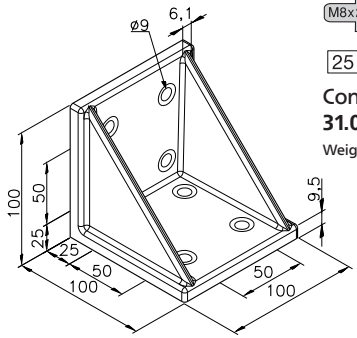


M8x25

25 | **40** | 50 | 60

Console 16/40
31.40.0016
Weight 1.30 kg

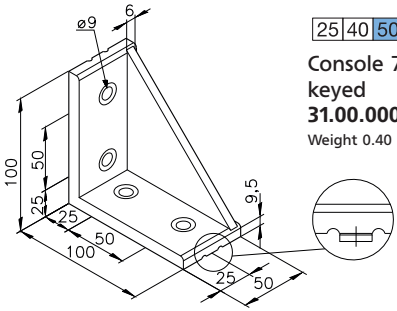
Cast Consoles



M8x20

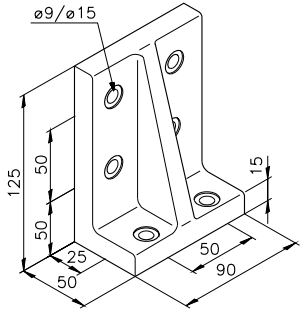
25 40 **50** 60

Console 5
31.00.0005
Weight 0.70 kg



25 40 **50** 60

Console 7
keyed
31.00.0007
Weight 0.40 kg

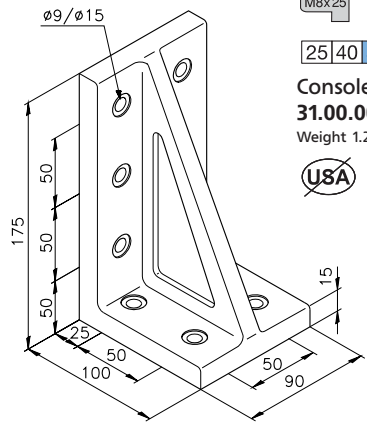


M8x25

25 40 **50** 60

Console 14
31.00.0014
Weight 0.70 kg

USA

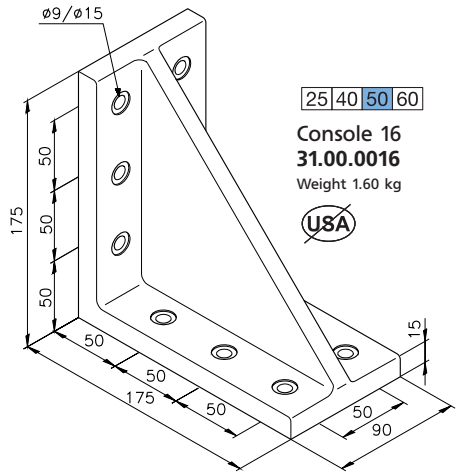


M8x25

25 40 **50** 60

Console 15
31.00.0015
Weight 1.20 kg

USA



25 40 **50** 60

Console 16
31.00.0016
Weight 1.60 kg

USA

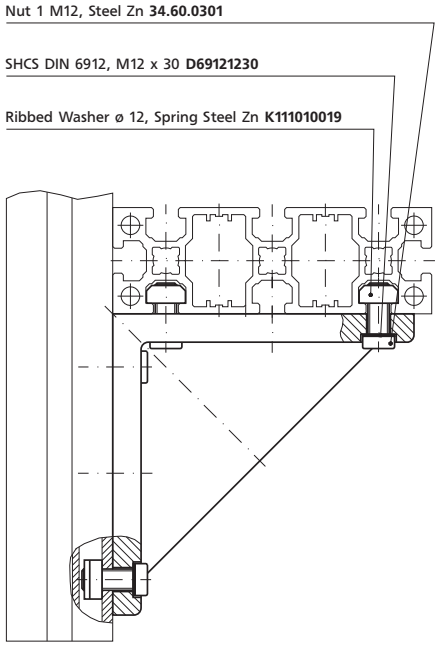
Assembly Components

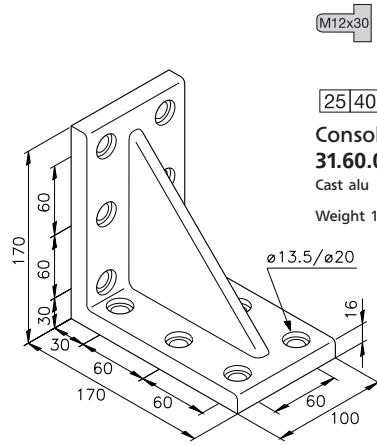
Consoles

Cast Consoles

Series 60

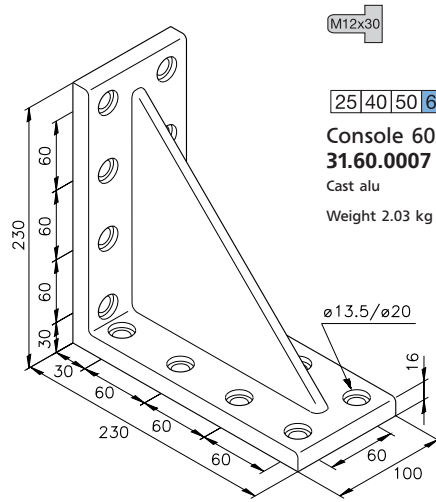
For framing with high static loads, mk consoles are a heavy duty alternative to angles. They are made of cast aluminum and milled square.





25 | 40 | 50 | **60**

Console 60/1
31.60.0001
Cast alu
Weight 1.38 kg



25 | 40 | 50 | **60**

Console 60/7
31.60.0007
Cast alu
Weight 2.03 kg

Assembly Components

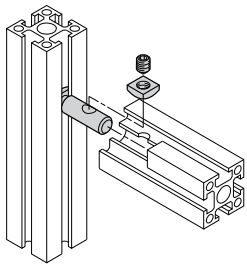
Internal Fasteners

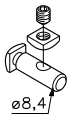
Tension plugs are an alternative to angles, if slots need to be kept free for inserting paneling or should structures need to be made without immediately visible connection elements. As a result, tension plugs are frequently used for guarding or in light-duty framing.

Profile services see page 64

Drill Fixtures see from page 216

Series 25

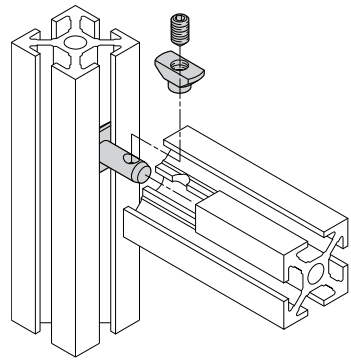


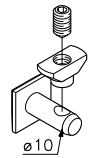


Tension Plug
Series 25
B51.03.009
Steel Zn

for end services BA, BB
(Drill ø 5,8 mm access hole, 15 mm from end)

Series 40





Tension Plug
Series 40
B51.03.004
Steel Zn

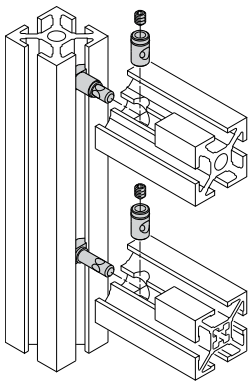
B51.03.030
Stainless Steel

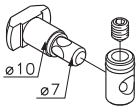
for end services BA, BB
(Drill ø 10 mm access hole, 15 mm from end)

Drill Fixtures see from page 216

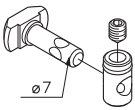
Series 40/1

The tension plug 40/1 is ideal for frame structures with paneling because all slots remain free. In addition, the T-shaped head of the tension plug allows for later installation of beams by passing through the top of the T-slot and rotating the beam 90°.





Tension Plug
Series 40 (normal+light)
B51.03.036

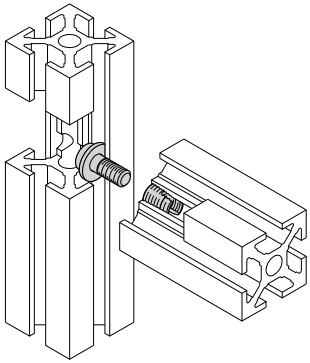


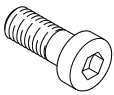
Tension Plug
Series 40 (extra light)
B51.03.037

for end services BV oder BW
(Drill ø 10 mm throung hole, 15 mm from end)

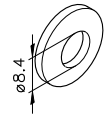
Series 40 light

The tension fastener 40 provides users with the option of setting up profile structures using assembly components consisting solely of standard hardware. This connection requires an M8 thread or threaded insert in the profile that is to be attached, and a ø 9 mm access hole at the connection position in the other profile.

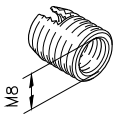




SHCS
D6912820
DIN 6912, 8.8 Zn
D6912820A2
DIN 6912, Stainless Steel



Spring Washer
D67968
St Zn
D67968A2
Stainless Steel



Threaded Insert M8
K112030008

Assembly Components

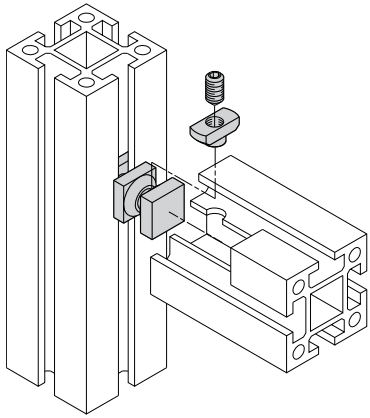
Internal Fasteners

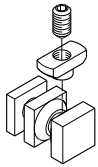
Series 50

The tension plug 50 sets itself apart thanks to its high load-bearing capacity. A further advantage is the standard drill service. Only the profile with the tension plug is drilled. A profile prepared in this way can be inserted into another profile and mounted in any position required without additional work.

Profile services see page 64

Drill Fixtures see from page 216





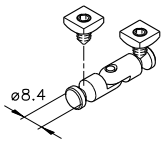
Tension Plug
for Series 50
B51.03.006

for end services BF, BG
(Drill ø 10 mm access hole, 15 mm from end)

Internal Fasteners

Swivel Tension Plug

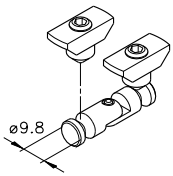
The swivel tension plug can be used to connect miter cut profiles. All angles between +- 90° can be realized. The connection requires a one-sided ø 9 resp. ø 10 mm hole on the chamfered edge in both profiles at a center-distance of 15 mm to the middle of the cut edge.



25 | 40 | 50 | 60

Swivel Tension Plug
Series 25
B51.03.010
Steel Zn

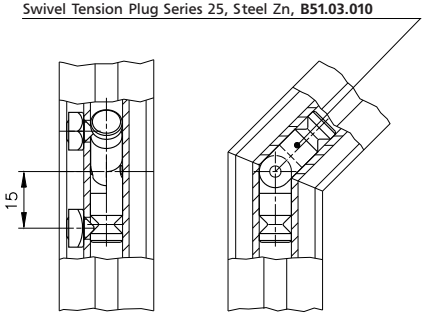
90 - 270°



25 | 40 | 50 | 60

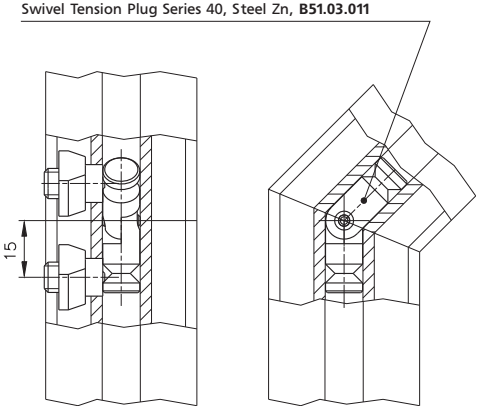
Swivel Tension Plug
Series 40
B51.03.011
Steel Zn, 90 - 270°

Swivel Tension Plug Series 25, Steel Zn, **B51.03.010**



for series 25
(Drill ø 5,8 mm access hole, 15 mm from end)

Swivel Tension Plug Series 40, Steel Zn, **B51.03.011**



for series 40
(Drill ø 10 mm access hole, 15 mm from end)

Assembly Components

Plates

Face Plates

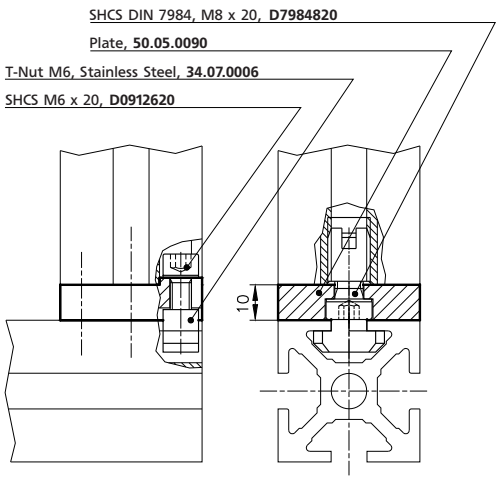
USA

Connecting plates for assembly at profile ends

Face plates are primarily used to mount profiles into existing framing. The plates feature keyways to prevent twist, and the included hardware is designed for drop-in use.

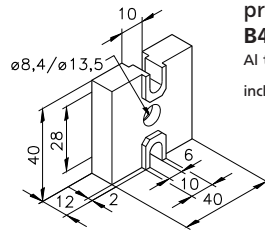
Profile services see page 64

Installation example B46.07.090



25 | 40 | 50 | 60

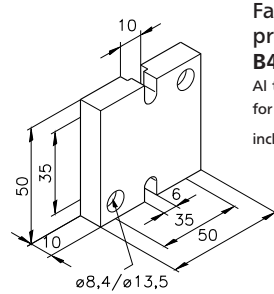
Face Plate 40
profile end
B46.07.090
Al tumbled
includes mounting hardware



for end services 1 x thread M8

25 | 40 | 50 | 60

Face Plate 50
profile end
B46.07.095
Al tumbled,
for Profile mk 2000
includes mounting hardware



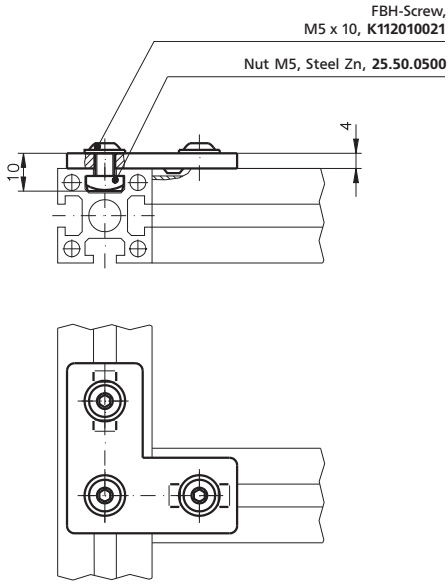
for end services 2 x/(4 x) thread M8

Plates

Light version

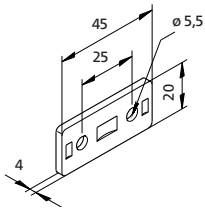
Series 25

The light plates are designed for low to medium loads, especially for additional stiffening of connections.



M5 x 10

Flanged Button-Head



25 | 40 | 50 | 60

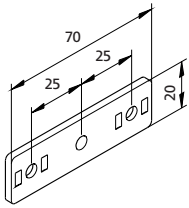
Straight Plate 01

25.50.3000

Al tumbled

T25.50.3000

includes mounting hardware



25 | 40 | 50 | 60

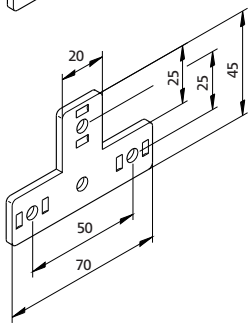
Straight Plate 02

25.50.3001

Al tumbled

T25.50.3001

includes mounting hardware



25 | 40 | 50 | 60

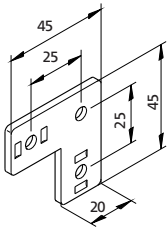
T-Platte 01

25.50.3006

Al tumbled

T25.50.3006

includes mounting hardware



25 | 40 | 50 | 60

Angle Plate 01

25.50.3002

Al tumbled

T25.50.3002

includes mounting hardware

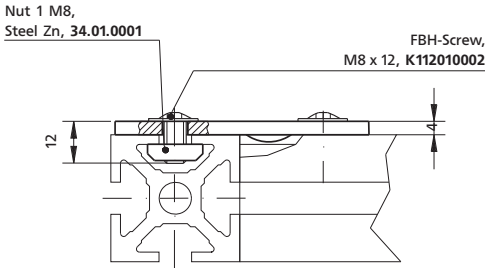
Assembly Components

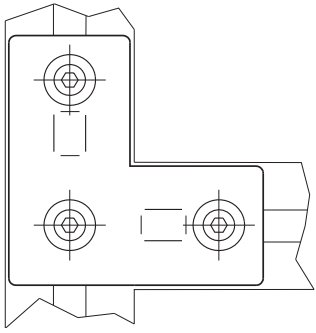
Plates

Light version

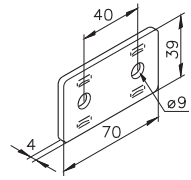
Series 40 and 50

The light plates are designed for low to medium loads, especially for additional stiffening of connections.





Flanged Button-Head



25 | **40** | 50 | 60

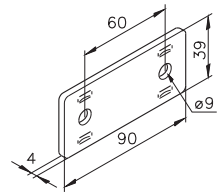
Parallel Plate 05

50.05.0053

Al tumbled

T50.05.0053

includes mounting hardware



25 | **40** | 50 | 60

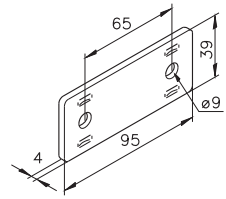
Parallel Plate 04

50.05.0077

Al tumbled

T50.05.0077

includes mounting hardware



25 | **40** | **50** | 60

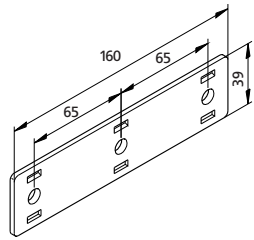
Parallel Plate 03

50.05.0052

Al tumbled

T50.05.0052

includes mounting hardware



25 | **40** | **50** | 60

Parallel Plate 09

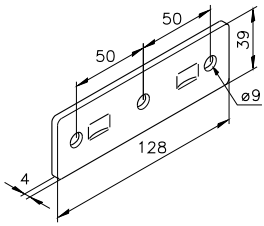
50.05.0070

Al tumbled

T50.05.0070

includes mounting hardware

Light version *Series 40 and 50*

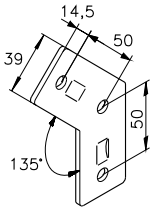


M8x12

Flanged Button-Head

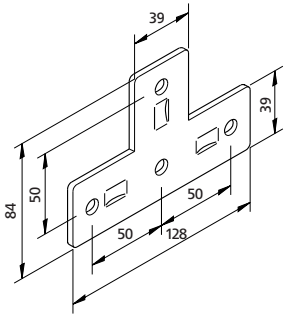
25 | **40** | **50** | 60

Parallel Plate 07
50.05.0047
Al tumbled
T50.05.0047
includes mounting hardware



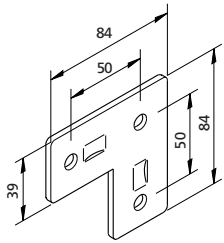
25 | **40** | **50** | 60

Angle Plate 13
50.05.0051
Al tumbled
T50.05.0051
includes mounting hardware



25 | **40** | **50** | 60

T-Plate 03
50.05.0046
Al tumbled
T50.05.0046
includes mounting hardware



25 | **40** | **50** | 60

Angle Plate 03
50.05.0045
Al tumbled
T50.05.0045
includes mounting hardware

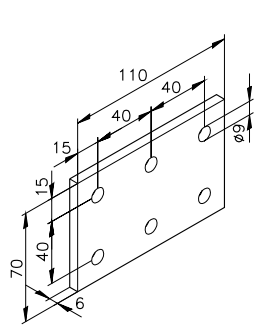
Assembly Components

Plates

Heavy-duty version

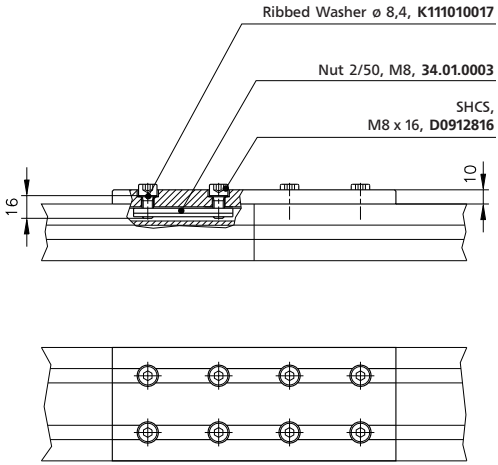
Series 40

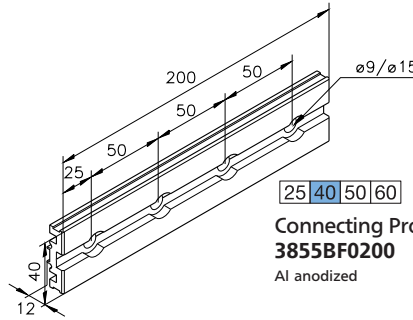
The heavy duty plates are designed for high loads. Plates with keyways ensure precisely aligned profiles.



25 | **40** | 50 | 60

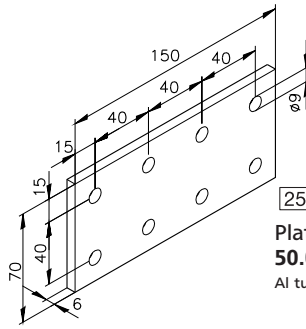
Plate 40/2
50.05.0060
Al tumbled





25 | **40** | 50 | 60

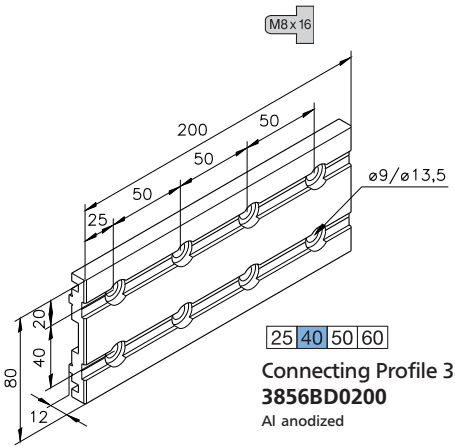
Connecting Profile 3855
3855BF0200
Al anodized



25 | **40** | 50 | 60

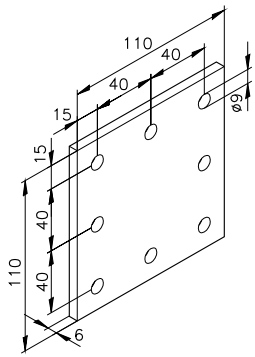
Plate 40/3
50.05.0061
Al tumbled

Heavy-duty version *Series 40*



25 | **40** | 50 | 60

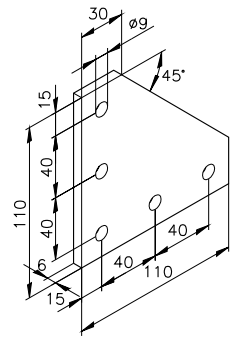
Connecting Profile 3856
3856BD0200
Al anodized



25 | **40** | 50 | 60

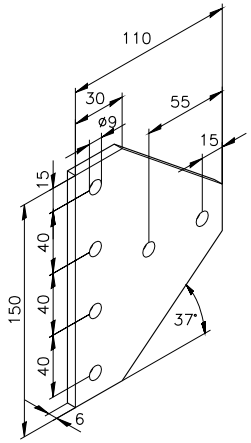
Plate 40/4
50.05.0062
Al tumbled

USA



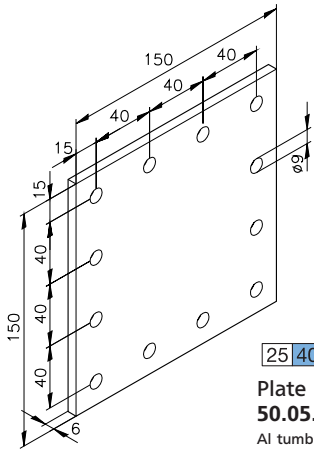
25 | **40** | 50 | 60

Plate 40/8
50.05.0066
Al tumbled



25 | **40** | 50 | 60

Plate 40/7
50.05.0065
Al tumbled



25 | **40** | 50 | 60

Plate 40/6
50.05.0064
Al tumbled

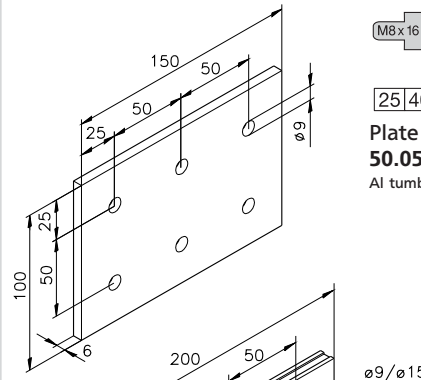
USA

Assembly Components

Plates

Heavy-duty version

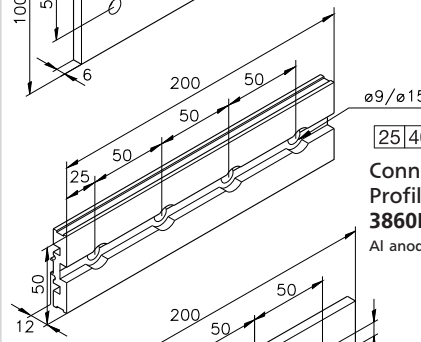
Series 50



M8 x 16

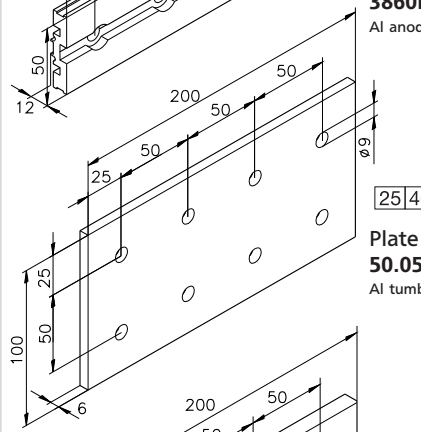
25 | 40 | **50** | 60

Plate 16
50.05.0016
Al tumbled



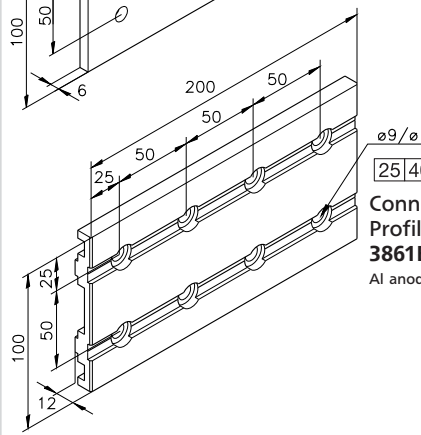
25 | 40 | **50** | 60

Connecting Profile 3860
3860BD0200
Al anodized



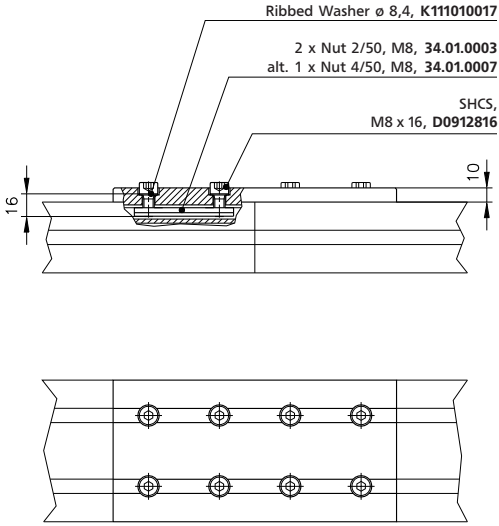
25 | 40 | **50** | 60

Plate 17
50.05.0017
Al tumbled

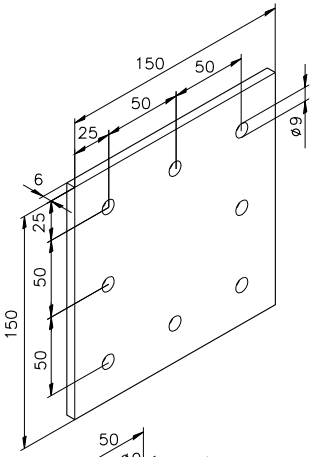


25 | 40 | **50** | 60

Connecting Profile 3861
3861BD0200
Al anodized



Heavy-duty version *Series 50*



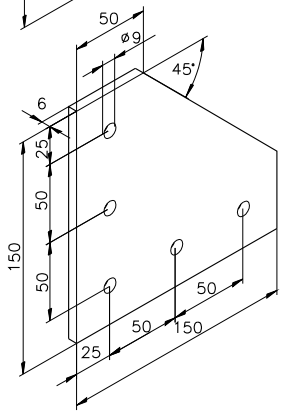
M8 x 16

DIN 912

25 | 40 | **50** | 60

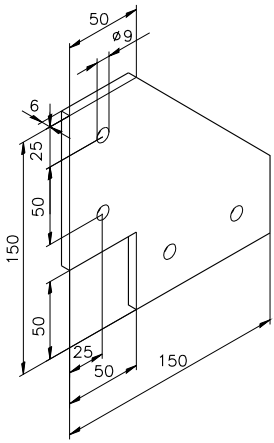
Plate 13
50.05.0013
Al tumbled

USA



25 | 40 | **50** | 60

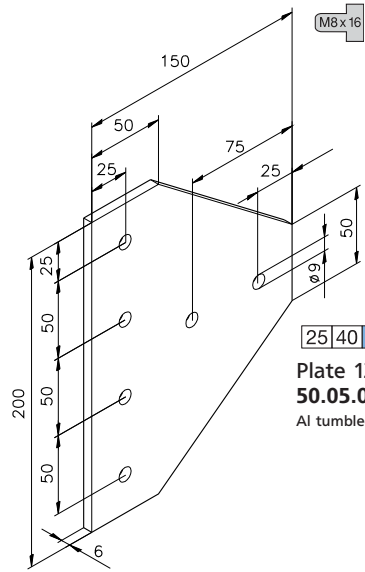
Plate 10
50.05.0010
Al tumbled



25 | 40 | **50** | 60

Plate 11
50.05.0011
Al tumbled

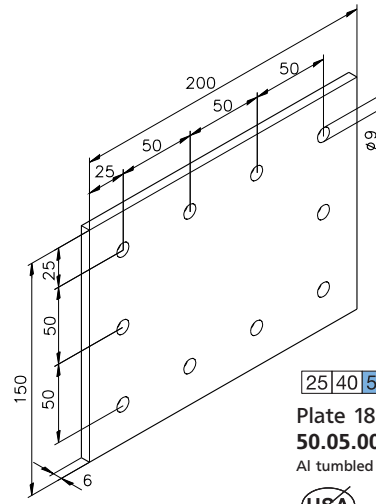
USA



M8 x 16

25 | 40 | **50** | 60

Plate 12
50.05.0012
Al tumbled



25 | 40 | **50** | 60

Plate 18
50.05.0018
Al tumbled

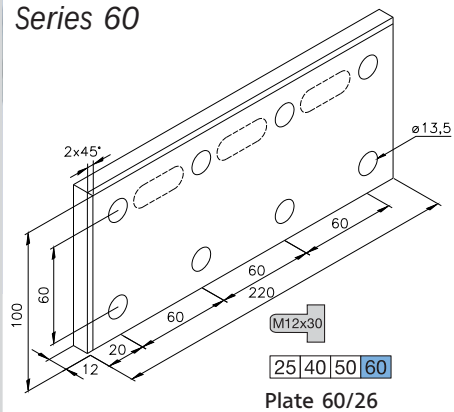
USA

Assembly Components

Plates

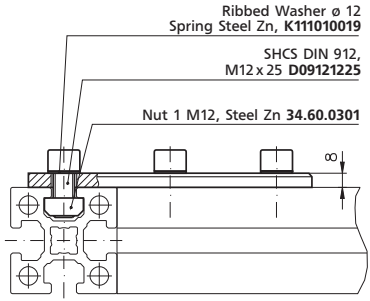
Heavy-duty version

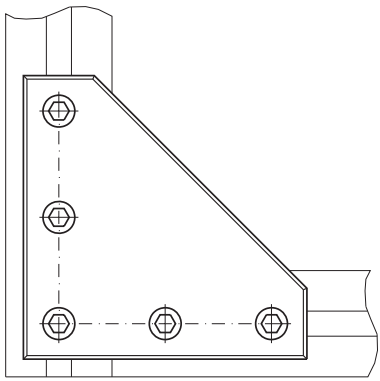
Series 60



25 | 40 | 50 | **60**

Plate 60/26
50.05.6026
Al tumbled
with 14 mm slots for T-slot alignment.
Use with 14x9x40 mm Parallel Keys
(Ident Nr. D6885A14940)

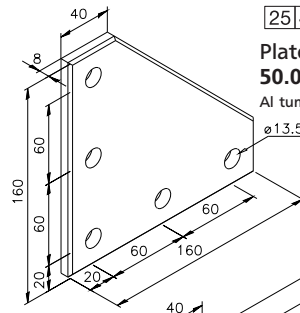


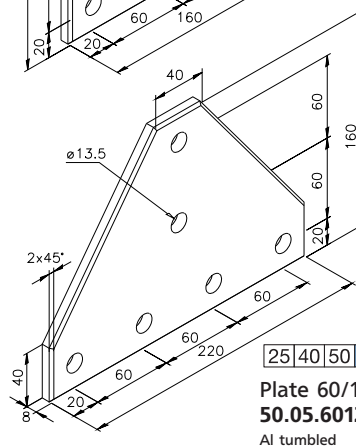


M12x25

25 | 40 | 50 | **60**

Plate 60/10
50.05.6010
Al tumbled





25 | 40 | 50 | **60**

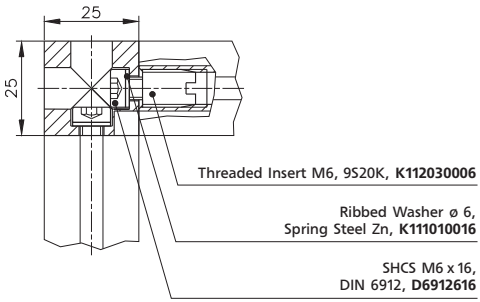
Plate 60/12
50.05.6012
Al tumbled

Corner Connections

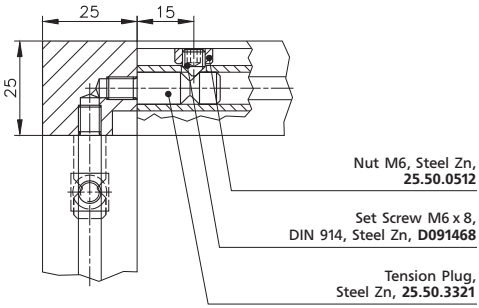
Corner Blocks Series 25

mk corner blocks connect the ends of profiles to each other to form a corner connection. They ensure clean junctions which visually enhance your design. Corner blocks using screws for attachment leave the full T-slots available. These attractive components are ideal for displays, furniture, guarding.

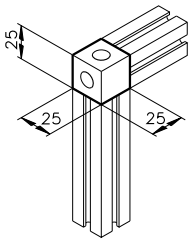
Open Connection



Closed Connection



Tools see page 214

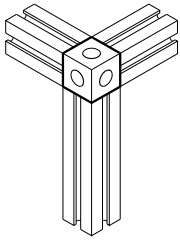


Corner Block 25
25.50.3300

Al tumbled

connects for ex.
2 x Profile mk 2025.01

hardware ordered separately

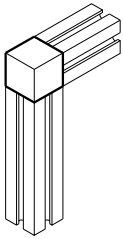


Corner Block 26
25.50.3301

Al tumbled

connects for ex.
3 x Profile mk 2025.01

hardware ordered separately



Corner Block 30
B46.05.001

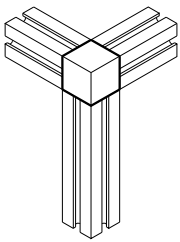
Al tumbled

connects for ex.
2 x Profile mk 2025.01

includes all hardware

Corner Connections

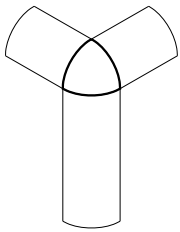
Corner Blocks Series 25



Corner Block 31
B46.05.002
Al tumbled

connects for ex.
3 x Profile mk 2025.01

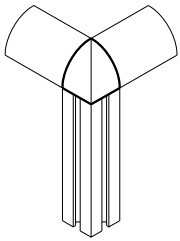
includes all hardware



Corner Block 32
B46.05.003
Al tumbled

connects for ex.
3 x Profile mk 2025.37

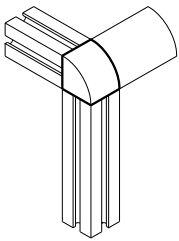
includes all hardware



Corner Block 33
B46.05.004
Al tumbled

connects for ex.
1 x Profile mk 2025.01
2 x Profile mk 2025.37

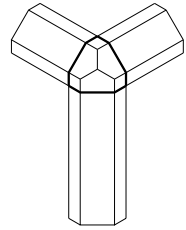
includes all hardware



Corner Block 34
B46.05.005
Al tumbled

connects for ex.
2 x Profile mk 2025.01
1 x Profile mk 2025.37

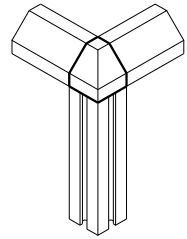
includes all hardware



Corner Block 35
B46.05.006
Al tumbled

connects for ex.
3 x Profile mk 2025.38

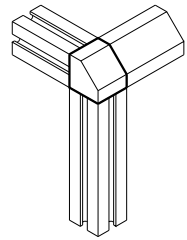
includes all hardware



Corner Block 36
B46.05.007
Al tumbled

connects for ex.
1 x Profile mk 2025.01
2 x Profile mk 2025.38

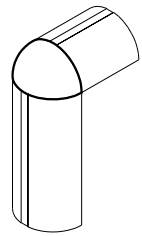
includes all hardware



Corner Block 37
B46.05.008
Al tumbled

connects for ex.
2 x Profile mk 2025.01
1 x Profile mk 2025.38

includes all hardware



Corner Block 38
B46.05.009
Al tumbled

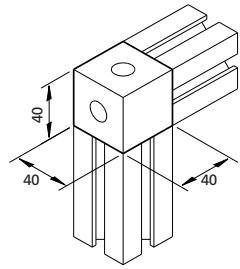
connects for ex.
2 x Profile mk 2025.39

includes all hardware

Corner Connections

Corner Blocks Series 40

mk corner blocks connect the ends of profiles to each other to form a corner connection. They ensure clean junctions which visually enhance your design. Corner blocks using screws for attachment leave the full T-slots available. These attractive components are ideal for displays, furniture and guarding.

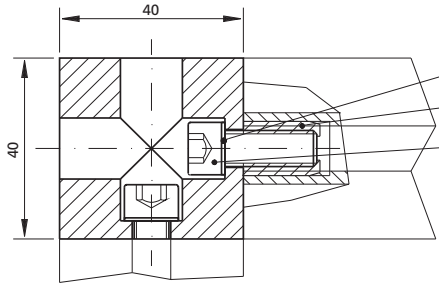


M8x20

Corner Block 6
79.01.0006
Al tumbled

connects for ex.
2 x Profile mk 2040.01
hardware ordered separately

Open Connection

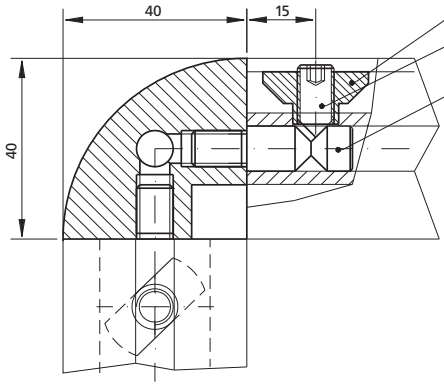


Ribbed Washer ø 8.4, Spring Steel Zn, **K111010017**

Threaded Insert M8, 9S20K, **K112030008**

SHCS M8 x 20, DIN 912, **D0912820**

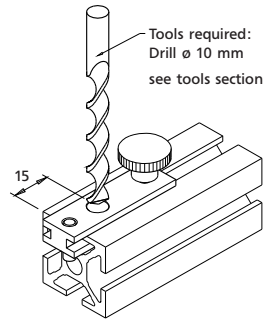
Closed Connection



Nut M8, Steel Zn, **34.06.0003**

Set Screw M8 x 16, DIN 914, Steel Zn, **D0914816**

Tension Plug, Steel Zn, **05.03.0004**



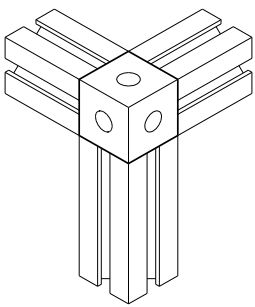
Tools required:
Drill ø 10 mm

see tools section pg. 214

Drill Fixture
B51.03.005
C45K

Corner Connections

Corner Blocks Series 40



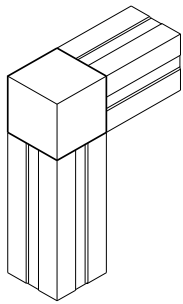
M8x20

Corner Block 5
79.01.0005

Al tumbled

connects for ex.
3 x Profile mk 2040.01

hardware ordered separately



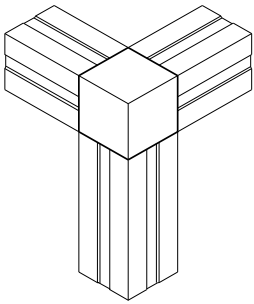
Corner Block 40
B46.05.041

with Nut, Tension Plug and Set Screw

Al tumbled

connects for ex.
2 x Profile mk 2040.11

includes all hardware



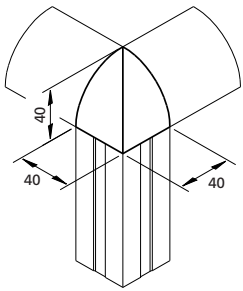
Corner Block 39
B46.05.040

with Nut, Tension Plug and Set Screw

Al tumbled

connects
3 x Profile mk 2040.11

includes all hardware



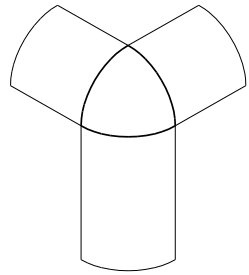
Corner Block 42
B46.05.043

with Nut, Tension Plug and Set Screw

Al tumbled

connects for ex.
2 x Profile mk 2040.15
1 x Profile mk 2040.01

includes all hardware



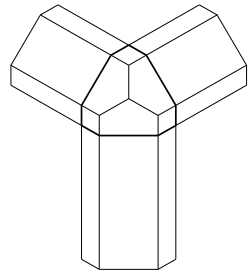
Corner Block 41
B46.05.042

with Nut, Tension Plug and Set Screw

Al tumbled

connects
3 x Profile mk 2040.15

includes all hardware



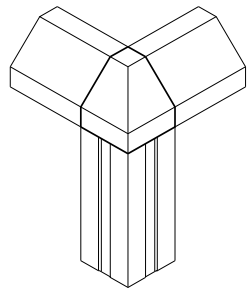
Corner Block 43
B46.05.044

with Nut, Tension Plug and Set Screw

Al tumbled

connects
3 x Profile mk 2040.14

includes all hardware



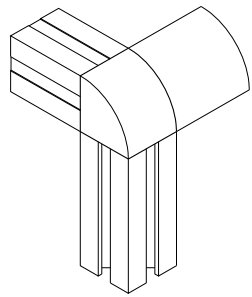
Corner Block 44
B46.05.045

with Nut, Tension Plug and Set Screw

Al tumbled

connects for ex.
2 x Profile mk 2040.14
1 x Profile mk 2040.01

includes all hardware



Corner Block 46
B46.05.039

with Nut, Tension Plug and Set Screw

Al tumbled

connects for ex.
2 x Profile mk 2040.11
1 x Profile mk 2040.15

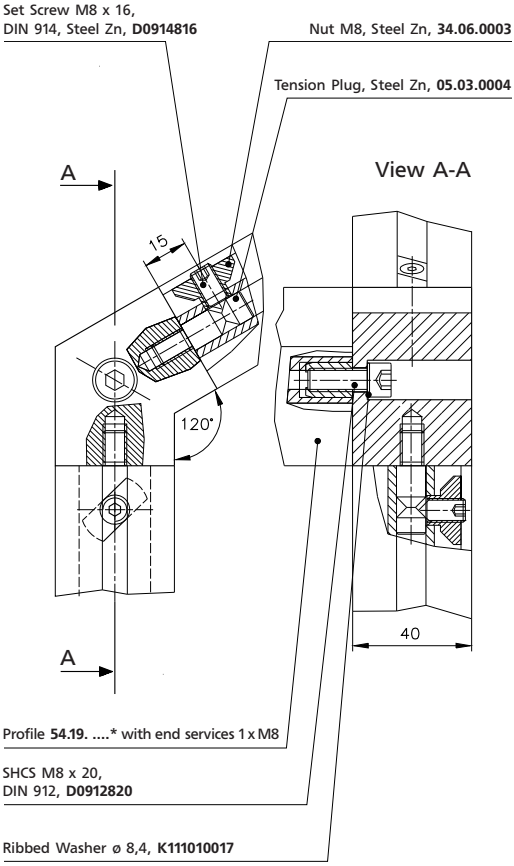
includes all hardware

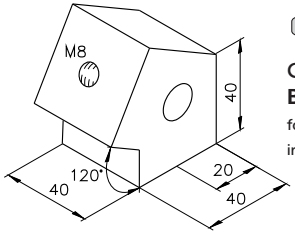
Corner Connections

Corner Blocks Series 40

In combination with profiles mk 2040.18/19/20 the angle blocks ensure an aesthetically high quality connection. With the 120°, 135° and 150° angles even complex frames are realizable.

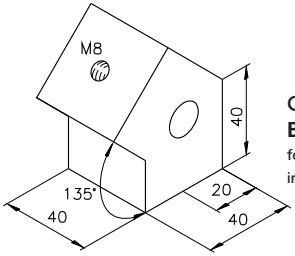
For further information see page 31



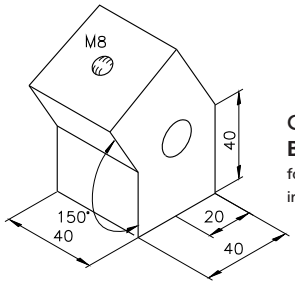


M8x20

Corner Block 47
B46.05.047
for Profile mk 2040.18
includes mounting hardware



Corner Block 48
B46.05.048
for Profile mk 2040.19
includes mounting hardware



Corner Block 49
B46.05.049
for Profile mk 2040.20
includes mounting hardware

Assembly Components

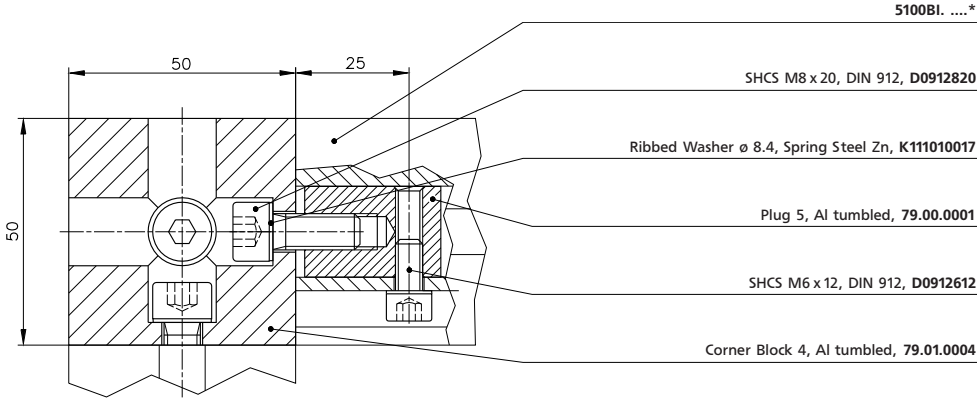
Corner Connections

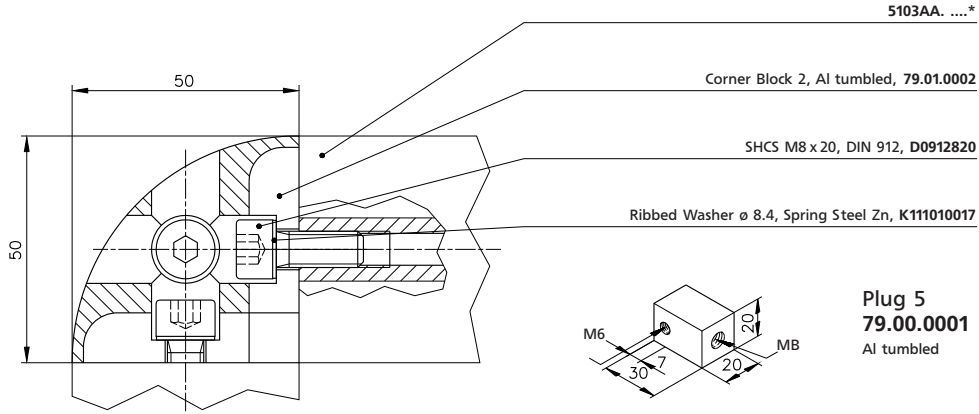
Corner Blocks Series 50

mk corner blocks connect the ends of profiles to each other to form a corner connection. They ensure clean junctions which visually enhance your design.

Assembly:

- When connecting using the mk 2000 profile, plug 5 must be inserted in the profile and screwed into place.
- An M8 thread must be cut in the center hole of the mk 2003 profile.

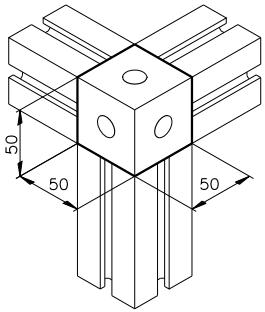




Plug 5
79.00.0001
Al tumbled

Corner Blocks Series 50

M8x20



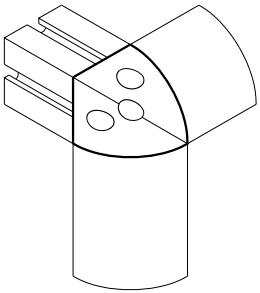
Corner Block 4
79.01.0004

Al tumbled

connects for ex.
3 x Profile mk 2000

hardware
ordered separately

M8x20



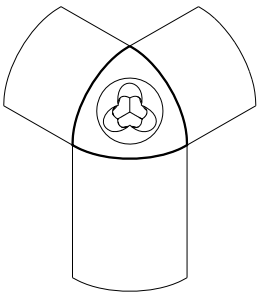
Corner Block 2
79.01.0002

Al tumbled

connects for ex.

1 x Profile mk 2000
2 x Profile mk 2003

hardware
ordered separately



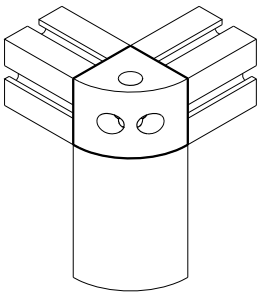
Corner Block 1
79.01.0001

Al tumbled

connects
3 x Profile mk 2003

B51.03.003
with End Cap

hardware
ordered separately



Corner Block 3
79.01.0003

Al tumbled

connects for ex.
2 x Profile mk 2000
1 x Profile mk 2003

hardware
ordered separately

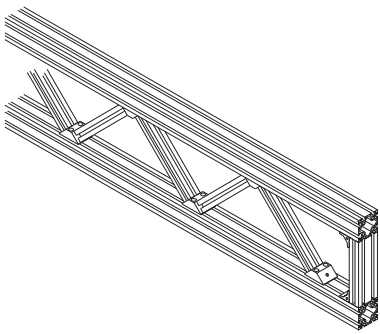
Assembly Components

Truss Joints

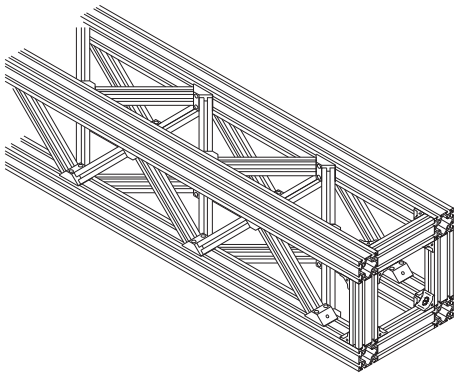
Truss Blocks

mk truss blocks are used to make supporting structures with any required height and with various profile combinations. Depending on which profiles are selected, large spans can be crossed or large loads carried. Possible uses are, i.e. for building linear axis gantries, as well as in exhibition stand construction. Provide us with a description of your application, and we will supply the appropriate truss with the corresponding calculations. Further information is available on request.

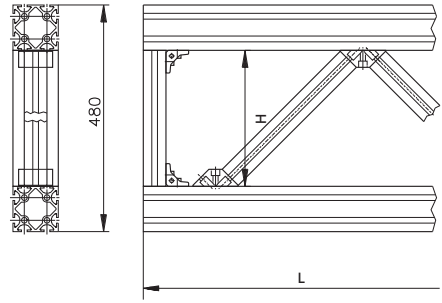
Lattice



Box Lattice



Example:



Upper and lower runner	mk 2040.03
Brace profile	mk 2040.01

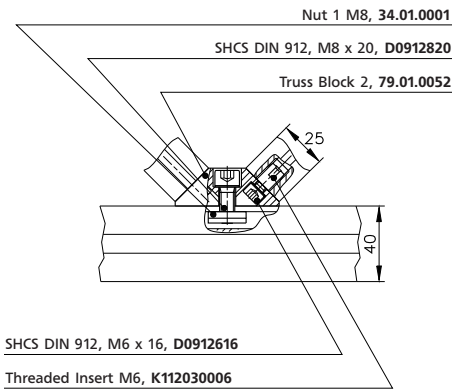
Ix	16,794.00 cm^4
Iy	643.00 cm^4
Wx	705.00 cm^3
Wy	87.00 cm^3

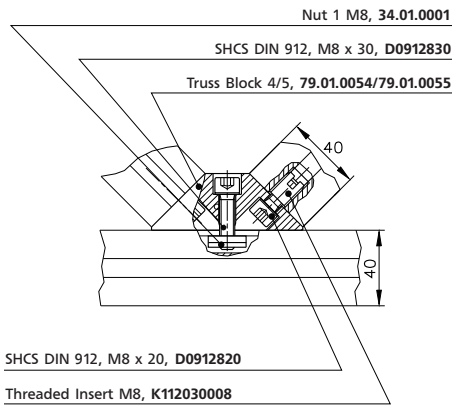
Brace length $= \sqrt{2} \cdot (H-31.7)$ with 40-series brace

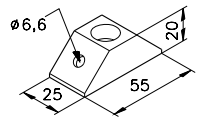
$= \sqrt{2} \cdot (H-22.3)$ with 25-series brace

Number of brace $\approx \frac{L}{H}$

Truss Blocks





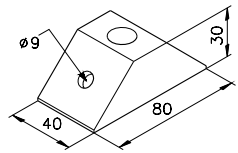


Truss Block 2

for 2x mk 2025.01
on series 40 and 50

79.01.0052

Al tumbled

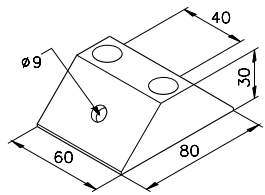


Truss Block 4

for 2x mk 2040.01
on series 40 and 50

79.01.0054

Al tumbled



Truss Block 5

for 2x mk 2040.01
on series 40

79.01.0055

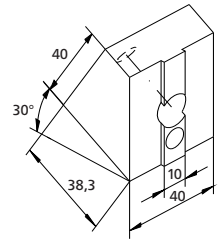
Al tumbled

Assembly Components

Truss Joints

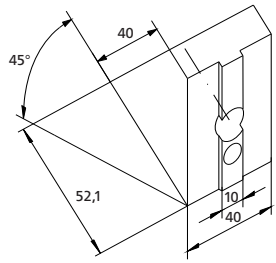
Truss Blocks

These angle blocks were designed especially to strengthen machine frames and bases, or any construction requiring lateral stiffness of the profiles. Advantages include the elimination of angled profile cuts, as well as a key which fits firmly into the profile T-slots, preventing rotation. 30°, 45° and 60° angle blocks are standard.



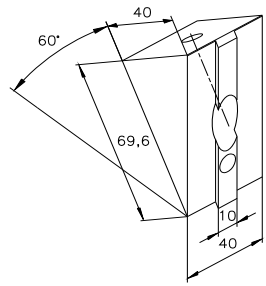
25 | **40** | 50 | 60

Truss Block 30°
79.01.0062
Al tumbled



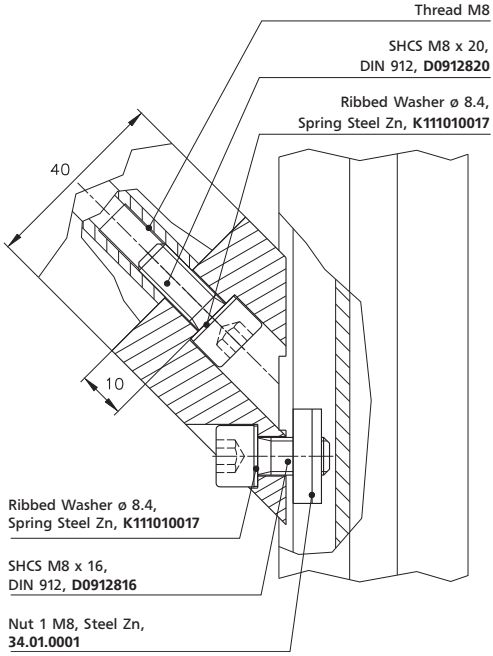
25 | **40** | 50 | 60

Truss Block 45°
79.01.0066
Al tumbled



25 | **40** | 50 | 60

Truss Block 60°
79.01.0068
Al tumbled

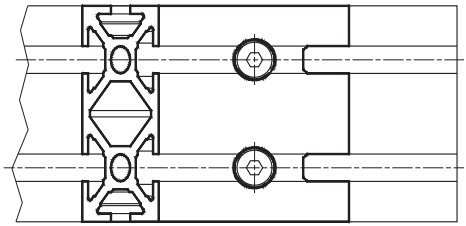


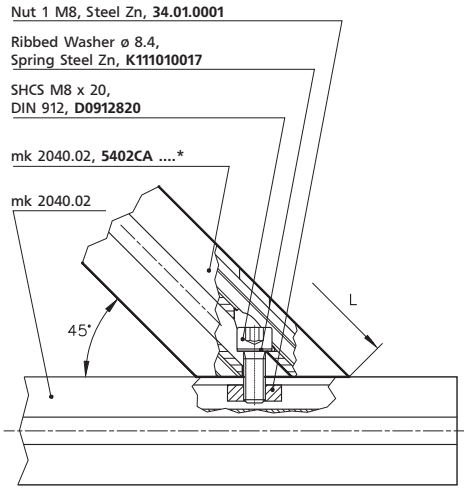
Truss Joints

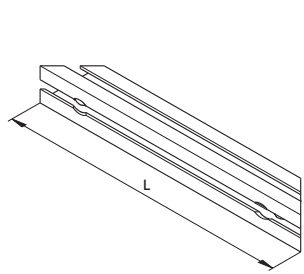
Angle Braces

mk braces offer the ability to easily add stiffness to a heavily loaded profile frame. Using slot nuts makes later installation effortless.

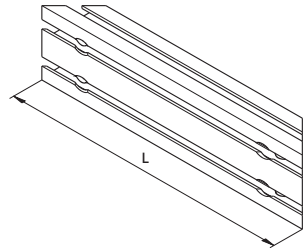
Stock lengths 200, 300, 400 and 500 mm.







Angle Brace 01
(mk 2040.01)
5401CC ....*
AlMgSi 0,5 F25

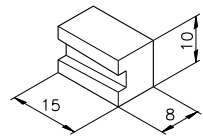


Angle Brace 02
(mk 2040.02)
5402CA ....*
AlMgSi 0,5 F25

Assembly Components

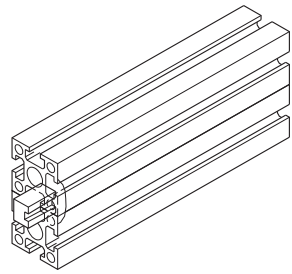
Parallel Connectors

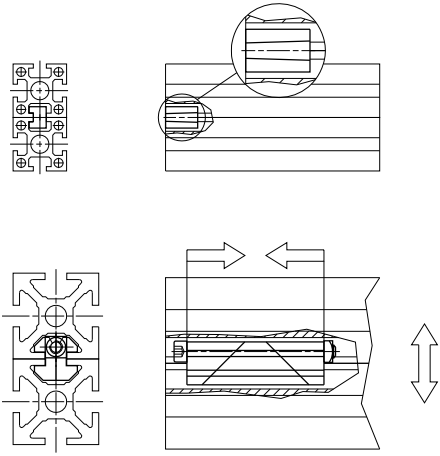
Parallel connectors establish a permanent connection between two profiles. When using Series 40 or 50 parallel connectors, the profiles can be released from each other at any time.



25 | 40 | 50 | 60

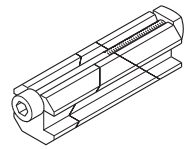
Parallel Connector
Series 25
25.50.3330
AlCuMgPb





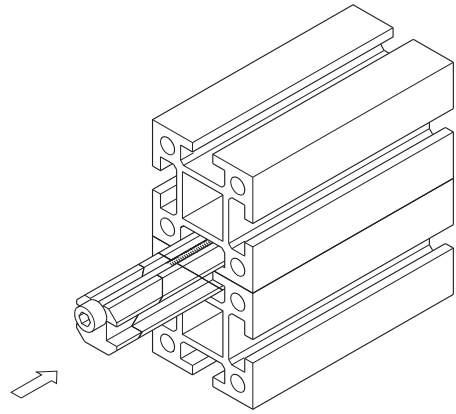
Tension causes the individual components of the connectors to push against the diagonal and clamp the profiles together. Parallel Connector 40/50 connects a series 40 profile to a series 50 profile.

25 | 40 | 50 | 60



Parallel Connector
Series 40 **B51.03.017**
Series 50 **B51.03.016**
Series 40/50 **B51.03.018**
Al tumbled

Screw and Nut Steel, ZN

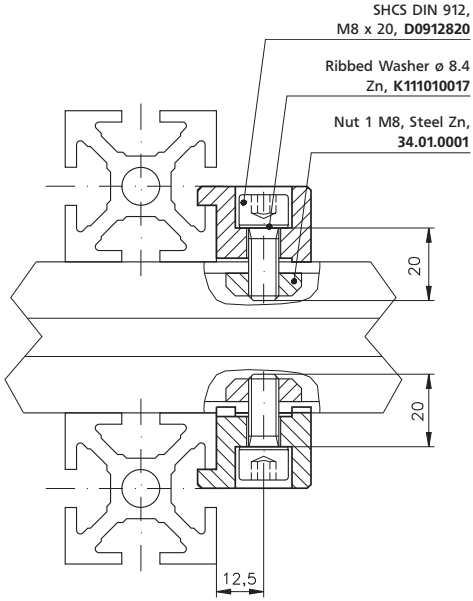


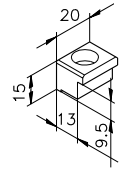
Assembly Components

Clamps

Profile Clamps

mk clamps without key steps enables profiles to be quickly and securely assembled together at any angle relative to each other. Clamps with key steps ensure right-angled orientation of the profiles. Arranging two clamps opposite each other effectively prevents the profiles from twisting.

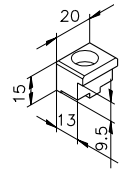




M5 x 12

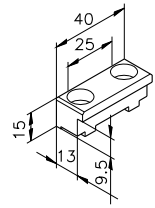
25 | 40 | 50 | 60

Clamp 25/0
25.50.7000
Al F28 tumbled



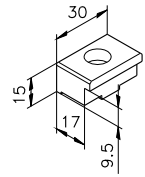
25 | 40 | 50 | 60

Clamp 25/1
25.50.7001
Al F28 tumbled,
Key width 6 mm



25 | 40 | 50 | 60

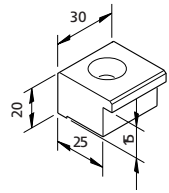
Clamp 25/2
25.50.7002
Al F28 tumbled,
Key width 6 mm



M6x16

25 | 40 | 50 | 60

Clamp 40/25
30.00.0048
Al F28 tumbled,
Key width 10 mm

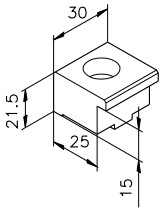


M8x20

25 | 40 | 50 | 60

Clamp 5/30
30.00.0033
Al F28 tumbled

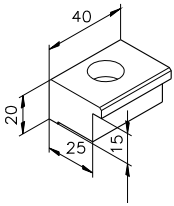
Profile Clamps



M8x20

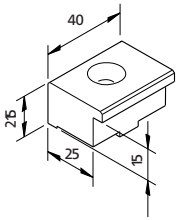
25 | **40** | 50 | 60

Clamp 6/30
30.00.0035
Al F28 tumbled,
Key width 10 mm



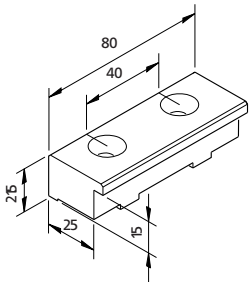
25 | **40** | 50 | 60

Clamp 5/40
30.00.0034
Al F28 tumbled



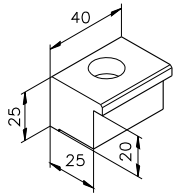
25 | **40** | 50 | 60

Clamp 6/40
30.00.0036
Al F28 tumbled,
Key width 10 mm



25 | **40** | 50 | 60

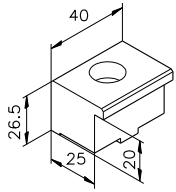
Clamp 7/80
30.00.0037
Al F28 tumbled
Key width 10 mm



M8x25

25 | 40 | **50** | 60

Clamp 1/40
30.00.0027
Al F28 tumbled



25 | 40 | **50** | 60

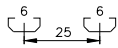
Clamp 2/40
30.00.0029
Al F28 tumbled,
Key width 10 mm

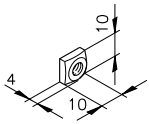
Assembly Components

Nuts

Nuts are the preferred mounting elements at mk in conjunction with angles, consoles, plates and T-slot accessory components. They are to be inserted into the profile on the front and can be used anywhere the installation situation allows because of their high load capacity and tear-out strength. Nuts with additional ESD function and their embossing penetrate the anodized coating of the profile and thus ensure the conductivity of the connection.

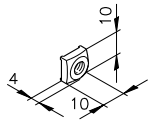
Nuts Series 25





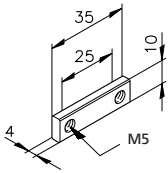
25 | 40 | 50 | 60

Square Nut, Steel Zn
M4 **25.50.0540**
M5 **25.50.0500**
M6 **25.50.0512**



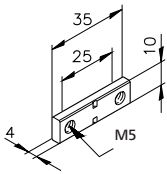
25 | 40 | 50 | 60

Square Nut ESD
Steel Zn
M5 **25.50.0508**
M6 **25.50.0518**



25 | 40 | 50 | 60

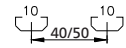
Nut 2/25
Steel Zn
M5 **25.50.0504**
M6 **25.50.0513**

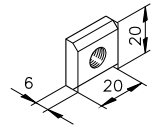


25 | 40 | 50 | 60

Nut 2/25 ESD
Steel Zn
M5 **25.50.0505**

Nuts Series 40 and 50

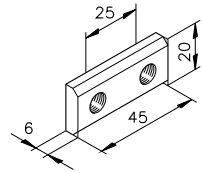




25 | 40 | 50 | 60

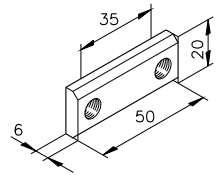
Nut 1, Steel Zn
M4 **34.08.0001**
M5 **34.12.0001**
M6 **34.02.0008**
M8 **34.01.0001**

Nut 1, Stainless Steel
M4 **34.08.0004**
M5 **34.12.0004**
M6 **34.02.0012**
M8 **34.01.0024**



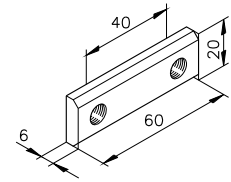
25 | 40 | 50 | 60

Nut 2/25, Steel Zn
M6 **34.02.0010**
M8 **34.01.0002**



25 | 40 | 50 | 60

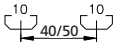
Nut 2/35, Steel Zn
M8 **34.01.0011**

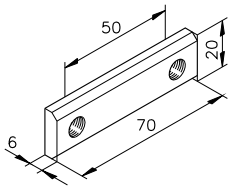


25 | 40 | 50 | 60

Nut 2/40, Steel Zn
M8 **34.01.0019**

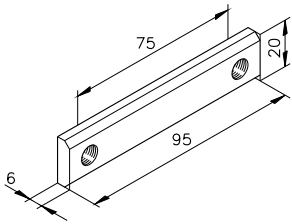
Nuts Series 40 and 50





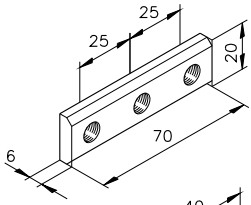
25 | 40 | 50 | 60

Nut 2/50, Steel Zn
M8 **34.01.0003**



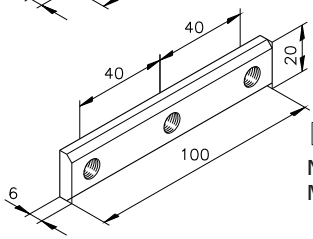
25 | 40 | 50 | 60

Nut 2/75, Steel Zn
M8 **34.01.0005**



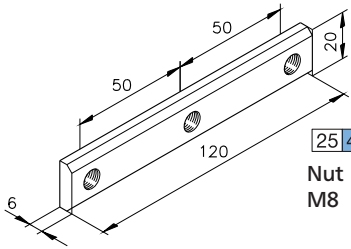
25 | 40 | 50 | 60

Nut 3/25, Steel Zn
M8 **34.01.0004**



25 | 40 | 50 | 60

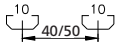
Nut 3/40, Steel Zn
M8 **34.01.0022**

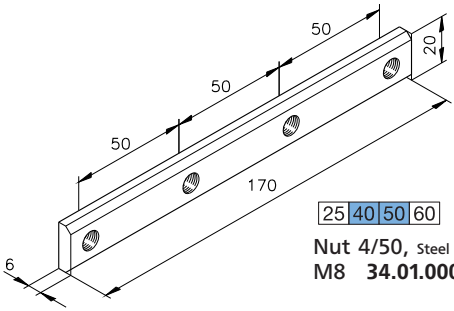


25 | 40 | 50 | 60

Nut 3/50, Steel Zn
M8 **34.01.0006**

Nuts Series 40 and 50

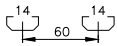


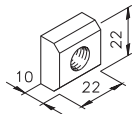


25 | 40 | 50 | 60

Nut 4/50, Steel Zn
M8 **34.01.0007**

Nuts Series 60

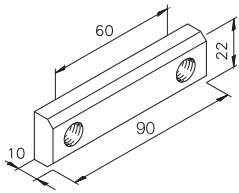




25 | 40 | 50 | 60

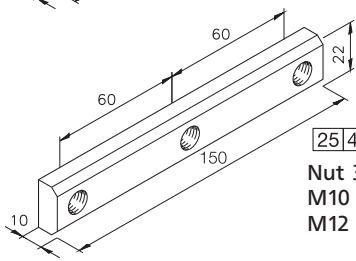
Nut 1, Steel Zn
M8 **34.60.0101**
M10 **34.60.0201**
M12 **34.60.0301**

Nut 1, Stainless steel
M12 **34.60.0321**



25 | 40 | 50 | 60

Nut 2/60, Steel Zn
M10 **34.60.0203**
M12 **34.60.0303**



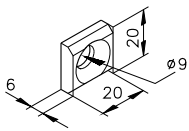
25 | 40 | 50 | 60

Nut 3/60, Steel Zn
M10 **34.60.0205**
M12 **34.60.0305**

Assembly Components

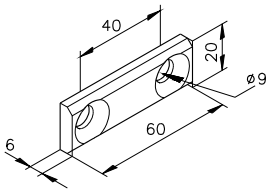
Nuts

Flat-Head Inserts



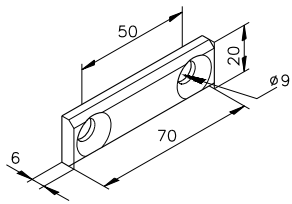
25 | **40** | 50 | 60

Nut S1
Steel Zn
34.09.0001



25 | **40** | 50 | 60

Nut S2/40
Steel Zn
34.09.0007

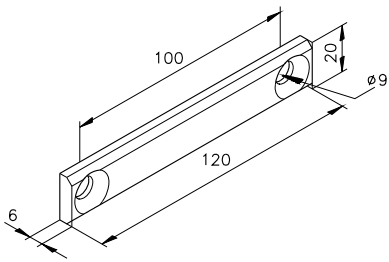


25 | **40** | 50 | 60

Nut S2/50
Steel Zn
34.09.0002

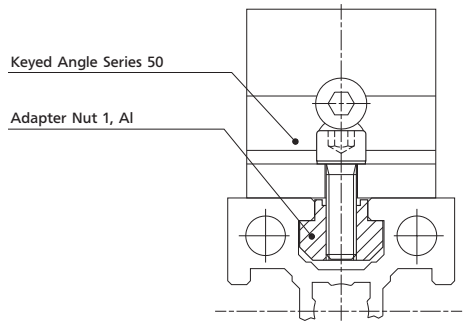
25 | **40** | 50 | 60

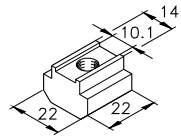
Nut S2/100
Steel Zn
34.09.0006



mk Adapter Nut

By using the adapter nut, keyed angles of series 40 and 50 can be used with series 60 pr ofiles.





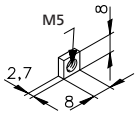
25 | 40 | 50 | **60**

Adapter Nut 1, Al
M6 **34.60.2001**
M8 **34.60.2101**

Nuts for last-minute assembly

Series 25

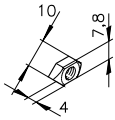
The nuts for last-minute assembly can be pivoted into the profile slot. In addition, they can also be used for profiles with polished slots that are only opened on the joint. The drop-in nuts with spring also provides an ESD function as well as locking in the slot. The key height of fixed components, for ex. an angle, must not be more than 1 mm at series 40 and not more than 2 mm at series 50, because otherwise there is no positive connection between profile and nut.



25 | 40 | 50 | 60

Square Nut, Steel Zn

M5 **D05625**

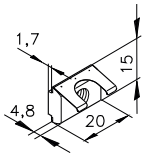


25 | 40 | 50 | 60

Slot Nut, Steel Zn

M4 **25.50.0541**

M5 **25.50.0501**



25 | 40 | 50 | 60

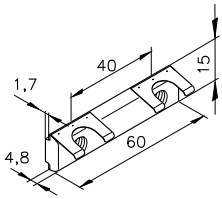
Drop-in Nut 1 steel Zn, with spring steel sheet, ESD

M4 **34.16.0431**

M5 **34.16.0531**

M6 **34.16.0631**

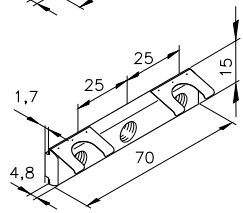
M8 **34.16.0831**



25 | 40 | 50 | 60

Drop-in Nut 2/40 steel Zn, with spring steel sheet, ESD

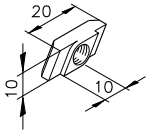
M8 **34.16.0834**



25 | 40 | 50 | 60

Drop-in Nut 3/25 steel Zn, with spring steel sheet, ESD

M8 **34.16.0835**



25 | 40 | 50 | 60

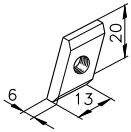
T-Nut, Steel Zn

M4 **34.07.0004**

M5 **34.07.0003**

M6 **34.07.0002**

M8 **34.06.0002**

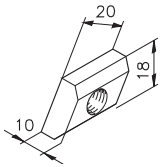


25 | 40 | 50 | 60

Slot Nut, Stainless steel

M6 **34.04.0003**

M8 **34.03.0002**



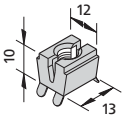
25 | 40 | 50 | 60

Slot Nut, Steel Zn

M8 **34.60.1101**

M10 **34.60.1201**

M12 **34.60.1301**



25 | 40 | 50 | 60

Clip, Plastic, Threaded Insert Steel Zn

M4 **K111020006**

M5 **K111020007**

M6 **K111020008**

25 | 40 | 50 | 60

Clip, Plastic, Threaded Insert Steel Zn

M4 **34.14.0006**

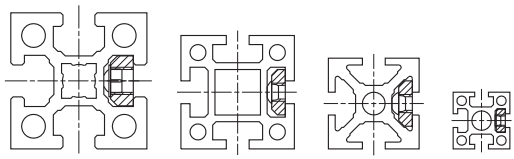
M5 **34.14.0007**

M6 **34.14.0008**

Assembly Components

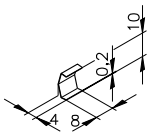
Nut Placement and Holding

If the nuts with springs are not used, mk also provides the option to lock standard nuts. Assembly of attachment elements vertically is much easier.



Spring Clips

The spring clip is pushed into the profile slot together with the nut and locks them into the required position.

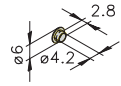


25 | 40 | 50 | 60

Spring Clip for Nut M5/M6
07.13.0003
Spring Steel

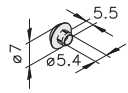
Nut Stoppers

The plastic nut stopper is pressed into the thread of the nut and then pushed into the profile slot on the front. When tightening the screw, the plastic of the nut stopper is displaced.



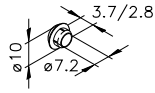
25 | 40 | 50 | 60

Nut stopper green
M5/Series 25
mk 2553 PE



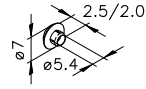
25 | 40 | 50 | 60

Nut stopper white
M6/Series 40
mk 2554 PE



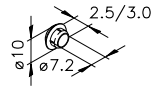
25 | 40 | 50 | 60

Nut stopper red
M8/Series 40
mk 2555 PE



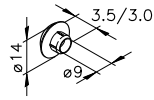
25 | 40 | 50 | 60

Nut stopper yellow
M6/Series 50
mk 2556 PE



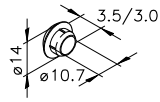
25 | 40 | 50 | 60

Nut stopper blue
M8/Series 50
mk 2557 PE



25 | 40 | 50 | 60

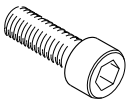
Nut stopper orange
M10/Series 60
mk 2559 PE



25 | 40 | 50 | 60

Nut stopper violet
M12/Series 60
mk 2560 PE

Screws

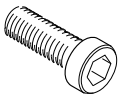


SHCS
DIN EN ISO 4762, 8.8 Zn

M4 x 10	**D0912410**
M5 x 8	**D091258**
M5 x 10	**D0912510**
M5 x 12	**D0912512**
M5 x 16	**D0912516**
M6 x 10	**D0912610**
M6 x 12	**D0912612**
M6 x 16	**D0912616**
M6 x 20	**D0912620**
M8 x 12	**D0912812**
M8 x 16	**D0912816**
M8 x 20	**D0912820**
M8 x 25	**D0912825**
M8 x 30	**D0912830**
M8 x 35	**D0912835**
M8 x 40	**D0912840**
M12 x 20	**D09121220**
M12 x 25	**D09121225**

SHCS
DIN EN ISO 4762, Stainless Steel

M8 x 16	**D0912816A2**
M8 x 20	**D0912820A2**

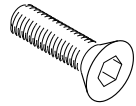


SHCS DIN 6912, 8.8 Zn

M5 x 8	**D691258**
M5 x 10	**D6912510**
M5 x 12	**D6912512**
M5 x 20	**D6912520**
M6 x 16	**D6912616**
M6 x 20	**D6912620**
M8 x 16	**D6912816**
M8 x 20	**D6912820**
M8 x 25	**D6912825**
M8 x 30	**D6912830**
M10 x 25	**D69121025**
M12 x 30	**D69121230**

SHCS DIN 6912, Stainless Steel

M8 x 16	**D6912816A2**
M8 x 20	**D6912820A2**



FH-SHCS
DIN EN ISO 10642, 8.8 Zn

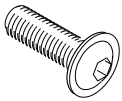
M4 x 6	**D799146**
M4 x 10	**D7991410**
M4 x 12	**D7991412**
M4 x 16	**D7991416**
M5 x 8	**D799158**
M5 x 10	**D7991510**
M5 x 12	**D7991512**
M5 x 16	**D7991516**
M5 x 25	**D7991525**
M6 x 10	**D7991610**
M6 x 12	**D7991612**
M6 x 16	**D7991616**
M6 x 20	**D7991620**
M8 x 12	**D7991812**
M8 x 16	**D7991816**
M8 x 20	**D7991820**
M8 x 25	**D7991825**
M8 x 30	**D7991830**

FH-SHCS
DIN EN ISO 10642, Stainless Steel

M4 x 10	**D7991410A2**
M4 x 16	**D7991416A2**
M4 x 35	**D7991435A2**
M5 x 8	**D799158A2**
M5 x 10	**D7991510A2**
M6 x 12	**D7991612A2**
M6 x 16	**D7991616A2**
M8 x 16	**D7991816A2**
M8 x 20	**D7991820A2**
M8 x 35	**D7991835A2**

Assembly Components

Screws



FBH-Screw,
10.9 black Zn

M5 x 10	**K112010021**
M6 x 8	**K112010010**
M6 x 10	**K112010011**
M6 x 12	**K112010012**
M6 x 16	**K112010013**
M8 x 12	**K112010002**
M8 x 16	**K112010003**
M8 x 20	**K112010004**

FBH-Screw,
Stainless steel

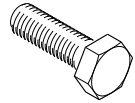
M8 x 12	**K112010002A2**
M8 x 16	**K112010003A2**
M8 x 20	**K112010004A2**

FBH-Screw,
undetachable, 10.9 black Zn

M8 x 16	**71.01.0019**

FBH-Screw,
undetachable, Stainless steel

M8 x 16	**71.01.0019A2**



Hex Head Screws
DIN EN ISO 4017, 8.8 Zn

M6 x 8	**D093368**
M6 x 16	**D0933616**
M6 x 20	**D0933620**
M6 x 25	**D0933625**
M6 x 30	**D0933630**
M6 x 35	**D0933635**
M8 x 12	**D0933812**
M8 x 16	**D0933816**
M8 x 20	**D0933820**
M8 x 25	**D0933825**
M8 x 30	**D0933830**
M8 x 35	**D0933835**
M8 x 40	**D0933840**
M10 x 20	**D09331020**
M10 x 25	**D09331025**
M10 x 30	**D09331030**
M12 x 30	**D09331230**

Hex Head Screws
DIN EN ISO 4017, Stainless Steel

M8 x 16	**D0933816A2**
M8 x 20	**D0933820A2**
M8 x 25	**D0933825A2**

Set Screws, Nuts and Spring Washers

Set Screw
DIN EN ISO 4027, 8.8 Zn

M4 x 6	**D091446**
M4 x 8	**D091448**
M4 x 10	**D0914410**
M5 x 6	**D091456**
M5 x 8	**D091458**
M5 x 10	**D0914510**
M6 x 6	**D091466**
M6 x 8	**D091468**
M6 x 10	**D0914610**
M8 x 10	**D0914810**
M8 x 12	**D0914812**
M8 x 16	**D0914816**
M8 x 20	**D0914820**

Set Screw
DIN EN ISO 4027, Stainless Steel

M6 x 6	**D091466A2**
M6 x 8	**D091468A2**
M6 x 10	**D0914610A2**
M8 x 10	**D0914810A2**
M8 x 16	**D0914816A2**

Hex Nut
DIN EN ISO 4032, 8 Zn

M5	**D09345**
M6	**D09346**
M8	**D09348**
M10	**D093410**
M12	**D093412**

Hex Nut
DIN EN ISO 4032, Stainless Steel

M5	**D09345A2**
M6	**D09346A2**
M8	**D09348A2**

Rib Washer,
Steel Zn

ø 4,3	**K111010014**
ø 5,3	**K111010015**
ø 6,4	**K111010016**
ø 8,4	**K111010017**
ø 10,5	**K111010018**
ø 12	**K111010019**

Rib Washer,
Stainless Steel 1.4301

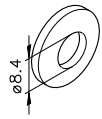
ø 4,3	**K111010020**
ø 5,3	**K111010021**
ø 6,4	**K111010022**
ø 8,4	**K111010023**
ø 10,5	**K111010024**
ø 12	**K111010025**

Rib Washer,
Steel Zn

ø 7	**K111010046**

Rib Washer,
Stainless steel 1.4301

ø 7	**K111010046A2**



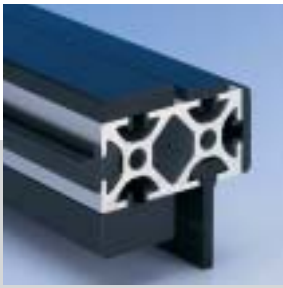
Spring Washer,
Steel Zn

ø 8,4	**D67968**

Stainless Steel

ø 8,4	**D67968A2**

mk Accessory Components



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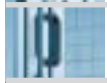

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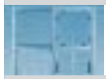

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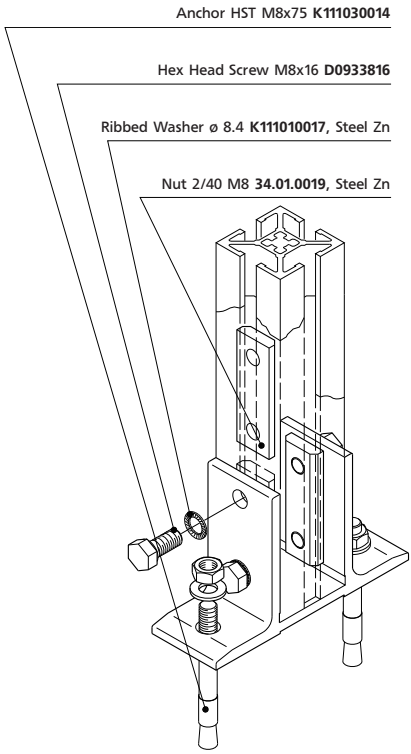
Accessory Components

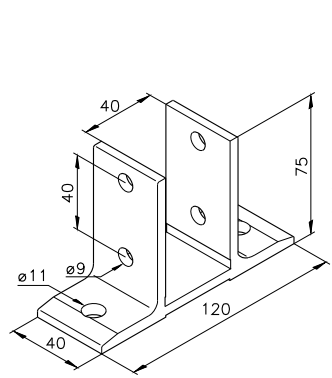
Floor Mounting

Floor Mounting Brackets

Series 40

Using the floor mounting brackets, floor height variations of up to 10 mm may be compensated. The brackets may be fastened to the floor with anchors and are tightened with the included M8 hex nut.





M8x16

25 | **40** | 50 | 60

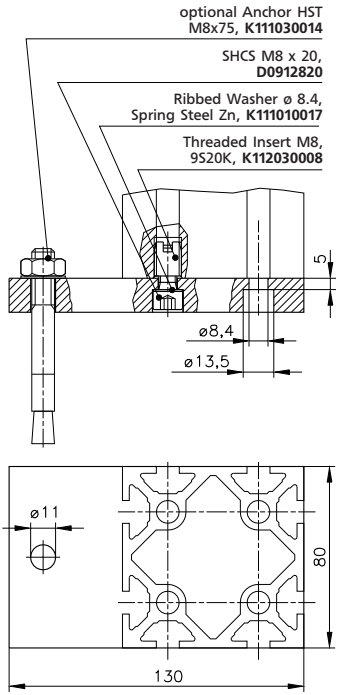
Floor Mounting Bracket
67.02.0004
Al tumbled
for Profile 40 x 40

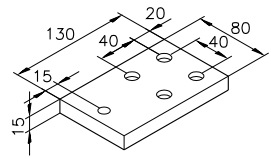
Floor Mounting

Floor Mounting Plates

Series 40

Floor mounting plates can be used to anchor equipment such as stands, guards, workbenches, frames, etc. firmly to the floor.

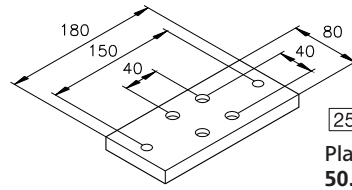




25 | **40** | 50 | 60

Plate 40/17
50.03.0025
Al tumbled

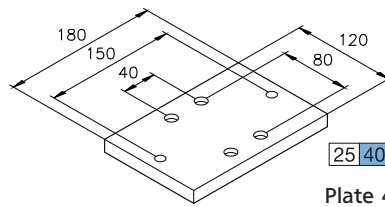
for Profile 80 x 80



25 | **40** | 50 | 60

Plate 40/18
50.03.0026
Al tumbled

for Profile 80 x 80



25 | **40** | 50 | 60

Plate 40/20
50.03.0028
Al tumbled

for Profile 80 x 120

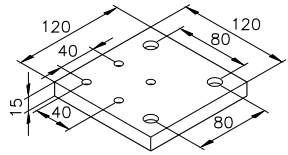
Accessory Components

Floor Mounting

Base Plates

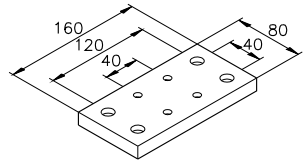
Series 40

Base Plates are used for robust floor mounting. They can also be used as flange-mounting for other profiles.



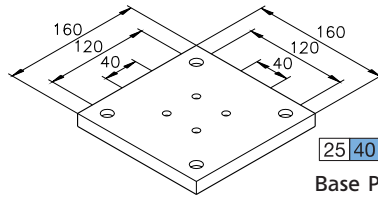
25 | **40** | 50 | 60

Base Plate 40/1
50.03.0009
Al tumbled
for Profile 80 x 80



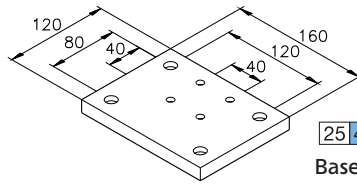
25 | **40** | 50 | 60

Base Plate 40/2
50.03.0010
Al tumbled
for Profile 80 x 80



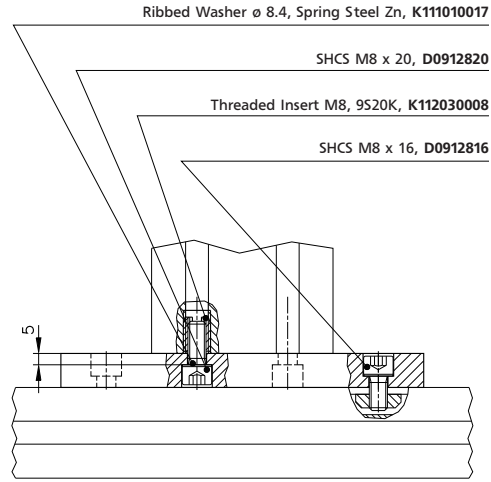
25 | **40** | 50 | 60

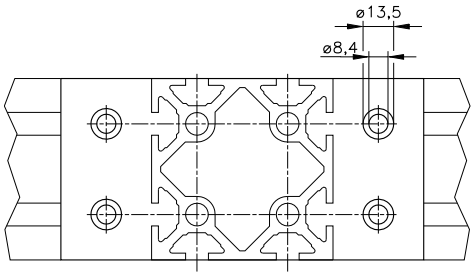
Base Plate 40/3
50.03.0011
Al tumbled
for Profile 80 x 80



25 | **40** | 50 | 60

Base Plate 40/4
50.03.0012
Al tumbled
for Profile 80 x 80

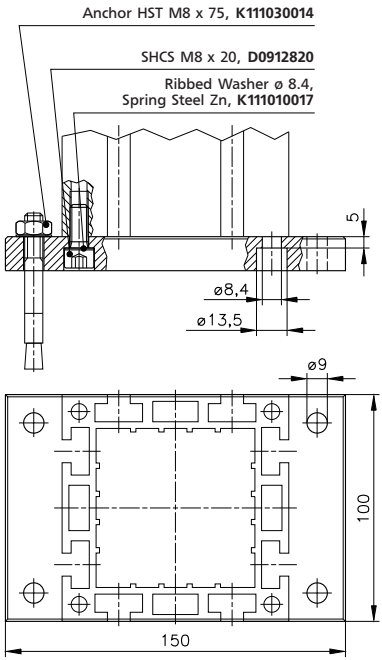


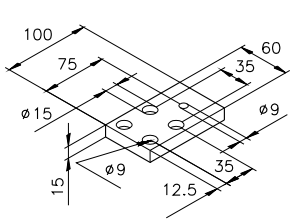


Floor Mounting

Base Plates

Series 50

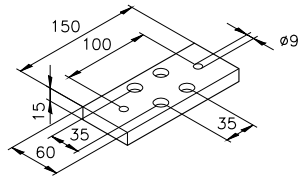




25 | 40 | **50** | 60

Base Plate 1
50.03.0001
Al tumbled

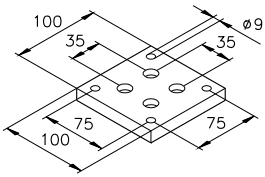
for Profile mk 2000
and mk 2017



25 | 40 | **50** | 60

Base Plate 2
50.03.0002
Al tumbled

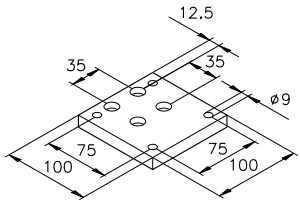
for Profile mk 2000
and mk 2017



25 | 40 | **50** | 60

Base Plate 4
50.03.0003
Al tumbled

for Profile mk 2000
and mk 2017



25 | 40 | **50** | 60

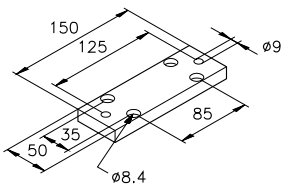
Base Plate 4a
50.03.0004
Al tumbled

for Profile mk 2000
and mk 2017

Floor Mounting

Base Plates

Series 50

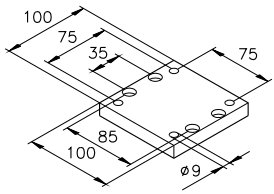


M8x20

25 40 **50** 60

Base Plate 5
50.03.0005
Al tumbled

for Profile mk 2004



25 40 **50** 60

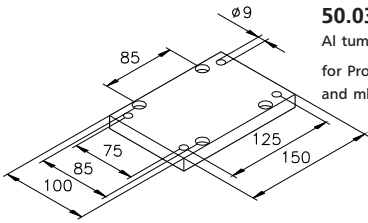
Base Plate 6
50.03.0006
Al tumbled

for Profile mk 2004

25 40 **50** 60

Base Plate 7
50.03.0007
Al tumbled

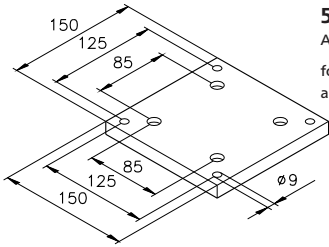
for Profile mk 2005
and mk 2011



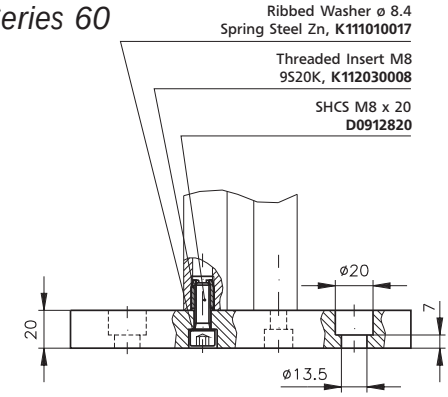
25 40 **50** 60

Base Plate 8
50.03.0008
Al tumbled

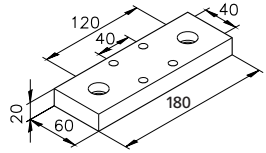
for Profile mk 2005
and mk 2011



Series 60



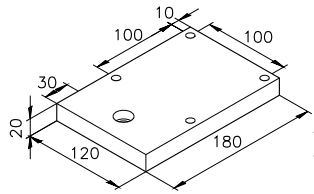
M8x20



25 40 50 **60**

Base Plate 60/2
50.03.6002
Al tumbled

for Profile mk 2060.01



25 40 50 **60**

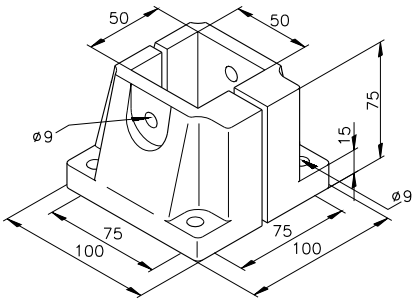
Base Plate 60/8
50.03.6008
Al tumbled

for Profile mk 2060.05

Floor Mounting

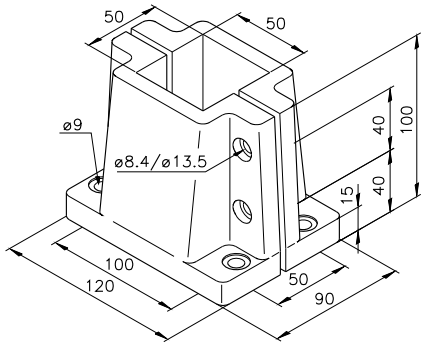
Cast Bases

Applications for Cast Bases include; securing stands or pillars to the floor or to other pr ofiles.



25 | 40 | **50** | 60

Cast Base 1
65.00.0001
Cast Aluminum,
0.8 kg



25 | 40 | **50** | 60

Cast Base 5
65.00.0005
Cast Aluminum,
1.35 kg

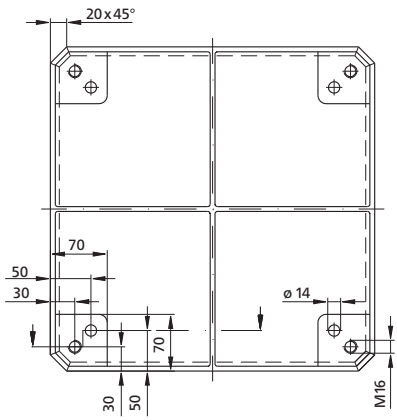
Accessory Components

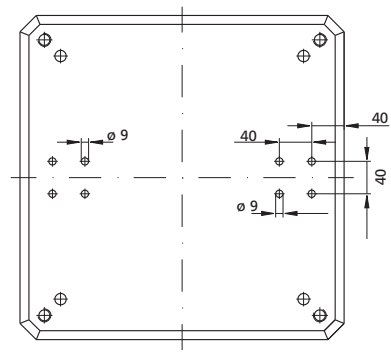
Floor Mounting

Pedestal Bases

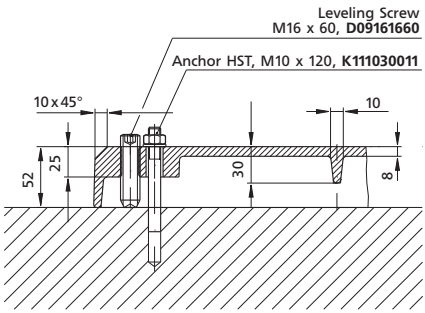
Pedestal Bases ensure a stable platform for such things as frames, stands or guards. They can be used with all of our profile series and have a clean design.

The bases are reinforced with more material at the corners and it is possible to add additional holes at these locations. The bases are stocked in black (similar to RAL 9005), although other colors are available on request. Order either the individual plate or a complete assembly with included hardware (Anchor HST and Leveling Screws).





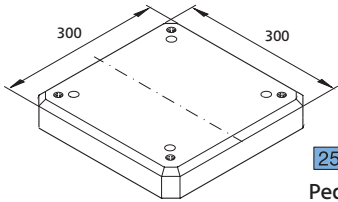
Drill pattern example



On request we will rework the bases to your specifications (see drill pattern example). Please note the location of the reinforcements (shown using centerlines) when specifying rework, as drilling through these reinforcements will adversely affect load capacity.

Pedestal Bases

The centerlines denote the location of a r einforcment which runs on the underside of the plate.

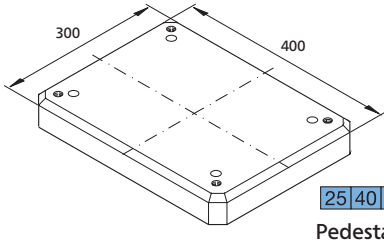


25 40 50 60

Pedestal Base 6
50.02.0088
H=52 mm, no milling

GG-26, painted black
Weight 10.5 kg

B46.07.274
with anchors and
leveling screws

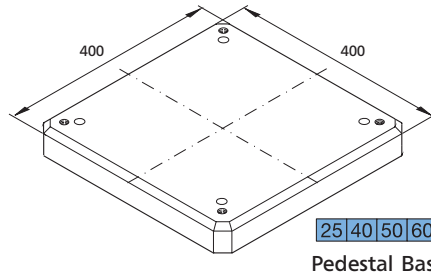


25 40 50 60

Pedestal Base 7
50.02.0089
H=52 mm, no milling

GG-26, painted black
Weight 12.1 kg

B46.07.275
with anchors and
leveling screws

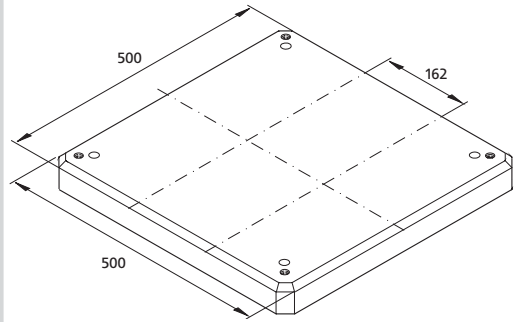


25 40 50 60

Pedestal Base 8
50.02.0076
H=52 mm, no milling

GG-26, painted black
Weight 13.7 kg

B46.07.276
with anchors and
leveling screws



25 40 50 60

Pedestal Base 9
50.02.0077
H=52 mm, no milling

GG-26, painted black
Weight 28.6 kg

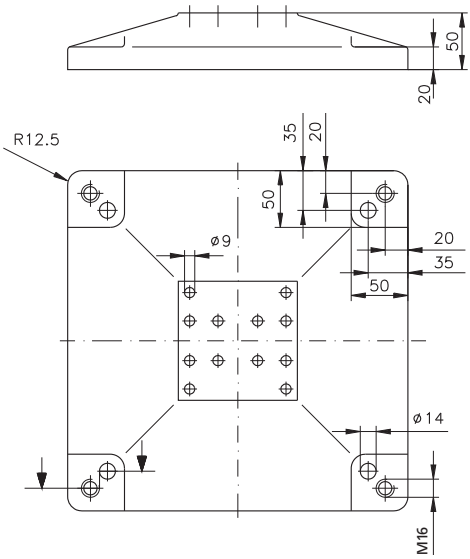
B46.07.277
with anchors and
leveling screws

Accessory Components

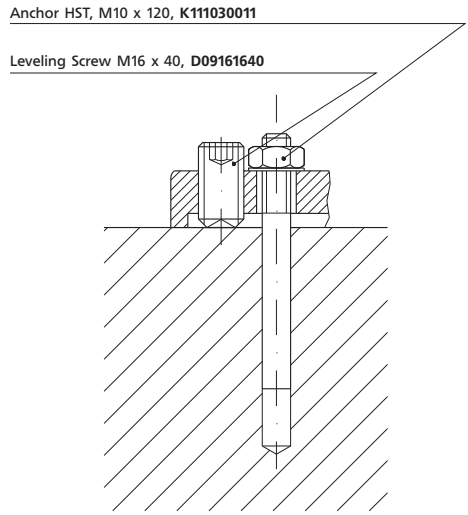
Floor Mounting

Pedestal Bases

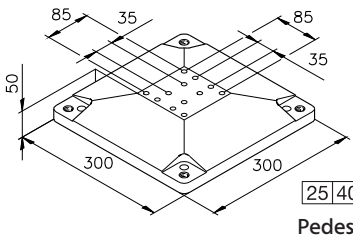
Pedestal Bases ensure a stable platform for heavy machine frames, gantries and stands. The bases are pre-drilled for attaching some of the basic system profiles and painted black (similar to RAL 9005). The undrilled bases only include the corner holes for leveling and floor mounting. Reworking and painting bases to customer specifications is possible on request.



Floor attachment:



Pedestal Bases

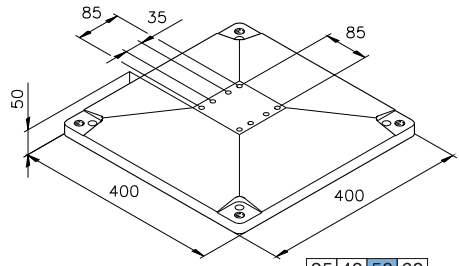


25 | 40 | **50** | 60

Pedestal Base 4
50.02.0028

Pre-drilled for
mk 2000, mk 2004,
mk 2005, mk 2011

Cast Iron,
painted matte black,
6.8 kg

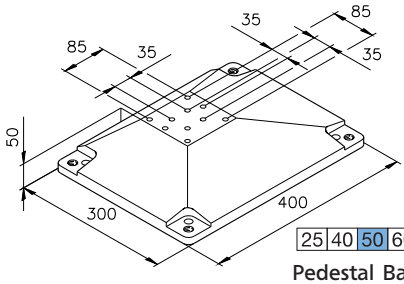


25 | 40 | **50** | 60

Pedestal Base 2
50.02.0026

Pre-drilled for
mk 2004, mk 2005,
mk 2011

Cast Iron,
painted matte black,
11.5 kg

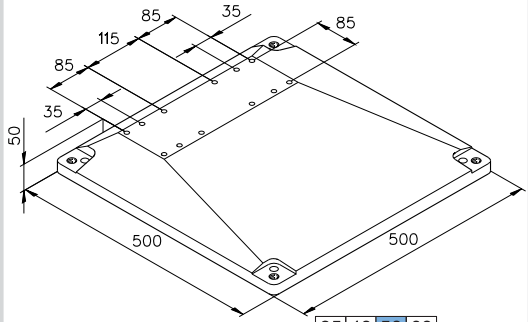


25 | 40 | **50** | 60

Pedestal Base 1
50.02.0023

Pre-drilled for
mk 2000, mk 2004, mk 2005

Cast Iron,
painted matte black,
8 kg



25 | 40 | **50** | 60

Pedestal Base 5
50.02.0029

Pre-drilled for
2 x mk 2004, mk 2005,
mk 2011

Cast Iron,
painted matte black,
16.6 kg

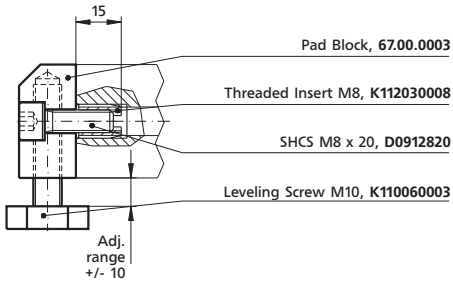
Accessory Components

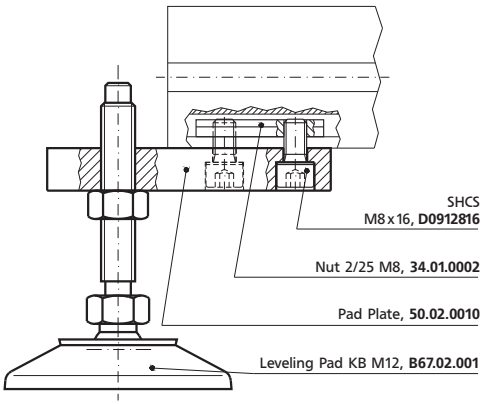
Floor Mounting

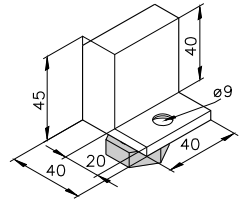
Pad Blocks and Plates

for horizontal profiles

Pad blocks accept leveling pads, swivel and fixed casters and hoists. Suitable pad blocks and plates are available for all common profiles and leveling pads.







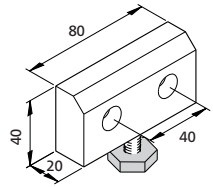
M8x16

DIN 7991

25 **40** 50 60

Pad Block M10
67.00.0010
Al tumbled,
without
Leveling Screw
for profile 40 x 40

Load Capacity 1,000 N

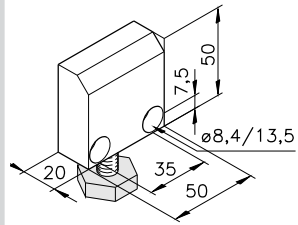


M8x20

25 **40** 50 60

Pad Block M10
67.00.0003
Al tumbled,
without
Leveling Screw
for profile 40 x 80

Load Capacity 1.000 N

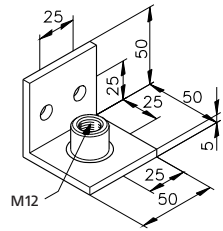


M8x20

25 40 **50** 60

Pad Block M10
67.00.0002
Al tumbled,
without
Leveling Screw
for profile mk 2000

Load Capacity 1.000 N



M8x16

25 40 **50** 60

Pad Angle M12
B67.02.009

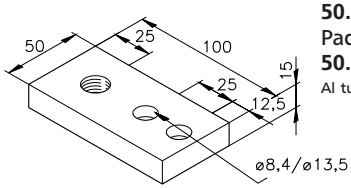
Pad Angle M16
B67.02.010

Steel Zn

Load Capacity 1.500 N

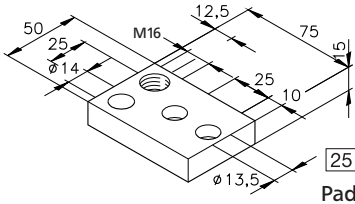
Pad Blocks and Plates

for horizontal profiles



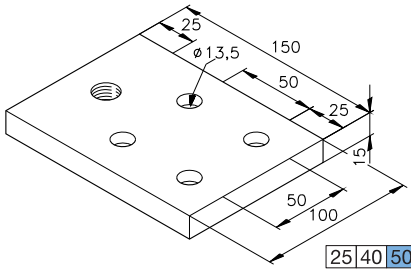
25 | 40 | **50** | 60

Pad Plate D M12
50.02.0010
Pad Plate D M16
50.02.0011
Al tumbled



25 | 40 | **50** | 60

Pad Plate F M16
50.02.0018
Al tumbled



25 | 40 | **50** | 60

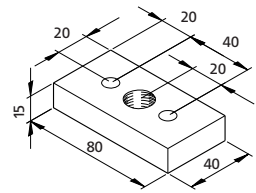
Pad Plate G M16
50.02.0007
Pad Plate G M20
50.02.0008
Al tumbled

Accessory Components

Floor Mounting

Pad Blocks and Plates

for vertical profiles



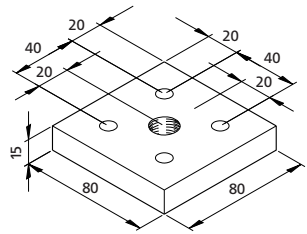
M8x20

25 | 40 | 50 | 60

Pad Plate I M10
50.02.0041
Pad Plate I M12
50.02.0035
Pad Plate I M16
50.02.0030
Al tumbled

for Profile mk 2040.02, mk 2040.41, mk 2040.52

Load Capacity 6,000 N

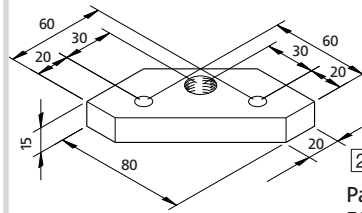


25 | 40 | 50 | 60

Pad Plate J M10
50.02.0042
Pad Plate J M12
50.02.0067
Pad Plate J M16
50.02.0032
Pad Plate J M20
50.02.0050
Al tumbled

for Profile mk 2040.03, mk 2040.45

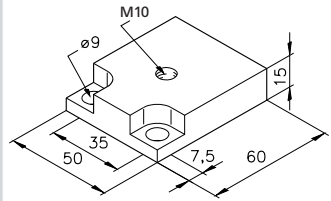
Load Capacity 6,000 N



25 | 40 | 50 | 60

Pad Plate K M10
50.02.0043
Pad Plate K M16
50.02.0040
Al tumbled

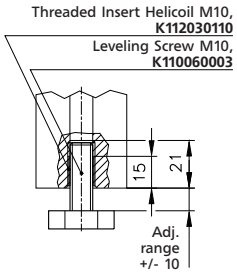
for Profile mk 2040.04
Load Capacity 4,150 N

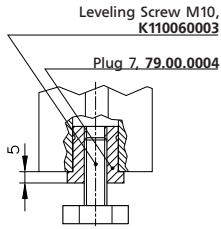


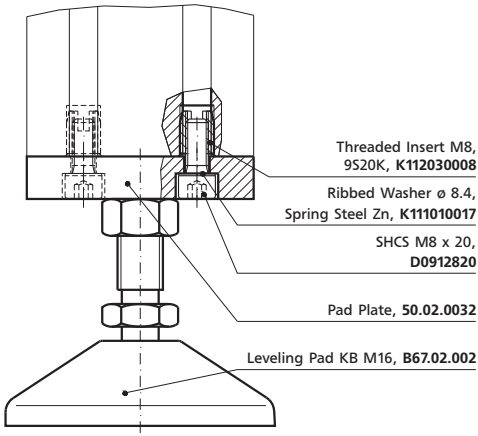
M8x16

25 | 40 | 50 | 60

Pad Plate M10
50.02.0068
Al tumbled
for Profile mk 2040.38

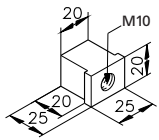






Pad Blocks and Plates

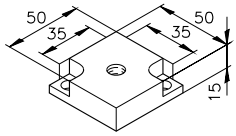
for vertical profiles



25 | 40 | **50** | 60

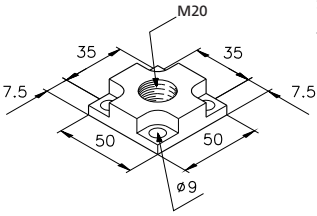
Plug 7
79.00.0004
Al tumbled
for Profile mk 2000
Load Capacity 1,000 N

M8 x 16



25 | 40 | **50** | 60

Pad Plate A M10
50.09.0013
Pad Plate A M12
50.09.0044
Pad Plate A M16
50.09.0045
Al tumbled
for Profile mk 2000
Load Capacity 6,000 N



25 | 40 | **50** | 60

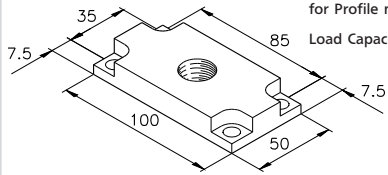
Pad Plate 1 M20
50.09.0037
Steel Zn
for Profile mk 2000
Load Capacity 12,000 N

M8 x 16

25 | 40 | **50** | 60

Pad Plate B M16
50.02.0003
Pad Plate B M20
50.02.0004
Al tumbled
Load Capacity 6,000 N

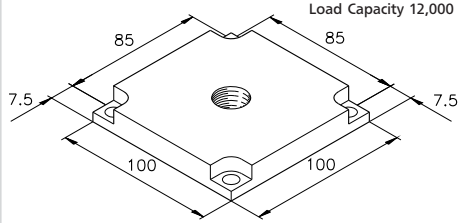
Pad Plate 3 M20
50.09.0038
Steel Zn
for Profile mk 2004
Load Capacity 12,000 N



25 | 40 | **50** | 60

Pad Plate C M16
50.02.0001
Pad Plate C M20
50.02.0002
Al tumbled
Load Capacity 6,000 N

Pad Plate I M20
50.09.0039
Steel Zn
for Profile mk 2005, mk 2011
Load Capacity 12,000 N



Floor Mounting

Pad Blocks and Plates

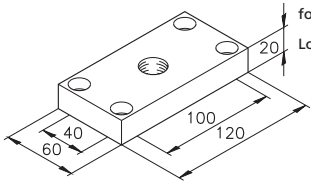
for vertical profiles

25 40 50 **60**

Pad Plate 60/4 M16
50.02.6004
Pad Plate 60/5 M20
50.02.6005
Al tumbled

for Profile mk 2060.02

Load Capacity 10,000 N

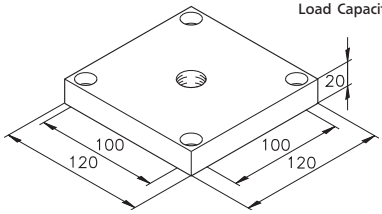


25 40 50 **60**

Pad Plate 60/8 M16
50.02.6008
Pad Plate 60/9 M20
50.02.6009
Al tumbled

for Profile mk 2060.05

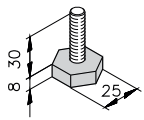
Load Capacity 10,000 N



Floor Mounting

Leveling Pads

The leveling pads are used in conjunction with the corresponding pad blocks or plates. All leveling pads have an adjustment range for compensating differences in floor elevation. Leveling pads with ball and socket joints have a swivel range of approximately ± 20° and also compensate for unevenness in the floor.



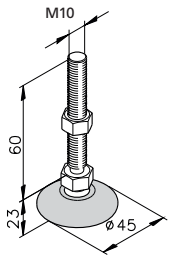
25 | 40 | 50 | 60

Leveling Screw M8
K110060004
Adj. range 10 mm

Leveling Screw M10
K110060003
Adj. range 10 mm

Plastic/Steel

Load Capacity 1,000 N

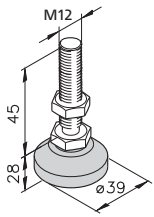


25 | 40 | 50 | 60

Leveling Pad KA M10
B67.02.057
Adj. range 25 mm

Spindle Steel Zn,
Plastic Pad,
with Ball Base

Load Capacity 750 N

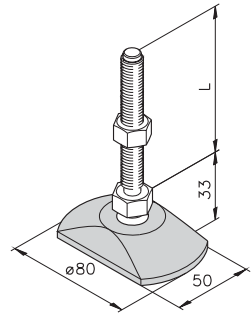


25 | 40 | 50 | 60

Leveling Pad M12
B67.02.076
Adj. range 22 mm

Spindle Steel Zn,
Plastic Pad

Load Capacity 1,000 N



25 | 40 | 50 | 60

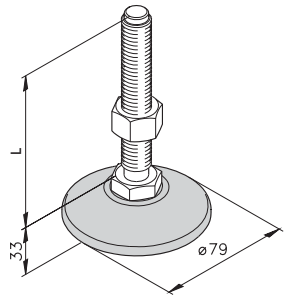
Leveling Pad KC M12
B67.02.077
Spindle length 50 mm,
Adj. range 15 mm

Leveling Pad KC M12
B67.02.027
Spindle length 75 mm,
Adj. range 45 mm

Leveling Pad KC M16
B67.02.028
Spindle length 85 mm,
Adj. range 50 mm

Spindle Steel Zn,
Plastic Pad,
with Ball Base

Load Capacity 1,000 N



25 | 40 | 50 | 60

Leveling Pad KB M12
B67.02.075
Spindle length 50 mm,
Adj. range 15 mm

Leveling Pad KB M12
B67.02.001
Spindle length 75 mm,
Adj. range 45 mm

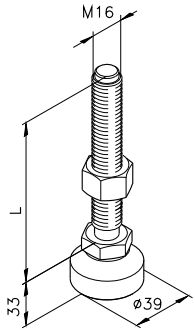
Leveling Pad KB M16
B67.02.002
Spindle length 85 mm,
Adj. range 50 mm

Spindle Steel Zn,
Plastic Pad,
glass-fiber reinforced,
with Ball Base

Load Capacity 1,500 N

Floor Mounting

Leveling Pads

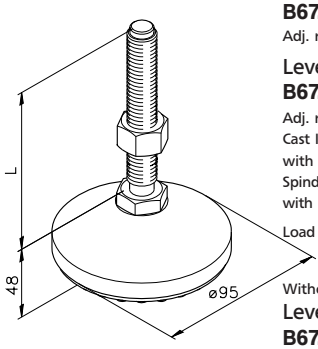


25 | 40 | 50 | 60

Leveling Pad EB M16
B67.02.040
Adj. range 50/L=85 mm

B67.02.058
Adj. range 160/L=200 mm
Stainless steel pad 1.4305,
Spindle steel Zn,
with ball base

Load capacity 25.000 N



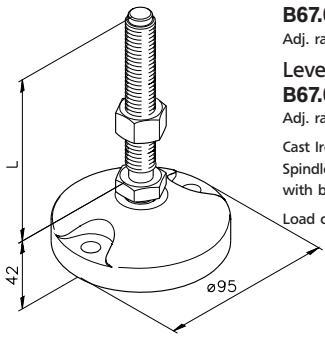
25 | 40 | 50 | 60

Leveling Pad GD M16
B67.02.005
Adj. range 50/L=85 mm

Leveling Pad GD M20
B67.02.006
Adj. range 80/L=120 mm
Cast Iron Pad
with rubber damping pad,
Spindle steel Zn,
with ball base

Load capacity 25.000 N

Without damping
Leveling Pad GA M16
B67.02.003
Leveling Pad GA M20
B67.02.004



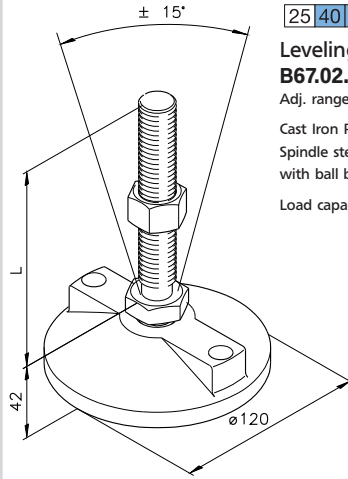
25 | 40 | 50 | 60

Leveling Pad GB M16
B67.02.032
Adj. range 50/L=85 mm

Leveling Pad GB M20
B67.02.031
Adj. range 80/L=125 mm

Cast Iron Pad,
Spindle steel Zn,
with ball base

Load capacity 30.000 N

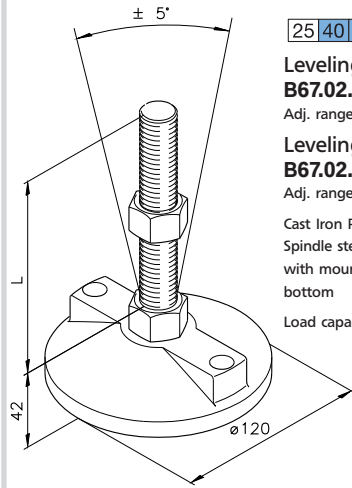


25 | 40 | 50 | 60

Leveling Pad GC M20
B67.02.030
Adj. range 80/L=120 mm

Cast Iron Pad,
Spindle steel Zn,
with ball base

Load capacity 30.000 N



25 | 40 | 50 | 60

Leveling Pad GE M20
B67.02.033
Adj. range 60/L=100 mm

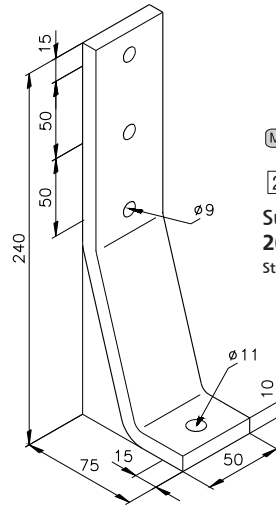
Leveling Pad GE M20
B67.02.034
Adj. range 100/L=150 mm

Cast Iron Pad,
Spindle steel Zn,
with mounting screw from the bottom

Load capacity 100.000 N

Floor Mounting

Support Brackets



M8x20

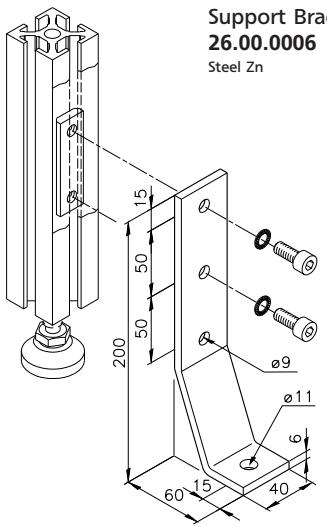
25 | 40 | **50** | 60

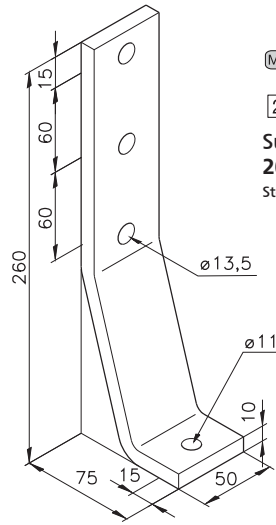
Support Bracket 2
26.00.0012
Steel Zn

M8x16

25 | **40** | 50 | 60

Support Bracket 1
26.00.0006
Steel Zn





M12x25

25 | 40 | 50 | **60**

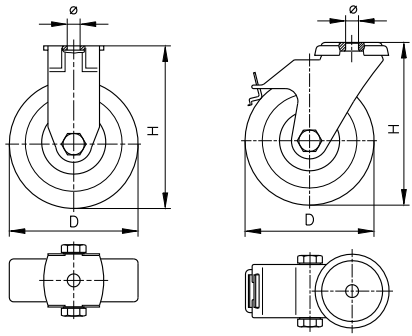
Support Bracket 60/1
26.00.0060
Steel Zn

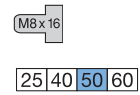
Accessory Components

Floor Mounting

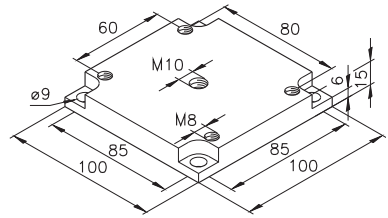
Fixed and Swivel Casters Type A

The zinc plated steel housing of mk Casters Type A can be attached to either the profile T-slots or the profile ends. The casters feature rubber wheels for quiet travel and bearings for smooth operation. Swivel casters are supplied standard with a total-lock brake.





Pad Plate R3
50.02.0093
Al tumbled



for mk 2005/mk 2011 and rollers with pre-drilled ø 10,5 mm hole or 80x60 mm hole pattern type B casters.

Fixed Caster (A)

Wheel ø D (mm)	Tread width (mm)	Load capacity (N)	Overall height H (mm)	Pre-drilled ø (mm)	Ident-No.
50	18	400	69	10.5	**K106001040**
75	25	600	98	10.5	**K106001041**
100	32	900	133	10.5	**K106001044**
100	32	900	133	12.5	**K106001042**
125	25	800	158	12.5	**K106001043**

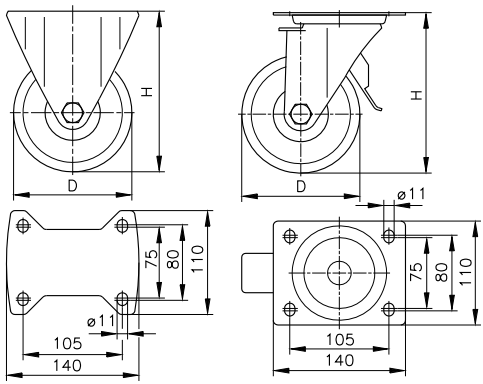
Swivel Caster (A) with Total-Lock

50	18	400	69	10.5	**K106000140**
75	25	600	98	10.5	**K106000141**
100	32	900	133	10.5	**K106000144**
100	32	900	133	12.5	**K106000142**
125	25	800	158	12.5	**K106000143**

Floor Mounting

Fixed and Swivel Casters Type B

The zinc plated steel housing of mk Casters Type B are attached to profiles using the plates shown. The casters feature bearings and nylon wheels for smooth operation and have a high load capacity. Swivel casters are supplied standard with a total-lock brake.

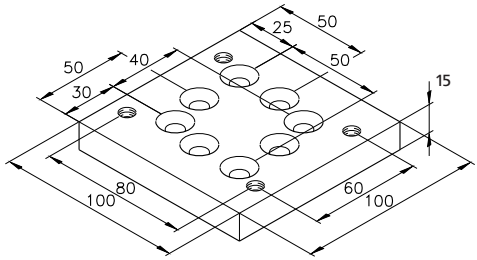


M8x25

DIN 7991

25	40	50	60

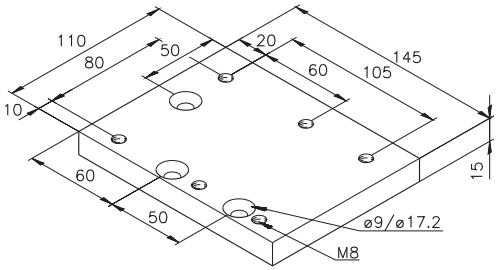
Pad Plate R1
50.02.0091
Al tumbled,



Universal plate used to attach casters with an 80/60 hole pattern. Use M8x25 FH-SHCS to attach plates to T-slots.

25	40	50	60

Pad Plate R4
50.02.0094
Al tumbled

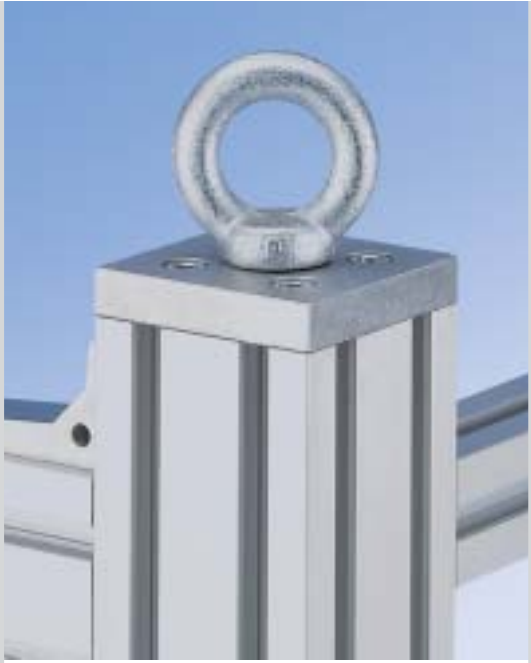


Fixed Caster (B)

Wheel ø D (mm)	Tread width (mm)	Load capacity (N)	Overall height H (mm)	Pre-drilled ø (mm)	Ident-No.
125	40	7000	165	105/80	**K106001045**
125	40	7000	165	80/60	**K106001048**

Swivel Caster (B) with Total-Lock

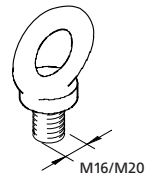
125	40	5000	165	105/80	**K106000145**
125	40	5000	165	80/60	**K106000148**



Accessory Components

Hoists

Hoists can be attached using M16/M20 pad plates or plates 4 and 5. An excellent method of moving equipment, the maximum carrying capacity shown applies for vertical loads only.



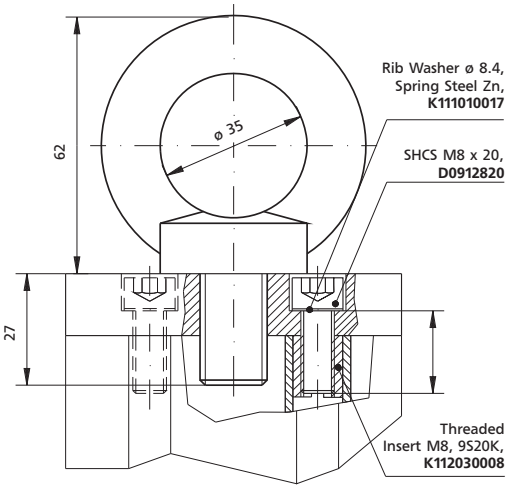
Eye Bolt

M16 DIN 580
D058016

C15 Zn
Load Capacity 4,000 N

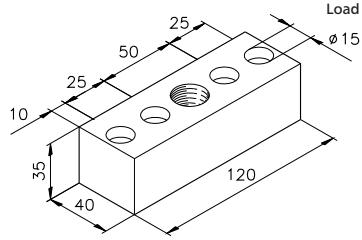
M20 DIN 580
D058020

C15 Zn
Load Capacity 12,000 N



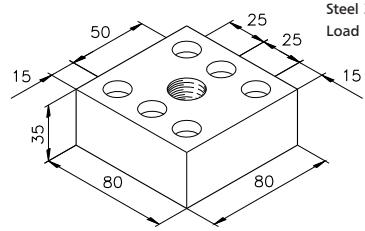
25 | 40 | 50 | 60

Plate 4 M20
50.09.0040
Steel Zn
Load Capacity 12,000 N



25 | 40 | 50 | 60

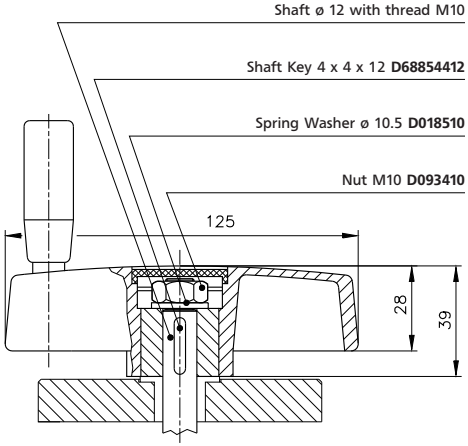
Plate 5 M20
50.09.0041
Steel Zn
Load Capacity 12,000 N



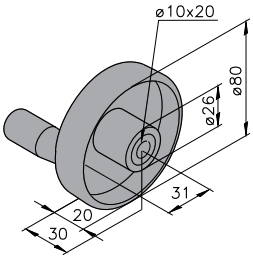
Operating elements

Handwheels

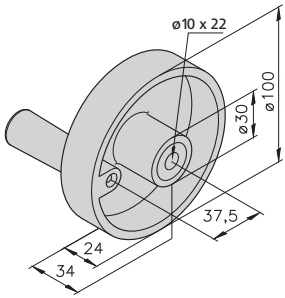
For attachment to spindles, for example, as shown on the linear positioning module. More information on linear positioning modules can be found in our Linear Technology catalog.



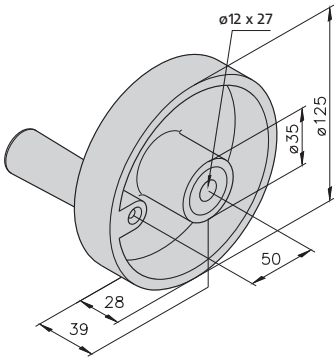
Handwheel
K110020028
Duroplast Fs 31,
black



Handwheel
K110020030
Duroplast Fs 31,
black,
Folding Handle



Handwheel
K110020031
Duroplast Fs 31,
black,
Folding Handle

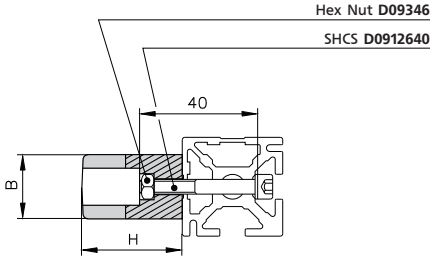


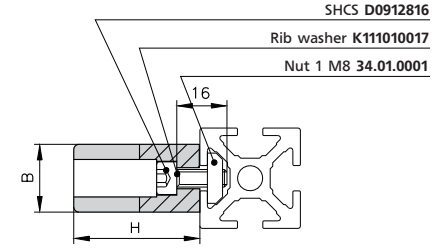
Accessory Components

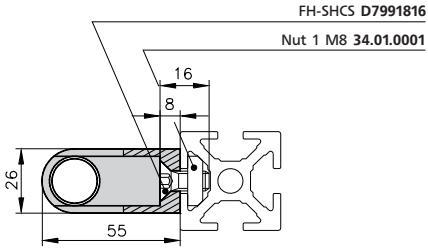
Operating elements

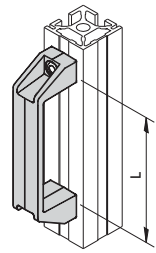
Handles

The variety of handles are suitable for carrying, opening and closing, pushing of frames, doors, enclosures, windows, etc. Please order screws and nuts separately (varies by application).



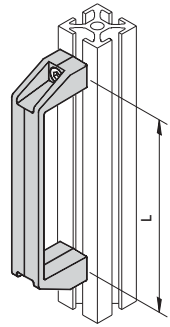






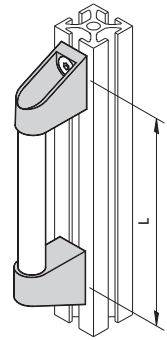
Handle
K110000021
PA-GF
L = 122 mm
B = 26 mm
H = 41 mm

Handle
K110000020
PA-GF
L = 152 mm
B = 28 mm
H = 60 mm



Handle
K110000009
PP-GF
L = 117 mm
B = 26 mm
H = 41 mm

Handle
K110000010
PP-GF
L = 179 mm
B = 28 mm
H = 50 mm



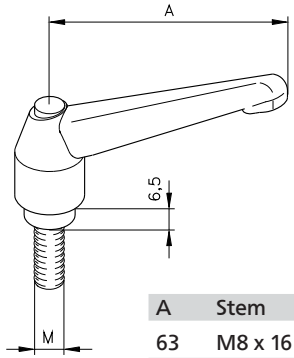
Handle
K110000011
PA-GF, Al
L = 200 mm

Handle
K110000012
PA-GF, Al
L = 300 mm

Handle
K110000013
PA-GF, Al
L = 400 mm

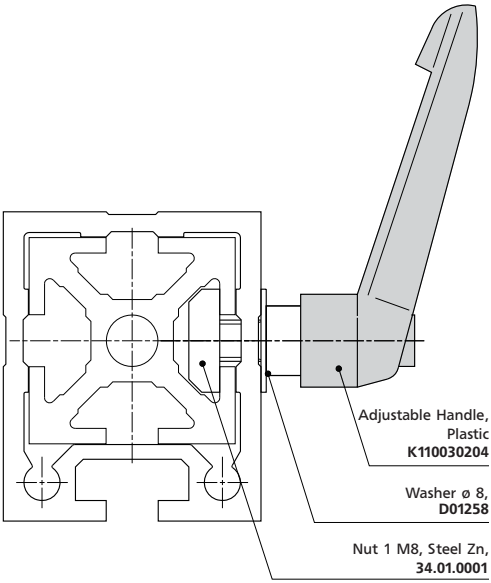
Operating elements

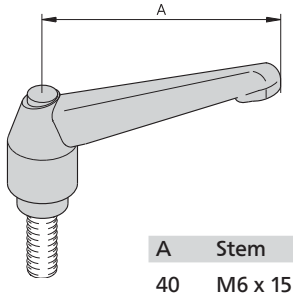
Adjustable Handle



Adjustable Handle
Cast Zinc

A	Stem	Ident-No.
63	M8 x 16	**K110030055**
63	M8 x 20	**K110030056**
63	M8 x 25	**K110030057**





Adjustable Handle
Plastic

A	Stem	Ident-No.
40	M6 x 15	**K110030200**
40	M6 x 20	**K110030201**
40	M6 x 25	**K110030202**
63	M8 x 16	**K110030204**
63	M8 x 20	**K110030205**
63	M8 x 25	**K110030206**

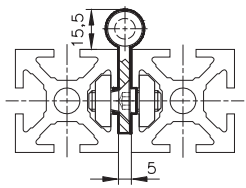
Accessory Components

Door Components

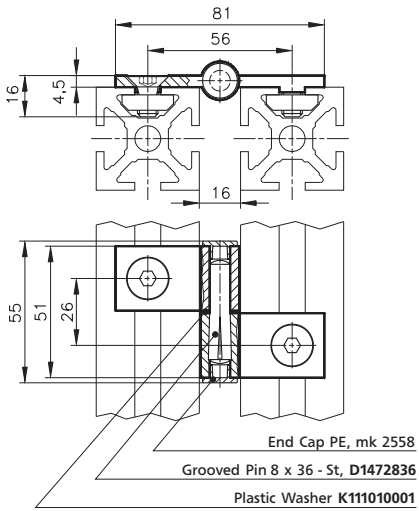
Hinges

The variety of standard hinge arms allow combinations between the various profile series. A frame constructed using series 50 profiles, for example, can include a door built using series 25 profiles. Two or three-leaf hinges can be used, depending on whether tool-less removal of the door is to be an option or not. The three-leaf hinges feature glide bushings whereby continuous actuation is possible, even under high loads.

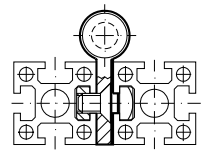
Mounting Example A

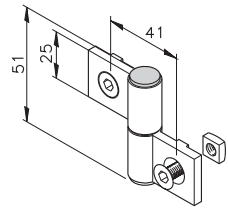


Mounting Example B



Combination Hinge 25-1/25-1

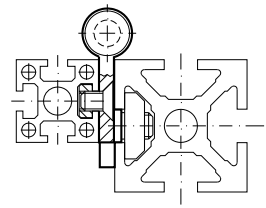


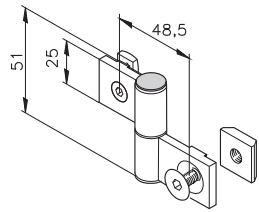


25 40 50 60

Hinge
25-1/25-1
B46.01.012
with mounting hardware

Combination Hinge 25-1/40-1



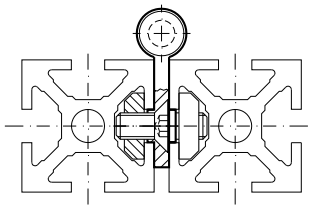


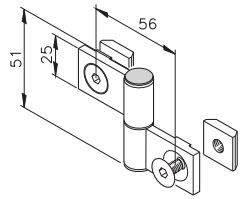
25 **40** 50 60

Hinge
25-1/40-1
B46.01.013
with mounting hardware

Hinges

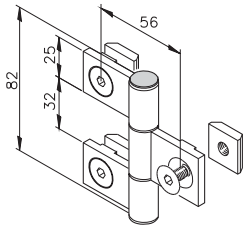
Combination Hinge 40-1/40-1 and 40-1/40-7/40-1





25 | **40** | 50 | 60

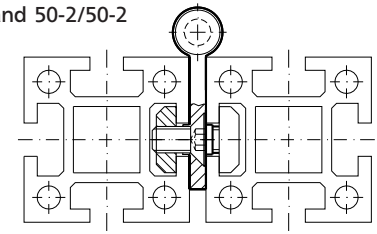
Hinge
40-1/40-1
B46.01.010
with mounting hardware

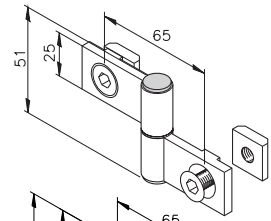


25 | **40** | 50 | 60

Hinge
40-1/40-7/40-1
B46.01.030
with mounting hardware

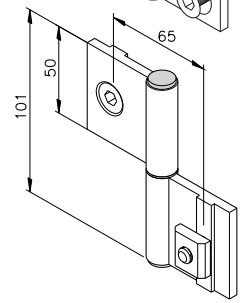
Combination Hinge 50-1/50-1 and 50-2/50-2





25 | 40 | **50** | 60

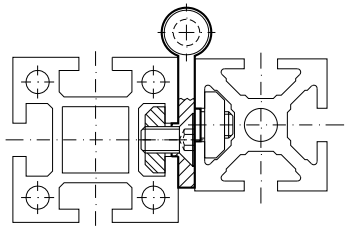
Hinge
50-1/50-1
B46.01.001
with mounting hardware

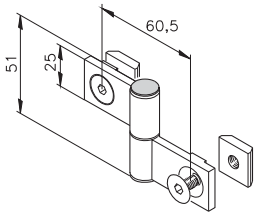


25 | 40 | **50** | 60

Hinge
50-2/50-2
B46.01.002
with mounting hardware

Combination Hinge 40-1/50-1

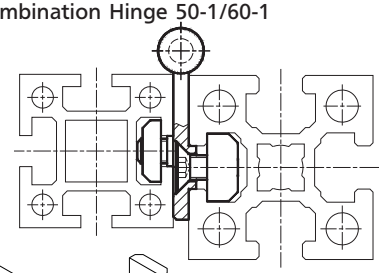


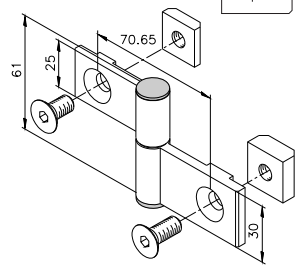


25 | 40 | **50** | 60

Hinge
40-1/50-1
B46.01.011
with mounting hardware

Combination Hinge 50-1/60-1





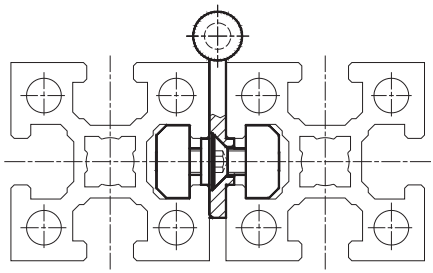
25 | 40 | **50** | **60**

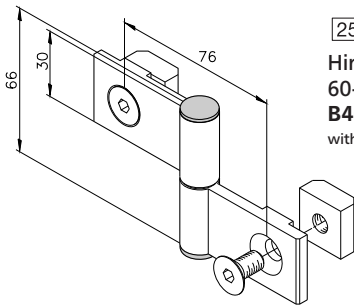
Hinge
50-1/60-1
B46.01.064
with mounting hardware

Door Components

Hinges

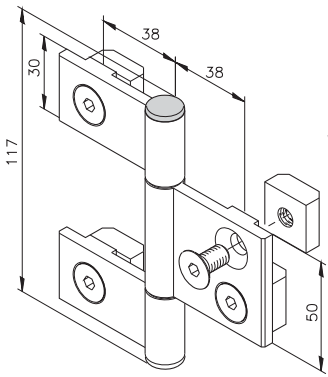
Combination Hinge 60-1/60-1 and 60-1/60-7/60-1





25 | 40 | 50 | **60**

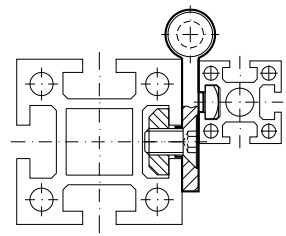
Hinge
60-1/60-1
B46.01.058
with mounting hardware

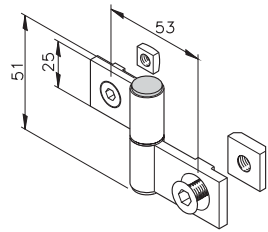


25 | 40 | 50 | **60**

Hinge
60-1/60-2/60-1
B46.01.059
with mounting hardware

Combination Hinge 25-1/50-1

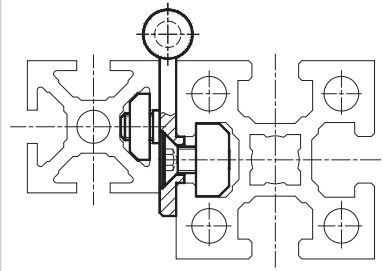


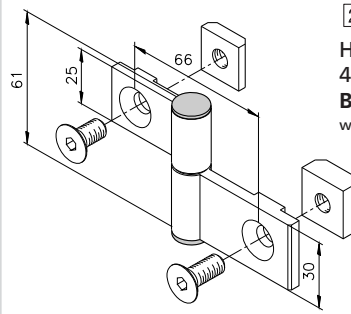


25 | 40 | **50** | **60**

Hinge
25-1/50-1
B46.01.014
with mounting hardware

Combination Hinge 40-1/60-1

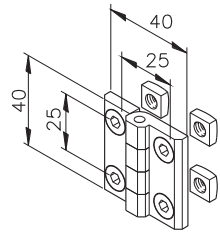




25 | 40 | **50** | **60**

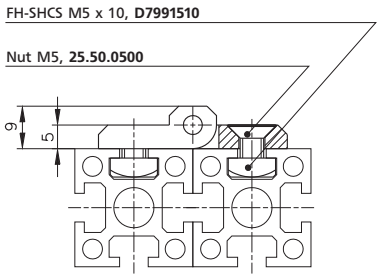
Hinge
40-1/60-1
B46.01.063
with mounting hardware

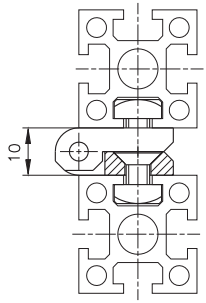
Hinges

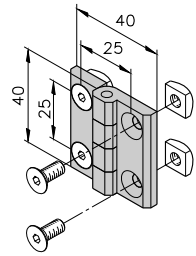


25 | 40 | 50 | 60

Hinge 25
B46.01.015
Hinge body
Zinc, black,
with mounting hardware







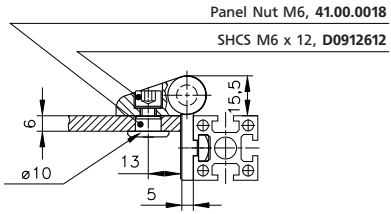
25 | 40 | 50 | 60

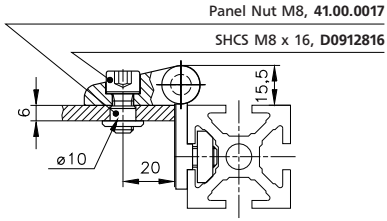
Plastic Hinge
B46.01.033
Hinge body plastic,
with mounting hardware

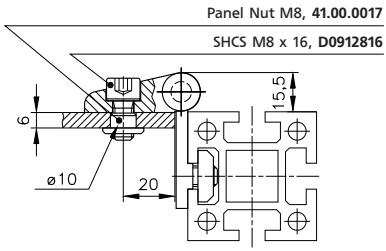
Accessory Components

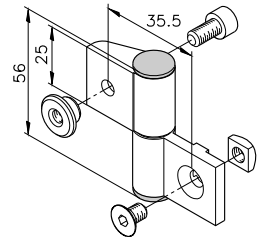
Door Components

Hinges for Panels



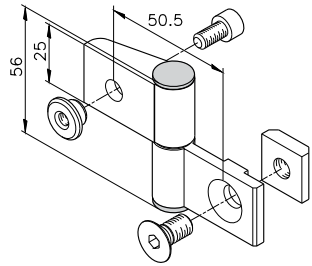






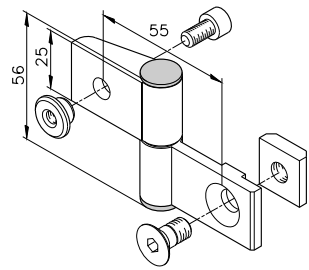
25 | 40 | 50 | 60

Hinge
25-1/25-3
B46.01.044
with mounting hardware



25 | 40 | 50 | 60

Hinge
40-1/40-3
B46.01.050
with mounting hardware



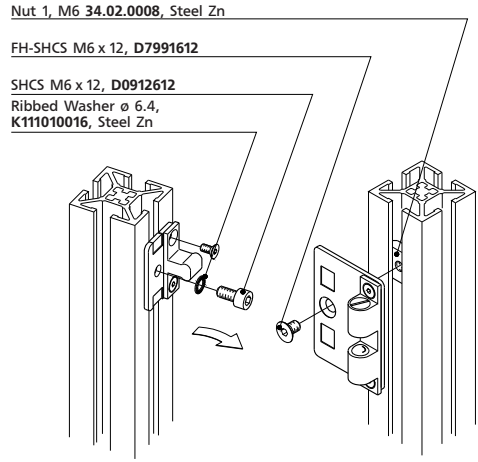
25 | 40 | 50 | 60

Hinge
50-1/40-3
B46.01.055
with mounting hardware

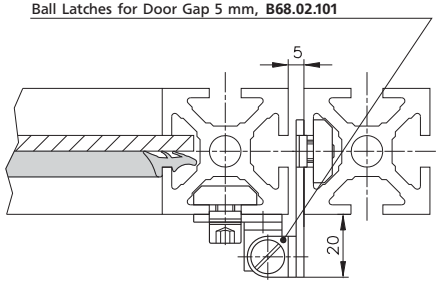
Ball Latches

25 | **40** | 50 | 60

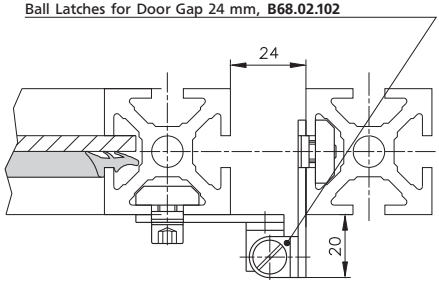
B68.02.101 for Door Gap 5 mm complete
B68.02.102 for Door Gap 24 mm complete



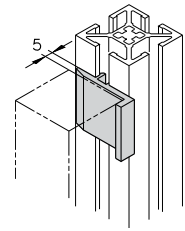
Ball Latches for Door Gap 5 mm, **B68.02.101**



Ball Latches for Door Gap 24 mm, **B68.02.102**

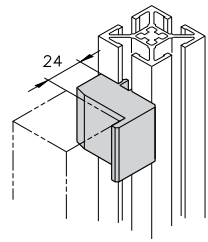


Door Stops



25 | **40** | 50 | 60

Door Stop for Swing Doors
(for 5 mm Door Gap)
22.90.0035
Plastic PE



25 | **40** | 50 | 60

Door Stop for Swing Doors
(for 24 mm Door Gap)
22.92.0035
Plastic PE

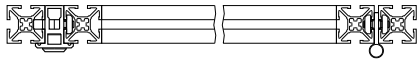
Accessory Components

Door Components

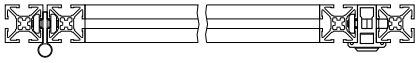
External locks

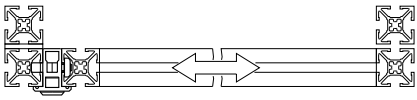
Mounted to the door profile T-slot, the gap between the door and frame must be 24 mm. They are suitable for both swinging and sliding doors.

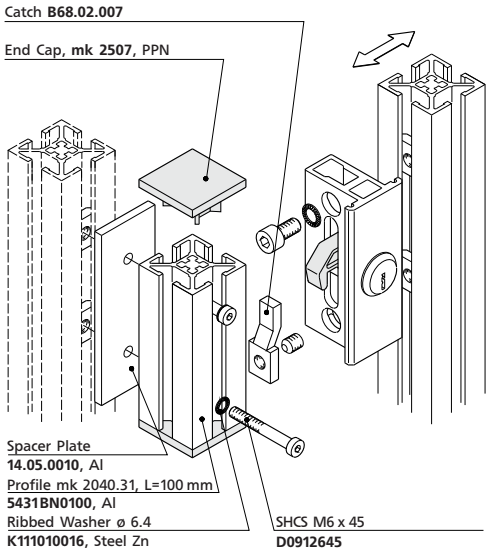
Swinging Door DIN-right

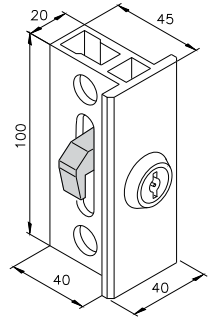


Swinging Door DIN-left





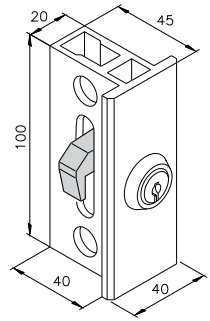




25 | **40** | 50 | 60

External
Double-Bit Lock
DIN-right
B68.02.017

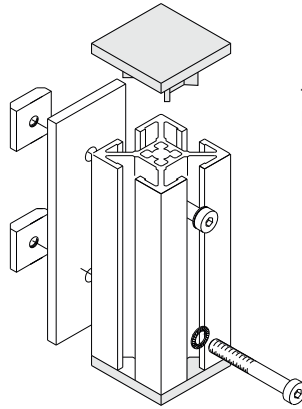
DIN-left
B68.02.018



25 | **40** | 50 | 60

External
Cylinder Lock
DIN-right
B68.02.019

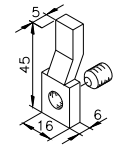
DIN-left
B68.02.020



25 | **40** | 50 | 60

Frame Extension
for Lock
B68.06.005

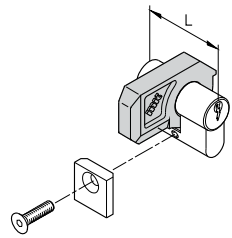
Catch
B68.02.007



Door Components

Internal locks

The gap between the door and frame must be 5 mm.

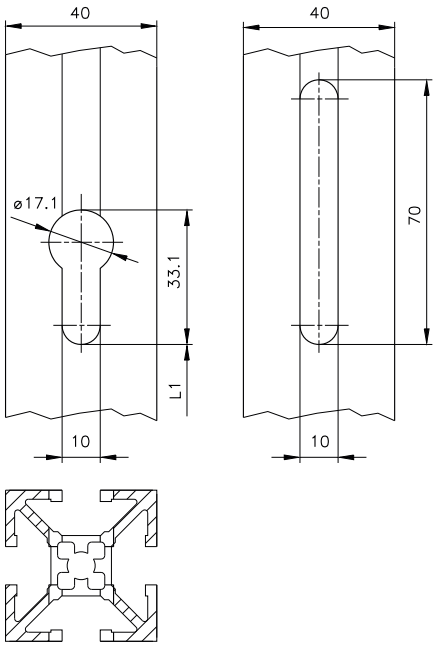


25	40	50	60

Cylinder Lock complete as shown
B68.02.051
L = 42 mm

25	40	50	60

Cylinder Lock complete as shown
B68.02.052
L = 52 mm



Profile Services
for Profile mk 2040.01
5401BC ....*
Please advise overall length and L1 dimension

for Profile mk 2040.40
5440BC ....*
Please advise overall length and L1 dimension

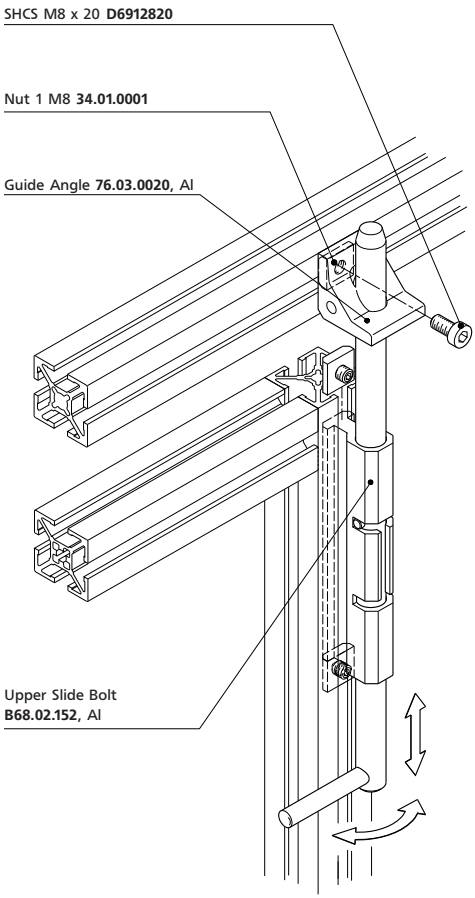
....* Profile length in mm

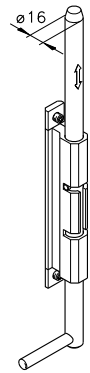
Accessory Components

Door Components

Slide Bolt

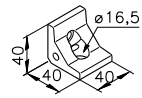
Used to lock swing doors at the top frame profile and/or at the floor. For this purpose, a guide angle must be mounted to the top frame profile; a lower side bolt is available for fastening to the floor. To hold the Lower Slide Bolt, an M8 thread must be formed in the vertical mk 2040.31 profile.



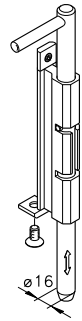


25 | 40 | 50 | 60

Upper Slide Bolt
B68.02.152
Al tumbled

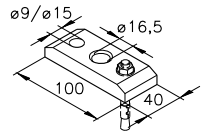


Guide Angle
76.03.0020
Al tumbled



25 | 40 | 50 | 60

Lower Slide Bolt
B68.02.151
Al tumbled

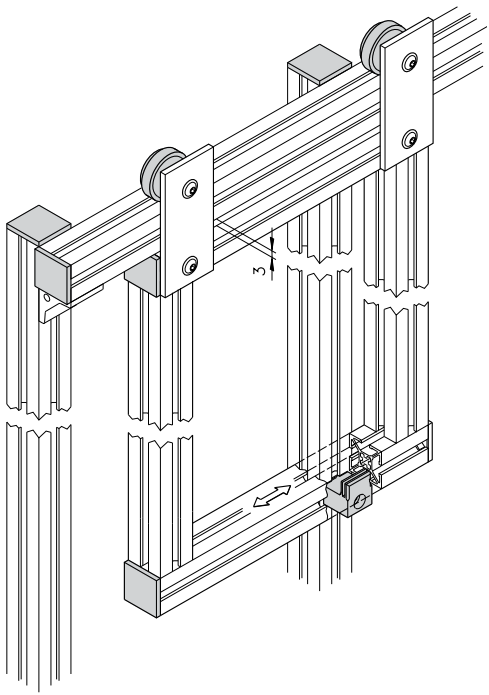


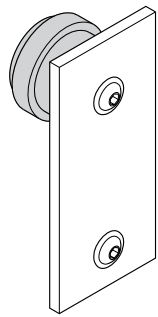
Anchor Plate
76.03.0018
Al

Door Components

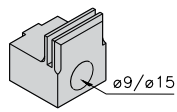
Elements for Sliding Doors

mk components include a cost-effective method for constructing sliding doors. The flanged roller assembly guides the door along the upper Profile T-slot while the Guide keeps the door oriented vertically. Once properly installed, the door is designed to be non-removable.

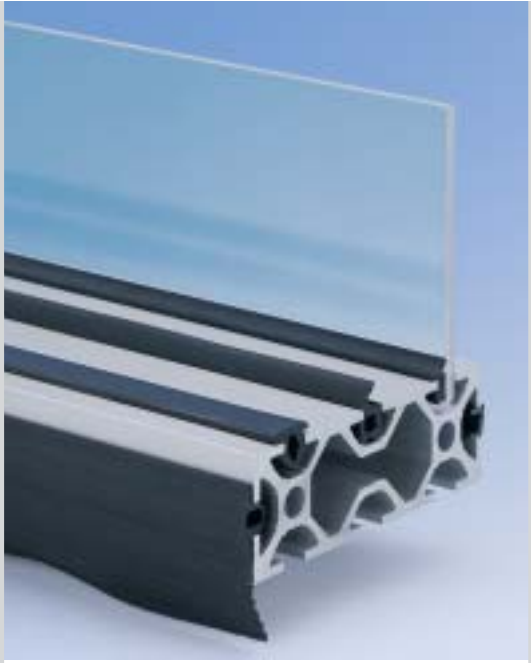




Roller Assembly
for Sliding Door
B68.11.003



Guide for
Sliding Door
19.00.0005
Plastic black

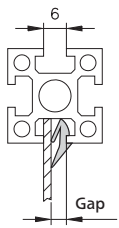


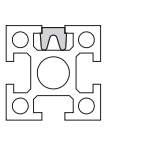
Accessory Components

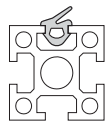
Closure and Seal Strips

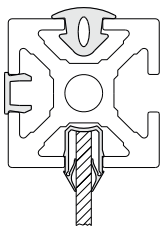
Seal Strips firmly fix panels and/or plates which have been placed into the profile T-slots. These strips are designed for panel/plate thicknesses of 1.5-6 mm. Seal Strip mk 3011 (with lip) is used primarily for doors. Closure Strips prevent dirt and other contaminants from accumulating in the T-slots. The available colors can be used as accent stripes, or to identify a particular beam as containing compressed air, or wiring, for example.

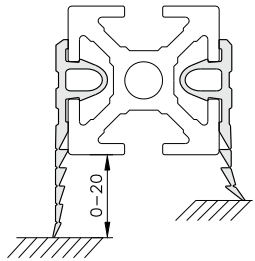
Seal Strip mk 3030 closes floor gaps of 5-25 mm. As shown below, the height of this strip can be adjusted by peeling off pieces to the desired height. For shown stock lengths of over 2m, any lengths may be ordered.

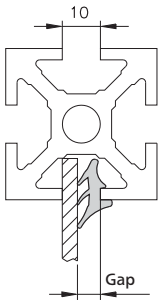


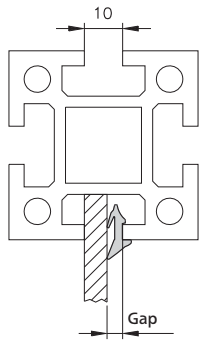




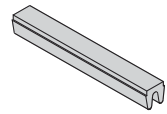






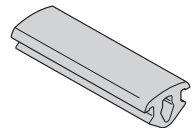


Closure Strips



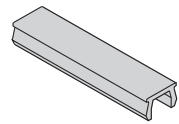
25 | 40 | 50 | 60

Closure Strip
mk 3026 black
PVC-P (soft),
Stock length 100 m



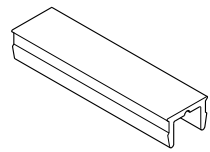
25 | 40 | 50 | 60

Closure Strip
mk 3010 black
PVC-P (soft),
Stock length 100 m



25 | 40 | 50 | 60

Closure Strip
mk 3012 black
mk 3013 grey
mk 3014 blue
mk 3015 yellow
mk 3016 green
mk 3017 red
mk 3019 silver
PVC-U (hard),
Stock length 2 m



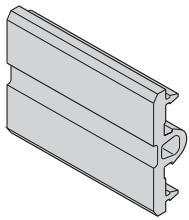
25 | 40 | 50 | 60

Profile mk 2060.30
0,14 kg/m
AlMgSi 0,5 F25

Stock length	**60.30.2000**
Cut	**60.30. ....***

Closure and Seal Strips

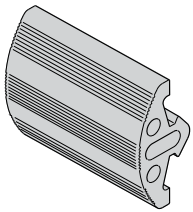
Closure Strips



25 **40** 50 60

Closure Strip
mk 3032 black
TPE, Stock length 25 m

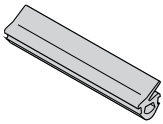
for Profiles with
closed T-slots



25 **40** 50 60

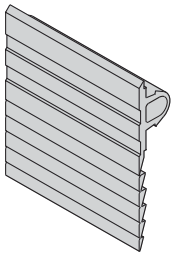
Closure Strip
mk 3035 black
mk 3036 grey
PVC-P (soft),
Stock length 25 m

Seal Strips



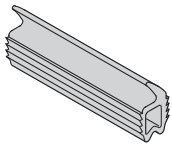
25 40 50 60

Seal Strip
mk 3025 black
TPE, Stock length 50 m



25 **40** **50** 60

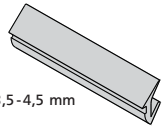
Seal Strip
mk 3030 black
TPE, Stock length 40 m



25 **40** **50** 60

Seal Strip
mk 3011 black
PVC, Stock length 200 m

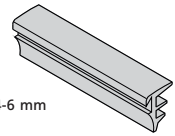
Seal Strips for paneling



for gap 3,5-4,5 mm

25 40 50 60

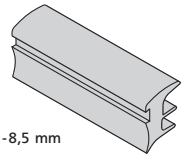
Seal Strip
mk 3027 black
TPE-V, Stock length 300 m



for gap 4-6 mm

25 **40** **50** 60

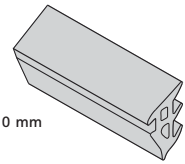
Seal Strip
mk 3020 black
TPE-V, Stock length 200 m



for gap 7-8,5 mm

25 **40** **50** 60

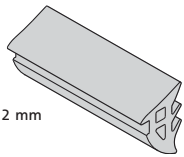
Seal Strip
mk 3021 black
EPDM, Stock length 200 m



for gap 10 mm

25 **40** 50 60

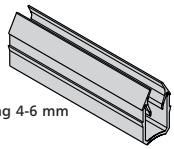
Seal Strip
mk 3023 black
EPDM, Stock length 200 m



for gap 12 mm

25 **40** 50 60

Seal Strip
mk 3024 black
EPDM, Stock length 200 m



for paneling 4-6 mm

25 **40** **50** 60

Profile Edging
mk 3008 black
mk 3008SI silver-grey
PP, Stock length 2 m

Accessory Components

Paneling and Accessories

Paneling

The paneling shown here can be used with all frames and doors shown in this catalog. When ordering, please advise all relevant frame dimensions for confirmation.

Metal panels painted per your specifications.

Paneling Material and Cuts

Material	Color	Sheet Size	Thickness	Ident-No. Material	Ident-No. Cut 1)
Acrylic	clear	3050 x 2050 mm	4 mm	K01D211004 1)	50.15.6014
		3050 x 2050 mm	5 mm	K01D211005 1)	50.15.6000
		3050 x 2050 mm	6 mm	K01D211006 1)	50.15.6001
		4' x 8'	1/4"	P90.05.001 2)	
Polycarbonate	clear	3050 x 2050 mm	4 mm	K01B211004 1)	50.15.6009
		3050 x 2050 mm	5 mm	K01B211005 1)	50.15.6002
		3050 x 2050 mm	6 mm	K01B211006 1)	50.15.6003
		4' x 8'	1/4"	P90.03.002 2)	
Polycarbonate	grey	3050 x 2050 mm	4 mm	K01B231004 1)	50.15.6009
		3050 x 2050 mm	5 mm	K01B231005 1)	50.15.6002
		3050 x 2050 mm	6 mm	K01B231006 1)	50.15.6003
		4' x 8'	1/4"	P90.03.003 2)	
PETG	clear	3050 x 2050 mm	5 mm	K01P211005 1)	50.15.6019
		3050 x 2050 mm	6 mm	K01P211006 1)	50.15.6017
Fencing Alu		2000 x 1000 mm	40 x 40 x 4 mm	K00315121.40 1)	24.00.0000
		3000 x 2000 mm	40 x 40 x 4 mm	K00315122.40 1)	24.00.0000
Fencing Steel	zinc plated	2000 x 1000 mm	40 x 40 x 4 mm	K00128221.40 1)	24.02.0000
		3000 x 2000 mm	40 x 40 x 4 mm	K00128222.40 1)	24.02.0000
Trespa	silver	5' x 10'	1/4"	P90.08.001 2)	

1) not in USA. 2) only in USA. ….. . ….* width and height in mm.

Paneling

Paneling Material and Cuts

Material	Color	max. Sheet Size	Thickness	Ident-No. Material	Ident-No. Cut [1]
Fencing Steel	black	2000 x 1000 mm	40 x 40 x 4 mm	K00128321.40 [1]	24.05.0000
	powder-coated	2000 x 1250 mm	40 x 40 x 4 mm	K00128323.40 [1]	24.05.0000
		2000 x 1500 mm	40 x 40 x 4 mm	K00128324.40 [1]	24.05.0000
		4' x 8'	1"x1", 12 Ga.	P90.00.007 [2]	
		4' x 8'	1/2"x1/2", 16 Ga.	P90.00.009 [2]	
	yellow	4' x 8'	1"x1", 12 Ga.	P90.00.008 [2]	
		4' x 8'	1/2"x1/2", 16 Ga.	P90.00.010 [2]	
Alucobond	silver anod.	3000 x 1500 mm	4 mm	K00316223004 [1]	50.15.4001
			4/2,5 mm reworked	50.15.3005	
		3000 x 1500 mm	6 mm	K00316223006 [1]	50.15.4002
Dibond	white	4' x 8'	2 mm	P90.06.001 [2]	
Steel	zinc plated	2000 x 1000 mm	1,5 mm	K00112121150 [1]	07.28. ….. . ….*
	painted	2000 x 1000 mm	1,5 mm	K00112131150 [1]	07.28. ….. . ….*
	zinc plated	4' x 8'	18 Ga.	P57.02.000 [2]	
Stainless Steel	polished	2000 x 1000 mm	1,5 mm	K00205121150 [1]	07.29. ….. . ….*
		4' x 8'	20 Ga.	P57.01.000 [2]	
Aluminum	silver anod.	2000 x 1000 mm	1,5 mm	K00305321150 [1]	07.30. ….. . ….*
		2000 x 1000 mm	2 mm	K00305321200 [1]	07.33. ….. . ….*
Expanded PVC	black	4' x 8'	1/4"	P90.07.001 [2]	
	blue	4' x 8'	1/4"	P90.07.002 [2]	
	grey	4' x 8'	1/4"	P90.07.003 [2]	
	white	4' x 8'	1/4"	P90.07.004 [2]	
Alumalite	silver anod.	4' x 8'	1/4"	P90.04.001 [2]	

Sizing

Installed using	Width	Height	Installed using	Width	Height
Seal Strip	LM+20 mm	LH+20 mm	Angle	LM	LH
Panel Clamp	LM-31 mm	LH-31 mm	Fencing w. Clamp Profile	LM+10 mm	LH+10 mm
Panel Block	LM	LH	Fencing	LM+20 mm	LH+20 mm

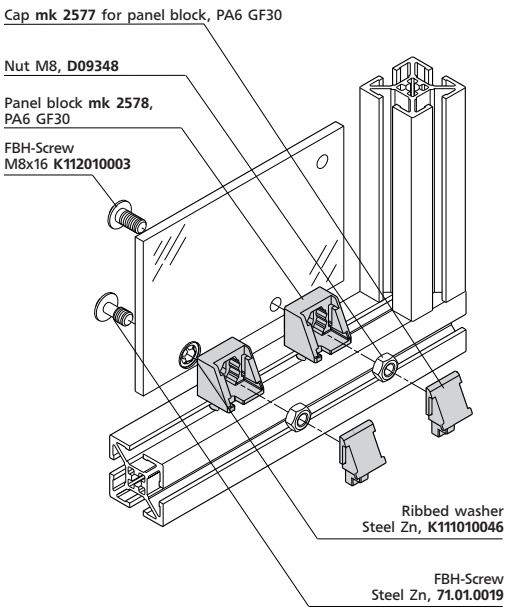
1) not in USA. 2) only in USA. ….. . ….* width and height in mm.

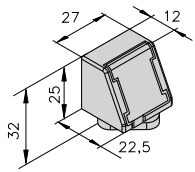
Paneling and Accessories

Attachment

... with Panel Blocks

The undetachable panel block is used together with the undercut flanged button-head screw and ribbed washer for subsequent attachment of paneling in accordance with the Machinery Directive. Paneling requires 9 mm drills at a distance of 10-15 mm from the profile frame.





25 | **40** | 50 | 60

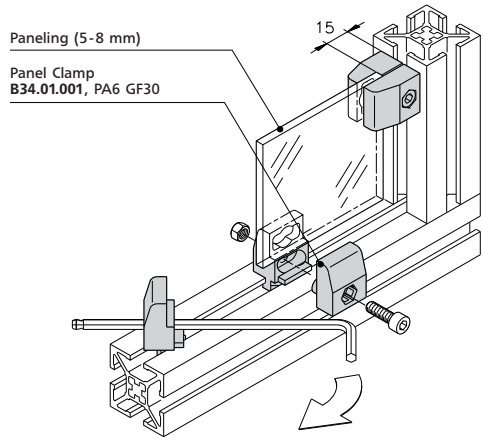
Panel block with cap
B34.01.003
without mounting hardware

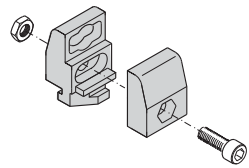
Panel block with cap
B34.01.004
with mounting hardware
optional in VA **B34.01.004A2**

Panel block with cap
B34.01.005
with mounting hardware
undetachable
optional in VA **B34.01.005A2**

... with Panel Clamps

Panel clamps are used to mount 5-8 mm thick paneling onto assembled frames. Panel clamps are installed after completed frame assembly.





25 | **40** | 50 | 60

Panel Clamp 40
B34.01.001
PA6 GF30

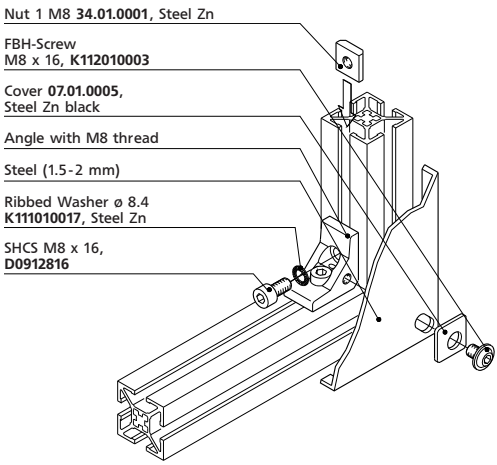
25 | 40 | **50** | 60

Panel Clamp 50
B34.01.002
PA6 GF30

Attachment

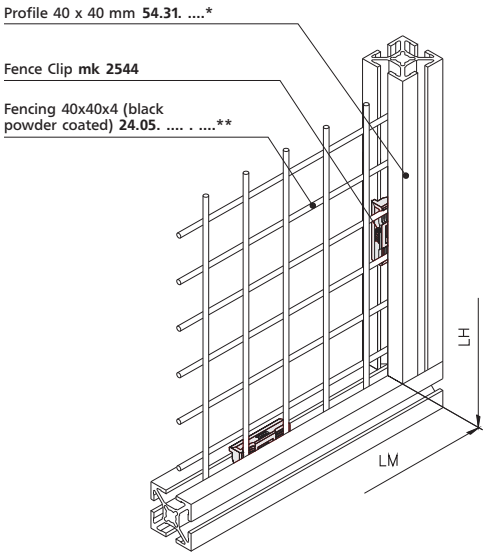
... with Angles

For paneling attached directly to angles, panel blocks add additional support for lengths of over 600 mm.

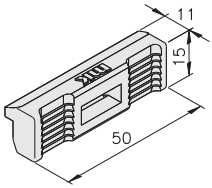


... with Fence Clips

Fence clips are the most cost effective and fastest assembly. The fence clip is simply installed using a mallet.



The clamp is designed for wire mesh fencing, thickness 4 mm.



25	40	50	60

Fence Clip
mk 2544

Accessory Components

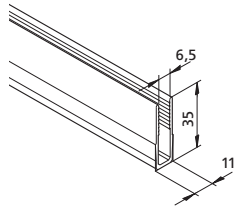
Paneling and Accessories

Attachment

USA

... for fencing

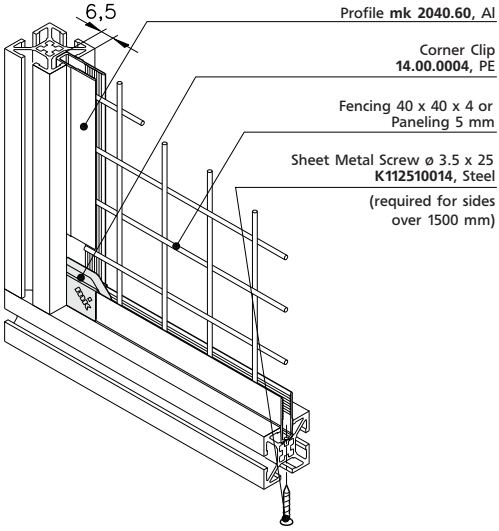
Clamping profiles are used when the aesthetics of the guarding are important as they frame the wire mesh completely. In addition, the clamping profiles securely hold the paneling around its entire perimeter.

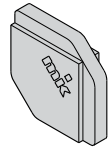


Profile mk 2040.60
0.30 kg/m
AlMgSi 0.5 F25

Stock length	**54.60.6100**
Cut	**54.60. ....***

Fence clamping





Corner Clip
14.00.0004

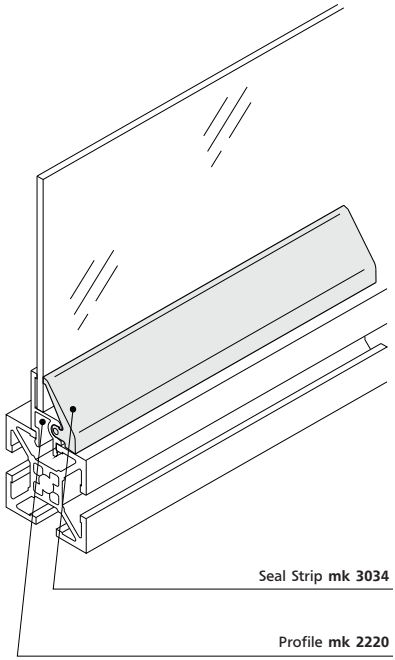
....* Profile length in mm

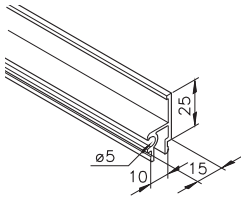
Paneling and Accessories

Attachment

... *with Windows*

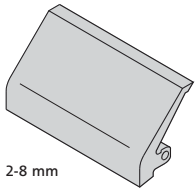
With the mk 2220 profile and the mk 3034 seal strip, a universal holder is available for 2 to 8 mm paneling. All series 40 and 50 structural profiles are suitable as support profiles.





Profile mk 2220
0.32 kg/m
AlMgSi 0.5 F25

Stock length	**52.20.6100**
Cut	**52.20. ....***



for Gap 2-8 mm

25 | 40 | 50 | 60

Seal Strip
mk 3034 black
for Paneling with mk 2220
EPDM, Stock length 200 m

....* Profile length in mm

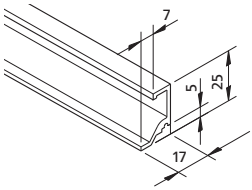
Accessory Components

Paneling and Accessories

Attachment

... with Windows

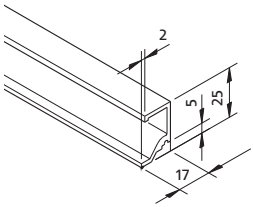
Through various combinations of panel profiles and seal strips, panels of various thicknesses can be installed within existing frames, even subsequently and without major effort or cost. These profiles are used primarily with 80 mm wide Series 40 structural profiles.



Profile mk 2040.81

0.28 kg/m
AlMgSi 0.5 F25

Stock length	**54.81.5100**
Cut	**54.81. ....***



Profile mk 2040.82

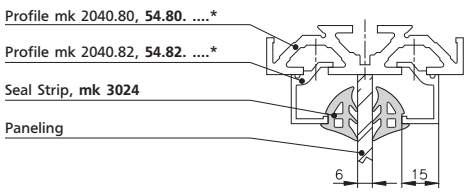
0.31 kg/m
AlMgSi 0.5 F25

Stock length	**54.82.5100**
Cut	**54.82. ....***

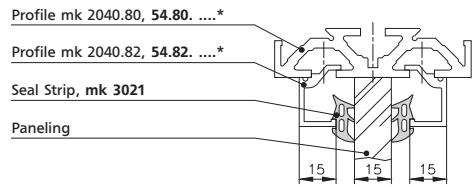
....* Profile length in mm

Examples

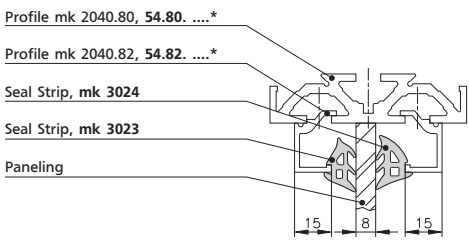
Panel width 6 mm



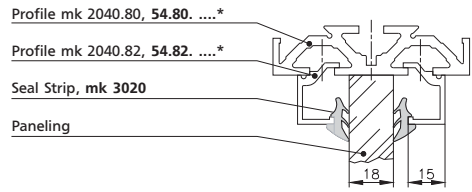
Panel width 15 mm



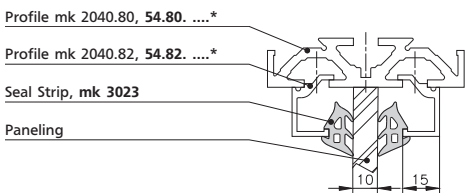
Panel width 8 mm



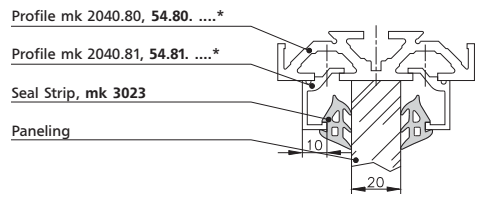
Panel width 18 mm



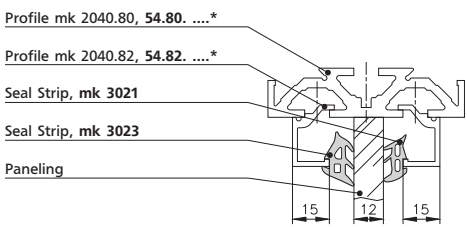
Panel width 10 mm



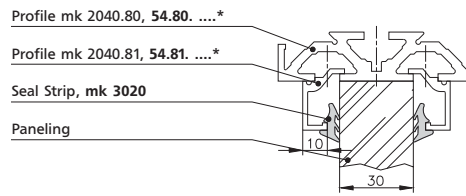
Panel width 20 mm



Panel width 12 mm



Panel width 30 mm

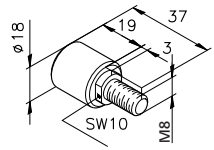


Accessory Components

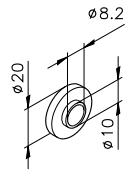
Rollers

Mini-Rollers

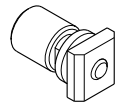
Mini-Rollers are used, for example, for pallet runouts at workstations, transfer stations, etc. They can be attached to profiles of Series 40 and 50. Roller spacing depends on the product conveyed. Stock length of mk Wear Strips is 2000 mm.



mk Mini-Roller
K101120001
Steel Zn

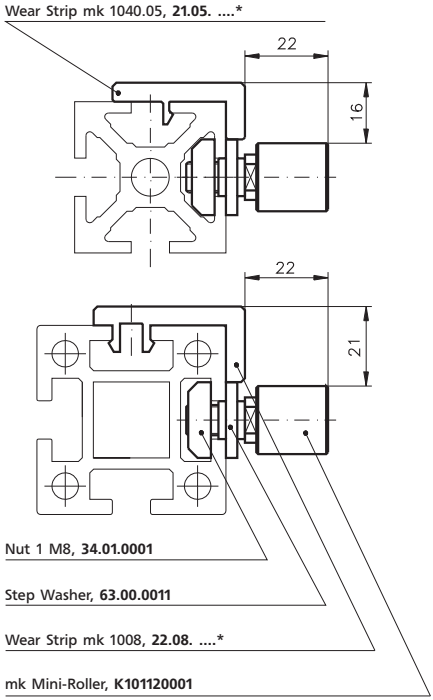


Step Washer
63.00.0011
Steel Zn



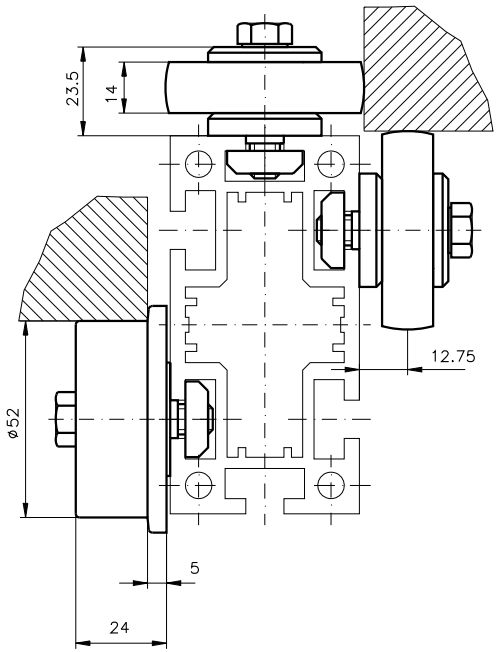
25 | 40 | 50 | 60

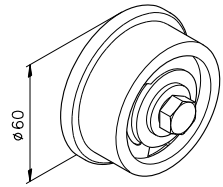
mk Mini-Roller
B60.04.002
with mounting hardware
max. radial load 80N



Carriage Rollers

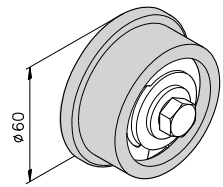
Both roller types are used in combination with Series 50 profiles for simple guiding or transfer of heavy work pieces.





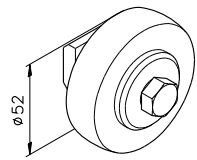
25 | 40 | 50 | 60

Flange Roller 1
B60.00.001
Roll blackened steel, complete with mounting hardware
max. radial load 500N



25 | 40 | 50 | 60

Flange Roller 2
B60.00.002
Roll POM, complete with mounting hardware
max. radial load 200N



25 | 40 | 50 | 60

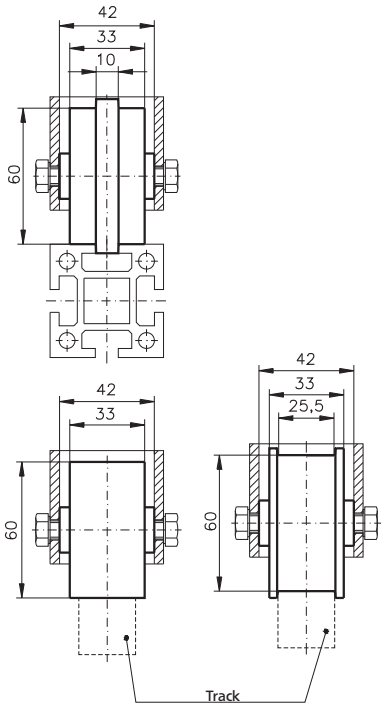
Roller
B60.01.001
Roll blackened steel, complete with mounting hardware
max. radial load 1000N

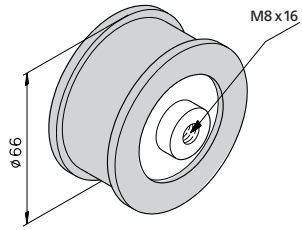
Accessory Components

Rollers

Carriage Rollers

Carriage Rollers can be used when frames or other equipment must travel in a linear direction, on either mk Profiles or tracks.





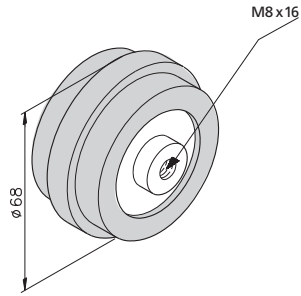
25 **40** 50 60

Flange Roller A1
B60.00.004

25 40 **50** 60

Flange Roller A1
B60.00.003

Roll Steel,
Bushing blackened steel,
max. radial load 1000N



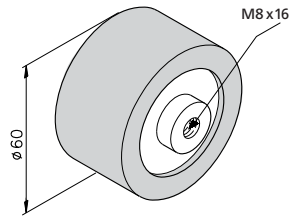
25 **40** 50 60

Guide Roller A2
B60.02.019

25 40 **50** 60

Guide Roller A2
B60.02.002

Roll POM,
Bushing blackened steel
max. radial load 200N



25 **40** 50 60

Roller A4
B60.01.005

25 40 **50** 60

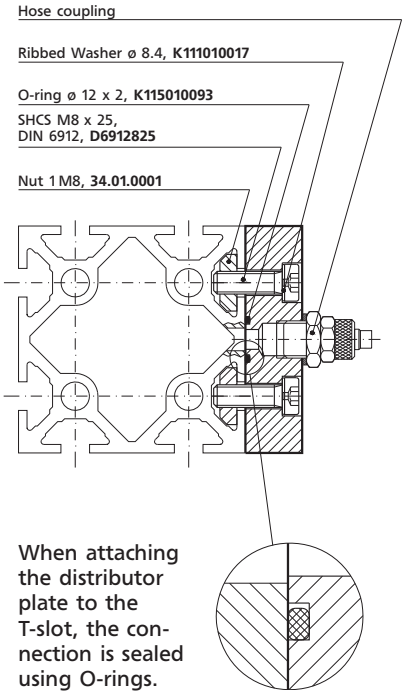
Roller A4
B60.01.003

Roll POM,
Bushing blackened steel
max. radial load 200N

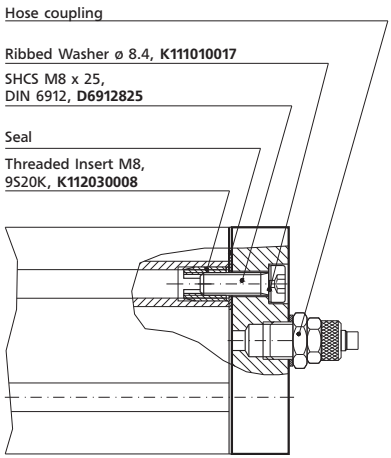
Pneumatic Components

Using pneumatic components, profiles mk 2040.02 and mk 2040.03 can be pressurized to provide compressed air at desired locations. This structural beam's features eliminates the need for additional plumbing in frames made using mk profiles. The pneumatic plates can be attached to the profile ends as well as their T-slots. The system is designed for a maximum pressure of 6 bar, or 90 psi. Further information on request.

Drill Fixtures see from page 227



When attaching the distributor plate to the T-slot, the connection is sealed using O-rings.

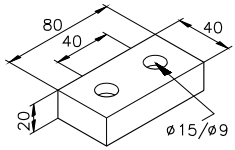


A seal ensures leak-proof attachment of plates to the profile ends.

Accessory Components

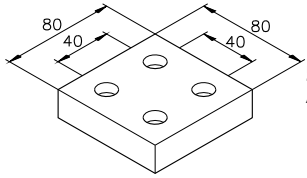
Pneumatic Components

End Plates



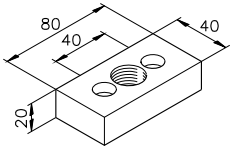
DIN 6912

End Plate A
53.00.0100
Al tumbled



End Plate B
53.00.0101
Al tumbled

Supply Plates



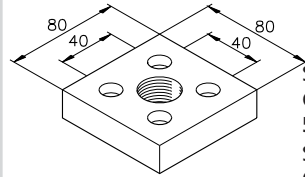
Supply Plate A
G1/4"
53.00.0352

Supply Plate A
G1/2"
53.00.0200

Supply Plate A
NPT1/4"
53.00.0353

Supply Plate A
NPT1/2"
53.00.0210

Al tumbled



DIN 6912

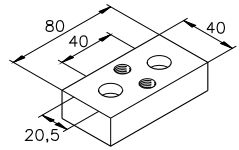
Supply Plate B
G1/2"
53.00.0201

Supply Plate C
G3/4"
53.00.0202

Supply Plate B
NPT1/2"
53.00.0211

Al tumbled

Distributor Plates

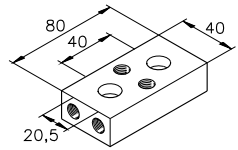


Distributor Plate
A18 G1/8"
53.00.0300

Distributor Plate
A14 G1/4"
53.00.0303

Distributor Plate
A14 NPT1/4"
53.00.0333

Al tumbled



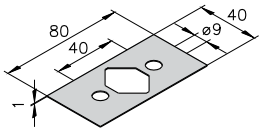
Distributor Plate
A28 G1/8"
53.00.0301

Distributor Plate
A24 G1/4"
53.00.0304

Distributor Plate
A24 NPT1/4"
53.00.0334

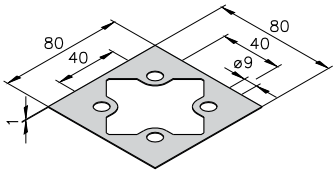
Al tumbled

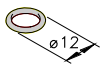
Seals



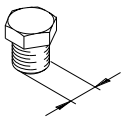
Seal A
53.01.0005

Seal B
53.01.0006

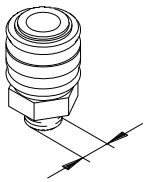




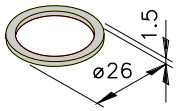
O-Ring ø 12 x 2 mm
K115010093
NBR 872



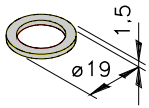
Closure Screw
G1/4"
K502050426
G1/2"
K502050428
NPT1/4"
K502050451
NPT1/2"
K502050450



Coupling
G1/4"
K502050700
NPT1/4"
K502050706
NPT1/2"
K502050705



Coupling Seal
G1/2"
K502050353

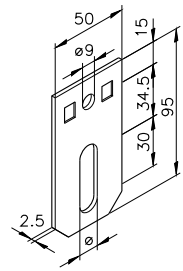


Coupling Seal
G1/4"
K502050351

Accessory Components

Electric Components

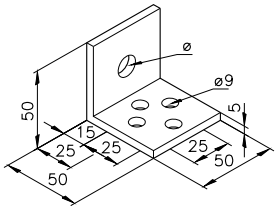
Sensor Brackets



M8x12

25 | 40 | 50 | 60

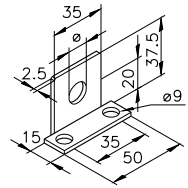
Sensor Bracket D
ø 9 – 16.00.0016
ø 13 – 16.00.0017
ø 19 – 16.00.0018
Steel Zn



M8x16

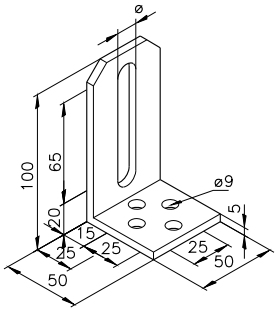
25 | 40 | 50 | 60

Sensor Bracket A
ø 13 – 16.00.0000
ø 19 – 16.00.0001
R1/4" – 16.05.0011
Al tumbled



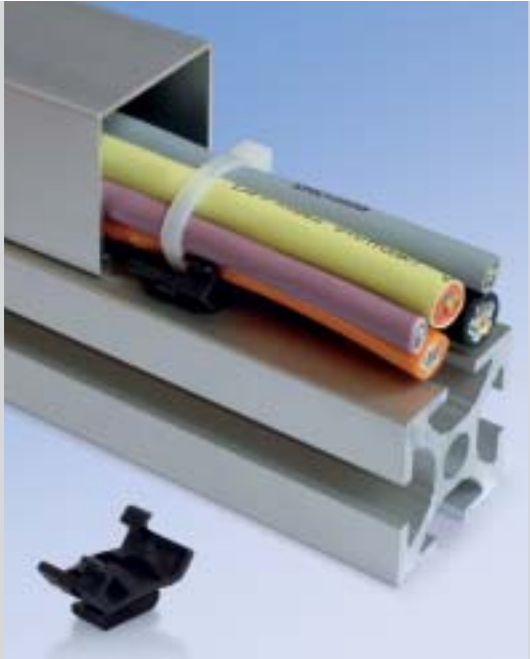
25 | 40 | 50 | 60

Sensor Bracket E
ø 9 – 16.00.0026
ø 13 – 16.00.0027
ø 19 – 16.00.0028
Steel Zn



25 | 40 | 50 | 60

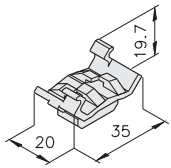
Sensor Bracket B
ø 13 – 16.00.0006
ø 19 – 16.00.0007
Al tumbled



Electric Components

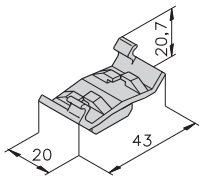
Wireways

Wireways offer an alternative to the usual cable trays. The are extremely functional and integrate neatly with mk profile systems. They can be installed at any time, requiring no tools. Cable clips are ideal for both temporary and permanent cable management and can be used either with or without the covers.



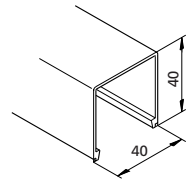
25 | **40** | 50 | 60

Clip 40
mk 2546
PA 6



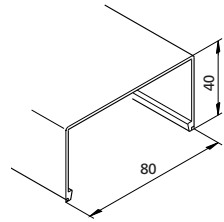
25 | 40 | **50** | 60

Clip 50
mk 2550
PA 6



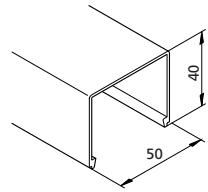
mk 2040.50
0.51 kg/m
AlMgSi 0.5 F25

Stock length	**54.50.5100**
Cut	**54.50. ....***



mk 2040.51
0.67 kg/m
AlMgSi 0.5 F25

Stock length	**54.51.5100**
Cut	**54.51. ....***



mk 2051
0.56 kg/m
AlMgSi 0.5 F25

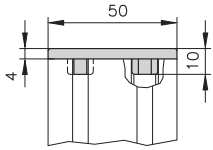
Stock length	**51.51.5100**
Cut	**51.51. ....***

Accessory Components

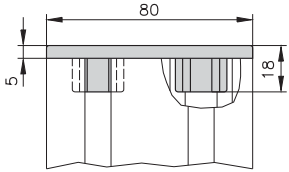
End Caps

End Caps of injection molded plastic (PPN 1060) cover the ends of the profiles and attach flush to the profile edges. The end caps are simply pressed onto the profile.

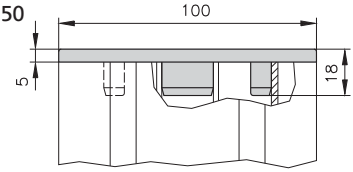
Series 25



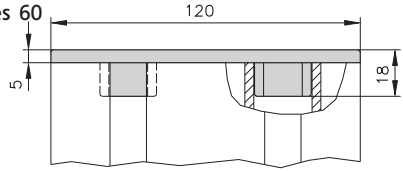
Series 40

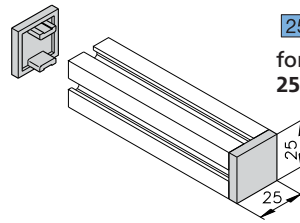


Series 50



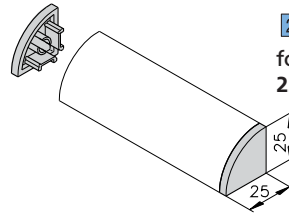
Series 60





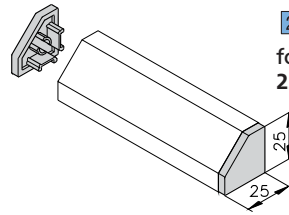
25 40 50 60

for Profile mk 2025.01
25.50.8000 black



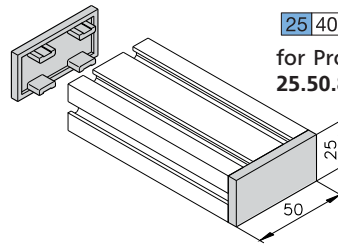
25 40 50 60

for Profile mk 2025.37
25.50.8004 black



25 40 50 60

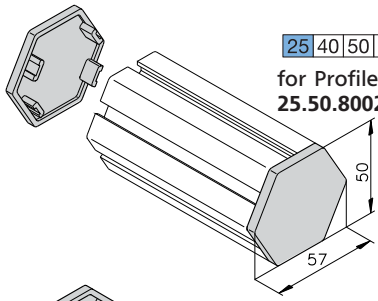
for Profile mk 2025.38
25.50.8005 black



25 40 50 60

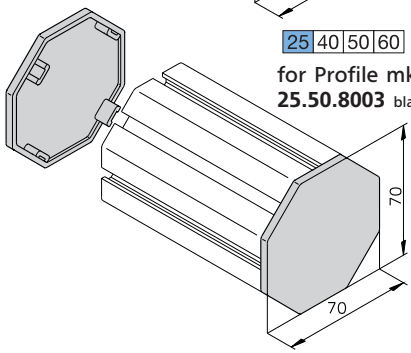
for Profile mk 2025.02
25.50.8001 black

End Caps



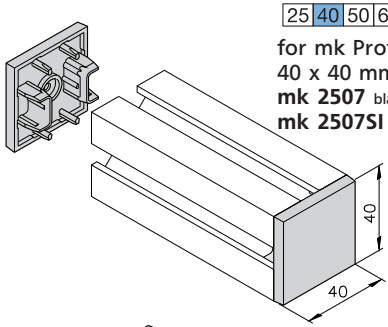
25 40 50 60

for Profile mk 2025.20
25.50.8002 black



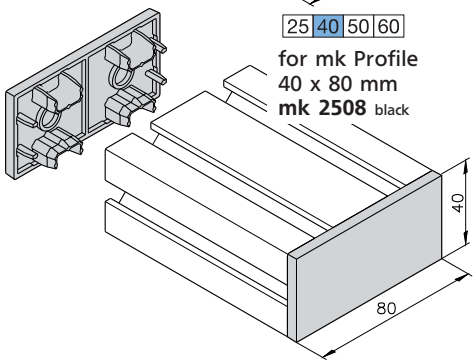
25 40 50 60

for Profile mk 2025.21
25.50.8003 black



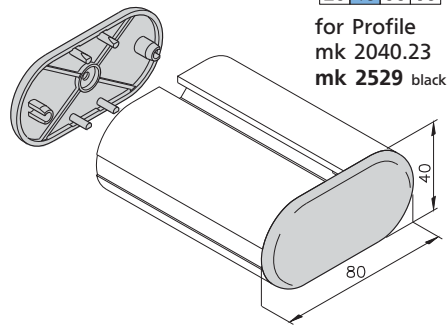
25 40 50 60

for mk Profile
40 x 40 mm
mk 2507 black
mk 2507SI silver-grey



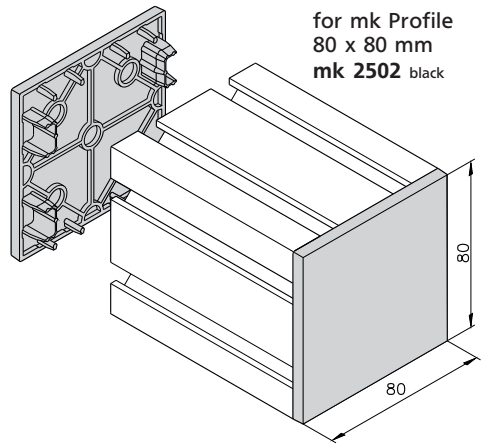
25 40 50 60

for mk Profile
40 x 80 mm
mk 2508 black



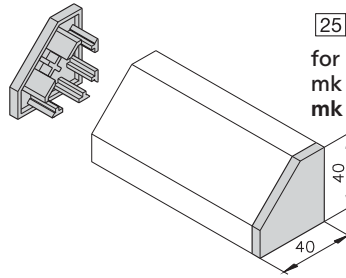
25 40 50 60

for Profile
mk 2040.23
mk 2529 black



25 40 50 60

for mk Profile
80 x 80 mm
mk 2502 black

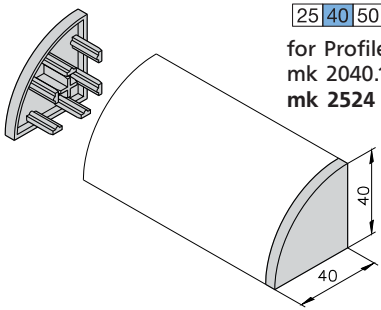


25 40 50 60

for Profile
mk 2040.14
mk 2523 black

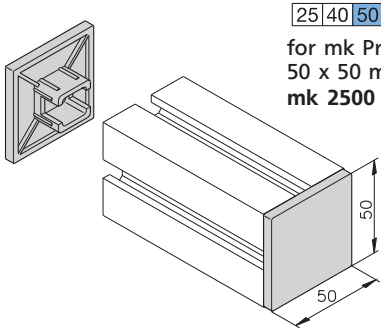
Accessory Components

End Caps



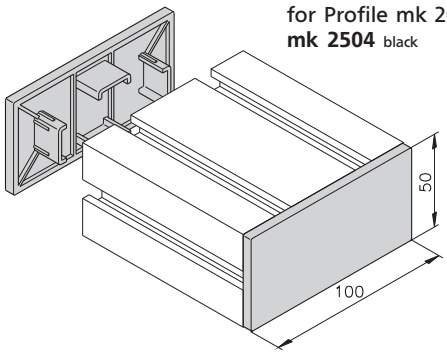
25 | **40** | 50 | 60

for Profile
mk 2040.15
mk 2524 black



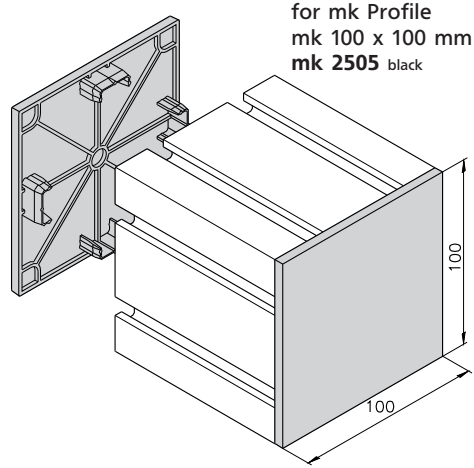
25 | 40 | **50** | 60

for mk Profile
50 x 50 mm
mk 2500 black



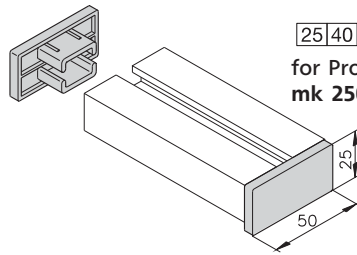
25 | 40 | **50** | 60

for Profile mk 2004
mk 2504 black



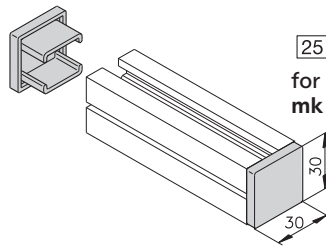
25 | 40 | **50** | 60

for mk Profile
mk 100 x 100 mm
mk 2505 black



25 | 40 | **50** | 60

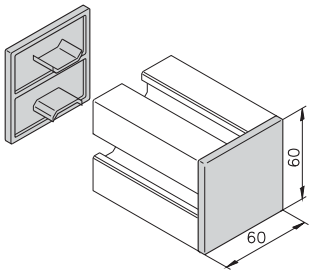
for Profile mk 2001
mk 2501 black



25 | 40 | **50** | 60

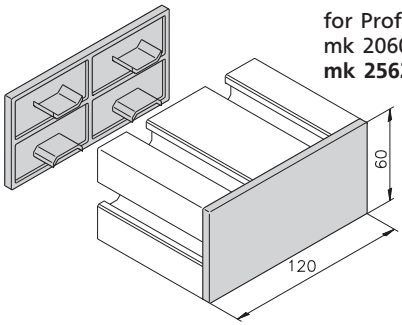
for Profile mk 2030
mk 2503 black

End Caps



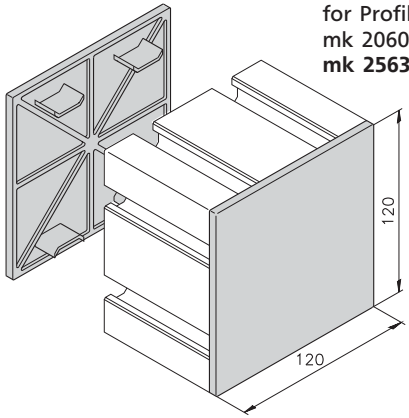
25 | 40 | 50 | **60**

for Profile
mk 2060.01
mk 2561 black



25 | 40 | 50 | **60**

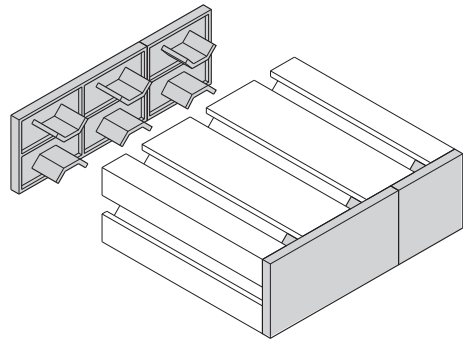
for Profile
mk 2060.02
mk 2562 black

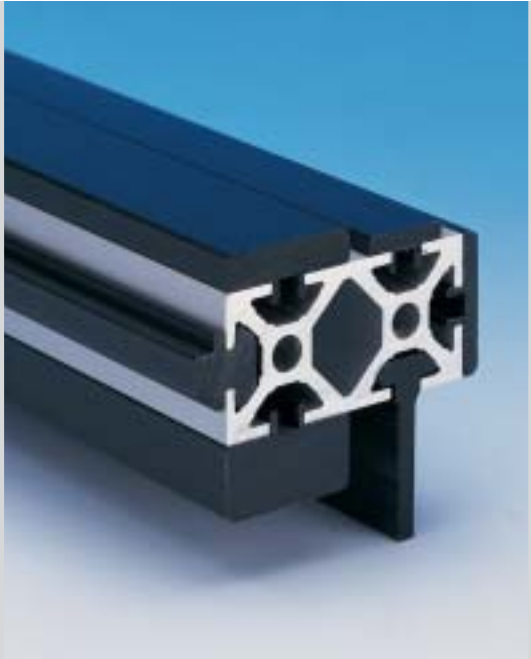


25 | 40 | 50 | **60**

for Profile
mk 2060.05
mk 2563 black

Larger profiles can be covered by using a combination of end caps. As shown below, profile mk 2040.05 can be capped using one each End Cap mk 2507 and mk 2508.

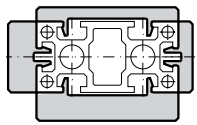


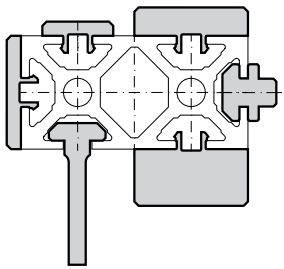


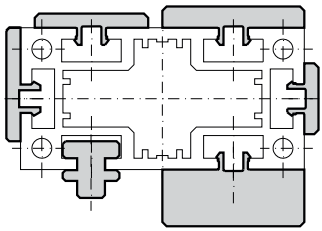
Accessory Components

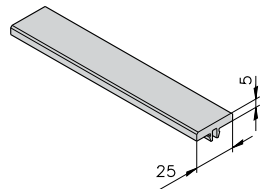
Wear Strips

Slide- and Wear Strips from mk ensure low friction for a variety of applications. The Wear Strips are made with PE - UHMW (PE - 1 000) and are available exclusively in stock lengths of 2000 mm.



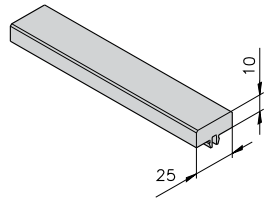






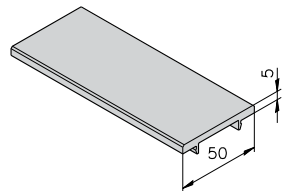
25 40 50 60

Wear Strip
mk 1025.71
25.71.2000



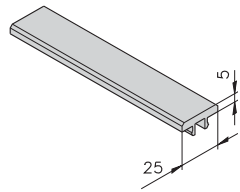
25 40 50 60

Wear Strip
mk 1025.72
25.72.2000



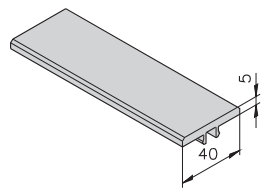
25 40 50 60

Wear Strip
mk 1025.73
25.73.2000



25 **40** 50 60

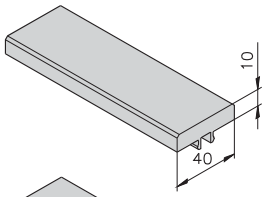
Wear Strip
mk 1000
22.00.2000



25 **40** 50 60

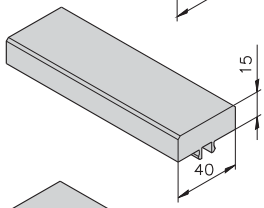
Wear Strip
mk 1040.01
21.01.2000

Wear Strips



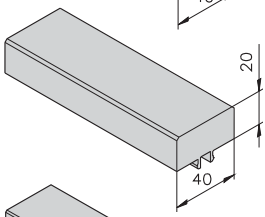
25 | **40** | **50** | 60

Wear Strip
mk 1040.02
21.02.2000



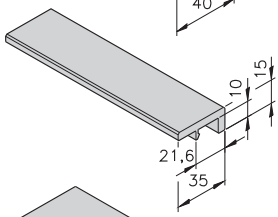
25 | **40** | **50** | 60

Wear Strip
mk 1040.03
21.03.2000



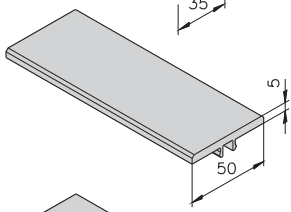
25 | **40** | **50** | 60

Wear Strip
mk 1040.04
21.04.2000



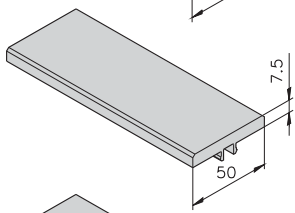
25 | **40** | 50 | 60

Wear Strip
mk 1040.05
21.05.2000



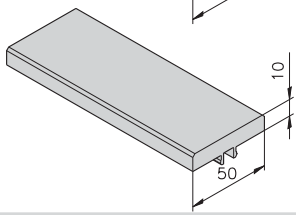
25 | 40 | **50** | 60

Wear Strip
mk 1001
22.01.2000



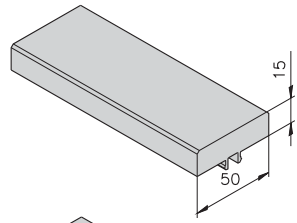
25 | 40 | **50** | 60

Wear Strip
mk 1017
22.17.2000



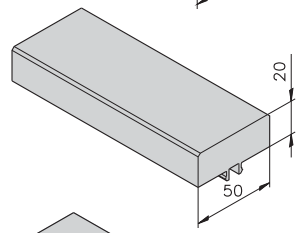
25 | 40 | **50** | 60

Wear Strip
mk 1070
22.70.2000



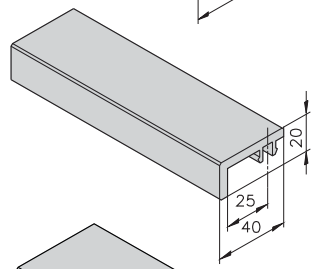
25 | 40 | **50** | 60

Wear Strip
mk 1071
22.71.2000



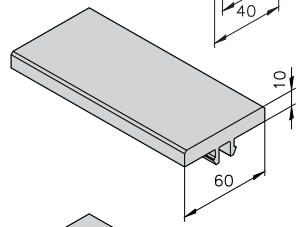
25 | 40 | **50** | 60

Wear Strip
mk 1072
22.72.2000



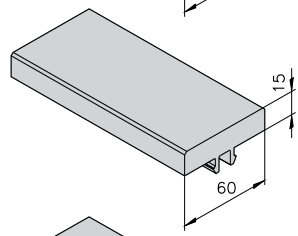
25 | 40 | **50** | 60

Wear Strip
mk 1008
22.08.2000



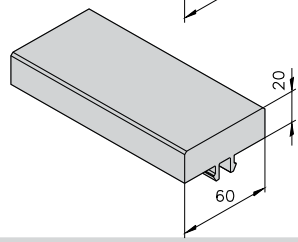
25 | 40 | 50 | **60**

Wear Strip
mk 1060.62
21.62.2000



25 | 40 | 50 | **60**

Wear Strip
mk 1060.63
21.63.2000



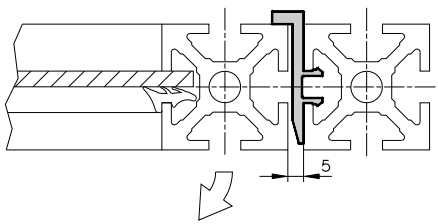
25 | 40 | 50 | **60**

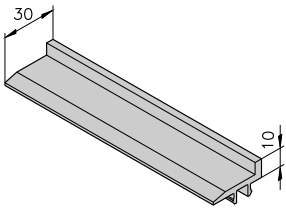
Wear Strip
mk 1060.64
21.64.2000

Accessory Components

Wear Strips

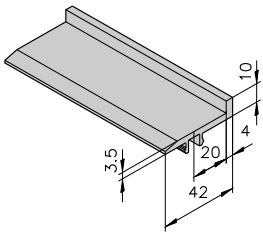
Wear Strips for Door Stops





25 | **40** | 50 | 60

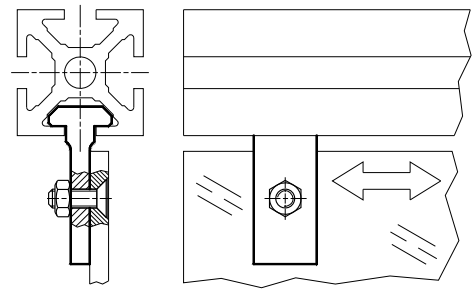
Wear Strip
mk 1091
22.91.2000

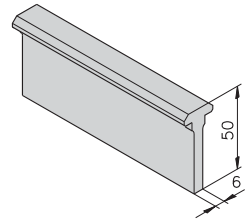


25 | **40** | 50 | 60

Wear Strip
mk 1090
22.90.2000

Wear Strips for Guides

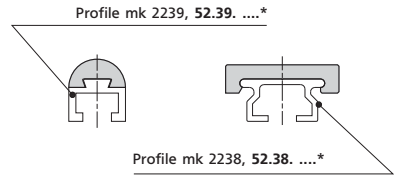


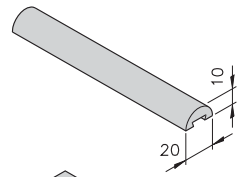


25 | **40** | 50 | 60

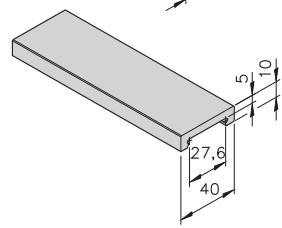
Wear Strip
mk 1009
22.09.2000

Wear Strips for Side Rails



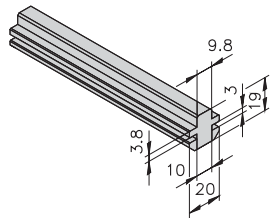


Wear Strip
mk 1030
22.30.2000



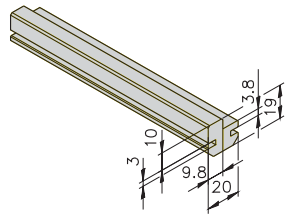
Wear Strip
mk 1031
22.31.2000

Wear Strips for Guides and Slides



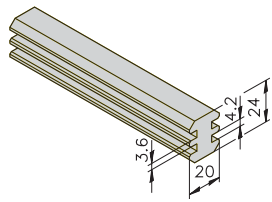
25 | **40** | 50 | 60

Wear Strip
mk 1026
22.26.2000



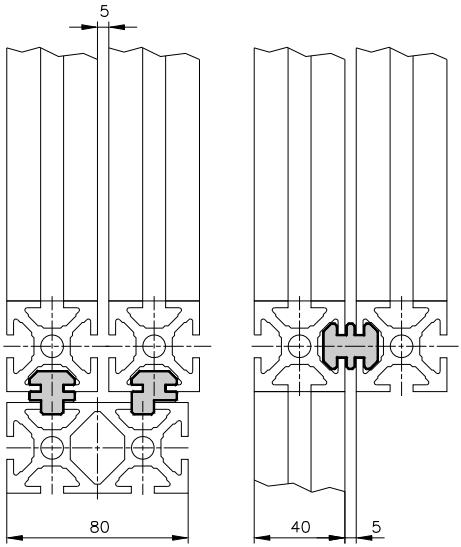
25 | **40** | 50 | 60

Wear Strip
mk 1027
22.27.2000



25 | 40 | **50** | 60

Wear Strip
mk 1021
22.21.2000

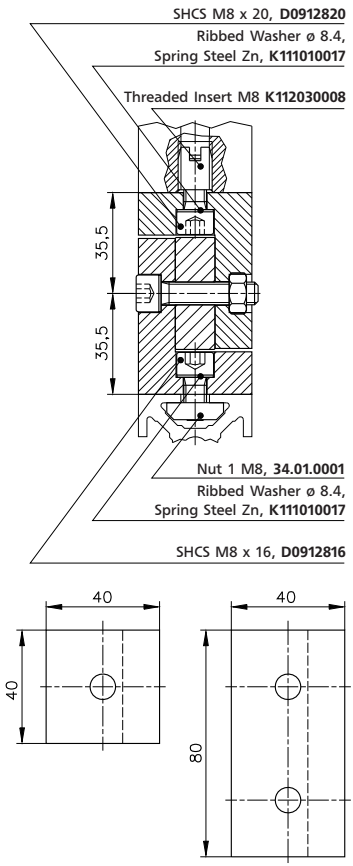


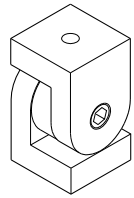
Accessory Components

Joints

Series 40

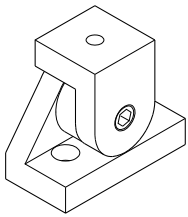
To attach profiles at various angles. The joints shown on this page are designed to be tightened at desired angles and are not suitable for continuous actuation. Max. load 200 kg.





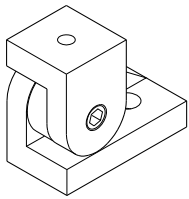
25 | **40** | 50 | 60

Joint B21
B46.01.221
Angle range + - 90°
complete as shown



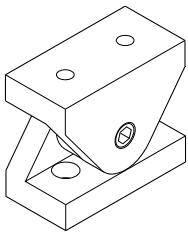
25 | **40** | 50 | 60

Joint B22
B46.01.222
Angle range + - 53°
complete as shown



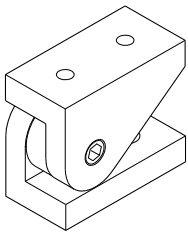
25 | **40** | 50 | 60

Joint B23
B46.01.223
Angle range + 90°/ - 37°
complete as shown



25 | **40** | 50 | 60

Joint B24
B46.01.224
Angle range + - 53°
complete as shown



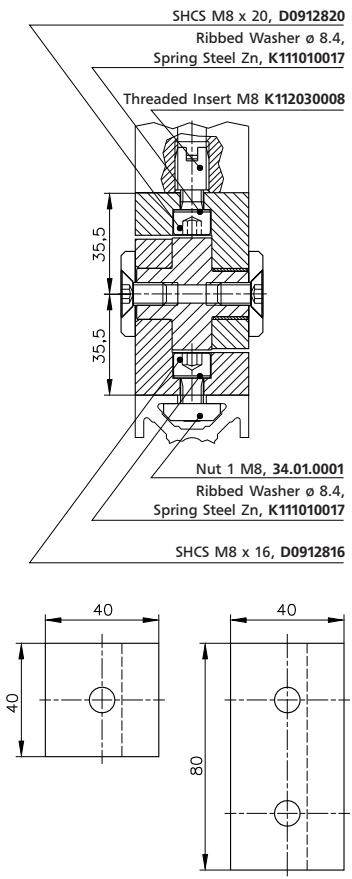
25 | **40** | 50 | 60

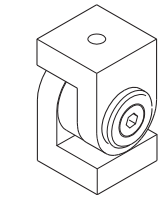
Joint B25
B46.01.225
Angle range + 90°/ - 37°
complete as shown

Joints

Series 40

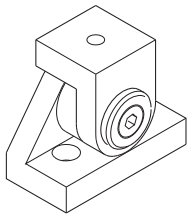
When tightened, the Joints with glide bushings remain movable. Max. load 200 kg.





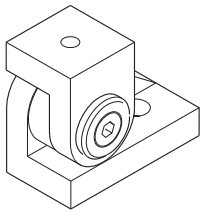
25 | **40** | 50 | 60

Joint B01
B46.01.201
Angle range + - 90°
complete as shown



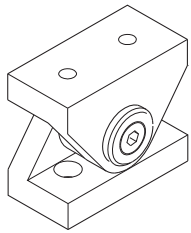
25 | **40** | 50 | 60

Joint B02
B46.01.202
Angle range + - 53°
complete as shown



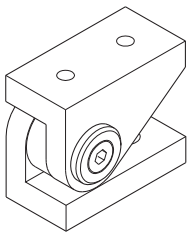
25 | **40** | 50 | 60

Joint B03
B46.01.203
Angle range + 90°/ - 37°
complete as shown



25 | **40** | 50 | 60

Joint B04
B46.01.204
Angle range + - 53°
complete as shown



25 | **40** | 50 | 60

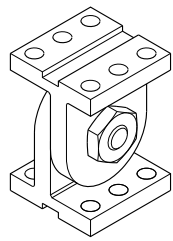
Joint B05
B46.01.205
Angle range + 90°/ - 37°
complete as shown

Accessory Components

Joints

Series 50

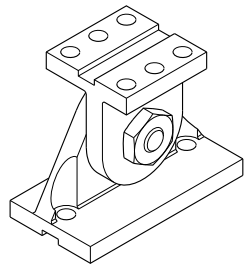
To attach profiles at various angles. The joints shown on this page are designed to be tightened at desired angles and are not suitable for continuous actuation. Max. load 300 kg.



M8x20

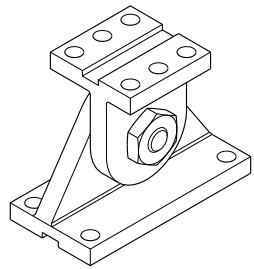
25 | 40 | **50** | 60

Joint B50
B46.01.250
for 2x mk 2000 profile end
complete as shown



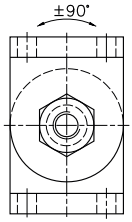
25 | 40 | **50** | 60

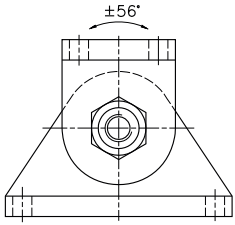
Joint B51
B46.01.251
for mk 2000 profile end
and Series 50 T-slot
complete as shown

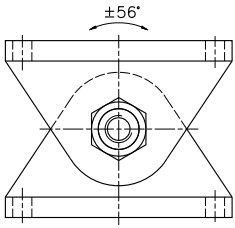


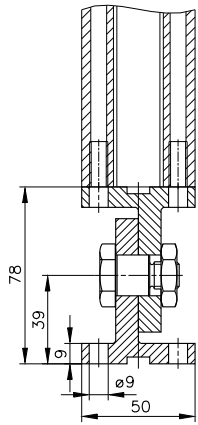
25 | 40 | **50** | 60

Joint B52
B46.01.252
for mk 2000 profile end
and mk 2004 profile end
complete as shown

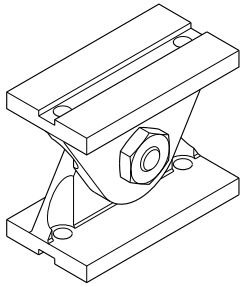






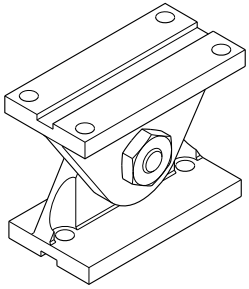


Series 50



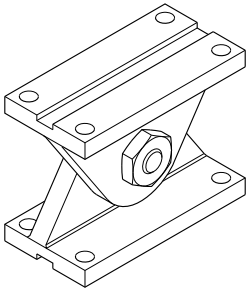
25 | 40 | **50** | 60

Joint B53
B46.01.253
for 2x Series 50 T-slot
on Series 50 slot side
complete as shown



25 | 40 | **50** | 60

Joint B54
B46.01.254
for mk 2004 profile end
and Series 50 T-slot
complete as shown



25 | 40 | **50** | 60

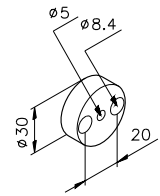
Joint B55
B46.01.255
for 2x mk 2004 profile end
complete as shown

Accessory Components

Ball Bases, Clamps and Rods

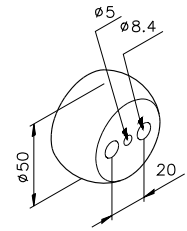
Ball Bases

The Ball Bases are made of cast iron and have a 60° range of motion. When at the desired angle, the position is maintained by tightening the included M8 x 25 SHCS.



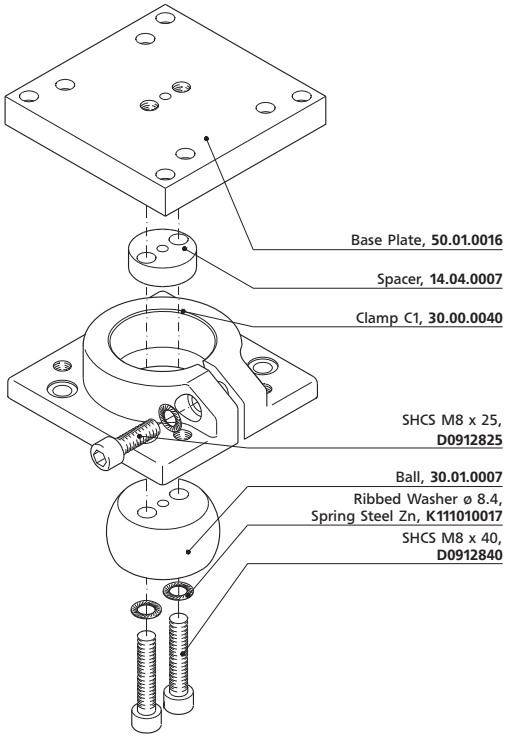
25 | 40 | 50 | 60

Spacer
14.04.0007
AlCuMGPb



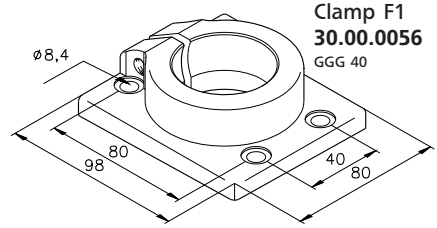
25 | 40 | 50 | 60

Ball
30.01.0007
Stainless Steel 1.4305



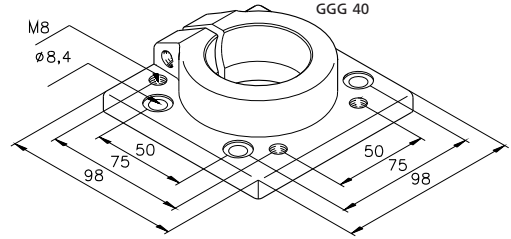
25 | 40 | 50 | 60

Clamp F1
30.00.0056
GGG 40

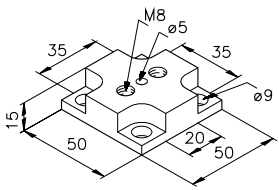


25 | 40 | 50 | 60

Clamp C1
30.00.0040
GGG 40

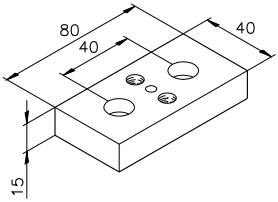


Ball Bases



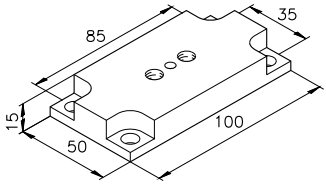
25 | 40 | **50** | 60

Base Plate
50.01.0014
Al tumbled



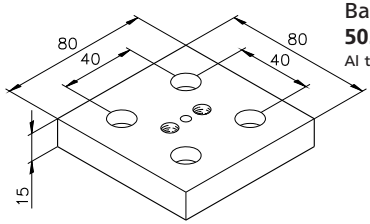
25 | **40** | 50 | 60

Base Plate
50.01.0020
Al tumbled



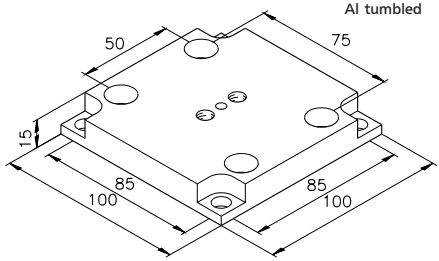
25 | 40 | **50** | 60

Base Plate
50.01.0015
Al tumbled



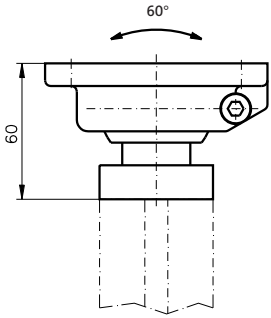
25 | **40** | 50 | 60

Base Plate
50.01.0021
Al tumbled



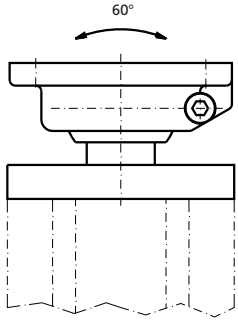
25 | 40 | **50** | 60

Base Plate
50.01.0016
Al tumbled



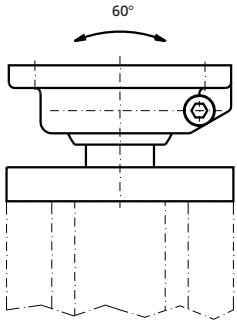
25 | 40 | **50** | 60

Ball Base C1
B46.02.010
for mk 2000



25 | 40 | **50** | 60

Ball Base C2
B46.02.011
for mk 2004



25 | 40 | **50** | 60

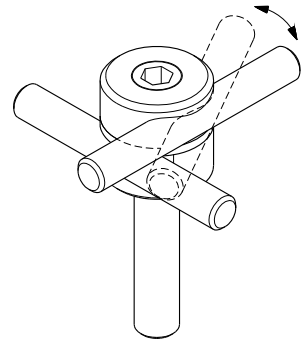
Ball Base C3
B46.02.012
for mk 2005 and mk 2011

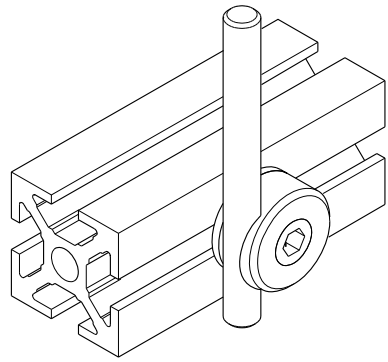
Accessory Components

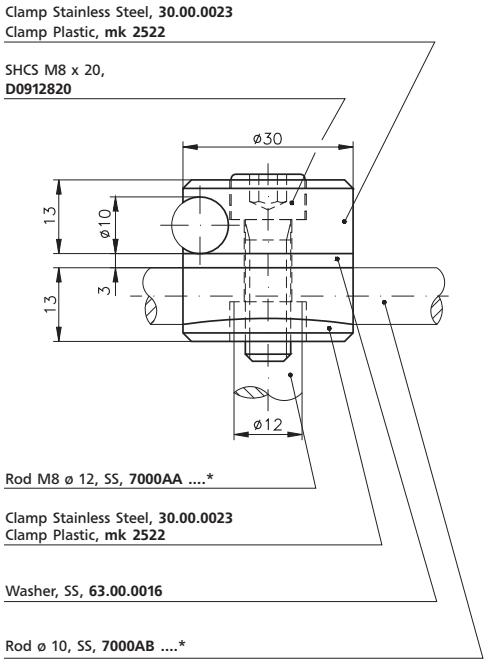
Ball Bases, Clamps and Rods

Swivel Clamps

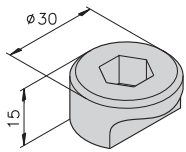
mk Swivel Clamps are used heavily in the area of material handling side guides/rails. They allow guide rods to be positioned at various angles and heights.





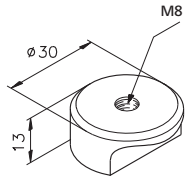


Swivel Clamps



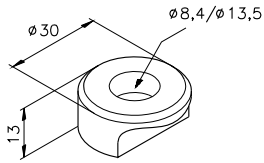
25 **40** **50** 60

Clamp
mk 2522
PA6GF 30%,
Fiber-reinforced



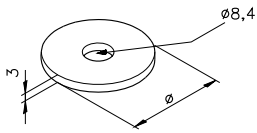
25 **40** **50** 60

Clamp
30.00.0024
Stainless Steel 1.4305



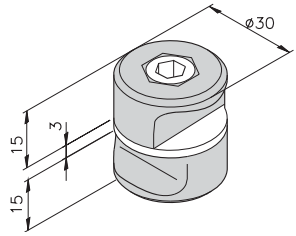
25 **40** **50** 60

Clamp
30.00.0023
Stainless Steel 1.4305



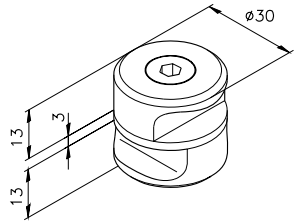
25 **40** **50** 60

Washer ø 30
63.00.0016
Stainless Steel 1.4305



25 **40** **50** 60

Clamp complete
B46.02.005
PA6GF 30%,
Fiber-reinforced



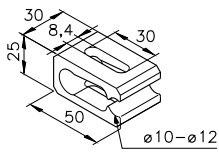
25 **40** **50** 60

Clamp complete
B46.02.004
Stainless Steel 1.4305

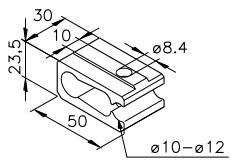
Ball Bases, Clamps and Rods

Clamps and Offsets

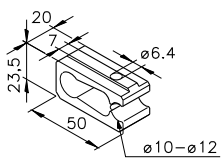
Clamps for rod mounting



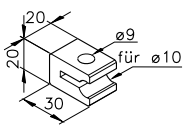
Clamp
30.00.0002
Al tumbled



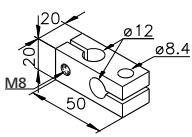
Clamp
30.00.0001
Al tumbled
for 10mm T-slot



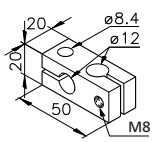
Clamp
30.00.0017
Al tumbled
for 7mm T-slot



Clamp short
30.00.0038
Al tumbled

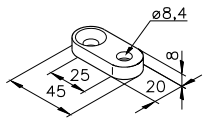


Clamp
right
30.00.0013
Al tumbled

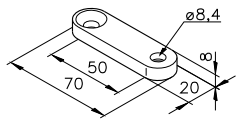


Clamp
left
30.00.0047
Al tumbled

Offsets for width adjustment



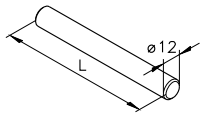
Offset 25
34.09.0003
Al tumbled



Offset 50
34.09.0004
Al tumbled

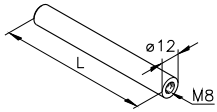
See the Conveyor Technology catalog/siderails

Rods



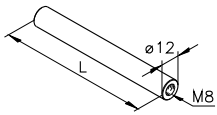
25 | 40 | 50 | 60

Rod ø 12
7000AD. ....*
Stainless Steel 1.4305,
Stock length 50, 75, 100, 150, 200 and 250 mm



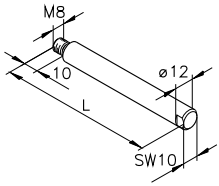
25 | 40 | 50 | 60

Rod ø 12
7000AA....*
Stainless Steel 1.4305,
M8x16 thread, one end
Stock length 50, 75, 100, 150 and 200 mm



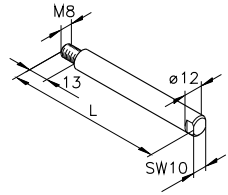
25 | 40 | 50 | 60

Guide Rod ø 12
7000AF. ....*
Stainless Steel 1.4305,
M8x16 thread, both ends
Stock length 50, 75, 100 and 150 mm



25 | 40 | 50 | 60

Guide Rod ø 12
7000CC. ....*
Stainless Steel 1.4305,
Stock length 50, 75 and 100 mm



25 | 40 | 50 | 60

Guide Rod ø 12
7000CA. ....*
Stainless Steel 1.4305,
Stock length 50, 75 and 100 mm

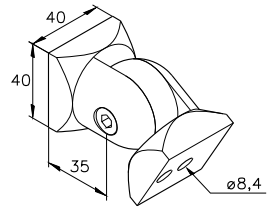
....* length in mm

Accessory Components

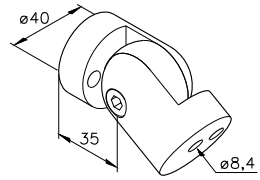
Accessory Components for Guardrails

These accessory components for rails are typically used in combination with profiles mk 2040.01 and mk 2040.16. They are aluminum and feature a tumbled finish. Please note that they are not designed for exterior use.

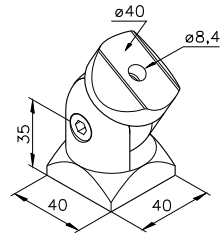
see Factory Equipment catalog



Joint 40/H1
B46.01.022
with mounting hardware

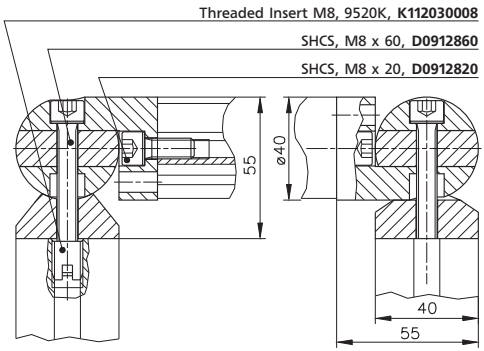


Joint 40/H2
B46.01.023
with mounting hardware

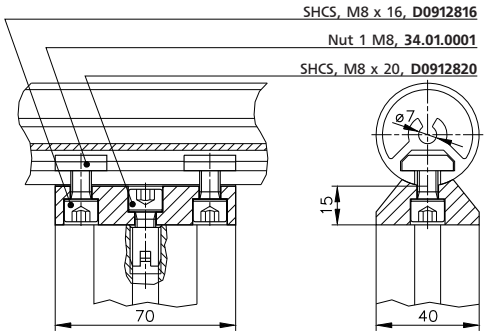


Joint 40/H4
B46.01.025
with mounting hardware

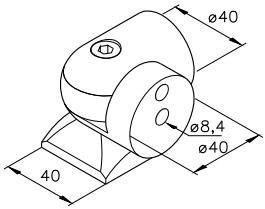
Joint 40/H5 **B46.01.026**



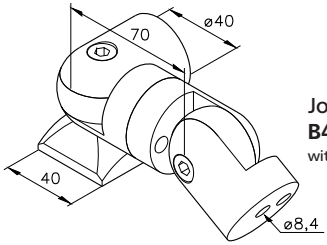
T-Connector **79.00.0011**



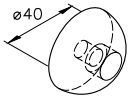
Accessory Components for Guardrails



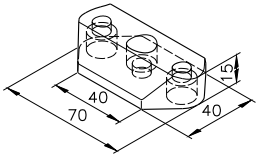
Joint 40/H5
B46.01.026
with mounting hardware



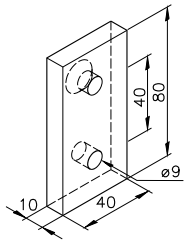
Joint 40/H3
B46.01.024
with mounting hardware



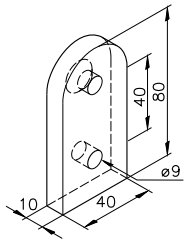
End Cap
for Profile
mk 2040.16
76.01.0002
Al, tumbled



T-Connector
for Profile
mk 2040.16
79.00.0011
Al, tumbled



Wall attachment
for Profile
mk 2040.01
50.03.0033
Al, tumbled

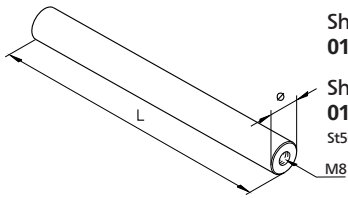


Wall attachment
for Profile
mk 2040.16
50.03.0034
Al, tumbled

Accessory Components

Glides and Bushings

The following components are often used in material handling applications as stops or singulators, for example. Using just a few elements, guides for a variety of tooling can be made as well. These components are designed for use with profile mk 2000.

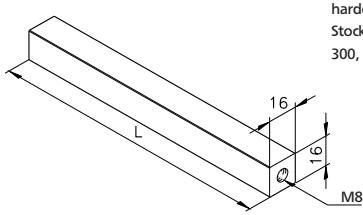


Shaft ø 12
0100AF ....*

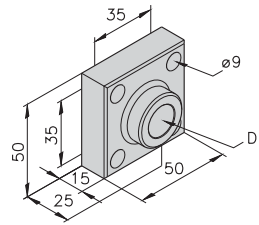
Shaft ø 16
0100AA ....*
St50K h6

Shaft ø 12
0100AE ....*

Shaft ø 16
0100AB ....*
hardened h6
Stock length 150, 200, 250, 300, 350 and 400 mm

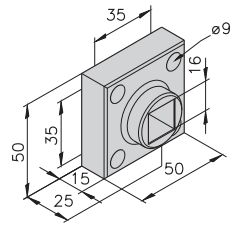


Shaft
0101AA ....*
Steel C45 polished h9
Stock length 150, 200, 250, 300, 350 and 400 mm

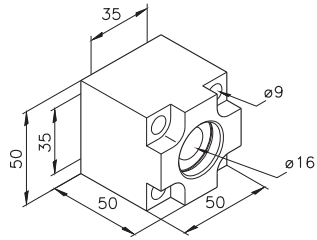


Bushing ø 12
35.00.0007
D = 12 mm

Bushing ø 16
35.00.0006
D = 16 mm,
Delrin



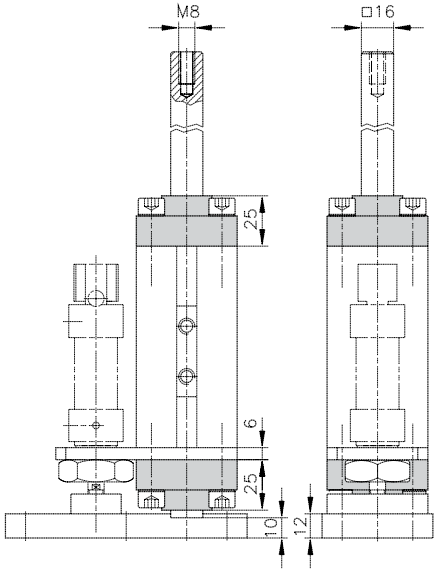
Bushing □ 16
35.00.0008
Delrin

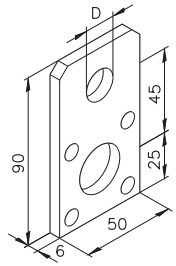


Bushing with Linear Bearing
B40.03.002
Aluminum with linear bearing 16 / 26 x 36 mm

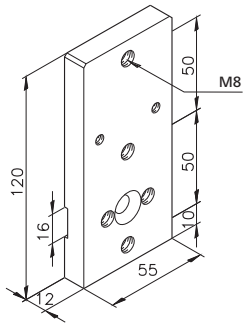
Glides and Bushings

A handful of components is all that is r equired to manufacture Pneumatic Glide System 2000. Various manufacturers pneumatic cylinders, conforming to ISO 6432 or Cetop RP52P with 20 or 25 mm bores and strokes to 300 mm can be used. Customer standards can be accommodated as the system is based on the air cylinder. Mechanically the assemblies are the same. Please note that cylinders must be ordered separately.

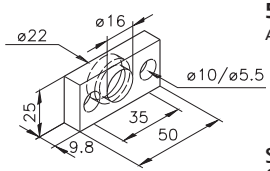




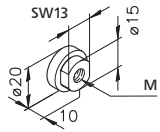
Cylinder Plate
50.05.0036
Al, tumbled, D = 22.5 mm
Bore ø 20 and ø 25



Cylinder Plate
50.09.0017
Al, tumbled



Cylinder Plate
50.09.0018
Al, tumbled



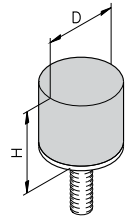
Step Washer M8
63.03.0001
Steel, Cylinder ø 20

Step Washer
M10 x 1.25
63.03.0003
Steel, Cylinder ø 25

Accessory Components

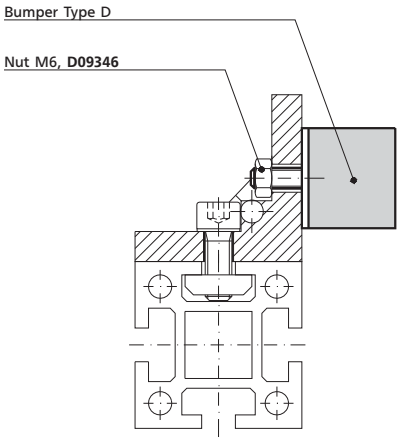
Bumpers

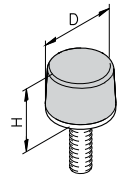
Elastomere Shore 55



Bumper Type D

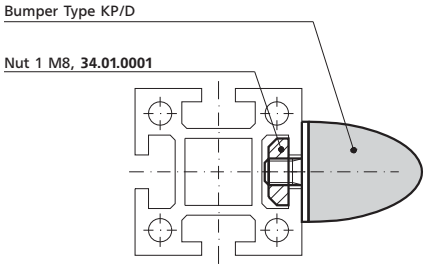
D	H	Thread	Ident-No.
20	12	M6 x 12	**K113060004**
20	15	M6 x 15	**K113060001**
30	28	M8 x 20	**K113060002**
50	21	M10 x 28	**K113060003**

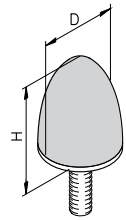




Bumper Type K/D

D	H	Thread	Ident-No.
25	17	M6 x 18	**K113060006**
50	18	M10 x 28	**K113060007**





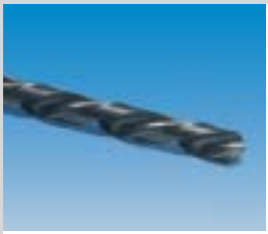
Bumper Type KP/D

D	H	Thread	Ident-No.
30	36	M8 x 10	**K113060012**
30	36	M8 x 20	**K113060011**

Accessory Components

Tools

Drill



ø	Type	Order Number
5.8	Twist-Drill	**K903000058**
7	Twist-Drill	**K903000070**
8	Twist-Drill	**K903000080**
9	Twist-Drill	**K903000090**
10	Twist-Drill	**K903000100**

Taps and Threadformers

Thread	Type	Order Number
M5	Tap	**K903060005**
M5 x 0.5	Tap	**K903060105**
M8	Threadformer	**K903070008**
M8	Tap	**K903060008**
M8 x 1	Tap	**K903060108**
M9 x 1	Tap	**K903060109**
M10	Tap	**K903060010**
M12	Tap	**K903060012**
M12 x 1.5	Tap	**K903060113**
M16	Tap	**K903060016**
M16 x 1.5	Tap	**K903060116**

Thread	Type	Order Number
M4	Tap for Helicoil	**K903060204**
M6	Tap for Helicoil	**K903060206**
M8	Tap for Helicoil	**K903060208**
M10	Tap for Helicoil	**K903060210**

Tools for threaded inserts

Thread	Tool Length	Type	Order Number
M3	58	H	**K902010004**
M3	82	M	**K902010005**
M5	69	H	**K902010008**
M5	101	M	**K902010009**
M6	74	H	**K902010010**

Thread	Tool Length	Type	Order Number
M6	102	M	**K902010011**
M8	81	H	**K902010012**
M8	105	M	**K902010013**
M12	95	H	**K902010016**
M12	118	M	**K902010017**

Type H=Hand operated, Type M=Machine operated

Insert Tools for Helicoil inserts

Thread	Type	Order Number
M4	H	**K902010204**
M6	H	**K902010206**

Thread	Type	Order Number
M8	H	**K902010208**
M10	H	**K902010210**

Type H=Hand operated

Wrench Set

The ball-end allows quick and easy installation of the screw. When tightening, the longer arm of the wrench provides a sufficient torque arm to set the fastener. The wrenches are made of Chrome-Vanadium Steel.

Type	Order Number
Wrench Set 8-piece	K902005050

Magnetic Holder for Nuts

Used to grab or hold nuts in profile T-slots. Ideal for moving nuts into vertical positions. Features a chrome-plated flexible brass tube and plastic handle.

Type	Order Number
Magnetic Holder	K901130001

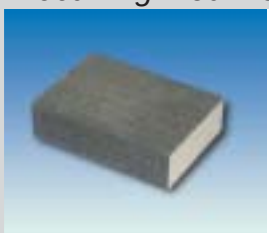
Parting Tool for Cleanroom Profiles

To open T-slots on Cleanroom profiles.

Type	Order Number
Parting Tool	B46.03.102

USA

Deburring Block for Cleanroom Profiles



For deburring the cut out slots in Cleanroom profiles.

Type	Order Number
Deburring Block	K902030001

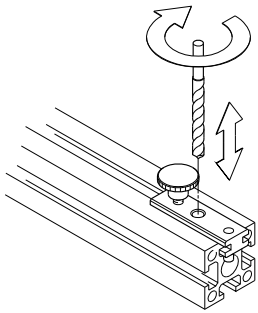
USA

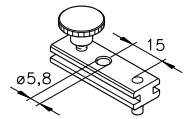
Accessory Components

Tools

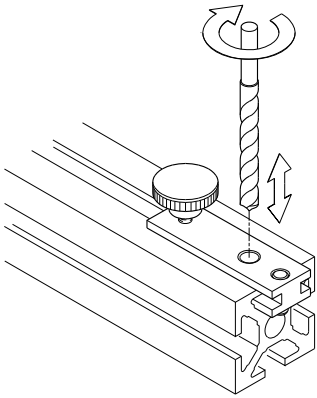
Drill Fixtures

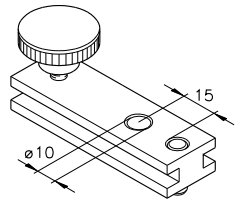
The drill fixtures made of hardened steel are used to make holes for tension plugs in the profiles.





Drill Fixture
Series 25
B46.03.003
D = 5,8 mm
A = 15 mm



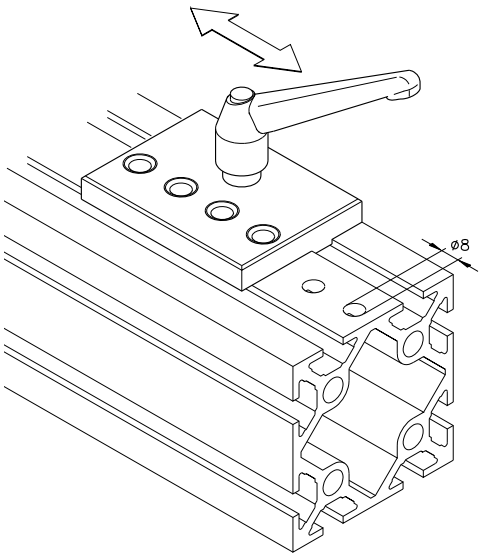


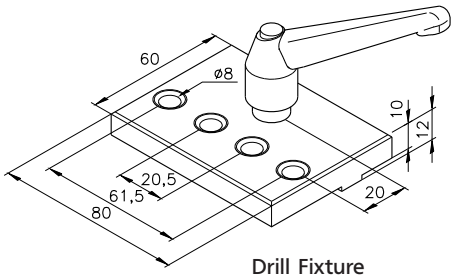
Drill Fixture
Series 40 and 50
B51.03.005
D = 10 mm
A = 15 mm

Tools

Drill Fixtures for Pneumatic Components

The drill fixture with hardened steel bushing is used to make the predrilled holes for pneumatic connections in the profiles.





Drill Fixture
for Pneumatic
Components
B46.03.007

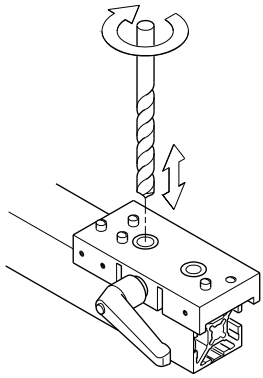
Accessory Components

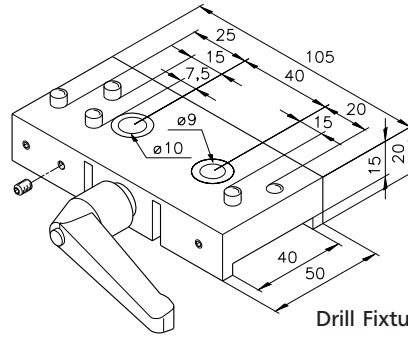
Tools

Drill Fixtures for Cleanroom Profiles

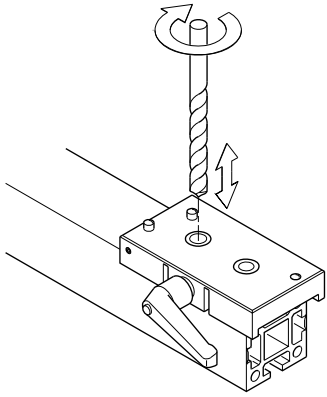
USA

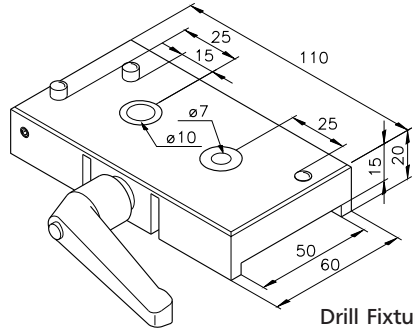
The drill fixture with hardened steel bushing is used to make holes in cleanroom profiles.





Drill Fixture
Cleanroom 40
B51.03.020





Drill Fixture
Cleanroom 50
B51.03.035

mk Assemblies

Contents mk Assemblies

Turntables 222

Carriage Wagons 224

Parallel Actuator 226

Assemblies

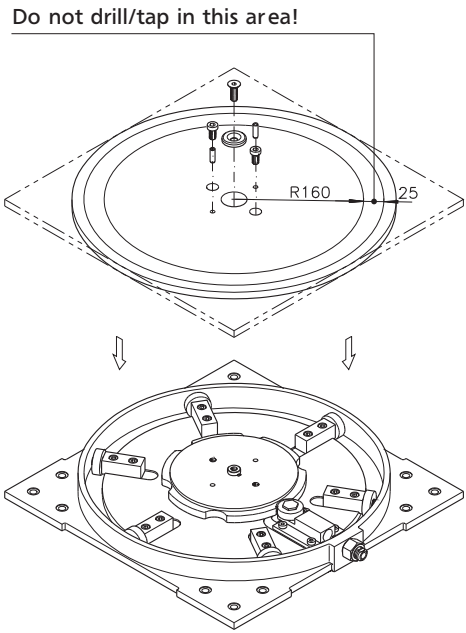
Turntables

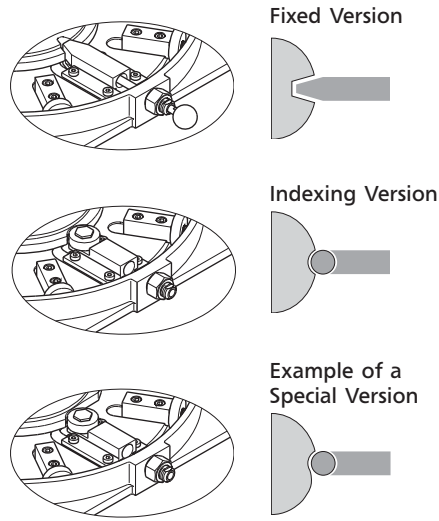
mk Turntables are most often used in the area of manual material handling. Heavier loads can be positioned effortlessly for assembly or machining operations.

The turntable consists of a solid cast aluminum base with an aluminum surface plate. The surface plate is supported on 6 roller bearings and rotates centric to the base on another roller bearing.

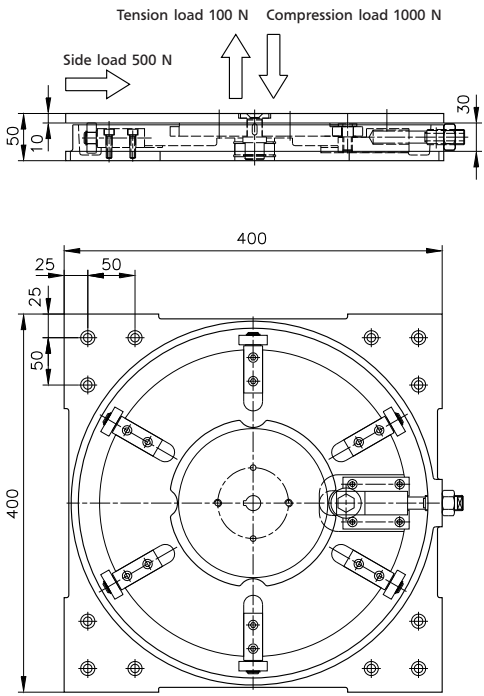
mk Turntables are available with either a ø 400 mm round or 400 x 400 mm square surface plate. In addition, the Indexing and Fixed versions are available with 2, 4 or 6 stop locations. Special versions please inquire.

The maximum load rating is 100 kg.



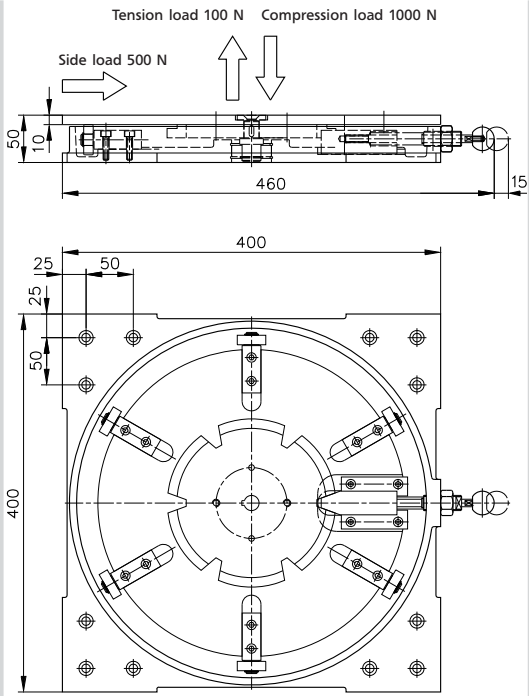


Turntables



Turntable with Index
B12.00.001

not shown
Turntable without Index
B12.00.003



Turntable with Fixed Stops
B12.00.002

Ordering example for above drawing:
Please indicate surface plate type (round or square) and number of Indexing, i.e. Fixed stops.

Turntable	B12.00.002
Fixed Stops	6
Surface Plate	round

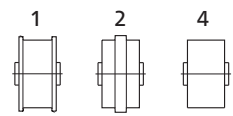
Assemblies

Carriage Wagons

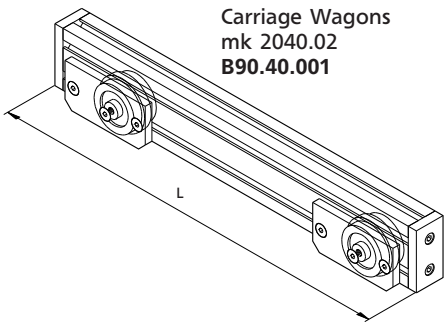
mk Carriage Wagons are used where equipment or machines are moved into position on tracks. The mk Carriage Wagons are available in stock lengths of 400, 500 and 600mm. Other v ersions please inquire. Please indicate roller version and wagon length when ordering.

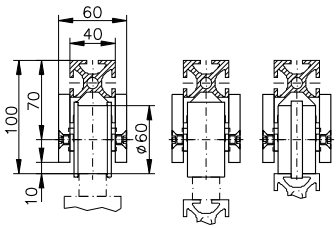
More roller information see page 193

	Version	Radial load/Roller
Flange Roller, Steel	1	1000N
Guide Roller, POM	2	200N
Flat Roller, POM	4	200N

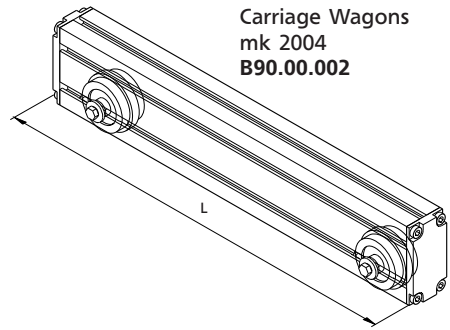


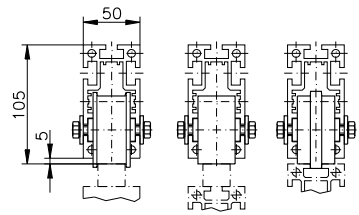
Carriage Wagons
mk 2040.02
B90.40.001

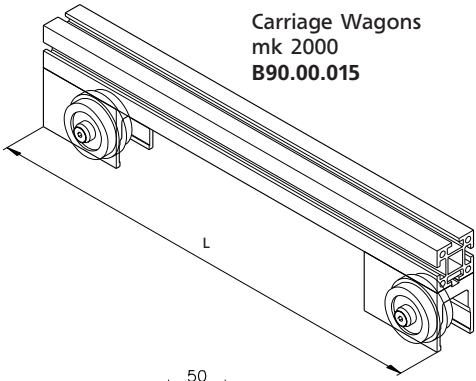




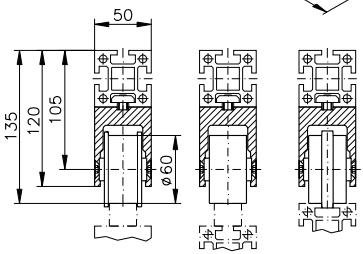
Carriage Wagons
mk 2004
B90.00.002

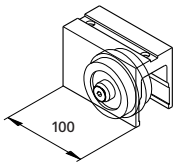




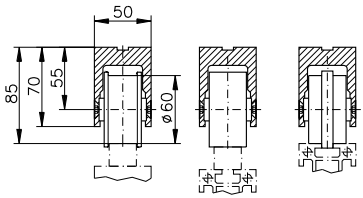


Carriage Wagons
mk 2000
B90.00.015





Roller Unit
B60.04.004

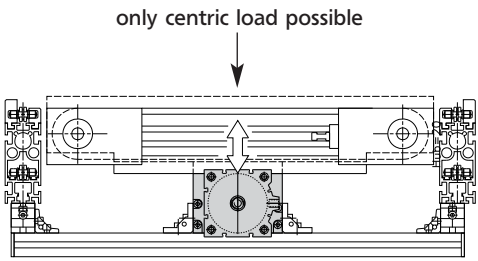


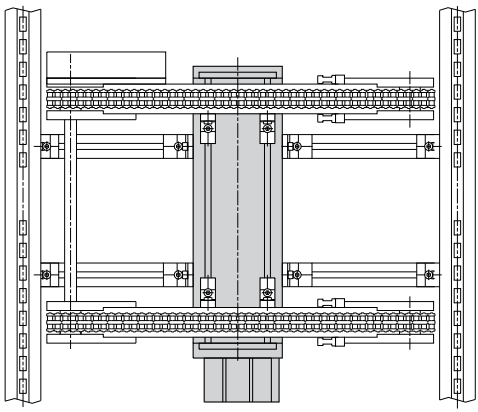
Parallel Actuator

Parallel Actuator Module PHM-A 20

The parallel actuator module PHM-A 20 features an external, dual-action cylinder. The parallel actuator is installed horizontally thus minimizing the required assembly space. Designed for use with an operating air pressure of 90 psi, mechanical linkages translate the horizontal cylinder force into vertical stroke and lifts up to 75 kg centrically placed loads. The cylinder stroke is cushioned and helps ensure smooth operation of the actuator. End plates guide the vertical travel and the T-slots of the structural aluminum profiles eliminate the need for special mounting plates.

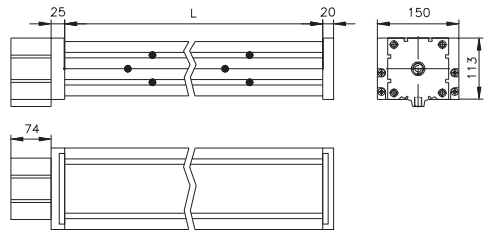
The use of mk structural profiles allows for lengths from 400 mm to 1500 mm (in 100 mm increments), with longer lengths of up to 5 m available on request. The travel time is 1.5 seconds with a lifting height of 20 mm, cycle time is 4 seconds.





Application used as lifting module for transfer conveyor.

External (short stroke cylinder):

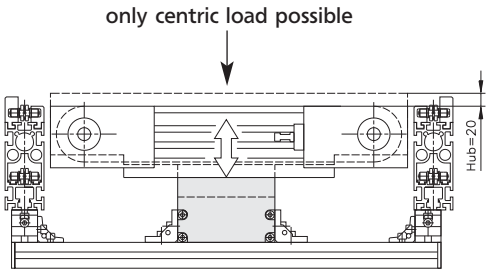


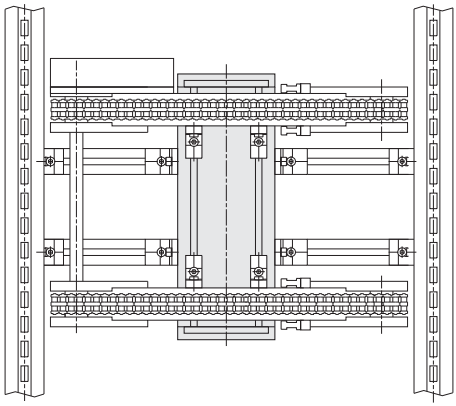
Ident Nr: **B28.00.002**
Please specify length when ordering.

Parallel Actuator Module PHM-I 20

The parallel actuator module PHM-I 20 features an internal, dual-action cylinder. The parallel actuator is installed horizontally thus minimizing the required assembly space. Designed for use with an operating air pressure of 90 psi, mechanical linkages translate the horizontal cylinder force into vertical stroke and lifts up to 20 kg centrically placed loads. The cylinder stroke is cushioned and helps ensure smooth operation of the actuator. End plates guide the vertical travel and the T-slots of the structural aluminum profiles eliminate the need for special mounting plates.

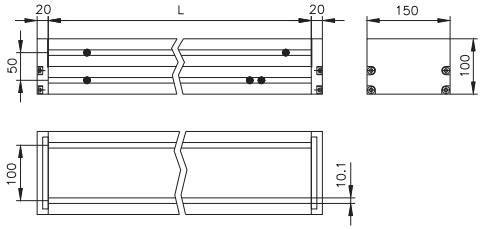
Standard lengths are 400, 500 and 600mm. The travel time is 1.5 seconds with a lifting height of 20 mm, cycle time is 4 seconds.





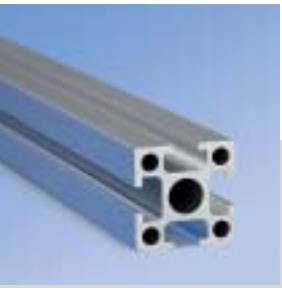
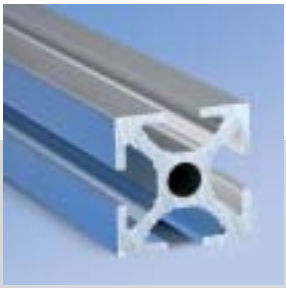
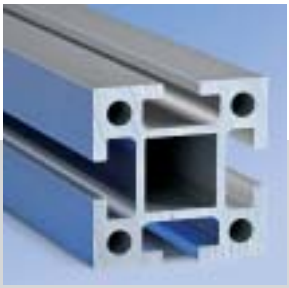
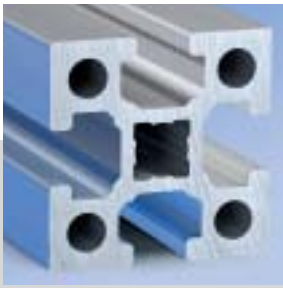
Application used as lifting module for transfer conveyor.

Internal (flat cylinder):



Ident Nr: **B28.00.001**
Please specify length when ordering.

Technical data

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Technical data 242

Standards, Norms and Calculations

Norms and Standards

mk profiles are extruded aluminum and are generally available in standard lengths of 5100 mm. All profiles are available cut to length. Longer lengths may also be available on request.
All structural profiles are chemically etched per E6, whereby surface grooves and roughnesses are removed. As a surface treatment the profiles are anodized with appx. 10 µm of tint C0 (natural). This surface finish is alkaline and acid resistant (alkalines to PH 9.5 and acids to PH 4).
The following tables show the allowable dimensional deviations from standard with maximum values indicated.

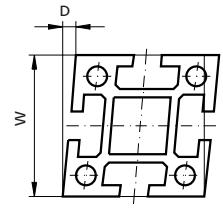
Alloys of mk Profiles

per DIN EN 755 and DIN EN 12020

mk uses primarily two alloys for all profile series. For Series 25 and 40 AlMgSi 0.5 F25, for Series 50 and 60, AlMgSi 0.7 F28, which has a more than 7% higher strength.

Material according to DIN EN 573-3 Material according to DIN 1725-1 Material number			EN AW 6063 T66 AlMg0.7Si AlMgSi 0.5 F25 3.3206.72	EN AW 6005A T6 AlSiMg(A) AlMgSi 0.7 F27 3.3210.71
Density	ρ	g/cm³	2.7	2.7
Elastic modulus	E	N/mm²	70,000	70,000
Tensile strength	Rm	N/mm²	245	270
Yield strength (0.2%-elastic limit)	$Rp_{0.2}$	N/mm²	200	215
Reduction of Area	A5	%	8	8
Brinell hardness	HB		80	85
Coefficient of thermal expansion (up to 20°C/to 293°K) (20°-100°C/293°-373°K)	α_l	1/K	$21.8*10^{-6}$ $23.2*10^{-6}$	$21.8*10^{-6}$ $23.2*10^{-6}$
Thermal conductivity	λ	W/(m*K)	200-220	180-220
Electrical conductivity (20°C/293°K)	κ	m/(Ω*mm²)	28-34	26-32

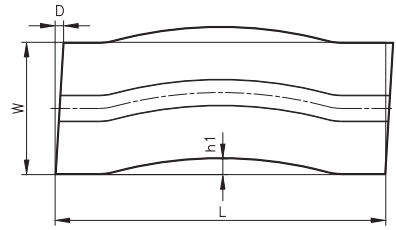
Squareness of cross-section



Width W Range over	to	Deviation from square (mm) D
-	40	0.20
40	60	0.30
60	90	0.40
90	120	0.45
120	150	0.55
150	180	0.65
180	210	0.70

Straightness in extruded direction

The deviation h_1 for a given length may not exceed the chart values. In addition, any 300 mm long section may not exceed 0.3 mm from true. All values in mm.



Length L	to 1000	to 2000	to 3000	to 4000	to 5000	to 6000	over 6000
Tolerance h_1	0.7	1.3	1.8	2.2	2.6	3.0	3.5

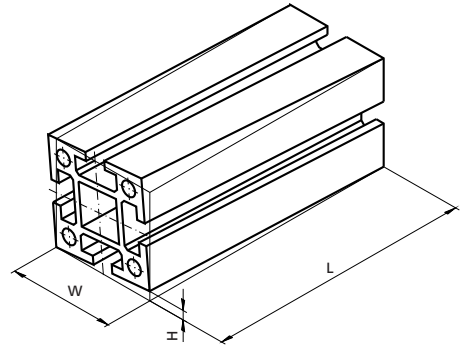
Tolerances for cut-to-length profiles

Length L	to 500	to 1000	to 2000	to 6000
Tolerance	± 0.5	± 0.8	± 1.2	± 2.0

Width W	to 50	to 100	to 200	to 300
Angle tolerance D	0.2 mm	0.4 mm	0.8 mm	1.2 mm

In case the above described length tolerance is not sufficient it is possible to improve accuracy by mechanical milling.

Twist



Width W		Allowable twist H per Length L						
over	to	to 1000	over 1000 to 2000	over 2000 to 3000	over 3000 to 4000	over 4000 to 5000	over 5000 to 6000	over 6000
-	25	1.0	1.5	1.5	2.0	2.0	2.0	per quote
25	50	1.0	1.2	1.5	1.8	2.0	2.0	
50	75	1.0	1.2	1.2	1.5	2.0	2.0	
75	100	1.0	1.2	1.5	2.0	2.2	2.5	
100	125	1.0	1.5	1.8	2.2	2.5	3.0	
125	150	1.2	1.5	1.8	2.2	2.5	3.0	
150	200	1.5	1.8	2.2	2.6	3.0	3.5	
200	300	1.8	2.5	3.0	3.5	4.0	4.5	

Standards, Norms and Calculations

Relative deflection of base profiles

Load at Center
Maximum Stress:

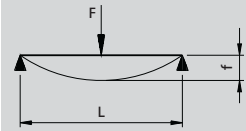
$$M_{bmax} = \frac{F \cdot L}{4} \qquad \sigma_b = \frac{M_{bmax}}{W_{x,y}} \qquad S = \frac{R_{p0.2}}{\sigma_b}$$

Maximum Deflection

$$f = \frac{F \cdot L^3}{48 \cdot E \cdot I_{x,y}}$$

$R_{p0.2}$ =
195 N/mm²
(AlMgSi 0.5 F25)

225 N/mm²
(AlMgSi 0.7 F28)



Uniform Load
Maximum Stress:

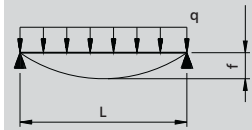
$$M_{bmax} = \frac{q \cdot L^2}{8} \qquad \sigma_b = \frac{M_{bmax}}{W_{x,y}} \qquad S = \frac{R_{p0.2}}{\sigma_b}$$

Maximum Deflection

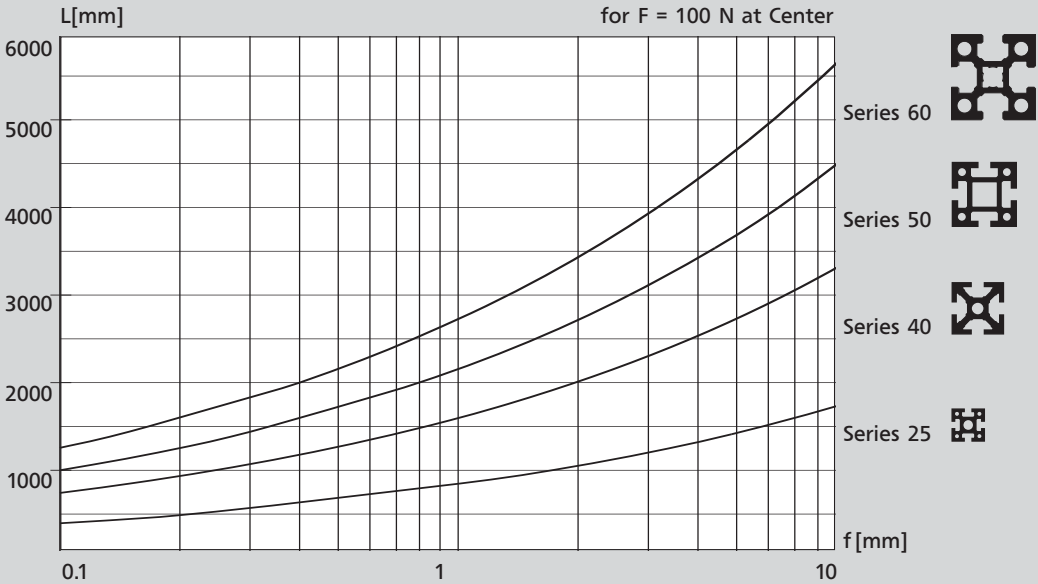
$$f = \frac{5}{384} \cdot \frac{q \cdot L^4}{E \cdot I_{x,y}}$$

$R_{p0.2}$ =
195 N/mm²
(AlMgSi 0.5 F25)

225 N/mm²
(AlMgSi 0.7 F28)



Deflection comparison of Base Profiles – Series 25, 40, 50 and 60



Determining the Deflection

Determining the Deflection of the System Profiles

The Deflection of the mk Structural Profiles can be ascertained mathematically as well as through the use of the ensuing logarithmic charts. Using the graphs is the fastest way of determining deflection. This method can also help recommend a profile given allowable deflection under a particular length/load situation. Using the given equation is recommended to determine exact deflection.

The examples shown here are limited to profiles supported at both ends with
– a single load at the center
– an evenly distributed load

As the weight of the beam itself can be considered an evenly distributed load, the deflection due to this can be taken from the graph "Deflection due to evenly distributed load", or calculated as shown in the example equation.

To determine the total deflection of overlapping profiles the deflection of the individual beams may be added (note to include the applied load as well as the weight of the beam).

Consider the following application:
A machine frame is constructed using Profile mk 2025.02, oriented vertically, as the top beams.
– This frame is 1585 mm long on one side.
– A surface plate is placed on these beams, which exerts a force of 237 N/m (distributed load) on this profile.
– A piece of equipment is placed onto the surface plate, which exerts an additional force of 750 N (point load) on the beam.
This example is shown in the calculations at right.

Caution!
Die examples shown are only valid for
– in relation to beam lengths – relatively small deflections!

Example

Deflection calculation using point load and weight of beam

Load: F_{Point} = 250 N
$q_{Distr.}$ = 237 N/m
L = 1585 mm
Profile: mk 2025.02 (25 x 50 – vertical)
Using: I_X = 12.19 cm^4 ≙ 121900 mm^4
q_{Beam} = 1.35 kg/m ≙ 13.2 N/m
E = 70000 N/m^2 (E-Modulus Alu)

Deflection due to point load

- using the graph on page 244-250
  f_{Point} = 2.4 mm
- using the formula

$$f_{Point} = \frac{F_{Point} \cdot L^3}{48 \cdot E \cdot I_X} = \frac{250\ N \cdot 1585^3\ mm^3}{48 \cdot 70000\ N/mm^2 \cdot 121900\ mm^4}$$

f_{Point} = 2.43 mm

Deflection due to distributed weight of beam

- using the graph on page 245-251,
  with $q = q_{Distr.} + q_{Beam}$ = 250 N/m
  $f_{Distr.}$ = 2.4 mm
- using the formula

$$f_{Distr.} = \frac{5}{384} \cdot \frac{q \cdot L^4}{E \cdot I_x} = \frac{5}{384} \cdot \frac{0.25\ N/mm \cdot 1585^4\ mm^4}{70000\ N/mm^2 \cdot 121900\ mm^4}$$

$f_{Distr.}$ = 2.4 mm

Total Deflection

$f_{Total} = f_{Point} + f_{Distr.}$ = 2.4 mm + 2.4 mm

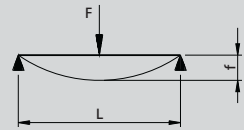
f_{Total} = 4.8 mm

Caution!
Ensure correct use of units.
To be safe, compare calculations with the examples shown above.

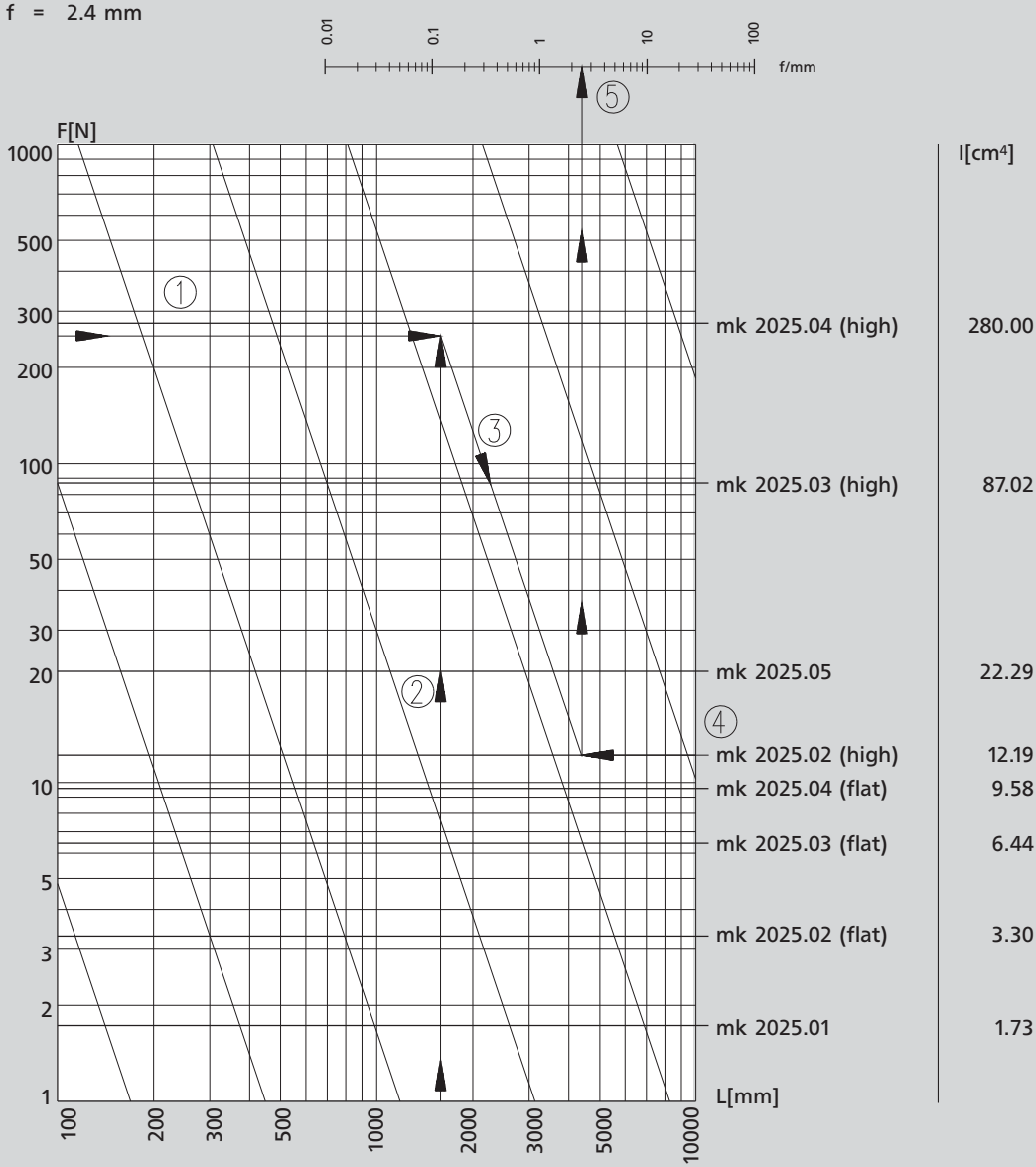
Determining the Deflection

System 2000 Series 25

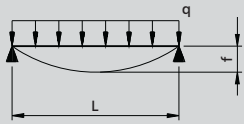
Deflection of Load at Center Series 25



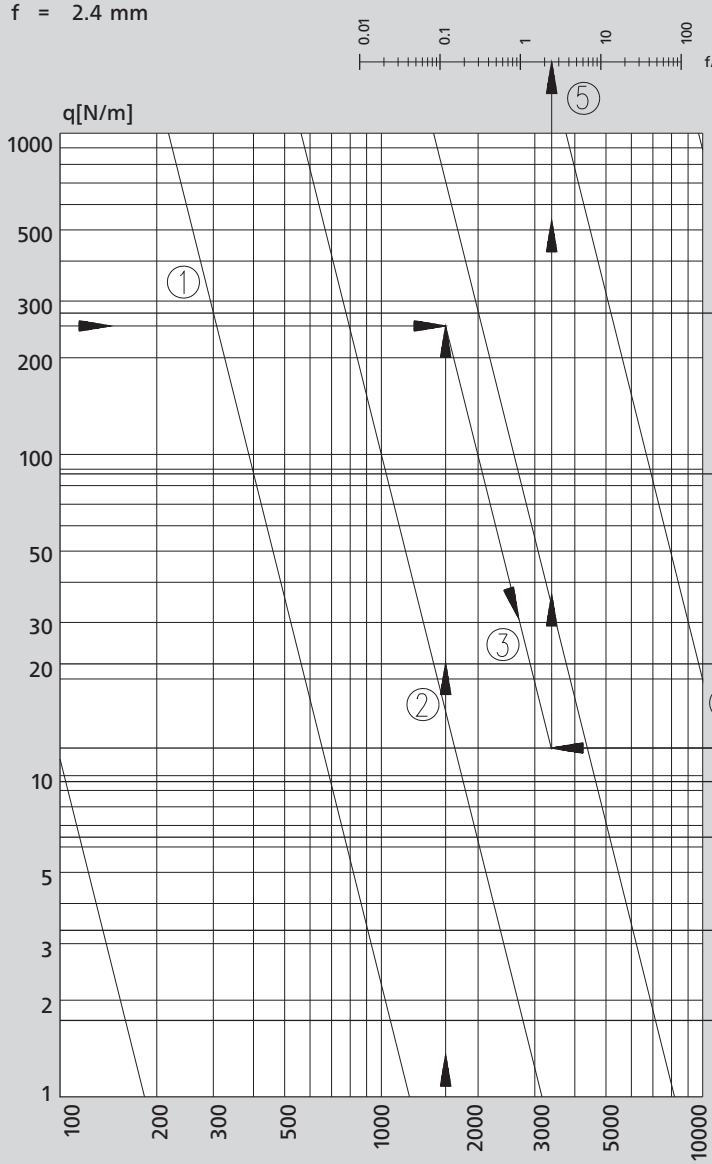
Example:
Profile mk 2025.02 (high)
I = 12.19 cm^4
F = 250N
L = 1585 mm
f = 2.4 mm



Deflection of Distributed Load
Series 25



Example:
Profile mk 2025.02 (high)
I = 12.19 cm^4
F = 250N
L = 1585 mm
f = 2.4 mm

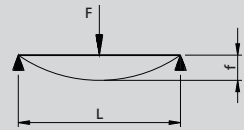


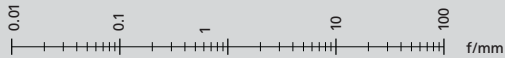
	I[cm^4]	$q_{of\ Profile}$ [N/m]
mk 2025.04 (high)	280.00	36.8
mk 2025.03 (high)	87.02	25.0
mk 2025.05	22.29	21.6
mk 2025.02 (high)	12.19	13.2
mk 2025.04 (flat)	9.58	36.8
mk 2025.03 (flat)	6.44	25.0
mk 2025.02 (flat)	3.30	13.2
mk 2025.01	1.73	7.4

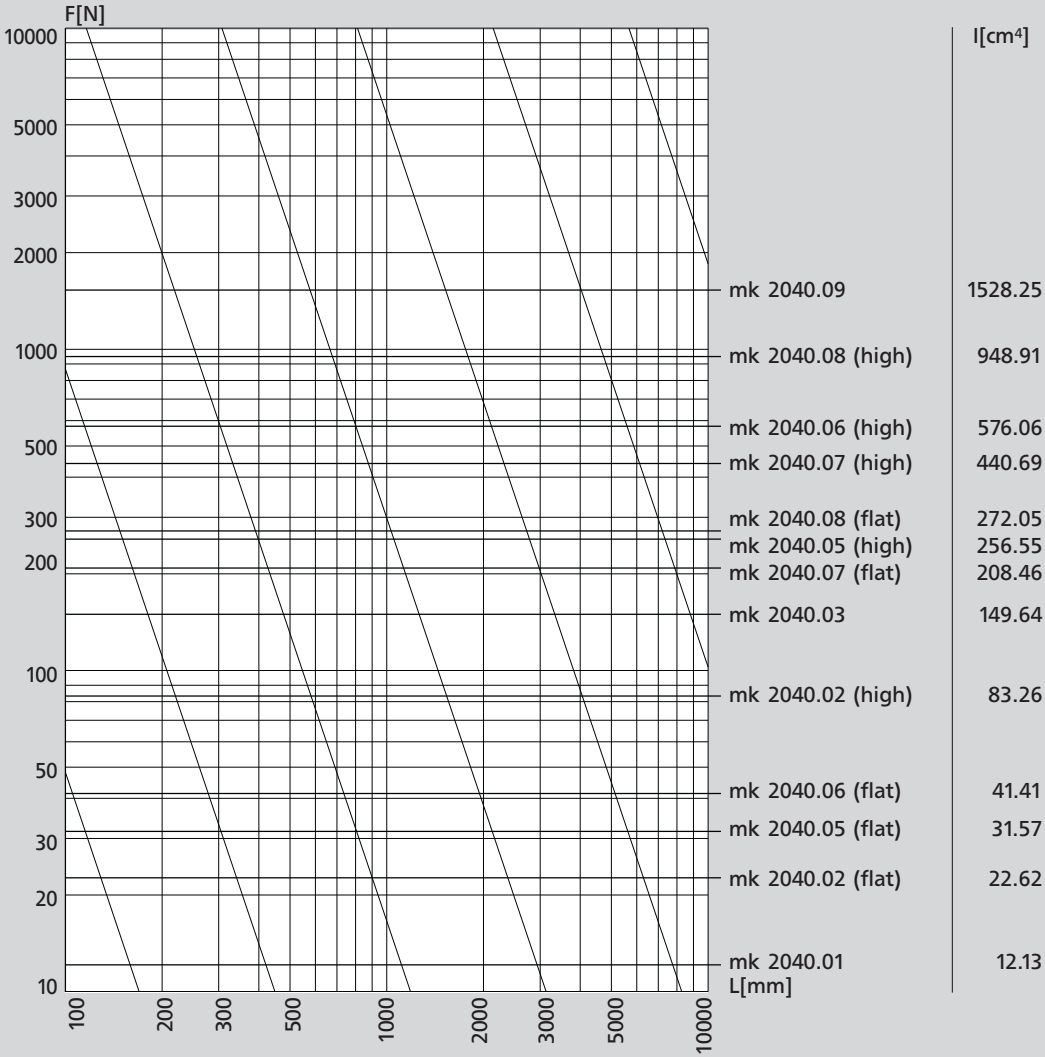
Determining the Deflection

System 2000 Series 40

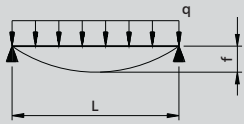
Deflection of Load at Center Series 40

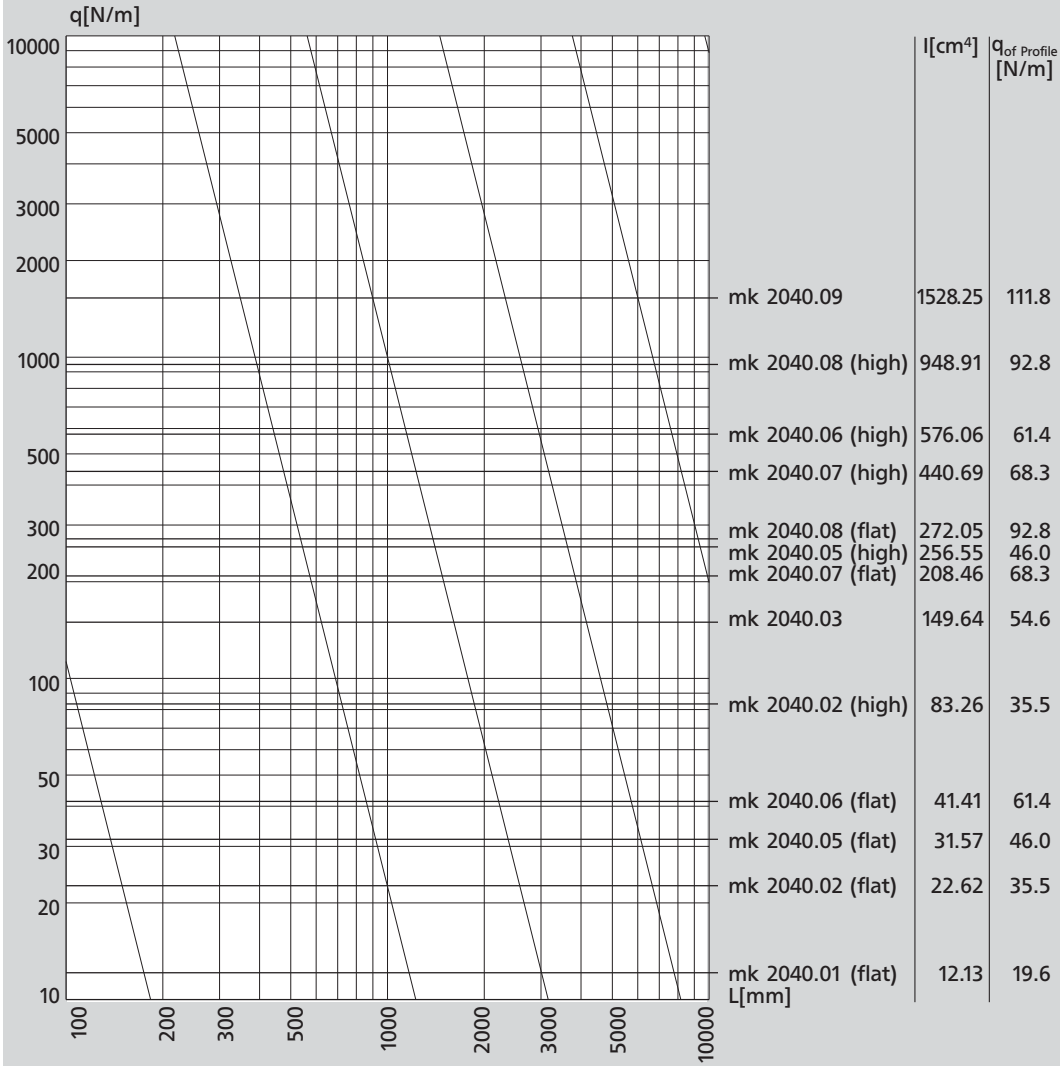






Deflection of Distributed Load
Series 40



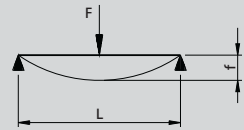


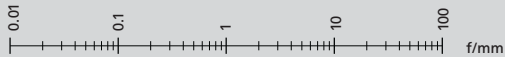
	I[cm^4]	$q_{of\ Profile}$ [N/m]
mk 2040.09	1528.25	111.8
mk 2040.08 (high)	948.91	92.8
mk 2040.06 (high)	576.06	61.4
mk 2040.07 (high)	440.69	68.3
mk 2040.08 (flat)	272.05	92.8
mk 2040.05 (high)	256.55	46.0
mk 2040.07 (flat)	208.46	68.3
mk 2040.03	149.64	54.6
mk 2040.02 (high)	83.26	35.5
mk 2040.06 (flat)	41.41	61.4
mk 2040.05 (flat)	31.57	46.0
mk 2040.02 (flat)	22.62	35.5
mk 2040.01 (flat)	12.13	19.6

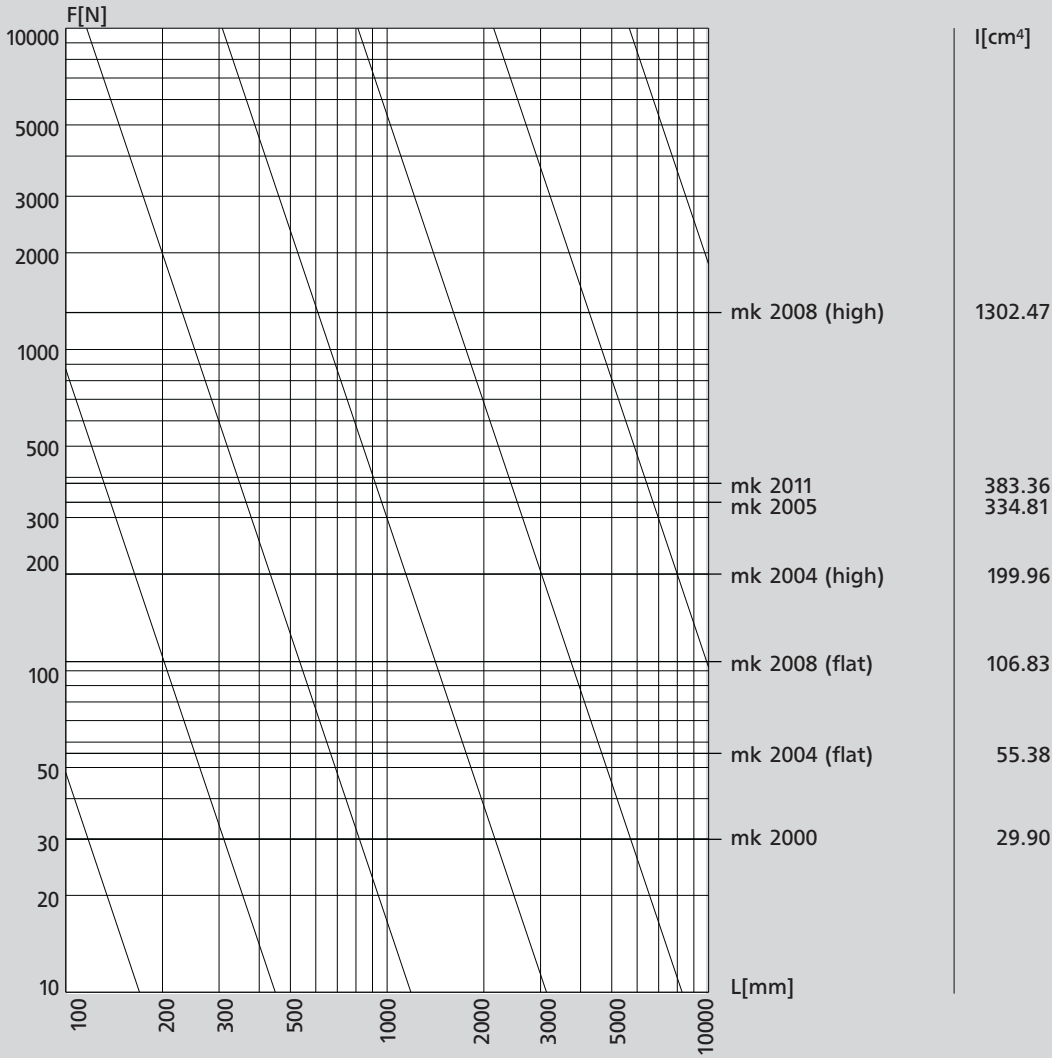
Determining the Deflection

System 2000 Series 50

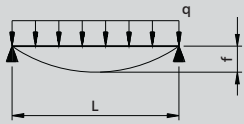
Deflection of Load at Center Series 50

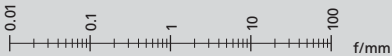


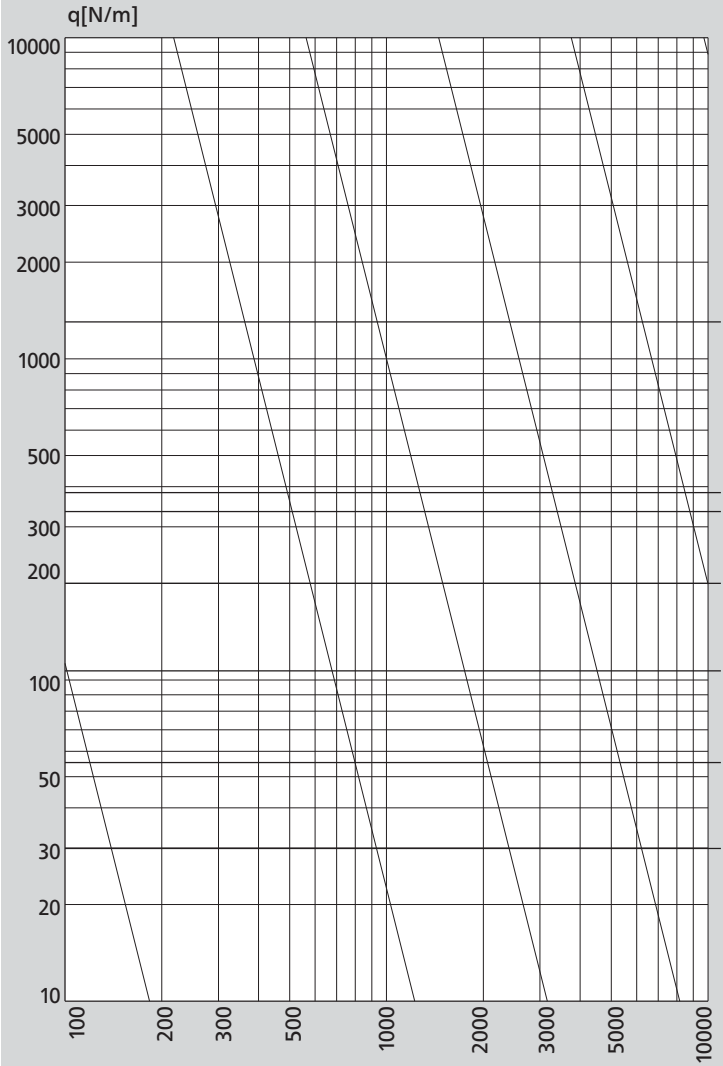




Deflection of Distributed Load
Series 50





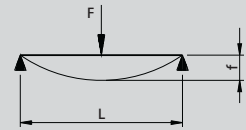


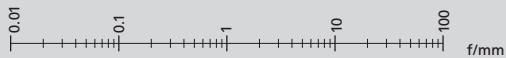
	I[cm^4]	$q_{of\ Profile}$ [N/m]
mk 2008 (high)	1302.47	89.3
mk 2011	383.36	95.2
mk 2005	334.81	68.7
mk 2004 (high)	199.95	46.6
mk 2008 (flat)	106.83	89.3
mk 2004 (flat)	55.37	46.6
mk 2000	29.90	27.0

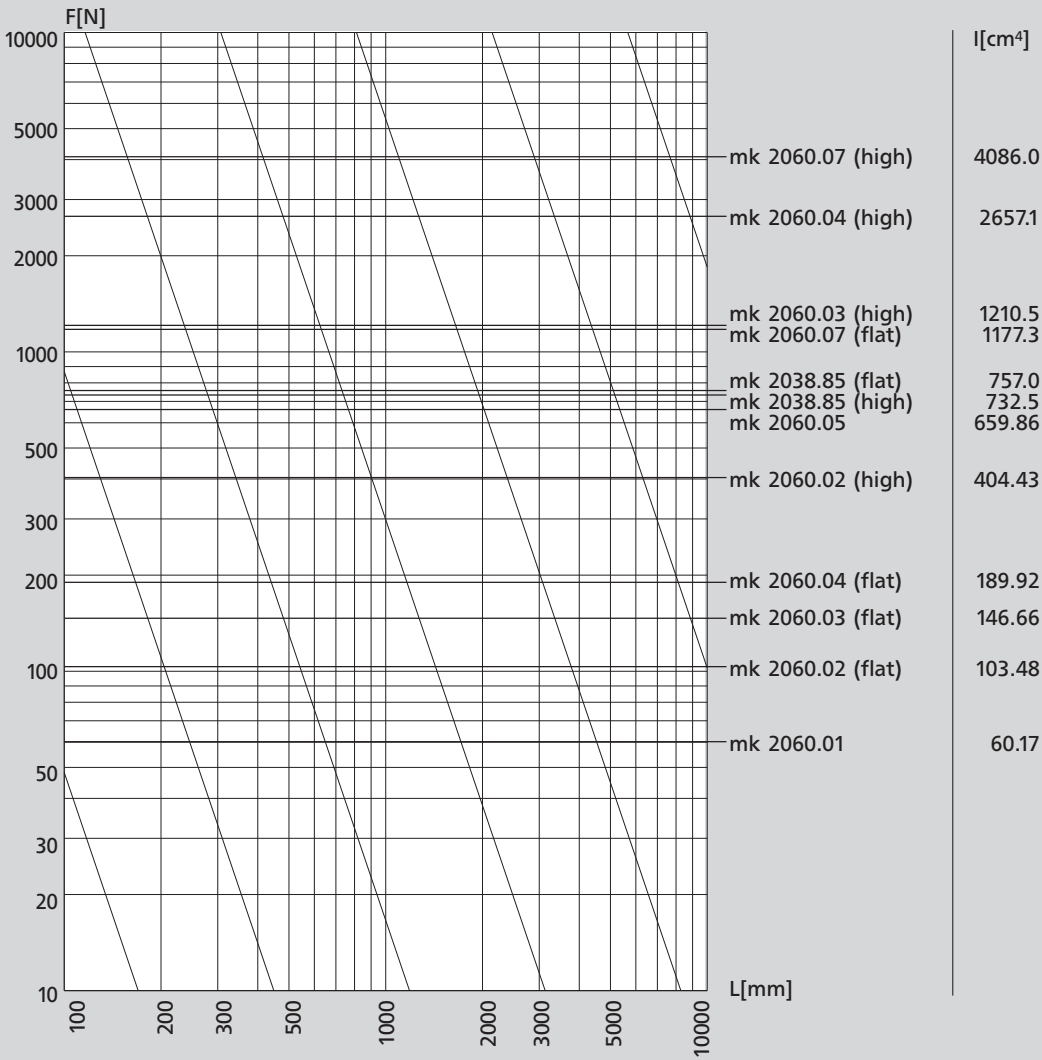
Determining the Deflection

System 2000 Series 60

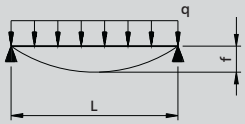
Deflection of Load at Center
Series 60

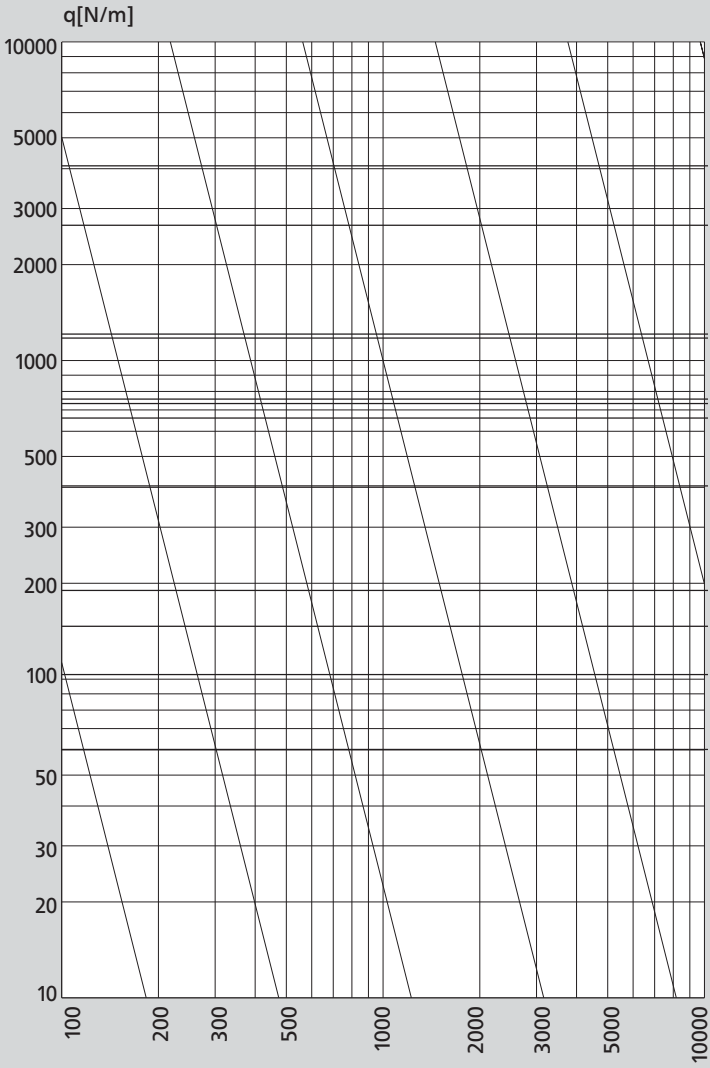






Deflection of Distributed Load
Series 60

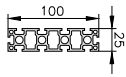
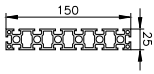


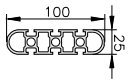
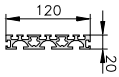
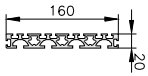
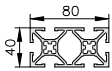
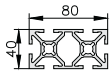


	I[cm⁴]	$q_{of\ Profile}$ [N/m]
mk 2060.07 (high)	4086.0	177.5
mk 2060.04 (high)	2657.1	119.6
mk 2060.03 (high)	1210.5	93.9
mk 2060.07 (flat)	1177.3	177.5
mk 2038.85 (flat)	757.0	116.2
mk 2038.85 (high)	732.5	116.2
mk 2060.05	659.86	100.7
mk 2060.02 (high)	404.43	68.2
mk 2060.04 (flat)	189.92	119.6
mk 2060.03 (flat)	146.66	93.9
mk 2060.02 (flat)	103.48	68.2
mk 2060.01	60.17	42.3

Technical data

Structural Profiles

Profile	Profile Symbol	Surface area	Mass per length	Moment of inertia		Section modulus		Page
		A [mm²]	m [kg/m]	Ix [cm⁴]	Iy [cm⁴]	Wx [cm³]	Wy [cm³]	
Profiles series 25								
mk 2025.01		279	0.75	1.73	1.73	1.38	1.38	21
mk 2025.02		501	1.35	12.19	3.30	4.87	2.64	21
mk 2025.03		945	2.55	87.02	6.44	17.40	5.15	21
mk 2025.04		1390	3.75	280.00	9.58	37.33	7.66	21
mk 2025.05		816	2.21	22.30	22.30	8.90	8.90	21
mk 2025.31		284	0.77	1.73	1.62	1.42	1.29	22
mk 2025.35		275	0.75	1.71	1.68	1.38	1.34	22
mk 2025.38		290	0.79	1.52	1.48	1.27	1.25	22
mk 2025.37		267	0.73	1.32	1.28	1.14	1.12	23
mk 2025.32		475	1.29	3.22	12.03	2.60	4.81	23
mk 2025.36		462	1.25	3.12	11.88	2.58	4.81	23
mk 2025.39		407	1.10	2.05	9.44	1.81	3.77	23
mk 2025.25		482	1.30	9.99	9.99	3.76	3.76	23

Profile	Profile Symbol	Surface area	Mass per length	Moment of inertia		Section modulus		Page
		A [mm²]	m [kg/m]	Ix [cm⁴]	Iy [cm⁴]	Wx [cm³]	Wy [cm³]	
Profiles series 25								
mk 2025.22		837	2.26	64.26	5.84	12.95	4.67	24
mk 2025.20		783	2.12	15.51	15.52	6.20	5.45	24
mk 2025.21		1100	2.98	43.62	43.62	12.46	12.46	24
Adapter Profiles series 25/40								
mk 2025.41		377	1.02	6.20	1.49	3.10	1.39	25
mk 2025.42		717	1.94	42.51	2.97	10.63	2.88	25
mk 2025.43		1060	2.86	136.21	4.44	22.70	4.37	25
mk 2025.44		1400	3.77	314.51	5.90	39.29	5.86	25
Profiles series 40								
mk 2040.31		561	1.50	9.69	9.69	4.84	4.84	27
mk 2040.40		606	1.64	10.52	10.52	5.26	5.26	27
mk 2040.01		742	2.00	12.13	12.13	6.06	6.06	27
mk 2040.52		988	2.67	64.10	17.50	16.00	8.76	27
mk 2040.41		1160	2.85	68.89	18.67	17.22	9.33	28

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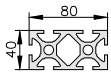
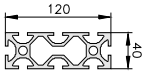
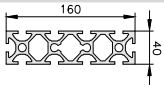
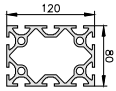
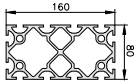
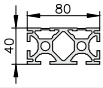
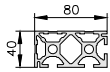
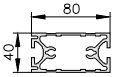
Structural Profiles

Profile	Profile Symbol	Surface area	Mass per length	Moment of inertia		Section modulus		Page
		A [mm²]	m [kg/m]	Ix [cm⁴]	Iy [cm⁴]	Wx [cm³]	Wy [cm³]	
Profiles series 40								
mk 2040.02		1340	3.62	83.26	22.62	20.84	11.31	28
mk 2040.45		1760	4.75	127.89	127.89	31.94	31.94	28
mk 2040.03		2060	5.57	149.64	149.64	37.41	37.41	28
mk 2040.73		2110	5.72	150.00	150.00	37.10	37.40	28
mk 2040.05		1740	4.69	256.55	31.57	43.75	15.78	28
mk 2040.06		2320	6.26	576.06	41.41	72.01	20.70	28
mk 2040.07		2580	6.96	440.69	208.46	73.44	52.11	29
mk 2040.08		3500	9.46	948.91	272.05	118.62	68.01	29
mk 2040.10		3060	8.26	585.21	585.21	97.51	97.51	29
mk 2040.09		4220	11.40	1528.25	1528.25	191.03	191.03	29
mk 2040.21		685	1.84	11.00	10.21	5.42	5.10	30
mk 2040.11		696	1.88	11.13	11.13	5.50	5.50	30
mk 2040.14		604	1.62	8.30	8.30	4.75	4.75	30

Profile	Profile Symbol	Surface area	Mass per length	Moment of inertia		Section modulus		Page
		A [mm²]	m [kg/m]	Ix [cm⁴]	Iy [cm⁴]	Wx [cm³]	Wy [cm³]	
Profiles series 40								
mk 2040.15		561	1.51	7.85	7.85	4.54	4.54	30
mk 2040.22		1270	3.43	21.53	75.54	10.72	18.89	31
mk 2040.12		1270	3.43	21.39	77.91	10.86	19.86	31
mk 2040.24		832	2.25	16.60	66.07	8.30	16.34	31
mk 2040.46		2020	5.44	145.08	145.56	35.63	36.38	31
mk 2040.13		1970	5.32	141.92	141.92	36.05	36.05	31
mk 2040.04		1340	3.61	71.82	71.82	18.80	18.80	31
mk 2040.92		623	1.68	11.00	10.56	5.40	5.28	32
mk 2040.93		634	1.72	11.00	11.00	5.40	5.40	32
mk 2040.94		634	1.72	11.40	10.50	5.73	5.28	32
mk 2040.95		647	1.75	11.00	11.40	5.41	5.74	33
mk 2040.96		659	1.78	11.48	11.48	5.74	5.74	33
mk 2040.110		535	1.44	7.41	7.68	3.15	3.21	33

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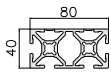
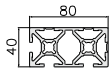
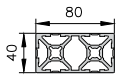
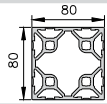
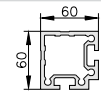
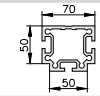
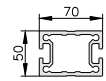
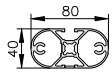
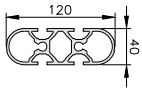
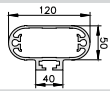
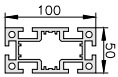
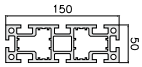
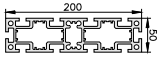
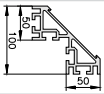
Structural Profiles

Profile	Profile Symbol	Surface area	Mass per length	Moment of inertia		Section modulus		Page
		A [mm²]	m [kg/m]	Ix [cm⁴]	Iy [cm⁴]	Wx [cm³]	Wy [cm³]	
Profiles series 40								
mk 2040.16		445	1.25	5.28	6.22	2.87	3.11	33
mk 2040.100		1090	2.94	19.68	70.83	9.63	17.71	33
mk 2040.101		1100	2.97	19.69	72.70	9.64	17.98	33
mk 2040.104		1138	3.07	20.60	75.50	18.80	10.30	33
mk 2040.109		1860	5.04	138.00	138.00	34.50	34.50	33
mk 2040.37		426	1.17	2.74	14.65	1.09	9.73	37
mk 2040.38		933	2.52	43.13	32.45	13.60	12.98	37
mk 2040.39		1110	3.00	49.87	49.87	16.31	16.31	37
mk 2040.74		1300	3.50	74.32	56.44	21.23	18.66	37
mk 2040.75		1120	3.01	68.36	38.58	27.35	11.02	37
mk 2040.23		785	2.12	42.60	12.00	10.70	5.90	38
mk 2040.34		1310	3.56	139.67	24.15	23.53	12.08	38
mk 2040.30		1620	4.36	242.23	67.65	40.20	19.84	38

Profile	Profile Symbol	Surface area	Mass per length	Moment of inertia		Section modulus		Page
		A [mm²]	m [kg/m]	Ix [cm⁴]	Iy [cm⁴]	Wx [cm³]	Wy [cm³]	
Profiles series 50								
mk 2001		542	1.49	14.26	2.67	5.70	1.82	45
mk 2000		1080	2.85	29.90	29.90	11.96	11.96	45
mk 2014		760	1.98	21.20	21.20	8.51	8.51	45
mk 2002		693	1.75	19.56	19.56	7.83	7.83	45
mk 2004		1810	4.87	199.96	55.38	39.99	22.15	46
mk 2005		2650	7.00	334.81	334.81	66.96	66.96	46
mk 2011		3670	9.70	383.36	383.36	76.67	76.67	46
mk 2006		2600	7.00	597.00	80.50	79.70	32.10	46
mk 2008		3370	9.09	1302.47	106.83	130.24	42.73	46
mk 2072		1710	4.62	151.77	151.77	28.75	28.75	46
mk 2003		762	2.00	14.01	14.01	6.49	6.49	46
mk 2017		1120	3.03	30.60	31.30	12.10	12.50	47
mk 2033		554	1.50	5.22	27.72	4.94	9.24	48

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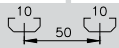
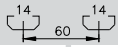
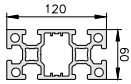
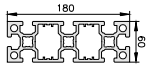
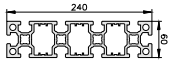
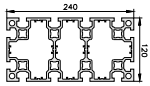
Structural Profiles

Profile	Profile Symbol	Surface area	Mass per Length	Moment of inertia		Section modulus		Page
		A [mm²]	m [kg/m]	Ix [cm⁴]	Iy [cm⁴]	Wx [cm³]	Wy [cm³]	
Profiles series 50 								
mk 2031		1120	2.85	79.17	55.59	23.18	18.53	48
Profiles series 60 								
mk 2060.01		1600	4.31	60.17	60.17	20.05	20.05	51
mk 2060.02		2580	6.95	404.43	103.48	67.34	34.49	51
mk 2060.03		3540	9.57	1210.53	146.66	134.50	48.89	51
mk 2060.04		4520	12.20	2657.18	189.92	221.18	63.28	52
mk 2060.05		3800	10.30	659.86	659.86	109.85	109.85	52
mk 2060.07		6700	18.10	4086.05	1177.39	340.50	169.23	52

Technical data

Conversion table

Length		[mm]	[cm]	[m]	[in]	[ft]
1 Millimeter [mm]	=	1	0.1	0.001	0.0394	0.0033
1 Centimeter [cm]	=	10	1	0.01	0.3937	0.0328
1 Meter [m]	=	1000	100	1	39.37	3.281
1 Inch [" / in]	=	25.4	2.54	0.0254	1	0.083
1 Foot [' / ft]	=	304.8	30.48	0.3048	12	1

Area		[mm²]	[cm²]	[m²]	[in²]	[ft²]
1 Square millimeter [mm²]	=	1	0.01		0.0016	
1 Square centimeter [cm²]	=	100	1	0.0001	0.155	0.0011
1 Square meter [m²]	=		10000	1	1550	10.76
1 Square inch [in²]	=	645.6	6.452	0.0006	1	0.0069
1 Square foot [ft²]	=		929	0.0929	144	1

Volume		[mm³]	[cm³]	[in³]
1 Cubic millimeter [mm³]	=	1	0.001	0.000006
1 Cubic centimeter [cm³]	=	1000	1	0.061
1 Cubic inch [cu.in.]	=	163871	16.39	1

Moments of inertia		[cm⁴]	[in⁴]
1 Centimeter⁴ [cm⁴]	=	1	0.024
1 Inch⁴ [in⁴]	=	41.62	1

Mass		[kg]	[lb]
1 Kilogram [kg]	=	1	2.205
1 Pound [lb]	=	0.4536	1

Force		[N]	[lbf]
1 Newton [N]	=	1	0.2248
1 Pound-Force [lbf]	=	4.448	1

Torque		[Nm]	[lb-in]
1 Newton-Meter [Nm]	=	1	8.851
1 Pound-Inch [lb-in]	=	0.113	1

Pressure		[bar]	[psi]
1 Bar [bar]	=	1	14.5
1 Pound per square inch [psi]	=	0.069	1

Power		[kW]	[hp]
1 Kilowatt [kW]	=	1	1.341
1 Horsepower [hp]	=	0.7457	1

Design examples

Contents design examples

Assembly instructions 252

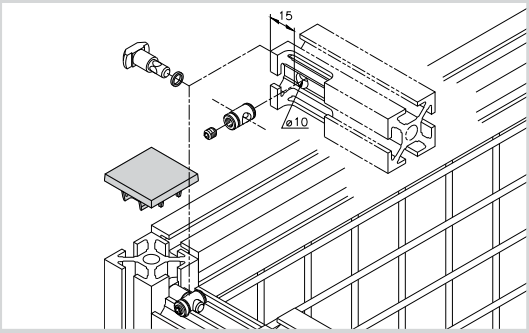
Application examples 262

Design examples

Assembly instructions

Detail A

Page 99



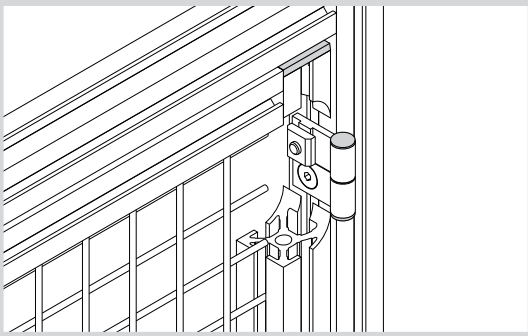
Tension Plug 40/1

B51.03.036

This connection requires a ø 10mm thru-hole placed 15mm from the profile end. Use the series 40 drill fixture, **B51.03.005**, for this. After inserting the bolt into the hole the tension plug is inserted in the profile end and is secured by slightly tightening the set screw. The beam can now be positioned at any other point of the profile.

Detail B

Page 163



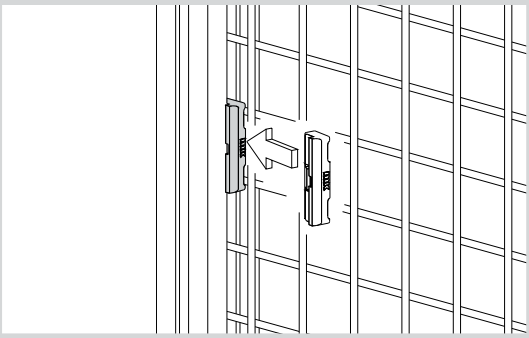
Hinge 40-1/40-1

B46.01.010

A hinge is mounted between two profiles with the flat head socket head cap screws (FH-SHCS) and nuts matching the profile series. The relevant mounting hardware is included with all hinges. The keys in the hinge leaves ensure parallel orientation of the elements.

Detail C

Page 177



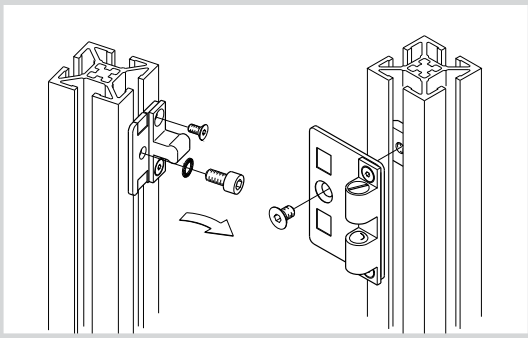
Fence Clip

mk 2544

The fence clip can be used to quickly fix wire mesh fencing in series 40 profiles. This is done by simply knocking the clip into the profile slot. To adequately secure the fencing in the profile frame the maximum distance of the fence clips from the corners should not exceed 200 mm and 520 mm from each other.

Detail D

Page 167



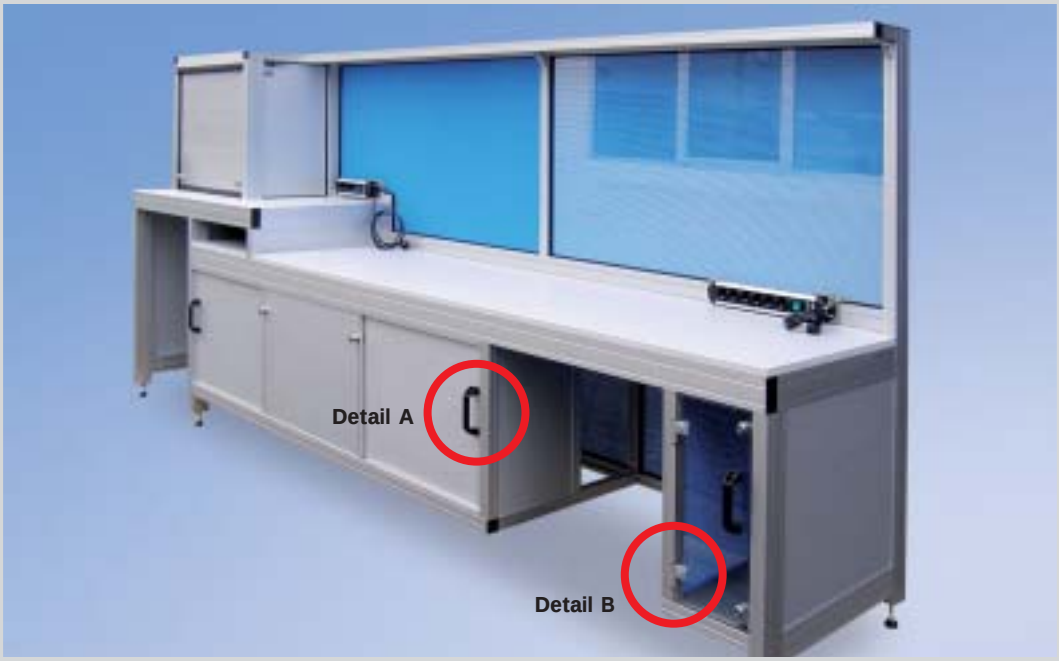
Ball latches

B68.02.101 for Door Gap 5 mm and
B68.02.102 for Door Gap 24 mm

Ball latches are simple and cost effective options for keeping doors shut which do not need to be locked with a key lock. They are easily mounted with screw-nut connections. All required hardware is included with the ball latches.

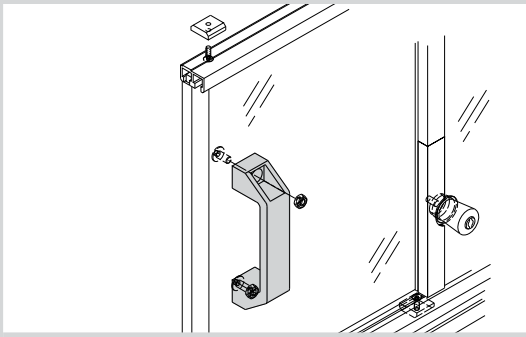
Design examples

Assembly instructions



Detail A

Page 160



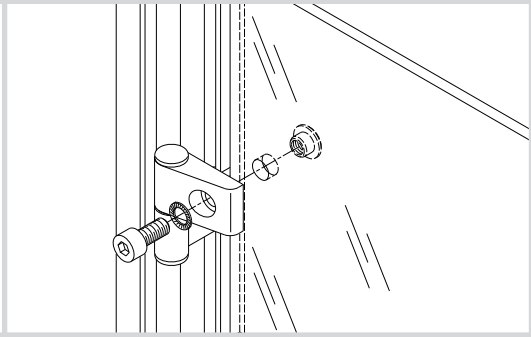
Handle

K110000020

The handle is attached directly onto onto the door panel using two M6x16 screws (**D0912616**) and two M6 hex nuts (**D09346**). To do this, drill two ø 6 mm clearance holes, 152 mm apart, into the panel.

Detail B

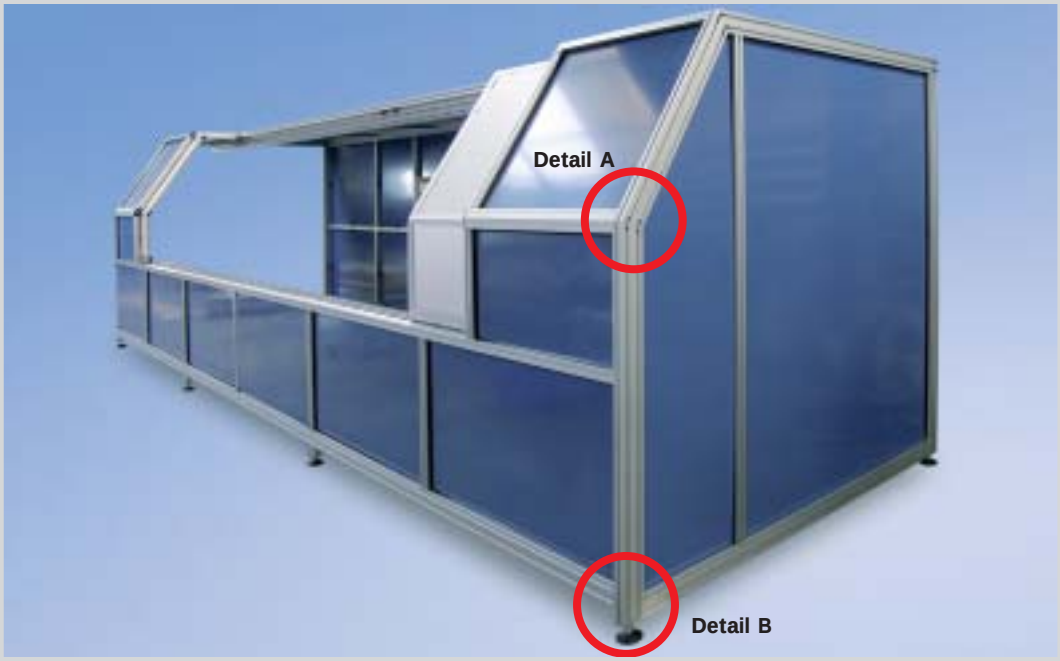
Page 166



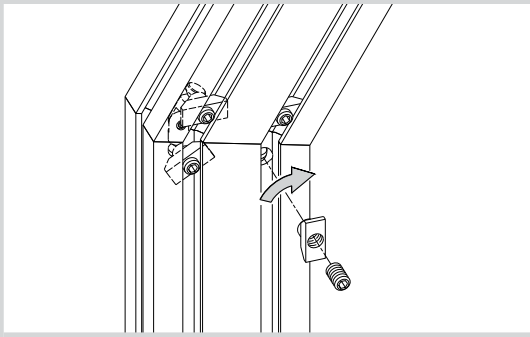
Hinge 40-1/40-3

B46.01.050

The hinge is mounted directly onto the 6 mm thick Polycarbonate panel. This requires a ø 10 mm hole at a distance of 20 mm from the edge of the panel. All mounting hardware is included in the set of components. The key in the hinge arm ensures parallel orientation of the elements.



Detail A ➥ **Page 101**

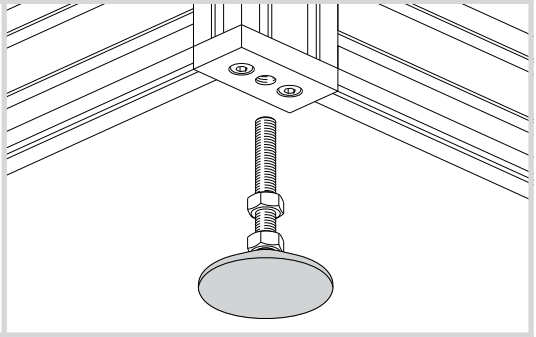


Swivel Tension Plug

B51.03.011

The swivel tension plug can be used to connect mitered series 40 profiles. All angles between +/- 90° can be accomplished. The connection requires a one-sided ø 10 mm hole on the chamfered edge in both profiles at a distance of 15 mm from the middle of the cut edge.

Detail B ➥ **Page 153**



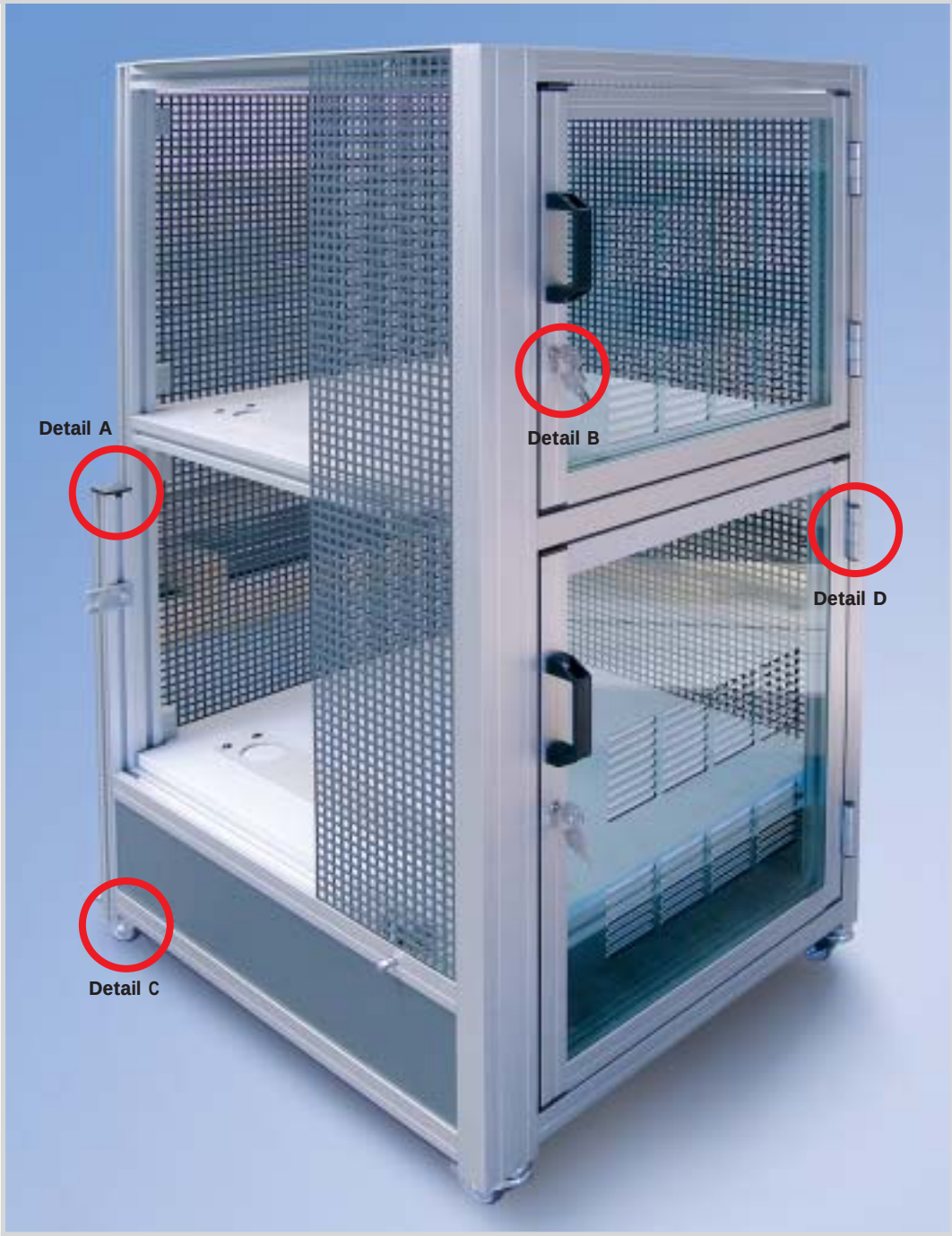
Leveling Pad KB M12

B67.02.001

The leveling pad is screwed into the pad plate matching the respective profile – here Pad Plate I M12 (**50.02.0035**). After adjusting the height, the pad is locked using the included hex nut. The leveling pad has an adjustment rage of 75 mm and a loading capacity of 1,500 N. The ball and socket joint compensates for sloped surfaces.

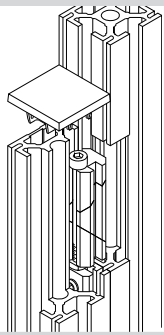
Design examples

Assembly instructions



Detail A

Page 122



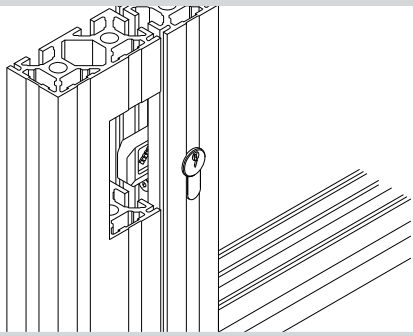
Parallel Tension Plug

B51.03.021

The parallel tension plug connects parallel profiles with no further rework required. To this end, the connector is inserted into both of the opposing profile slots, facing each other and is securely tightened with an allen wrench.

Detail B

Page 169



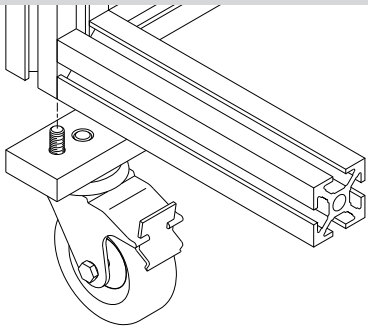
Cylinder Lock

B68.02.051

The lock is designed for installation in mk 2040.01 and mk 2040.40 profiles. This requires profile services 5401BC and 5440BC, whereby specifications must be made regarding both the total length of the profile and the distance from the bottom end of the profile up to the bottom edge of the lock. The profile cylinder is installed by pressing it through the profile opening in the keeper and is then secured by tightening the included hardware.

Detail C

Page 156



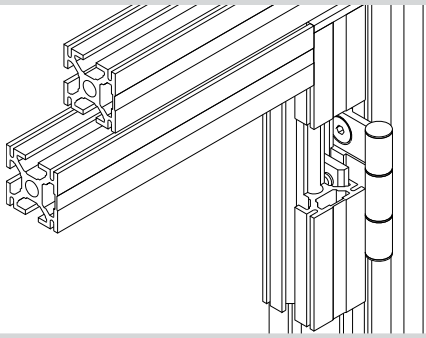
Fixed and Swivel Caster

K106001041 and K106000141

The casters are fastened to the appropriate pad plate using an M 10 hex head screw – here Pad Plate I M10 (50.02.0041). The casters have a load bearing capacity of 600 N. The swivel casters have a brake.

Detail D

Page 163



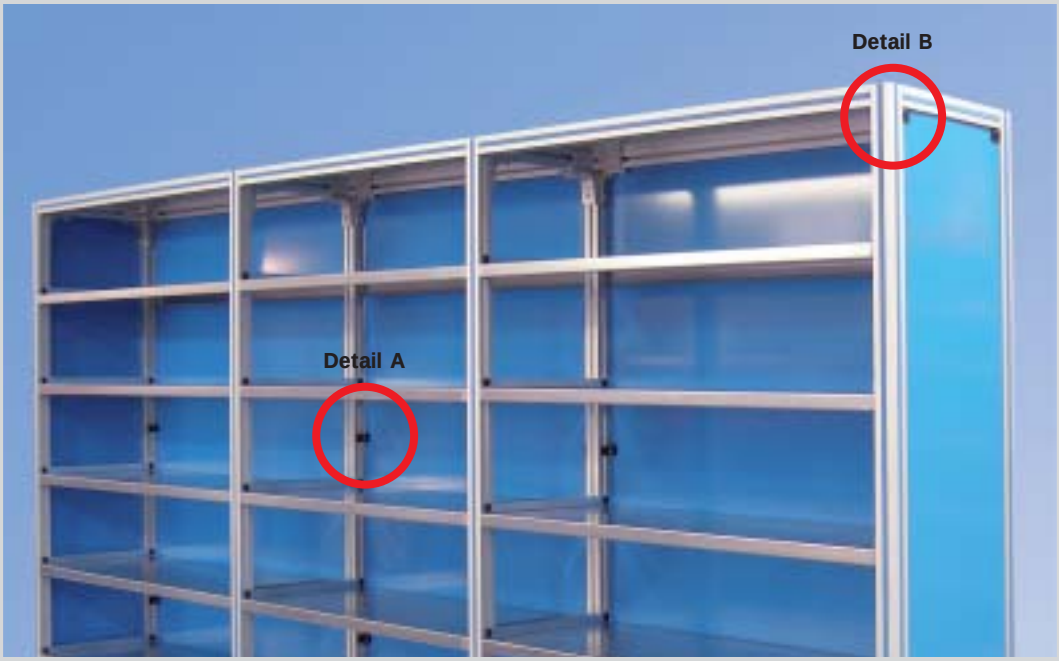
Hinge 40-1/40-7/40-1

B46.01.030

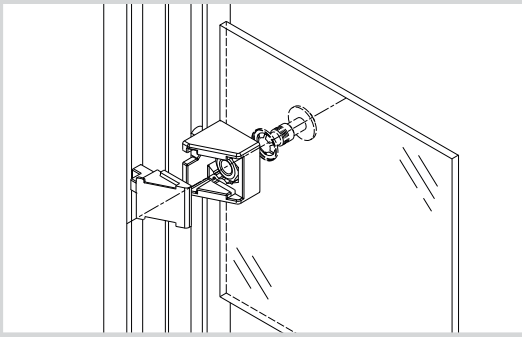
The hinge is mounted between two profiles using flat head socket head cap screws (FH-SHCS) and nuts. The appropriate mounting hardware is included with all hinges. The keys in the hinge arms ensure parallel orientation of the elements. If three hinge arms are used the door cannot be lifted and removed without tools.

Design examples

Assembly instructions



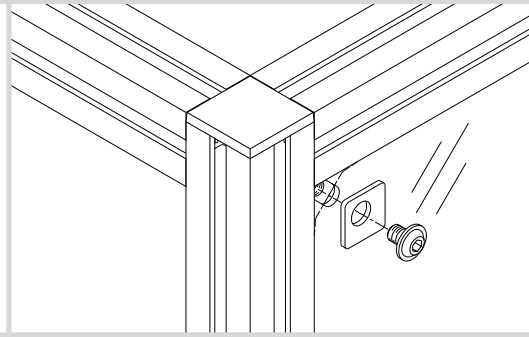
Detail A Page 176



Attachment with Panel Block mk 2578

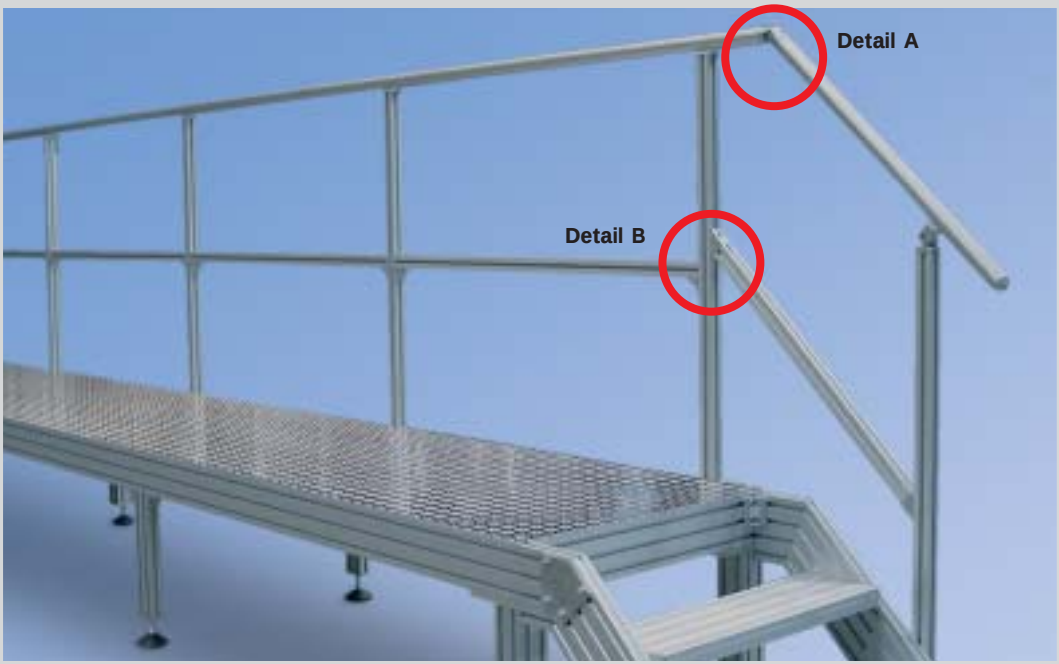
The undetachable panel block is used together with the undercut flanged button-head screw and ribbed washer for subsequent attachment of paneling in accordance with the Machinery Directive. Paneling requires 9 mm drills at a distance of 10-15 mm from the profile frame.

Detail B Page 176



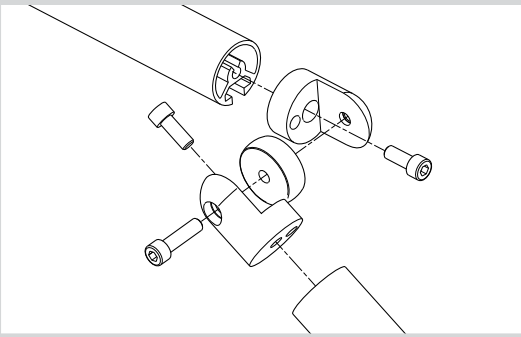
Attachment with Angles

This method is suitable for 1.5-2 mm thick metal sheets. The metal sheet edging provides the necessary stiffness up to a side length of 1200 mm. Panel Blocks mk 25552 are required for longer lengths. The angles must have an M8 thread placed in the side. The elongated hole can be covered with cover (07.01.0005); the metal sheets are screwed on using flanged button head screws (K112010003).



Detail A

Page 208



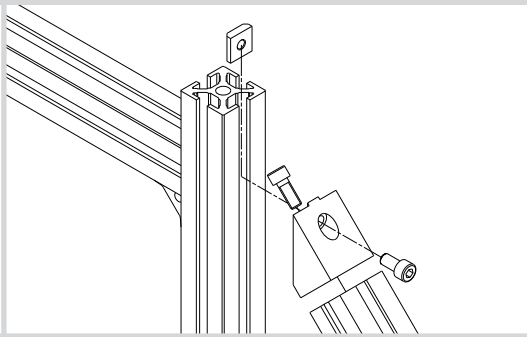
Joint 40/H2

B46.01.023

The joint connects two mk 2040.16 profiles at any angle required relative to each other. This is done by first screwing the two halves of the joint to the profiles using socket head cap screws and then mounting and locking the whole entire assembly with an additional socket head cap screw. All hardware shown is included.

Detail B

Page 116



Corner Block 45°

79.01.0066

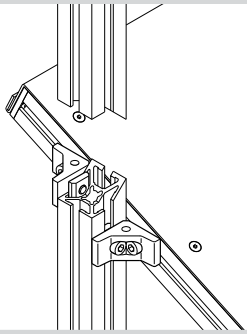
The corner block is used to connect two profiles at a 45° angle between them. The corner block is screwed into the end face of a 40x40 pr ofile and is fixed to another profile by means of a screw-nut connection.

Design examples

Assembly instructions

Detail A

➡ Page 80



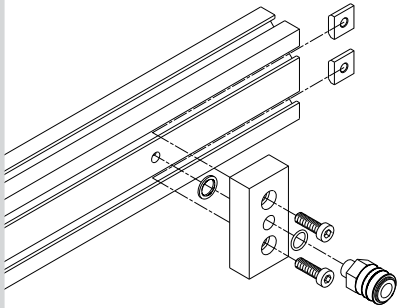
Angle E25 for fastening shelves

82.40.0701

The angles are mounted using M8x16 SHCS, ø 8.4 ribbed washers and M8 nuts. The angles without keys are used when installing inclined shelves. This angle is easily achieved by offsetting the two angles along the support profile. All commonly used angles can also be purchased with the necessary mounting hardware as a set of components. The order number for the E25 angle with hardware is T82.40.0701.

Detail B

➡ Page 185



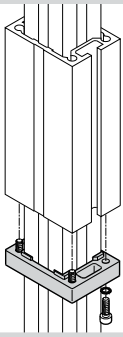
Pneumatic Component

53.00.0352

The interior of many of the series 40 profiles, i.e. mk 2040.02 or mk 2040.03 can be used to store compressed air. To access the compressed air, a ø 8 mm hole must be made in the middle of the profile on the T-slot side and a distributor plate mounted at this location. It is sealed with an O-ring.

Detail C

➡ Page 37



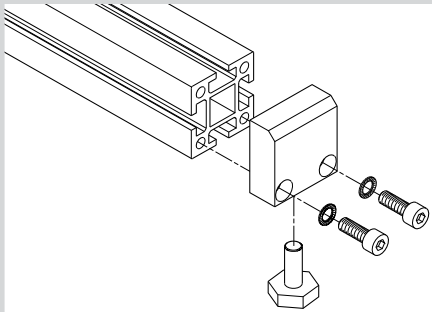
Telescoping Profile

mk 2040.74

A 40x40 mm profile can be inserted into this profile. The bottom cover is formed using the mk 2575 guide. To this end, threaded inserts must be placed into the mk 2040.74 profile.

Detail D

➡ Page 148



Pad Block

67.00.0002

The pad block is fastened by cutting an M8 thread in the lower holes of the mk 2000 profile. It is supported off the floor using the M10 leveling screw M10 (K110060003).

Design examples

Application examples

System frame of series 25 profiles

System frame of profile mk 2025.02

Interior construction for fire engine of series 25 profiles

Customer-specific workstations for integration of 19" racks and video monitors. The basic structure is made from using series 25 profiles

Base frame of series 40 profiles

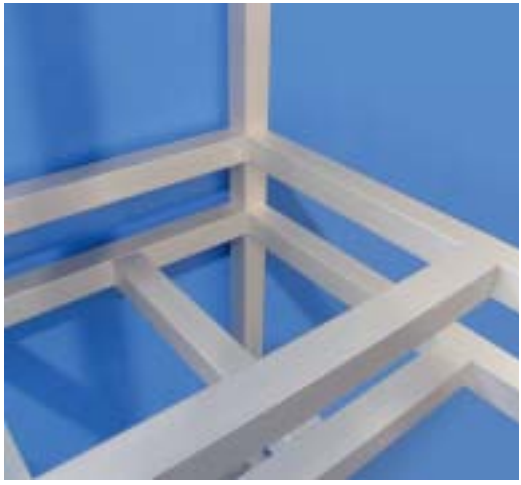
Customer-specific frame of series 40 profiles with closure strips

Design examples

Application examples

Mobile underframe of series 40 clean room profiles

Rack of series 40 clean room profiles



Base frames for lock of series 40 clean room profiles

Kanban assembly workstation made of series 40 profiles

Frame of series 40 profiles of a unit for monitoring and control of plant growth

Base frame of series 40 profiles

Design examples

Application examples

Customer-specific frame of mk 2004 profile (50x100 mm) and mk 2005 profile (100x100 mm), profile connection by C90s and M25 angles

Frame structure for customerspecific conveyor system made using series 50 profiles

Frame for transfer tables of profile series 50

Underframe for a curing line of series 60 profiles

Assembly variant on profile rack of mk 2060.03 profile

Assembly platforms of series 60 profiles

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- Part configuration online

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- Price advantage

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Information material

Our catalogs are organized by our four main business areas. Various product flyers complement our catalogs.

Current information about mk products and other interesting topics are also available on our website at www.mk-group.com.

mk Profile Technology Catalog

More than 250 combinable system profiles made of high-quality alloys, perfected and stability-oriented connectors, as well as a comprehensive range of accessories is available in our comprehensive 300-page mk profile technology catalog.

mk Conveyor Technology Catalog

20 different conveyor systems from belt, timing belt, chain and flat top chain conveyors to roller conveyors are available in our 320+ page mk conveyor technology catalog. Our mk INOX conveyor technology catalog includes belt and flat top chain conveyors, as well as roller conveyors made of stainless steel.

mk Linear Motion Catalog

mk linear technology stands for optimal, needs-based design. Gliding assemblies, track roller assemblies and recirculating ball bearings are displayed on 130 pages. You have the choice between profile and linear guides, as well as complete linear modules.

mk Factory Equipment Catalog

Building on our profile technology, a comprehensive range of modules for individual factory equipment is on 160 pages. It includes guarding, system workstations, guard rails, treads and platforms in modular design.

CD mk QuickDesigner

The "mk QuickDesigner" software package includes the 3D guarding configurator "mk Config" and the "mk Parts" CAD library. You can use these tools to quickly and easily design your guarding.

Mini-CD mk E-Catalog

The handy Mini-CD contains all mk catalogs in the form of an eBook. You can conveniently page and search through the catalogs on your screen, as well as save them as PDF files.

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