mk Factory Equipment
One construction kit – many options

“mk creating flexibility through modularity”

The mk system is based on high-quality aluminum profiles. Over 250 different profiles, extensive connectors and a large range of accessories form the basis of the four mk business segments: mk profile technology, mk conveyor technology, mk linear technology (linear motion) and mk factory equipment. Select the mechanical components and modules from our extensive system construction kit to create all the basic functions of your automation systems. Make decisions based on your production capacity, for example; on when and where you purchase the system components; as individual units, as an assembly kit or as a fully functional module. Your benefits:

The mk system can radically simplify complex machinery design and construction and makes it more effective because the individual mk system components can easily be combined with each other. In this way, you can achieve optimum plant and system configurations. The system is flexible and the materials used are of the highest quality. This enables expansion, or any equipment changes, to be easily implemented. Last, but not least, system construction using standard components enables you to considerably simplify your entire project planning process and to reduce project costs and risks by purchasing specific functions at fixed prices!
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Guarding
With guarding from mk you have chosen a flexible and economical system. Select from a wide range of standard guarding elements including fixed and removable panels, as well as swing, sliding and vertical doors. Customize your guarding with a variety of paneling options, door locks and latches, interlocks, floor mounting brackets, etc. We can supply complete paneling assemblies for quick installation or kits should you decide to do-it-yourself. mk allows you to easily design perimeter guarding in compliance with your local standards.

Workstations
With the mk system you can design very task-specific workstations for the shop floor and assembly areas, as well as for the office. Maximize the functionality and ergonomics of your workstation while remaining flexible and within budget. By fully utilizing the modular construction elements of our mk Profile Technology, workstations can be designed in an uncomplicated and cost-effective way, providing you with the exact workstation you require.

Guard Rails, Treads, Platforms
Manufacture safe and easy access to platforms and equipment using the guard rail, tread and platform (GTP) system from mk. Based on our tried and true structural profile technology system, custom-tailored work platforms, walkovers or access solutions can be manufactured to your exact requirements.
"Modular products which fulfill the functions of automation systems at fixed prices"

As a mechanical engineer, you develop automation systems to help your customers optimize their production processes and to save costs. The mk Technology Group supports you in this task by supplying the technical components and modules which make complex engineering easier and your production process more efficient. Take advantage of the mk system which has been
developed over some 40 years for your benefit, and with great enthusiasm for technical solutions and an understanding of market requirements. We are able to supply you with everything you need from a single source based on the uniform construction principle — modular and flexible, and with the highest quality. From simple profile elements for building precise machine frames to the complex linear and conveyor technology modules through to system elements for your factory equipment. All of the mk business segments are part of a modular system and are therefore compatible with each other. You order the parts you need – we deliver them quickly and reliably, assembled or not, just as you need them. Why not do what countless other satisfied customers across the world do – construct with mk! It doesn’t matter whether you are in the special mechanical engineering sector and are looking for a competent, reliable and flexible partner for your projects, or whether you are involved in standard mechanical engineering and rely on dependable suppliers who provide high-quality sub-components for your systems. We know your market and its requirements.
Introducing mk
The mk modular system – systematically advantageous

The advantages of the mk modular system

- Everything from a single source: Compatible profile, conveyor and linear technologies as well as factory equipment
- Outsourcing of fixed project functions at fixed prices helps integrators to optimize their project costs and risks
- Covers all basic mechanical functions of automation systems (support structure, conveyor technology, handling and safety elements)
- Widest system profile range on the market reduces the need for special design and therefore provides a cost benefit due to standardization
- Simplified system project planning through modular design and compatibility
- Top material quality for high load-bearing capacity and long lifetimes
- Maximum flexibility for system expansions or modifications due to the compatibility and reusability of the individual components and modules
- Utilize your resources optimally due to the freely selectable degree to which our products can be assembled
- Simplification of planning & design thanks to online CAD library and 3D configurator
- Reduced production and assembly times by the use of threaded connectors
- 24-hour ordering available from the mk online shop
- Online order tracking creates transparency
Our range of products and services

One basic technology, four business segments, thousands of products and constant engineering innovation: That is mk.

Profile technology, conveyor technology, linear motion technology and factory equipment – mk supplies the complete system construction kits for all of the essential basic functions of automation systems – standardized and compatible. And everything is available from a single source.

From the provision of individual components and assemblies to modules right down to complete solutions. Put your trust in the flexible and practical mk system with its countless benefits!

mk – the definition of service

Consultation
Consultation and advice from mk regarding your project allows you to benefit from all our strengths. Sales staff with considerable experience and professional consultant engineers with both analysis and method expertise are able to assist you in designing solutions based on modular products.

Conceptual design & proposal
For the best solution at the best price, we provide the following services:
- Simulation and tests/engineering services
- CAD library
- Design
- Configurator for perimeter guarding
- Tools for preparing quotations, price lists
- Contact on site

Production
We develop components and modules for your factory automation. When it comes to setting up your system using mk products, this means you decide whether modules are to be delivered assembled or unassembled – depending how you require them for your own project process.

After-sales support
- International, locally based support from locations worldwide
- Compatibility and modularity of all mk products
- Maintenance and Service agreements for mk products selectable
- Response times
- Stability-oriented pricing policy
- Spare parts supply
Factory equipment from mk is characterized by modular equipment. Based on the basic technology of the mk profiles, you have an economic and comprehensive range of elements for individual factory equipment.

Your benefit: Due to the modular design you are completely flexible when it comes to designing your
workstations and work areas as functionally and ergonomically as possible. A module construction kit for enclosures with swing, sliding and lifting doors enables you to configure perimeter guards using a 3D configurator. If the conditions on site change, it is easy to modify or expand, even using the existing modules. In addition, the individual modules can be used to set up individual workstations for the workshop, assembly areas or offices, which satisfy all aesthetic, functional and ergonomic requirements. Our modules are complemented by an extensive range of stylish and functional guard rails, stairs and platforms which enable you to complete the design of your plant layout from a single source.
With mk profile technology you build using flexibility and established technology from the outset. With an excess of 250 system profiles made from high-quality alloys, perfected stable connectors, as well as a comprehensive range of accessories and compatible standardized components, you can realize virtually all structural designs for machine frames, guards and factory equipment. With four aluminum profile series – categorized according to the base
dimensions 25, 40, 50 and 60 mm – a perfect profile series is available for every application. Simple frames with small spatial requirements can be built just as effectively as load-bearing structures for heavy machinery. Our experienced engineers and customer-focused design aids such as the 3D configurator and online CAD library provide further support. The benefit that the mk system offers is an assembly that is substantially simpler for you due to the use of standard components. You are able to focus on the functions rather than the design of individual components. You also profit from the compatibility of the profiles with each other. This means systems can be easily expanded or modified as and when necessary. Due to the high quality of the products and connectors, all components have a long life and can be reused after being disassembled.
There are three important factors to take into account when choosing the right conveyor technology: high process reliability, fast availability and a reasonable price. mk conveyor technology offers you all three of these benefits.

mk conveyor technology provides you with an extensive standardized range which enables precise matching of the individual modules.
to their respective requirements. This ensures maximum process reliability. Our products include flat and timing belt conveyors, steel and plastic chain conveyors as well as roller conveyors. You can choose from a total of 20 conveyor systems. This enables your system to be designed precisely to the workpiece and the environment in which it is used. To do so, use our product comparison tool on the internet. Individual production processes and automation can be taken into account as well as specific customer requirements, i.e. integration within existing systems.

Thanks to standardization, our range is cost-effective, easy to expand and quickly available.
“Our Linear Motion product catalog”

mk linear technology features customized linear systems which set themselves apart thanks to their high reliability in operation and precise running. Choose from a wide selection. With our add-on principle you can achieve limitless configuration options for linear functions. This results in an optimum design that is tailored
to your needs. We offer slide-ways, track roller guides and recirculating ball bearings. You can choose between profile tracks, linear tracks and linear modules for handling applications with high repeat accuracy. On request, carriages with pneumatic or electro-mechanical drive elements may also be incorporated. An additional benefit: mk guides are compatible with all mk profile series. The add-on principle enables tracks to be mounted directly onto your system’s load-bearing structure. You save on material, cost and space.
Advantages of mk Factory Equipment made from aluminum profiles

- Uncomplicated and quick setup of individual guarding and workstations through modular design
- 3D product configurator for simplifies the planning process and lowers overall project costs
- Less project-related fabrication through the use of compatible modules lowers system costs
- Optimized functionality and ergonomics for work areas and workstations using a comprehensive modular system
- Simple modification or expansion due to the compatibility of the modules and the use of removable assembly components enables continuous adaptation to ever-changing requirements
- Attractive design of work areas due to the use of high-quality anodized aluminum profiles
- Complementary range of suitable guard rails, stairs and platforms for safe access to your machinery and equipment
- Fast availability of all modules and individual parts from stock
Safety through mk Guarding

Effectively safeguard your plant with mk guarding systems. Choose from a wide range of guarding components and build barriers which are precisely matched to your individual spatial circumstances as well as the required safety distances of your plant. In this way you prevent employees or visitors from entering hazard zones or falling equipment, tools or workpieces from causing serious accidents.

All mk guarding is designed and produced taking into account the country-specific relevant safety standards. So that you are always on the safe side!

Safety Distances

Fixed safety distances are specified by local ordinances to effectively protect employees. Depending on the required safe distance, choose between closed paneling such as sheet metal, polycarbonate or glass (required safety distance = 0 mm) and open welded or corrugated fencing solutions (required safety distance with an opening of 40 x 40 mm = 200 mm). Guarding components with the standard frame heights 1400 mm and 2000 mm are available depending on the nature of the equipment or area to be protected (see Fig. a and b).
mk Guarding
## Contents mk Guarding

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Apart from the ability to individually design guarding, mk also offers two different standards which are fully compatible with each other.

The post-panel solution is characterized by separate panel frames which are each mounted between posts anchored in the ground. In the panel solution, the posts with the panel infill form a unit and are erected next to each other, are connected and anchored in the ground.

The various solutions are based on the same base dimensions. This ensures continuous compatibility and modularity. In the post-panel solution the base dimension extends from post centerline to post centerline and in the panel solution the base dimension refers to each frame’s outer dimensions.

The default floor clearance of both systems is 200 mm, which enables easy floor cleaning with no critical safety or security issues. The favorable weight/strength ratio of the profile structure provides an ergonomically advantageous effect when it comes to handling and assembling the individual elements.
**Post-Panel Method**

This style is best suited for large areas which may require regular maintenance at various locations, for example, which must be quickly and readily accessible. Using just four attachment points, each with an angle-screw combination, the panels can be easily removed at any location, or simply swung aside. As this is only possible using a wrench, this system conforms to standard safety regulations. A further advantage is hinge-like assembly of the panels, which allows the guarding to be designed and installed at any desired angle.

**Partition Method**

Because of their standard right-angle connections, the Partition style of guarding is ideal for long straight or rectangular perimeter guards. As such the partitions can be installed flush together with little effort. The compatibility with Panel-Post guards and the modularity and versatility of the individual guarding components enable the layout and manufacture of almost any guarding requirement. The connecting plates feature protrusions which lock the panels in place (see page 25).

**Custom Solutions**

Although custom solutions for perimeter guarding provide savings due to lower material cost, there is often a significant assembly component which should not be overlooked. Custom, i.e. machine specific guards are possible on request. Many examples of custom guards can also be found in the mk Profile Technology System catalog.
Guarding

Assembly Details

Post-Panel Methods

Internal Fastening of Panels
The profile connection of the panels and panel frames is achieved using the Tension Plug 40/1. For this the horizontal beams require profile service 5431BW .....*

Panel Connection with Angles
The panel connection with angles offers the highest stability with minimal labor. By loosening only four screws, the entire panel can be removed if necessary. Panels may be rotated up to ± 90°. The connection shown below is standard for the Post-Panel style of guards.

Floor Mounting of Posts
Using the Floor Mounting Bracket 67.02.0004, floor height variations of up to 10 mm can be compensated. Posts or Partitions are fastened to the floor with Anchors and are tightened with the included M8 hex nut.

Angle B20/40 82.05.0026, Al alternative Angle 82.40.0805, Al
SHCS M8x16 D0912816
Ribbed Washer ø 8.4 K111010017
Nut 1 M8 34.01.0001, Steel Zn

Profile mk 2040.31 with End Services 5431BW .....*

Tension Plug 40/1 (extra light) B51.03.037

Nut 2/40 M8 34.01.0019, Steel Zn
Floor Mounting Bracket 67.02.0004, Al
Anchor HST M8x75 K111030014
Ribbed Washer ø 8.4 K111010017, Steel Zn
Hex Head Screw M8x16 D0933816
**Partition Methods**

**Parallel connection of two Partitions**
Connecting plates are stamped and include protrusions which ensure an exact and dimensionally precise connection of the partitions. Two connecting plates should be used per partition, each of which is installed using two M8 screws.

**Angle Connection of Partitions**
When connecting two partitions at right angles either plates or angles can be used.

**T-connection of Partitions**

**Angle Connection of Partitions**

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**Nut 1 M8**
34.01.0001, Steel Zn

**SHCS M8x16**
D0912816

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

**Plate 05**
50.05.0053, AL

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**Nut 1 M8**
34.01.0001, Steel Zn

**SHCS M8x16**
D0912816

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

**Plate 09**
50.05.0070, AL
Guarding
Assembly Details

Custom Solutions

**Internal Fastener Series 40**
The Tension Plug is ideal for simple, and also later, assembly of profiles. This connection method requires an access hole which is drilled with the help of the Drill Fixture shown on page 27, and can be accomplished by the customer using a normal power drill. Profiles can also be supplied pre-drilled by mk.

End Cap for Profile mk 2040.01, mk 2040.40 and 2040.31 mk 2507 (PPN 1060)

Tension Plug for Series 40 B51.03.004
Profile with End Service 5401BB ....* oder 5440BB ....*

**Economy Fastener Series 40 light**
The economy fastener is the most cost-effective connection option. The center hole of Profile mk 2040.31 is designed to accept an M8 formed thread. Additionally, the mating profile requires a 9 mm access hole for the wrench.

SHCS M8x20 D6912820
Spring Washer ø 8.4 D67968, Steel Zn
5431AB ....* M8 thread formed in Profile

...* Profile length in mm
**Custom Solutions**

**Profile Services**
As a standard for Profile Series 40, mk uses a Metric M8 thread for the Economy Fastener. Profile mk 2040.31 features a ø 7.4 mm center hole, which allows two fastening methods. When using standard M8 screws, an M8 thread must be formed (Note that thread forming is not the same as tapping). If using self-tapping screws, no services are required.

Profiles mk 2040.40 and mk 2040.01 are normally used with an M8 threaded insert, whereby the ø 10 mm center hole first requires an M12x1.5 tap. The threaded insert significantly increases the thread strength. To install the threaded insert use Insert Tool K902010012.

**Drill Fixture**
This Drill Fixture is used to locate the ø 9 mm access hole required for the Economy Fastener. A detent ensures the correct 20 mm center distance from the end of the profile. This detent can also be pushed in for access holes required at other locations.

- **Drill Fixture ø 9 mm**
  - B51.03.012
- **SHCS M8**
- **Spring Washer ø 8.4**
  - D67968, Steel Zn
- **Key Set 8-piece**
  - K902005050
- **Insert**
  - K112030008, 9520K

**Drill Fixture**
This Drill Fixture serves to locate the required ø 10 mm hole when using Tension Plug B51.03.004, B51.03.036 and B51.03.037. A detent provides the required 15 mm offset between the center of the hole and the end of the profile.

- **Tension Plug for Series 40**
  - B51.03.004
- **Drill Fixture ø 10 mm**
  - B51.03.005
Guarding

Post-Panel Method

Depicted here is an example of the many possibilities when standard elements such as Posts, Panels and various paneling materials, or Fillers, are combined. The standard heights are fixed at 2060 and 1460 mm. These reference dimensions, as well as the standard heights, can also be modified to your specific requirements.

① Post 1
② Panel with horiz. brace/Metal/Polycarbonate
③ Panel with vertical brace/Fencing
④ Simple Panel/Fencing
⑤ Simple Panel/Fencing
⑥ Post 2
⑦ Post 3
⑧ Wall attachment
Post-Panel Method

Post

consisting of: Profile mk 2040.31, Angles B20/40 82.05.0026, Screws, Nuts, End Cap and Floor Mounting Bracket.

Standard H: 1460 and 2060 mm
Panel

consisting of: Profile mk 2040.31 and Tension Plugs. The panels are attached to the angles of the posts. Paneling material (Fillers) can be found on pages 54-65.

LM = Light (Opening) dimension
AM = Outside dimension
RM = Reference dimension

Standard H1: 1400 and 1800 mm
Swing Doors

The modular construction method of the mk Guarding System enables a completely flexible incorporation of doors into the enclosure design. You can specify the dimensions of your door and include any of the filler materials shown on pages 60-65. The width of doors is typically dependent on their function, as well as frequency of use:
- Normal use: 750 mm minimum opening
- Emergency exit: 1000 mm minimum opening.

Diagram:

1. Post 1
2. Swing Door Frame
3. Double Swing Door/Metal/Polycarbonate
4. Simple Panel/Fencing
5. Swing Door Frame
6. Swing Door DIN-left/Fencing
7. Simple Panel/Fencing
8. Post 1
9. Swing Door DIN-left/Fencing
10. Post 1
11. Wall attachment
Guarding

Post-Panel Method

Swing Door Frame
The modular construction method of the mk Guarding System enables a completely flexible incorporation of doors into the enclosure design. You can specify the dimensions of your door and include any of the paneling materials (Fillers) shown on pages 60-65.

Swing Door Frame
consisting of: Profile mk 2040.40, Tension Plugs, Floor Mounting Backets, Screws, Angles and Nuts. The Swing Door Frames are suitable for both the single and double swinging doors. Panels can be attached to the outsides of the frames.

AM = Outside dimension
RM = Reference dimension

Standard H: 2060 mm
Post-Panel Method

**Single Swing Door**
consisting of: Profile mk 2040.40, Tension Plugs, Door Stops, Handle, Hinges and either an external Double Bit or Cylinder Lock. Fillers can be found on pages 60-65. Please indicate lock type when specifying door.

Special versions available with: Latches, Cam Locks, Profile cylinders and T- or Lever Handle Locks.

- **Standard RM:**
  - 1500, 2000 mm

- **Double Swing Door**
Double Doors include upper and lower slide latches. Accessories can be found on pages 66-70.

- **Standard RM:**
  - 1500, 2000 mm

**Single Swing Door**

- **DIN-right**
  - B69.60.001
  - RM ....
  - H1 ....

- **DIN-left**
  - B69.60.002
  - RM ....
  - H1 ....

**Single Swing Door**

- **with horizontal brace**

  - **DIN-right**
    - B69.60.003
    - RM ....
    - H1 ....

  - **DIN-left**
    - B69.60.004
    - RM ....
    - H1 ....

**Standard H1:** 1800 mm

**Double Swing Door**

- **DIN-right**
  - B69.60.005
  - RM ....
  - H1 ....

- **DIN-left**
  - B69.60.006
  - RM ....
  - H1 ....

**Standard RM:**

- **1500, 2000 mm**
Guarding

Post-Panel Method

Sliding Doors

When selecting sliding doors, two types are available:

- Sliding Doors B
- Sliding Doors C

The Sliding Door Frames can be used in combination with Sliding Door type B and C. It is also possible, through a slight redesign, to include windows or other access panels within the doors themselves.

![Diagram of Sliding Doors]

1. Sliding Door Frame
2. Panel with horiz. brace/Metal/Polycarbonate
3. Single Sliding Door with horizontal brace/Metal/Polycarbonate
4. Panel with horiz. brace/Metal/Polycarbonate Slider
5. Sliding Door Frame
6. Simple Panel/Fencing
7. Double Sliding Door/Fencing
Sliding Door Frame

consisting of: Profile mk 2040.40, Tension Plugs, Angles, Screws, Nuts and Floor Mounting Backets.

The Sliding Door Frame "Single" is used for DIN-right and DIN-left sliding doors.

Standard RM:
750, 1000, 1250 mm

Sliding Door Frame single
B69.55.003
RM ....
H ....

Standard RM:
750, 1000 mm

Sliding Door Frame double
B69.55.004
RM ....
H ....

AM = Outside dimension
RM = Reference dimension
SH = Height of sliding door

Standard H: 2060 mm
Guarding

**Post-Panel Method**

**Sliding Doors B**

- **Standard RM:**
  - 750, 1000, 1250 mm
  - Fencing max. 1000 mm
- **Single Sliding Door:**
  - .....-lock
  - DIN-right
    - B69.61.007
    - RM ....
    - H1 ....
  - DIN-left
    - B69.61.008
    - RM ....
    - H1 ....

- **Standard RM:**
  - 750, 1000, 1250 mm
  - Single Sliding Door with horizontal brace
  - .....-lock
  - DIN-right
    - B69.61.009
    - RM ....
    - H1 ....
  - DIN-left
    - B69.61.010
    - RM ....
    - H1 ....

- **Standard RM:**
  - 750, 1000 mm
  - Double Sliding Door
  - .....-lock
  - B69.61.011
    - RM ....
    - H1 ....

- **Standard RM:**
  - 750, 1000 mm
  - Double Sliding Door with horizontal brace
  - .....-lock
  - B69.61.012
    - RM ....
    - H1 ....
Hardware
Sliding Doors B

A cost-effective alternative to Sliding Doors C, the hardware for Sliding Doors B has the additional advantage of being easily assembled. The flanged Roller Assembly guides the door along the upper Profile T-slot. Once properly installed, the door is designed to be non-removable.

Roller Assembly B68.11.003 for Sliding Door
consisting of: Plate, Roller, Bolt, Washer, Flanged Button-Head Screw and Nut

Locks see page 69

Guide for Sliding Door
19.00.0005
Plastic, black
Guarding

Post-Panel Method

Sliding Doors C

Standard RM:
750, 1000, 1250 mm
Fencing
max. 1000 mm

Single Sliding Door
......-lock

DIN-right
B69.61.015
RM ....
H1 ....

DIN-left
B69.61.016
RM ....
H1 ....

Standard RM: 750, 1000 mm
Double Sliding Door
......-lock

B69.61.019
RM ....
H1 ....

Standard RM: 750, 1000 mm
Double Sliding Door
with horizontal brace
......-lock

B69.61.020
RM ....
H1 ....
Post-Panel Method

Hardware Sliding Doors C

The C-guide consisting of Profile mk 2245 offers the advantage of a closed track. The lower guide engages the T-slot to keep the sliding door properly positioned. Maximum track length is 5100 mm.

Mounting Hardware for Sliding Doors

Single Sliding Door
B68.11.005 L ....
consisting of: 1x Track, 2x Roller Assembly, 2x Stop, 2x End Cap and 3x Plate

Double Sliding Door
B68.11.006 L ....
consisting of: 1x Track, 4x Roller Assembly, 2x Stop, 2x End Cap and 5x Plate

Locks see page 69

Guide for Sliding Door
19.00.0005
Plastic, black
Guarding

Post-Panel Method

Vertical Door
consisting of: Profile mk 2040.40, Tension Plugs, Floor Mounting Brackets, Handle, Wear Strips, Pulleys and Counterweights. Manually operated – balanced using the Counterweights. Pneumatic, hydraulic or electromechanical operation possible on request. Paneling material (Fillers) can be found on pages 60-65.

Standard RM:
750, 1000, 1250 mm
Post-Panel Method

Scissor Door
consisting of: Profile mk 2040.40, mk 2040.41, Tension Plugs, Floor Mounting Brackets, Handles, Wear Strips, Pulleys, Wire Rope and hardware. Manually operated – balanced through the scissor action of the equally weighted doors. Pneumatic, hydraulic or electromechanical operation possible on request. Paneling material (Fillers) can be found on pages 60-65.

Standard RM:
750, 1000, 1250 mm

Scissor Door
B69.62.002
RM ....
H ....
H1 ....
LW ....
H6 ....
Guarding

**Partition Method**

Shown below is a sampling of the many possible combinations using just a few standard elements such as partitions and filler material. The standard heights are 2060 and 1460 mm. The reference dimensions as well as the standard heights can be changed to suit your particular requirements.

1. Partition with horizontal brace/Metal/Polycarbonate
2. Partition with vertical brace/Fencing
3. Partition/Fencing
4. Partition/Fencing
5. Partition/Fencing
6. Wall attachment
Partition Method

Partition
consisting of: Profile mk 2040.31, Tension Plugs, Floor Mounting Backets, Screws and Nuts. To attached neighboring partitions, please order plates separately (page 25). The paneling material (Fillers) can be found on pages 54-65.

LM = Light (Opening) dimension
RM = Reference dimension
Standard H: 1460 and 2060 mm

Standard RM:
500, 750, 1000, 1250 mm

Fencing
max. 1000 mm

Partition single
B69.51.001
RM ....
H ....

Standard RM:
500, 750, 1000, 1250, 1500, 2000 mm

Partition with horizontal brace
B69.51.002
RM ....
H ....

Standard RM:
1500, 2000 mm

Partition with vertical brace
B69.51.003
RM ....
H ....
Guarding

Partition Method

Swing Doors

The modular construction method of the mk Guarding System enables a completely flexible incorporation of doors into the enclosure design. You can specify the dimensions of your door and include any of the paneling materials shown on pages 60-65.

Door Header
consisting of: Profile mk 2040.40, Tension Plugs. The profile is used with both single and double swinging doors. Panels are attached at the profile ends.

AM = Outside dimension
RM = Reference dimension
Standard H: 2060 mm

Tension Plug 40 see page 26

Standard RM:
750, 1000, 1250, 1500, 2000 mm

Door Header
B69.55.010
RM ....
**Partition Method**

**Single Swing Door**
Consisting of: Profile mk 2040.40, Tension Plugs, Door Stops, Handles, Hinges and and either an external Double Bit or Cylinder Lock. Paneling materials can be seen on pages 60-65. Please indicate lock type when specifying door.

Special versions available with: Latches, Cam Locks, Profile cylinders and T- or Lever Handle Locks.

- **Standard RM:** 750, 1000, 1250 mm
- **Fencing max.** 1000 mm

**Single Swing Door**
- DIN-right
- B69.60.001
- RM ....
- H1 ....
- DIN-left
- B69.60.002
- RM ....
- H1 ....

**Standard H1:** 1800 mm

**Double Swing Door**
Double Doors include upper and lower slide latches. Accessories can be found on pages 66-70.

- **Standard RM:** 1500, 2000 mm
- **Double Swing Door**
- DIN-right
- B69.60.005
- RM ....
- H1 ....
- DIN-left
- B69.60.006
- RM ....
- H1 ....

**Standard RM:**
- **1500, 2000 mm**

**Double Swing Door with horizontal brace**
- DIN-right
- B69.60.003
- RM ....
- H1 ....
- DIN-left
- B69.60.004
- RM ....
- H1 ....
Guarding

Partition Method

Sliding Doors

When selecting sliding doors, two types are available:
- Sliding Doors B
- Sliding Doors C

The Sliding Door Frame, in combination with Sliding Doors of type C, is the model of a precise and aesthetically pleasing high-quality sliding door. It is also possible, through a slight redesign, to include windows or other access panels within the doors themselves.

---

1. Partition with horizontal brace/Metal/Polycarbonate
2. Single Sliding Door with horizontal brace/Metal/Polycarbonate
3. Partition with horizontal brace/Metal/Polycarbonate Slider
4. Partition single/Fencing
5. Double Sliding Door/Fencing
Partition Method

Sliding Door Frame
consisting of: Profile mk 2040.40, Tension Plugs, Screws, Nuts and Floor Mounting Backets.
The Single Sliding Door Frame is used for Sliding Doors DIN-Right and DIN-Left.

AM = Outside dimension
RM = Reference dimension
SH = Height of sliding door

Standard H: 2060 mm

The following standard components are combined using the Door Header, when manufacturing Sliding Door Frames: Sliding Door: Post (less angles) B69.65.000 and a simple Partition B69.51.001 Double Sliding Door: 2 x Partition B69.51.001.
Guarding

Partition Method

Sliding Doors B

Standard RM: 750, 1000, 1250 mm
Fencing max. 1000 mm

Single Sliding Door
......-lock

DIN-right
B69.61.007
RM ....
H1 ....

DIN-left
B69.61.008
RM ....
H1 ....

Standard RM: 750, 1000 mm
Double Sliding Door
.....-lock

B69.61.011
RM ....
H1 ....

Standard RM: 750, 1000 mm
Double Sliding Door
with horizontal brace
.....-lock

B69.61.012
RM ....
H1 ....

Standard RM: 750, 1000, 1250 mm
Single Sliding Door
with horizontal brace
.....-lock

DIN-right
B69.61.009
RM ....
H1 ....

DIN-left
B69.61.010
RM ....
H1 ....
Hardware
Sliding Doors B

A cost-effective alternative to Sliding Doors C, the hardware for Sliding Doors B has the additional advantage of being easily assembled. The flanged Roller Assembly guides the door along the upper Profile T-slot. Once properly installed, the door is designed to be non-removable.

Guide for Sliding Door
19.00.0005
Plastic, black

Roller Assembly B68.11.003 for Sliding Door
consisting of: Plate, Roller, Bolt, Washer, Flanged Button-Head Screw and Nut.

Locks see page 69
Guarding

Partition Method

Sliding Doors C

Standard RM: 750, 1000, 1250 mm
Fencing
max. 1000 mm

Single Sliding Door
......-lock

DIN-right
B69.61.015
RM ....
H1 ....

DIN-left
B69.61.016
RM ....
H1 ....

Standard RM: 750, 1000 mm
Double Sliding Door
......-lock

B69.61.019
RM ....
H1 ....

Standard RM: 750, 1000 mm
Double Sliding Door
with horizontal brace
......-lock

B69.61.020
RM ....
H1 ....
Partition Method

Hardware Sliding Doors C

The C-guide consisting of Profile mk 2245 offers the advantages of a closed track. The lower guide engages the T-slot to keep the sliding door properly positioned. Maximum track length is 5100 mm.

Mounting Hardware for Sliding Doors

Single Sliding Door
B68.11.005 L ....

Double Sliding Door
B68.11.006 L ....

consisting of: Track, Roller Assembly, Stop and End Cap

Guide for Sliding Door
19.00.0005
Plastic, black

Locks see page 69
Guarding

Vertical Door

consisting of: Profile mk 2040.40, Tension Plugs, Floor Mounting Backets, Handle, Wear Strips, Pulleys and Counterweights. Manually operated – balanced using the Counterweights. Pneumatic, hydraulic or electromechanical operation possible on request. Paneling material (Fillers) can be found on pages 60-65.

Standard RM:
750, 1000, 1250 mm
Scissor Door

consisting of: Profile mk 2040.40, mk 2040.41, Tension Plugs, Floor Mounting Brackets, Handles, Wear Strips, Pulleys, Wire Rope and hardware. Manually operated – balanced through the scissor action of the equally weighted doors. Pneumatic, hydraulic or electromechanical operation possible on request. Paneling material (Fillers) can be found on pages 60-65.

Standard RM:
750, 1000, 1250 mm
Paneling

Guarding

Swing Doors

A standard Access Door may be all you need where safety or security is not required. Our Ball Latch ensures a quick and secure closure of the door within the profile frame. Please note that this is not a safety door. For safety doors, use either a door lock and/or electronic interlock switch. Paneling material (Fillers) can be found on pages 60-65. Safety Accessories see pages 71-73.
Swing Doors

Standard Door with Door Lock. An alternative to the Access Door, the Swing Door uses a Profile Cylinder Lock instead of a ball latch. Paneling material (Fillers) can be found on pages 60-65. Safety Accessories see pages 71-73.
Guarding

Paneling

Double Door

consisting of: Profile mk 2040.40, Hinges, Handles, Latches, Paneling, Seal Strip and attachment hardware. Paneling materials (fillers) can be found on pages 60-65.

Machining patterns for the Profile Cylinder Lock

LM max. = 1200 mm
LH max. = 1800 mm
Paneling

Slider

consisting of: Profile mk 2240, Profile mk 2207, PE-Tubing, 6 mm Polycarbonate or Alucobond panels, handles, attachment hardware and push-bolt lock. Both sliding elements can be installed or removed in the open position. In the closed position they are locked using a push-bolt lock and are simultaneously secured against dismantling by locking pins within the slider profiles.

Flanged Button Head Screw M6x12 K112010012, 10.9 Zn black
Flat Head Screw M4x12 D7991412
Nut 1 M4 34.08.0001, Steel Zn
Hex Nut M6 D09346, 8 Zn

Push-bolt lock K117050015
Handle K110000021, Plastic PP

LM max. = 1200 mm
LH max. = 1000 mm
Guarding

Paneling

Bifold door

consisting of:
Profile mk 2040.40, Handles, Seal Strip and attachment hardware. Paneling material (Fillers) can be found on pages 60-65.

Bifold door
Acrylic
B69.91.004
LM ....
LH ....

Bifold door
Polycarbonate
B69.91.005
LM ....
LH ....

LM max. = 1200 mm
LH max. = 1000 mm
## Paneling Material and Cuts

<table>
<thead>
<tr>
<th>Material</th>
<th>Color</th>
<th>Sheet Size</th>
<th>Thickness</th>
<th>Ident-No. Material</th>
<th>Ident-No. Cut 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acrylic</td>
<td>clear</td>
<td>3050 x 2050 mm</td>
<td>4 mm</td>
<td>K01D211004</td>
<td>50.15.6014</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3050 x 2050 mm</td>
<td>5 mm</td>
<td>K01D211005</td>
<td>50.15.6000</td>
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<tr>
<td></td>
<td></td>
<td>3050 x 2050 mm</td>
<td>6 mm</td>
<td>K01D211006</td>
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<td>4’ x 8’</td>
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<td>P90.05.001</td>
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<td>Polycarbonate</td>
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<td>K01B211004</td>
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<td>3050 x 2050 mm</td>
<td>5 mm</td>
<td>K01B211005</td>
<td>50.15.6002</td>
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<td>K01B211006</td>
<td>50.15.6003</td>
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<tr>
<td></td>
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<td>4’ x 8’</td>
<td>1/4”</td>
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<td>5 mm</td>
<td>K01B231005</td>
<td>50.15.6002</td>
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<td></td>
<td>3050 x 2050 mm</td>
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<td>K01B231006</td>
<td>50.15.6003</td>
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<td>4’ x 8’</td>
<td>1/4”</td>
<td>P90.03.003</td>
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</tr>
<tr>
<td>PETG</td>
<td>clear</td>
<td>3050 x 2050 mm</td>
<td>5 mm</td>
<td>K01P211005</td>
<td>50.15.6019</td>
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<tr>
<td></td>
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<td>3050 x 2050 mm</td>
<td>6 mm</td>
<td>K01P211006</td>
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<tr>
<td>Fencing Alu</td>
<td></td>
<td>3000 x 2000 mm</td>
<td>40x40x4 mm</td>
<td>K00315122.40</td>
<td>24.00.0000</td>
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<td>Fencing Steel</td>
<td>zinc plated</td>
<td>3000 x 2000 mm</td>
<td>40x40x4 mm</td>
<td>K00128222.40</td>
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<tr>
<td>Trespa</td>
<td>silver</td>
<td>5’ x 10’</td>
<td>1/4”</td>
<td>P90.08.001</td>
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</tr>
</tbody>
</table>

1) not in USA. 2) only in USA. \* width and height in mm.
### Paneling and Accessories

#### Paneling Material and Cuts

<table>
<thead>
<tr>
<th>Material</th>
<th>Color</th>
<th>Sheet Size</th>
<th>Thickness</th>
<th>Ident-No. Material</th>
<th>Ident-No. Cut 1)</th>
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<td>4' x 8'</td>
<td>1/2&quot;x1/2&quot;, 16 Ga.</td>
<td>P90.00.009</td>
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</tr>
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<td>yellow</td>
<td>4' x 8'</td>
<td>1&quot;x1&quot;, 12 Ga.</td>
<td>P90.00.008</td>
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<td>1/2&quot;x1/2&quot;, 16 Ga.</td>
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<td>Alucobond</td>
<td>silver anod.</td>
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<td>4 mm</td>
<td>K00316222000</td>
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<td></td>
<td>4 / 2,5 mm gefalzt</td>
<td></td>
<td>50.15.3005</td>
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<tr>
<td></td>
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<td>2500 x 1250 mm</td>
<td>6 mm</td>
<td>K00316222006</td>
<td>50.15.4002</td>
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<td>white</td>
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<td>2 mm</td>
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<td>Steel</td>
<td>zinc plated</td>
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<td>1,5 mm</td>
<td>K0011211150</td>
<td>07.28. .... ....*</td>
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<td></td>
<td>painted</td>
<td>2000 x 1000 mm</td>
<td>1,5 mm</td>
<td>K00112131150</td>
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<td>Stainless</td>
<td>polished</td>
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<td>1,5 mm, 20 Ga.</td>
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<td>07.29. .... ....*</td>
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<td>Steel</td>
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<td>P57.01.000</td>
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<td>1,5 mm</td>
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<td>07.30. .... ....*</td>
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<td>2000 x 1000 mm</td>
<td>2 mm</td>
<td>K00305321200</td>
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<td>1/4&quot;</td>
<td>P90.07.001</td>
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<td>1/4&quot;</td>
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<td>Alumalite</td>
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<td>1/4&quot;</td>
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#### Sizing

<table>
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<th>Installed using</th>
<th>Width</th>
<th>Height</th>
<th>Installed using</th>
<th>Width</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seal Strip</td>
<td>LM+20 mm</td>
<td>LH+20 mm</td>
<td>Angle</td>
<td>LM</td>
<td>LH</td>
</tr>
<tr>
<td>Panel Clamp</td>
<td>LM-31 mm</td>
<td>LH-31 mm</td>
<td>Fencing w. Clamp Profile</td>
<td>LM+10 mm</td>
<td>LH+10 mm</td>
</tr>
<tr>
<td>Panel Block</td>
<td>LM</td>
<td>LH</td>
<td>Fencing</td>
<td>LM+20 mm</td>
<td>LH+20 mm</td>
</tr>
</tbody>
</table>

1) not in USA. 2) only in USA. .... ....* width and height in mm.
Paneling with Seal Strips
(LM+20 mm, LH+20 mm)

- Alucobond silver anodized (E6/EV1)
  - 4 mm: B69.90.501
  - 6 mm: B69.90.502

- Acrylic clear
  - 5 mm: B69.90.101
  - 6 mm: B69.90.102

- Polycarbonate clear or gray tint
  - 4 mm: B69.90.201
  - 5 mm: B69.90.202
  - 6 mm: B69.90.203

- Steel painted RAL
  - 1.5 mm: B69.90.301
  - 2 mm: B69.90.302

- Stainless Steel
  - 1.5 mm: B69.90.303
  - 2 mm: B69.90.304

- Aluminum, anodized
  - 1.5 mm: B69.90.401
  - 2 mm: B69.90.402

Other materials available on request.

Paneling with Angles
(LM, LH)

- Steel painted RAL
  - 1.5 mm: B69.90.311
    max length to 1200 mm
  - 2 mm: B69.90.312
    max length over 1200 mm with additional Panel Blocks mk 2552.
Paneling with Panel Blocks
(LM, LH)

Polycarbonate clear or gray tint
5 mm  B69.90.206  LM ....  LH ....
6 mm  B69.90.207  LM ....  LH ....

Other materials available on request.

Paneling with Panel Clamps
(LM-31 mm, LH-31 mm)

Acrylic clear
5 mm  B69.90.103  LM ....  LH ....
6 mm  B69.90.104  LM ....  LH ....

Polycarbonate clear or gray tint
5 mm  B69.90.204  LM ....  LH ....
6 mm  B69.90.205  LM ....  LH ....

Other materials available on request.
Paneling with Fencing
(LM+23 mm, LH+23 mm)

Fencing
Al 40x40x4 mm
B69.90.001 LM .... LH ....

Steel Zn 40x40x4 mm
B69.90.002 LM .... LH ....

Paneling with Closure Strip
(LM-22 mm, LH-22 mm)

Polycarbonate clear or gray tint
4 mm B69.90.701 LM .... LH ....
6 mm B69.90.702 LM .... LH ....

Acrylic clear
5 mm B69.90.710 LM .... LH ....
6 mm B69.90.711 LM .... LH ....

Steel painted RAL ........
2 mm B69.90.720 LM .... LH ....
Paneling with Fencing

(LM+20 mm, LH+20 mm)

Fencing black powder coated

Fencing 40x40x4 mm (Steel)
24.05. LM .... LH ....

Fencing complete with Fence Clips
B69.90.003 LM .... LH ....

*RM = Centerline of Posts
Guarding

Accessories

**Angle attachments**

for profile frames to upright posts.

- **Angle B20/40**
  - Stock number: 82.05.0026

- **Angle F40/R**
  - Stock number: 82.40.0805

**Profiles for paneling**

for fix the paneling within the profile.

- **Profile mk 2040.60**
  - Stock number: 54.60. ....*
  - Weight: 0.30 kg/m
  - Material: AlMgSi 0.5 F25
  - Section area: 112.52 mm²

- **Profile mk 2220**
  - Stock number: 52.20. ....*
  - Weight: 0.30 kg/m
  - Material: AlMgSi 0.5 F25
  - Section area: 112.52 mm²

**Parallel connections**

between neighboring profiles and/or frames.

- **Parallel Plate**
  - Stock number: 50.05.0053

- **Parallel Plate**
  - Stock number: 50.05.0070

**Closure Strip**

**mk 3034** black

EPDM

Stock length 200 m

for paneling 2-8 mm
Accessories

Paneling components
Panel Clamps, designed for use with 5-8 mm thick panels, are placed into the T-slots of the assembled frame. If attaching paneling material to angles, the Panel Block should be used as an additional support on sides with lengths of over 600 mm.

Panel Clamp B34.01.001
Panel Block mk 2552
Fence Clip mk 2544
Fence Clamp 30.00.0117

Corner Clip 14.00.0004
for fencing

Seal Strip mk 3020 black
EPDM
Stock length 300 m
for paneling 4-5 mm

Seal Strip mk 3021 black
EPDM
Stock length 200 m
for paneling 1,5-3 mm

Seal Strip mk 3033 black
EPDM
Stock length 200 m
for paneling 6 mm

Seal Strip mk 3021 black
EPDM
Stock length 200 m
for paneling 1,5-3 mm
Guarding

Accessories

**Hinges**

- Hinge 40-1/40-1
  - B46.01.010
  - complete

- Hinge 40-1/40-7/40-1
  - B46.01.030
  - complete

**Ball Latch**

- B68.02.101 for door gap of 5 mm, complete
- B68.02.102 for door gap of 24 mm, complete

- Nut 1, M6
  - 34.02.0008, Steel Zn
- Flat Head Screw M6x12
  - D7991612
- SHCS M6x12
  - D0912612
- Ribbed Washer ø 6.4
  - K111010016, Steel Zn

**Door Stop**

- Door Stop for Swinging Doors (w. 5 mm gap)
  - 22.90.0035
  - Plastic PE

- Door Stop for Swinging Doors (w. 24 mm gap)
  - 22.92.0035
  - Plastic PE

**Handle**

- SHCS M8x16
  - D0912820
- Nut 1, M8
  - 34.01.0001, Steel Zn

- Handle for Profile attachment
  - K110000009
  - Plastic PA
**Accessories**

**External Lock**
Mounted to door profile T-slot. The gap between the door and frame must be 24 mm. For Sliding Doors, please order Catch B68.06.005 or B68.02.007 separately.

- External Double-Bit Lock
  - DIN-right B68.02.017
  - DIN-left B68.02.018
- External Cylinder Lock
  - DIN-right B68.02.019
  - DIN-left B68.02.020

**Internal Locks**
Installed within door frame profile. The gap between the door and frame must be 5 mm.

- Cylinder Lock complete as shown, plus key
  - B68.02.051
- Cylinder K117055000
- Keeper
  - mk 2533
  - PA 30 % GFK

**Profile machining pattern for Internal Lock**
Guarding

Accessories

**Upper Slide Bolt**
To securely latch swing doors to upper framing members, use the Upper Slide Bolt and Guide Angle.

**Lower Slide Bolt**
A thread must be made in the vertical brace for fixing the slide bolt for locking swing doors on the ground. The Lower Slide Bolt is designed for use with doors featuring a maximum 200 mm sweep clearance.
Safety Interlocks

The safety interlock is suitable for use with swing doors which must be closed to ensure the required operational safety.

Standards: IEC 60947-5-1/
DIN EN 60947-5-1/
DIN VDE 0660-200;
DIN EN 1088;
BG-GS-ET-15

Rating: IP 65 per IEC 60529/
DIN EN 60529/
DIN VDE 0470-1

Contacts: 1 NO & 1 NC

Contact Rating $I_e/U_e$: 2,5 A/230 VAC;
2 A 250 VAC;
1A/24 VDC

Short Circuit Protect: 2A (slow blow fuse)

Mech. Life: > $10^6$ operations

Note: Actual switch availability may vary according to local and international safety and electrical standards. Although dimensionally identical, please inquire as to normally available ratings.

Flat Head Screw M6x16
D7991616

Nut 1M6
34.02.0008, Steel Zn

Hinged-Safety Interlock
ETVS400-12/B-M20
K370000030
Guarding

Safety Accessories

Safety Interlocks

The safety interlock with separate actuation is suitable for sliding or swinging doors, and in particular for removable guarding sections which must be locked to ensure the required operational safety.

Standards:

IEC 60947-5-1/
DIN EN 60947-5-1/
DIN VDE 0660-200;
BG-GS-ET-15

Rating:

IP 67 per IEC 60529/
DIN EN 60529/
DIN VDE 0470-1

Contacts:

1 NO & 1 NC

Actuator:

straight link made of stainless steel and magnetic clamp

Contact Rating Ie/Ue:

4 A/230 VAC;
2,5 A/400 VAC;
1 A/500 VAC

Short Circuit Protect.:

6 A (time-delay fuse)

Holding Force:

30 N

Mech. Life:

> $10^6$ operations

Note: Actual switch availability may vary according to local and international safety and electrical standards. Although dimensionally identical, please inquire as to normally available ratings.

Actuating Key
AZ15/16-B1-1747
K370000011

Safety Interlocks
AZ 16 zvrk – M16
K3700000010
Safety Accessories

Mounting for Safety Interlocks
The safety switch mounting kit can be used for swing doors with either a 5 or 24 mm gap.

Mounting Set for Safety Interlocks on Swing Doors, complete
B16.03.001
Plate Al tumbled

Mounting Set for Safety Interlocks on Sliding Doors, complete
B16.03.002
Plate Al tumbled

Solenoid Latching
The solenoid latching ensures that sliding and swing doors, as well as removable guarding sections cannot be opened until all potentially hazardous operations have ceased.

Solenoid Latch
AZM 161 SK-12/12rk-024M16
K370000020

Actuator Key
AZM 161-B1
K370000021

Mounting kit for solenoid latch on swing doors, complete (without safety interlocks)
B16.03.003
Plate Al tumbled

Standards:
IEC 60947-5-1/
DIN EN 60947-5-1/
DIN VDE 0660-200;
DIN EN 1088; BG-GS-ET-19

Rating:
IP 65 nach IEC 60529/
DIN EN 60529/
DIN VDE 0470-1

Contacts: 2 NO & 4 NC

Actuating Key: Stainless steel 1.4301

Contact Rating $I_e/U_e$: 2 A/230 V

Short Circuit Protect.: 6 A (time-delay fuse)

Solenoid Locking Force: 2000 N

Mech. Life: $> 10^x$ operations

Solenoid-supply voltage $U_s$: 24 VAC/VDC
(others available)
To properly safeguard your area or equipment, please consider the following order example.

- Create the machine or plant layout or use our 3D configurator.
- Draw in the guarding outline, considering the safety distances and hazard zones shown in illustrations A and B on page 19.
- Lay in the locations of required swing, sliding and/or vertical doors.
- Fully dimension the guard and individual elements. If possible, use our standard reference dimensions. Confirm dimensions are complete and accurate.

- Identify the position the individual components using sequential numbering.
- Sketch the side views as they are to be installed, so that possible digressions from standard can be confirmed and identified.
- List the individual elements of the guard in the form of a parts list. For elements requiring paneling materials, panels and doors for example, enter their respective Ident-Numbers in the correct position (1,2) as identified on their respective pages.
- We would be pleased to assist you.
Order Example for manual order

<table>
<thead>
<tr>
<th>Ref Nr.</th>
<th>Qty.</th>
<th>Description</th>
<th>Ident-Nr.</th>
<th>RM</th>
<th>Height 1</th>
<th>Paneling 1 Description</th>
<th>Ident-Nr.</th>
<th>Paneling 2 Description</th>
<th>Ident-Nr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Sliding Door Frame double</td>
<td>B69.55.004</td>
<td>750</td>
<td>2060</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>Simple Panel</td>
<td>B69.50.001</td>
<td>750</td>
<td>1800</td>
<td>Fencing 40x40x4</td>
<td>B69.90.003</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>Double Sliding Door with Double Bit Lock</td>
<td>B69.61.005</td>
<td>750</td>
<td>1800</td>
<td>Polycarbonate 6mm clear</td>
<td>B69.90.203</td>
<td>Polycarbonate 6mm clear</td>
<td>B69.90.203</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>see Pos. 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>5</td>
<td></td>
<td>see Pos. 2</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>Vertical Door</td>
<td>B69.62.001</td>
<td>1000</td>
<td>3000</td>
<td>Fencing 40x40x4</td>
<td>B69.90.003</td>
<td>Fencing 40x40x4</td>
<td>B69.90.003</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>Simple Panel</td>
<td>B69.50.001</td>
<td>1000</td>
<td>920</td>
<td>Fencing 40x40x4</td>
<td>B69.90.003</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>5</td>
<td>Post 2</td>
<td>B69.65.002</td>
<td></td>
<td>2060</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

RM = Reference dimension
Guarding

Application Examples

Guarding with sliding scissor door, motor-driven

Custom guarding for conveyor segments
Machine guarding with vertically swinging door actuated by gas springs

Bifold door within post-panel system

Guarding with customer-specific perforated sheet metal panels

Custom guarding with vertically swinging doors actuated by gas springs
Guarding

Application Examples

Standard guarding
(Post-Panel Method)

Guarding for production machinery
Telescoping guarding on rollers
Vertical door elements with counterweights

Guarding with fencing paneling
Scanner cabin with double swing door
Workstations
<table>
<thead>
<tr>
<th>Contents Workstations</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial Workstations</td>
<td>82</td>
</tr>
<tr>
<td>Information about Industrial Workstations</td>
<td>82</td>
</tr>
<tr>
<td>Standards, Connections and Attachments</td>
<td>84</td>
</tr>
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<td>Telescoping Legs</td>
<td>87</td>
</tr>
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<td>Workstations</td>
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<td>Worksurfaces</td>
<td>92</td>
</tr>
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<td>Paneling</td>
<td>93</td>
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<td>Risers</td>
<td>94</td>
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<tr>
<td>Shelving</td>
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<td>Pneumatic Outlets</td>
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<td>Electric Outlets and Lighting</td>
<td>101</td>
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<tr>
<td>Accessories Workstations</td>
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<td>Order Example</td>
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</tr>
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<td>Office Workplaces</td>
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</tr>
<tr>
<td>Information about Office Workplaces</td>
<td>118</td>
</tr>
<tr>
<td>Worksurfaces, Table frames, Legs and File Cabinets</td>
<td>120</td>
</tr>
<tr>
<td>Application Examples</td>
<td>122</td>
</tr>
</tbody>
</table>
Information about Industrial Workstations

Advantages of
mkIndustrial Workstations

- mk’s extensive know-how regarding customer-specific workstations and workplaces ensures a standardized and modular product range for individual design according to specific work tasks. Useful modules make the planning and design easier.

- mk offers workstation systems which adapt to people and not the other way around.

- If production conditions change, simple and economical adjustment to the new application can be achieved smoothly and cost-effectively.

- mk always follows the basic philosophy of “form follows function” in its product development. This is expressed by elegant shapes, timelessness and attractive appearance.

- Consistent, logical system manufacture made of compatible elements, high quality materials and workmanship and above all a high degree of practical, beneficial use ensure economic efficiency for the long term.

- We would be pleased to assist you.
Ergonomics and mk Industrial Workstations

The word Ergonomics is a combination of the Greek words Ergon = work and Nomos = law. Our workstations are designed to provide a balance between human well-being and performance. It is a known fact that the ergonomically ideal layout of workstations and workplaces not only stimulates the efficient manufacture of products in general, yet also has direct benefits with respect to reducing the psychological demands placed on employees. When properly designed, workstations are built around normal and comfortable human body movement rather than subject it to forced positions. It also has a positive influence on the well-being of the individual with respect to their work and to their company. Statistically, a disregard of ergonomic principles when designing workstations has been shown to result in reduced performance of between 5 %- 20 %, due to back and neck pain alone.
Standards and Practices

mk has used the following Standards and Practices as a basis for its designs:

- BGI 523; Person and workplace
- DIN 31000/A1; VDE 1000/A1; general principals for safe design of technical products
- DIN EN 527-1/-2/-3; Office furniture, office and work desks
- DIN EN 894-1/-2/-3; Safety of machinery – Ergonomic requirements for the design of displays and control actuators
- DIN EN ISO 6385; Ergonomic principles in the design of work systems
- DIN EN ISO 10075-1/-2/-3; Ergonomic principles related to mental work-load
- DIN VDE 0100-410; VDE 0100-410; Construction of low-voltage power systems, protective measures – protection against electric shock

Electricity and Grounding

If workplaces are electrified (i.e. lighting, electrical outlets, etc.), DIN VDE 0100-410 requires that all conductive elements of the workplace must be connected via a common ground, so that the workplace remains safe in the case of an electrical short.

As a rule, mk uses a grounding method in all its standard workstation systems which is applied whether the workstation has electrical components or not. Connecting angles using our PE-Nuts, this grounding is accomplished without the use of additional wires. This means that in the case of later electric additions, that only the electrical grounding must be connected with the workplace.

Angle connection with PE-Nuts

The nut is stamped to include protrusions which break through the anodized surface of the profile. This provides conductivity through the screw and thus ensures grounding of the connection.

Common Grounding

A defined grounding location of an mk workplace for attachment to a common ground.
Standards, Connections and Attachments

**Worksurface attachment**

mk offers various methods within the standard program whereby a worksurface can be attached to the framing.

**Worksurface**

- Clamp 26.00.0052, Al
- Wood Screw ø 5x30 K112510040

**Leveling Pad attachment**

Floor level variations of up to 30 mm can be compensated for with the Floor Leveling Screw. This is available standard on all mk System Workplaces.

**Pad Block M10 67.00.0002, Al**
- Floor Leveling Screw M10 K110060003, Plastic/Steel
- Ribbed Washer ø 8.4 K111010017, Steel Zn
- SHCS M8x25 D0912825, Steel Zn

**Angle connections**

Angles are available either with or without key steps. Keyed angles offer the advantage of preventing profile twisting while easily achieving a flush connection.

**Nut 1 PE M8 34.01.0018**
- Angle E40 82.40.0702, Al
- Ribbed Washer ø 8.4 K111010017, Steel Zn
- SHCS M8x16 D0912816
Industrial Workstations
Telescoping Legs

Telescoping Profiles for manual height adjustment

- Profile mk 2040.75 and mk 2040.01
- Profile mk 2040.74 and mk 2040.01

SHCS M8x16, D0912816
Ribbed Washer ø 8.4, K111010017, Steel Zn
Nut 1 PE M8 34.01.0018

Guide mk 2538, PPN 1060
Ribbed Washer ø 5.3, K111010015, Steel Zn
SHCS M5x16, D0912516

Telescoping Profiles for electric height adjustment

- Profile mk 2040.75 and mk 2040.01
- Profile mk 2040.74 and mk 2040.01

SHCS M8x16, D0912816
Attachment Plate (lower) left 50.09.0070 right 50.09.0071
Nut 1 PE M8 34.01.0018

SHCS M8x16, D0912816
Attachment Plate (upper)
left 50.09.0070 right 50.09.0071
Nut 1 PE M8 34.01.0018
Industrial Workstations

Workstations

Fixed height
Manufactured using our Series 40 Profiles, mk fixed height workstation frames are designed using an extremely rigid desk construction. The standard dimensions shown reflect their suitability as either standing or seated workplaces. Naturally customer-specific dimensions are no problem, although the standard program has taken relevant ergonomic standards into consideration. The light and heavy versions differ primarily in the worksurface size and placement as well as the profiles used for framing.

A selection of various worksurfaces and paneling is shown on the following pages.

Workstation C1 light B02.13.030
Load capacities

<table>
<thead>
<tr>
<th>Load type</th>
<th>Surface load</th>
<th>Point load</th>
</tr>
</thead>
<tbody>
<tr>
<td>Static load</td>
<td>2000 N (450 lbs)</td>
<td>1200 N (270 lbs)</td>
</tr>
</tbody>
</table>

Standard dimensions (mm)

<table>
<thead>
<tr>
<th>Standard height H</th>
<th>Standard depth T</th>
<th>Standard width B</th>
</tr>
</thead>
<tbody>
<tr>
<td>850</td>
<td>600</td>
<td>1200</td>
</tr>
<tr>
<td>1050</td>
<td>750</td>
<td>1400</td>
</tr>
</tbody>
</table>

Other dimensions possible

Workstation E1 heavy B02.13.050
Load capacities

<table>
<thead>
<tr>
<th>Load type</th>
<th>Surface load</th>
<th>Point load</th>
</tr>
</thead>
<tbody>
<tr>
<td>Static load</td>
<td>4000 N (900 lbs)</td>
<td>2400 N (540 lbs)</td>
</tr>
</tbody>
</table>

Standard dimensions (mm)

<table>
<thead>
<tr>
<th>Standard height H</th>
<th>Standard depth T</th>
<th>Standard width B</th>
</tr>
</thead>
<tbody>
<tr>
<td>850</td>
<td>600</td>
<td>1200</td>
</tr>
<tr>
<td>1050</td>
<td>750</td>
<td>1400</td>
</tr>
</tbody>
</table>

Other dimensions possible
Workstations

Manual height adjustment
Manufactured using our Series 40 Profiles, mk height adjustable workstation frames are designed using an extremely rigid desk construction. The method of height adjustment is accomplished using screws to hold telescoping profiles. The adjustment of the work height is easily accomplished while maintaining high workstation rigidity and load capacity. The light and heavy versions differ primarily in the worksurface size and placement as well as the profiles used for framing.

A selection of various worksurfaces and paneling is shown on the following pages.

Workstation D1 light B02.13.040
Load capacities

<table>
<thead>
<tr>
<th>Load type</th>
<th>Surface load</th>
<th>Point load</th>
</tr>
</thead>
<tbody>
<tr>
<td>Static load</td>
<td>2000 N (450 lbs)</td>
<td>1200 N (270 lbs)</td>
</tr>
</tbody>
</table>

Standard dimensions (mm)

<table>
<thead>
<tr>
<th>Standard height H</th>
<th>Standard depth T</th>
<th>Standard width B</th>
</tr>
</thead>
<tbody>
<tr>
<td>680 to 1070</td>
<td>600</td>
<td>1200</td>
</tr>
<tr>
<td>as of H = 900 mm</td>
<td>750</td>
<td>1400</td>
</tr>
<tr>
<td>with additional brace</td>
<td>750</td>
<td>1600</td>
</tr>
<tr>
<td>Other dimensions possible</td>
<td>1600</td>
<td></td>
</tr>
</tbody>
</table>

Workstation F1 heavy B02.13.060
Load capacities

<table>
<thead>
<tr>
<th>Load type</th>
<th>Surface load</th>
<th>Point load</th>
</tr>
</thead>
<tbody>
<tr>
<td>Static load</td>
<td>2500 N (562 lbs)</td>
<td>1500 N (337 lbs)</td>
</tr>
</tbody>
</table>

Standard dimensions (mm)

<table>
<thead>
<tr>
<th>Standard height H</th>
<th>Standard depth T</th>
<th>Standard width B</th>
</tr>
</thead>
<tbody>
<tr>
<td>680 to 1070</td>
<td>600</td>
<td>1200</td>
</tr>
<tr>
<td>as of H = 900 mm</td>
<td>750</td>
<td>1400</td>
</tr>
<tr>
<td>with additional brace</td>
<td>750</td>
<td>1600</td>
</tr>
<tr>
<td>Other dimensions possible</td>
<td>1600</td>
<td></td>
</tr>
</tbody>
</table>
Industrial Workstations

Workstations

Manual, hydraulic height adjustment with crank
Manufactured using our Series 40 Profiles, mk height adjustable workstation frames are designed using an extremely rigid desk construction. The height adjustment of this workstation style is accomplished using a hand crank to drive telescoping profiles with the appropriate wear strips. The surface elevation can be quickly changed to accommodate different operators or products. A change between seated and standing positions can also be realized. The torque requirement of appx. 6 Nm (53 in-lbs) falls within the range of ergonomic design guidelines for manual operation as outlined in DIN 33401. A selection of various worksurfaces and paneling is shown on the following pages.

Workstation D4 light  
B02.13.043

Load capacities

<table>
<thead>
<tr>
<th>Load type</th>
<th>Surface load</th>
<th>Point load</th>
</tr>
</thead>
<tbody>
<tr>
<td>Static load</td>
<td>2000 N (450 lbs)</td>
<td>1200 N (270 lbs)</td>
</tr>
<tr>
<td>Dynamic load</td>
<td>1600 N (360 lbs)</td>
<td>1000 N (225 lbs)</td>
</tr>
</tbody>
</table>

Standard dimensions (mm)

<table>
<thead>
<tr>
<th>Standard height H</th>
<th>Standard depth T</th>
<th>Standard width B</th>
</tr>
</thead>
<tbody>
<tr>
<td>680 to 1070</td>
<td>600</td>
<td>1200</td>
</tr>
<tr>
<td>as of H = 900 mm</td>
<td>750</td>
<td>1400</td>
</tr>
<tr>
<td>with additional brace</td>
<td>1600</td>
<td></td>
</tr>
</tbody>
</table>

Other dimensions possible

Workstation F4 heavy  
B02.13.063

Load capacities

<table>
<thead>
<tr>
<th>Load type</th>
<th>Surface load</th>
<th>Point load</th>
</tr>
</thead>
<tbody>
<tr>
<td>Static load</td>
<td>2800 N (630 lbs)</td>
<td>1600 N (360 lbs)</td>
</tr>
<tr>
<td>Dynamic load</td>
<td>1600 N (360 lbs)</td>
<td>1200 N (270 lbs)</td>
</tr>
</tbody>
</table>

Standard dimensions (mm)

<table>
<thead>
<tr>
<th>Standard height H</th>
<th>Standard depth T</th>
<th>Standard width B</th>
</tr>
</thead>
<tbody>
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<tr>
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<td>750</td>
<td>1400</td>
</tr>
<tr>
<td>with additional brace</td>
<td>1600</td>
<td></td>
</tr>
</tbody>
</table>

Other dimensions possible
Workstations

Electric, hydraulic height adjustment

The workstation with electric and hydraulic height adjustment includes the same ergonomic features as described in the workstation with manual height adjustment. Height adjustment is accomplished using a keypad which features digital height display and four memory functions. A selection of various worksurfaces and paneling is shown on the following pages.

Technical Data

- Travel speed: \( v = 10 \, \text{mm/s} \)
- Voltage/Frequency:
  - Europe: 230 V/50 Hz
  - (North America): (115 V/60 Hz)
- Operating voltage (secondary): 29 V DC
- Construction: IP30/II
- Comes complete with 3 m cable

Workstation D5 light hydr. B02.13.044

Load capacities

<table>
<thead>
<tr>
<th>Load type</th>
<th>Surface load</th>
<th>Point load</th>
</tr>
</thead>
<tbody>
<tr>
<td>Static load</td>
<td>2000 N (450 lbs)</td>
<td>1200 N (270 lbs)</td>
</tr>
<tr>
<td>Dynamic load</td>
<td>2000 N (450 lbs)</td>
<td>1200 N (270 lbs)</td>
</tr>
</tbody>
</table>

Standard dimensions (mm)

<table>
<thead>
<tr>
<th>Standard height H</th>
<th>Standard depth T</th>
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</tr>
</thead>
<tbody>
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<td>680 to 1070</td>
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<td>750</td>
<td>1400</td>
</tr>
<tr>
<td>with additional brace</td>
<td>1600</td>
<td></td>
</tr>
<tr>
<td>Other dimensions possible</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Workstation F5 heavy hydr. B02.13.064

Load capacities

<table>
<thead>
<tr>
<th>Load type</th>
<th>Surface load</th>
<th>Point load</th>
</tr>
</thead>
<tbody>
<tr>
<td>Static load</td>
<td>2800 N (630 lbs)</td>
<td>1600 N (360 lbs)</td>
</tr>
<tr>
<td>Dynamic load</td>
<td>2000 N (450 lbs)</td>
<td>1200 N (270 lbs)</td>
</tr>
</tbody>
</table>

Standard dimensions (mm)

<table>
<thead>
<tr>
<th>Standard height H</th>
<th>Standard depth T</th>
<th>Standard width B</th>
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</thead>
<tbody>
<tr>
<td>680 to 1070</td>
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<td>1400</td>
</tr>
<tr>
<td>with additional brace</td>
<td>1600</td>
<td></td>
</tr>
<tr>
<td>Other dimensions possible</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Industrial Workstations

Worksurfaces

mk offers a variety of standard worksurface materials with thicknesses of 25 and 40 mm. The workstation frame rigidity, the worksurface material and the product, as well as the friction between the two, are factors to be considered when selecting an appropriate worksurface. Additionally, environmental factors such as humidity and high temperatures can influence this decision. An additional advantage to consider is with the application of heavy workstations with 40 mm worksurfaces. These workstations feature available T-slots which are accessible from the top and sides for the attachment of additional equipment or components.

**Multiplex surface**

<table>
<thead>
<tr>
<th>Thickness</th>
<th>Density (kg/m²)</th>
<th>Ident-Nr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 mm</td>
<td>18.9</td>
<td>50.13.5005</td>
</tr>
<tr>
<td>40 mm</td>
<td>30.0</td>
<td>50.13.5008</td>
</tr>
</tbody>
</table>

Multilayered beechwood, dimensionally stable and free of knots. Level, impregnated and polished natural surface, painted on request.

**Laminated surface**

<table>
<thead>
<tr>
<th>Thickness</th>
<th>Density (kg/m²)</th>
<th>Ident-Nr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>20.6 mm</td>
<td>15.5</td>
<td>50.13.6004</td>
</tr>
<tr>
<td>26.6 mm</td>
<td>20.0</td>
<td>50.13.6005</td>
</tr>
<tr>
<td>39.6 mm</td>
<td>27.2</td>
<td>50.13.6008</td>
</tr>
</tbody>
</table>

Laminated particle board, standard color light gray, black edging with rounded corners. Limited resistance to oil, acid, alkalies and heat. Conductive surfaces available on request.

**Aluminum Plate**

<table>
<thead>
<tr>
<th>Thickness</th>
<th>Ident-Nr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 mm</td>
<td>50.13.0012</td>
</tr>
<tr>
<td>15 mm</td>
<td>50.13.0013</td>
</tr>
<tr>
<td>20 mm</td>
<td>50.13.0014</td>
</tr>
<tr>
<td>25 mm</td>
<td>50.13.0015</td>
</tr>
</tbody>
</table>

**Aluminum Profile Surface (on request)**

Profile worksurfaces used for fixturing with commonly available tools. Surface features T-slots along entire length.

**Customer Specific Surfaces**

On request we can provide you with other surface materials (such as wood with stainless sheeting, UHMW or butcher block, for example).

**Multiplex mounting kit**

Required to fasten 25 mm and 40 mm thick surfaces B02.99.050 consisting of:

- 6 pieces Clamp 26.00.0052
- 12 pieces Wood Screws K112510040

**Laminate mounting kit**

Required to fasten 25 mm and 40 mm thick surfaces B02.99.050 consisting of:

- 6 pieces Clamp 26.00.0052
- 12 pieces Wood Screws K112510040

**Aluminum Plate mounting**

Required to fasten 10 mm and 25 mm thick surfaces B02.99.053 Depending on the material thickness, aluminum plates are attached with Series 40 Angles. For further information, please refer to page 85 or in the mk Profile Technology catalog.

**Important Note:**

Typically the material selection available in North America (United States, Canada and Mexico) will vary from that shown. In addition, thicknesses of material will be the more standard ANSI dimensions. Please inquire prior to ordering.
Paneling

Additional panels may be desired to further enhance the aesthetic appeal of the workstation. Available as sets, these panels are pre-defined for the Workstations C1 and E1 (fixed height), as well as D and F (height adjustable). The sets can be readily installed at a later date. Besides their visual appeal, the panels can increase the structural rigidity of the workstation.

Standard is steel, painted RAL 5015 as shown. Other materials and/or colors are available.

Paneling for mk Workstations with fixed height

Paneling for mk Workstations with adjustable height

<table>
<thead>
<tr>
<th>Workstation</th>
<th>Ident-No. Paneling (set)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1 and E1</td>
<td>B02.20.500</td>
</tr>
<tr>
<td>D and F</td>
<td>B02.20.501</td>
</tr>
</tbody>
</table>
Risers

mk Risers serve as a place to locate various accessories above the worksurface including shelving, electric and pneumatic outlets, etc. The standard version is supplied with a C-channel designed to accept tool holders. This channel features our standard T-slot, whereby lamps can be hung and properly located, for example, without the need for any additional profile. The height of both the Risers and the Outriggers can be freely adjusted. Due to varying load requirements, mk offers both a Light and a Heavy version.
**Risers**

**Riser light**  
Profile mk 2040.01  
**B02.22.001**  
Allowable load  
250 N (56 lbs)  
B = workstation width  
m = 12 kg  
T = 500 mm

**Riser heavy**  
Profile mk 2040.02  
**B02.22.002**  
Allowable load  
500 N (112 lbs)  
B = workstation width  
m = 14 kg  
T = 500 mm

**Shelf**  
Profile mk 2040.01  
**B02.22.003**  
Surface material see  
Worksurfaces on page 92  
B = workstation width  
m = 6 kg  
T = 300 or 400 mm
mk offers three basic standard shelving styles for the placement of bins, tools, test and measurement equipment, or work-specific literature and instruction binders. Basically, the shelving options vary according to their application and orientation. For optimum ergonomic use, the shelves are freely adjustable with respect to their height, depth and incline angle.
Shelving

Steel shelf
**B02.22.260**
- Black powder coated, fully adjustable
- For B = 1400 mm
- m = 8 kg
- $F_s = 800 \text{ N (180 lbs)}$
- $F_p = 500 \text{ N (112 lbs)}$

Profile framed shelf
**B02.22.250**
- Fully adjustable
- For B = 1400 mm
- m = 9 kg
- $F_s = 1600 \text{ N (360 lbs)}$
- $F_p = 1000 \text{ N (225 lbs)}$

Flat shelf
**B02.22.255**
- Fully adjustable
- For B = 1400 mm
- m = 14 kg
- $F_s = 1200 \text{ N (270 lbs)}$
- $F_p = 800 \text{ N (180 lbs)}$

$F_s$ = Surface load
$F_p$ = Point load

Profile mk 2040.22
- As Bin Holder
**B02.22.265**
- For B = 1400 mm
- m = 4.8 kg
Industrial Workstations

Pneumatic Outlets

Series 40 Profile mk 2040.02 serves as the air plenum for pneumatic outlets. This profile offers enormous advantages with respect to the flexibility of placing air inlets, outlets and distributor plates. Air can be drawn anywhere along the 80 mm profile surface and at as many locations as is desired. A variety of plate options are available for the profile ends as well. Please refer to the mk Profile Technology catalog for a complete listing of all available plates. Note that our system is designed for a maximum pressure of 6 bar (90 psi).
**Pneumatic Outlets**

**Pneumatic Parts**

Prior to mounting plates to the profile T-slot, an ø 8.4 mm hole must be drilled at the desired location. For exact hole placement, Drill Fixture B46.03.007 is recommended, or the plates themselves can be used to mark the hole location. An O-ring placed between the profile and the plate serves to seal the connection. Proper O-ring placement is ensured by a groove on the underside of the plate.

**Mounting 1/O-Ring**

- Coupling G1/4" K502050700
- Polyamide Seal G1/4" K502050351
- SHCS M8x25 DIN 6912 D6912825
- Distributor Plate A1 G1/4" 53.00.0352, Al
  
**Mounting 2/End Seal**

- SHCS M8x25 DIN 6912 D6912825
  
**Supplementary Parts**

- G1/2" NPT 1/2" Supply Plate A 53.00.0200, Al
- G1/4" Distributor Plate A1 53.00.0352, Al
- G1/4" Closure Screw K502050451 NPT 1/2" K502050450 (NPT only in USA)
- G1/4" Coupling K502050700 NPT 1/4" K502050706 NPT 1/2" K502050705 (NPT only in USA)
Industrial Workstations

**Pneumatic Outlets**

- **Polyamide Seal**
  - G1/2"
  - K502050353

- **Polyamide Seal**
  - G1/4"
  - K502050351

- **O-Ring**
  - K115010093

- **End Seal A**
  - 53.01.0005
Electric Outlets

As an alternative to integrated electric outlets, mk offers high quality power strips (Schuco) in two versions. The housing is a clear anodized aluminum profile with tough plastic end pieces. The outlets are angled to neatly accommodate right-angled plugs. A lighted rocker switch turns the 16A rated power strip on and 2-poles off. Complete with a 1.75 m long cable, the power strip can be mounted anywhere along the profile T-slots.

Please Note:
These, and all mk Electric Accessories and Components, vary in style and appearance to conform to local and international standards. Please inquire before ordering.

---

Electric Accessories

Power Strip 3-outlet
K370020020
B02.23.581
incl. attachment hardware
country-specific versions

Power Strip 6-outlet
K370020021
B02.23.582
incl. attachment hardware
country-specific versions

---

ex. Profile mk 2040.75 54.75. .....*, Al

Power Strip K370020020
Flanged Button Head Screw M5x20
K120100024, 10.9 Zn

Clip M5 34.14.0007, PPN

---

45 70
Industrial Workstations

Electric Outlets

The Electric Outlet Module shown consists of a combination of Profiles mk 2040.41 and mk 2069. Noteworthy are the assembly's rigidity and design. Various outlet and switch combinations can be placed freely along the entire length. A further advantage of this design is the ability to add or move electric elements as desired. Each assembly is tested per DIN VDE 0100-410/413 and comes with a wiring diagram. Also included is a 3 m long cable with plug.

Important Note:
These, and all mk Electric Accessories and Components, vary in style and appearance to conform to local and international standards. Please inquire before ordering.
Electric Outlets

1x – Cover
5169BB0200
AlSiMg 0,7 F28
Reworked
to local standards

End Plate
50.12.0005
Al

2x – Cover
5169BC0200
AlSiMg 0,7 F28
Reworked
to local standards

Angle for strain relief
16.05.0012
Al

3x – Cover
5169BD0300
AlSiMg 0,7 F28
Reworked
to local standards

Cord Grip
K399010001

Cover
5169BA ....
AlSiMg 0,7 F28

Angle for power strip
82.01.0007
Al

Spacer for Round Housing*
16.01.0038
*not applicable in USA
Industrial Workstations

Workplace Lighting

One of the more important requirements of first-class productivity and the ability of personnel to produce quality products is optimized lighting of the workstation. For this mk offers suitable work lights for every situation. The lamps provide a bright and even illumination of the work area, and are absolutely non-reflective. The illustrated matrix and table shown below are designed to provide a quick, simple and exact selection of recommended illumination for various distances. The measurements took place in ambient lighting measured at 135 Lux.

Luminous Intensity

<table>
<thead>
<tr>
<th>Type</th>
<th>Point</th>
<th>Point</th>
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</thead>
<tbody>
<tr>
<td>SAMKC136</td>
<td>1</td>
<td>700 lx</td>
</tr>
<tr>
<td>SAMKC136</td>
<td>2</td>
<td>560 lx</td>
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<td>3</td>
<td>530 lx</td>
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<td>7</td>
<td>340 lx</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>340 lx</td>
</tr>
</tbody>
</table>
### Workplace Lighting

**Luminous Intensity**

<table>
<thead>
<tr>
<th>Type</th>
<th>Point</th>
<th>Point</th>
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</thead>
<tbody>
<tr>
<td>SAMC236</td>
<td>1</td>
<td>1350 lx</td>
</tr>
<tr>
<td>SAMC236</td>
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<td>1000 lx</td>
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<td>800 lx</td>
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<td>SAMCE240</td>
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<td>1200 lx</td>
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<tr>
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<td>3</td>
<td>1000 lx</td>
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<tr>
<td>SAMCE240</td>
<td>4</td>
<td>800 lx</td>
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<tr>
<td>CER236</td>
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<td>1100 lx</td>
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<tr>
<td>CER236</td>
<td>3</td>
<td>900 lx</td>
</tr>
<tr>
<td>CER236</td>
<td>4</td>
<td>740 lx</td>
</tr>
</tbody>
</table>

Type SAMC 236
B02.23.803
incl. attachment hardware
L = 910 mm

Type SAMCE 240
B02.23.804
incl. attachment hardware
L = 1120 mm

Type CER 236
B02.23.801
incl. attachment hardware
Industrial Workstations

Accessories Workstations

Swing Arm

mk Swing Arms are designed for stability, flexibility and high load capacity. Applications range from simple bin holders for small parts on up to monitor platforms at testing or logistic stations. Besides freeing up valuable space on the work-surface, an optimum ergonomic presentation of parts can be achieved for each operator due to the Swing Arms’ inherently flexible design. Locking (or adding some resistance through tightening) of the joints is accomplished using the adjustable handles or the socket head cap screws.

Swing Arm, Double

for T = 600mm
B02.24.360
L1 = 150 mm
L2 = 200 mm
Weight 5 kg (11 lbs)
Load max. 300 N (67.5 lbs)

for T = 750 mm
B02.24.361
L1 = 200 mm
L2 = 300 mm
Weight 5.5 kg (12 lbs)
Load max. 300 N (67.5 lbs)

Swing Arm

for T = 600 mm
B02.24.362
L = 250 mm
Weight 4.6 kg (10 lbs)
Load max. 300 N (67.5 lbs)

for T = 750 mm
B02.24.363
L = 400 mm
Weight 4.9 kg (11 lbs)
Load max. 300 N (67.5 lbs)
Accessories Workstations

Mounting to Swing Arms

Angled Shelf
B02.24.364
Weight: 3.6 kg (8 lbs)

Straight Shelf
B02.24.365
Weight: 3.4 kg (7.5 lbs)

Bin Holder
B02.24.366
L = (Bin width + 1 mm) x N
(N = # of bins, not incl.)

Rack with Swing Arm Mounting
B02.24.367

Table Rack
B02.24.356
Weight: 4.6 kg (10 lbs)
Bins not included
Industrial Workstations

Accessories Workstations

Tool Holders

The Tool Holder components shown are some of the basics, which can be expanded with customer specific components. They help to ensure a safe and organized workplace. In addition, they present tools without minimizing the available work-surface. With the adjustable Tool Balancers an ergonomically important strain relief is available to the operator.

Carabiner
K120010003

Tool Balancer F2
K120010006
supports 1-2 kg (2-4.5 lbs)
max. extension 2 m

Tool Balancer F3
K120010005
supports 2-3 kg (4.5-6.5 lbs)
max. extension 2 m

Tool Holder
K120010004
Plastic PAGF
Outriggers

The mk Outrigger is an extended application of the C-channel for tool hanging as used with mk Risers. With a 270° swivel range and maximum length of 1000 mm, a tool can be used exactly where needed for manual assembly or manufacturing operations. When work is completed, the tool can be pushed back and clear of the work area.
Hanging Cabinets

These Hanging Cabinets offer ample storage space for work-specific items, thus presenting a professional appearance and organization by maintaining a clean and uncluttered work area. The cabinets are manufactured using reinforced sheetmetal construction, and can be loaded with up to 200 kg (440 lbs). All Hanging Cabinets feature cylinder locks and are painted RAL 7035 (shown).
Important Note:
Cabinets may vary in style, color or appearance depending on local and international availability. mk makes every effort to maintain global uniformity, yet it is sometimes more economically realistic to work with regional suppliers. There will be, however, no difference in the quality and workmanship of our products. Please inquire before ordering.

### Accessories Workstations

#### 2-Drawer Cabinet
- **B02.23.902**
- Weight: 23 kg (51 lbs)

#### Mounting hardware kit
- Workstation Depth: 600 mm
- **B02.99.001**

#### Mounting hardware kit
- Workstation Depth: 750 mm
- **B02.99.002**

#### Drawer
- **B02.23.903**
- Weight: 8 kg (17.5 lbs)

#### Mounting hardware kit
- **B02.99.004**
The Sheet Pocket of anodized mk Profile with clear plastic cover can be installed vertically or horizontally.

Sheet Pocket
DIN A4*
B02.99.043
*suitable for A4 only

Magnet Strip
B02.24.025
magnets not included

Document Holder
10-sheet A4* portrait
B02.99.041
*supplied for local formats

Document Holder
10-sheet A4* landscape
B02.99.042
*supplied for local formats
Accessories Workstations

**Holders**

Holders for shop rags and water bottles round out the organized workstation. Every element at the workplace therefore has its place, thus preventing possible obstructions for the worker as well as damage to, or contamination of, the workpiece.

The Bottle Holder is made of stainless steel and is designed to accept drink cartons as well. Shop rags or cleaning towels now also have a defined place on the workstation. The Rag Holder can be mounted to any available T-slot, either horizontally or vertically.

Flanged Button-Head Screw M6x12 K112010012

Clip M6 K111020008

Rag Holder
B02.24.015
Plastic with mounting hardware

Bottle Holder
B02.24.010
Stainless steel with mounting hardware
Foot Rest

An important element to reduce strain at the workstation is the proper seating height. It is achieved when, with vertical upper arms, the forearms lay parallel on the worksurface, the thigh and lower leg form an angle of at least 90° at the knee, and the soles of the feet are flush with the floor. For workstations which are too tall, a foot rest can compensate for the distance between foot and floor. The freely adjustable Foot Rest is comfortable for the feet and reduces leg strain for a pleasant working environment.
**Accessories Workstations**

**Work Stools**

The correct seating position is a requirement for relaxed and strain-free work. The optimum ergonomic position is described on page 114 in combination with a height adjustable foot rest. In order to achieve this ergonomically ideal position, a chair conforming to the relevant norms and standards should be utilized. The seat should be adjustable in such a way as to accommodate operators of varying body sizes, as well as the functions they are to perform.

**Important Note:**

Work Stools may vary in style, color or appearance depending on local and international availability. mk makes every effort to maintain global uniformity, yet it is sometimes more economically realistic to work with regional suppliers. There will be, however, no difference in the quality and workmanship of our products. Please inquire before ordering.

---

**Work Stool**

K606-ST1030

Seat height from 480 to 880 mm, black
Defining Form and Function

The workstation must be layed out in such a way as to satisfy two (principally) important factors. One the one hand there are economic considerations such as the efficient production, manufacture or assembly of a given product while on the other maintaining employee health and well-being while at work.

In order to accomplish this it is necessary to separate and distinguish between the required human and technical aspects in an effort to formulate an appropriate workstation. The result will be an mk Workstation which is custom-tailored to the specific requirements of the customer, while satisfying both the ergonomic and economic considerations.

Establishing the Requirements for the Proper Workstation

It is important to first define the scope of the activities to be performed at the workstation.

- Is the workstation subject to heavy loads or large forces, or is it designed for light assembly where precision plays more of a role?
- What is the size of the product, it’s dimensions and weight?
- Will there only be one product, or could there be multiple, different products?
- Will the processes performed always be the same?
- Is this a free-standing workstation, or will it be part of a larger system?

The resulting answers will already point to whether a light or heavy workstation is appropriate, and whether the height can be fixed or needs to be adjustable.

Ergonomic Considerations

- What type and duration of work can the employee be expected to perform at the workstation?
- Can work categories be defined?
- Must considerations be made for more than one individual?
- How large is the individual?

Herewith the actual work considerations for both the user and the product should be defined.

With respect to the following parameters, define the type of work to be performed and evaluate the importance of the required elements.

- Type of work performed: Manufacturing, assembly, rework, testing, packaging, shipping, etc.
- Evaluation: Importance, frequency, sequence, accessibility, freedom of movement
- Required supplies: Production aids, tools, assembly parts, information presentation, etc.
- Workstation requirements: Risers, shelves, swing arms, lighting, etc. but also work stools, foot rests, etc.

When planning a workstation, consider that the best solution to provide a safe and efficient workplace is often only achieved when understanding the entire process as a whole. Laying out single workstations, without the larger picture in mind, can result in bottlenecks or minimise their full potential. Therefore, sensible layout planning must be used, which takes into account and optimises the whole material flow. We will be pleased to assist you with the planning.
System Workstation Series 40

Example Workstation B02.05.100 composed of:

1. Workstation C1 1400 x 750 x 850 mm B02.13.030
2. Riser Light B = 1400 mm B02.22.001
3. with Multiplex surface 50.13.5005
4. Panel in RAL 5015 B02.20.500
5. 2-Drawer Cabinet B02.23.902
6. Cabinet mounting hardware B02.99.002
7. Steel shelf B02.22.260
8. Pneumatic Outlets B02.23.179
9. Power Strip 3-sheet K370020020
10. Workstation Light B02.23.803
11. Swing Arm double B02.24.360
12. Rack with swing arm mounting B02.24.367
13. Height adjustable Foot Rest B02.21.030
14. Worksurface Mounting kit B02.99.050
Advantages of mk Office Workplaces

- mk’s extensive know-how regarding customer-specific workstations and workplaces ensures a standardized product range for individual design according to specific work tasks. Useful modules make the planning and design easier.

- mk offers workstation systems which adapt to people and not vice versa.

- The function and adaptability provides the opportunity to individually design office equipment to ensure a professional appearance in the company.

- Durable components and high-quality workmanship ensure robust everyday practicality for many years.
Individually tailored office workplaces

Based on our proven Profile System, mk developed the mk Office Desk System X80 (80 cm basic dimension). It’s functionality and adaptability allow you to layout and design workplaces to your exact requirements – resulting in a professional look which reflects positively on your company. Important are your actual requirements. Whether setting up an entire department or a single office, the Office Desk System X80 offers an ideal solution. High quality materials and workmanship guarantee robust construction which will last for years. Various standard desks are available. Naturally we will assist you during planning and selection.

Examples PC-Workstations

Examples Conference and Training Tables

Application Examples

Examples Desks with Meeting Area
Office Workplaces

Worksurfaces

The worksurfaces are made of robust multi-laye-
red beechwood, featuring a V-groove around its perimeter. Assembly with tension pins and square alignment blocks avoids any high spots or edges over the entire surface.

On request we can also supply other surface sha-
pes and/or materials.

- **Round Corner**
  - 80 x 40
  - **50.13.5015**

- **Chamfered Corner**
  - 80 x 80
  - **50.13.5012**

- **Keyboard Surface**
  - 80 x 120
  - **50.13.5013**

- **Keyboard Surface**
  - 80 x 160
  - **50.13.5014**
**Desk Frames**

mk Office Desk Frames consist of our proven Aluminum Structural Profiles (with natural anodize). Advantages of System X80 include the absence of leg obstructions and the compact construction of the frames, which can be disassembled and reassembled effortlessly. The desks can be leveled to the floor, and come standard with basic wire management.

**Legs**

Aesthetic accent sheets can be placed onto the exterior of several profiles.

- **BEECH**
- **SILVER**
- **BLACK**

**File Cabinets**

With high-quality hardware (central locking) manufactured roller cabinets, using multi-layer Beechwood, we offer two standard units.

- **Model 4S:**
  1 pencil drawer and three box drawers
  K120101001
- **Model 3S:**
  1 pencil drawer, 1 box drawer and 1 file drawer
  K120101000
Industrial Workstations

Application Examples

Industrial workplace with integrated material handling using roller conveyors

Complete solution workplace with integrated electrical outlets, ball transfer table and driven roller conveyor
Kanban workstations increase assembly productivity by providing parts logistics

Packing table with integrated scale and chute

Service assembly and disassembly table

QA inspection station for motor parts
Industrial Workstations

Application Examples

Customer-specific assembly table with linear track and pneumatic clamping

Customer-specific industrial workstation with electrical supply
Kanban assembly workstation made of Series 40 profiles, flow rack for max 76 different products, workbench with hydraulic height adjustment.
Office Workplaces

Application Examples

File cabinets of multiplex beech

Meeting table with multiplex beech tabletop

mk Office desk with integrated conference table
Multiple workstation office

Office workplaces as training room

Office workplaces as training room
Office Workplaces

Application Examples

Conference Room

mk Office desk with integrated conference table
Customer-specific reception desk with curved profiles and partitions with glass panes fixed using mk profiles

Customer-specific reception workplace with Profile mk 2040.26

Workstations for open plan offices

Recessed socket outlets
GTP (Guard Rails, Treads, Platforms)
## Contents GTP (Guard Rails, Treads, Platforms)

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<td>Information about GTP (Guard Rails, Treads, Platforms)</td>
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<td>Guardrails</td>
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<tr>
<td>Treads</td>
<td>138</td>
</tr>
<tr>
<td>Platforms</td>
<td>144</td>
</tr>
<tr>
<td>Assembly Details</td>
<td>145</td>
</tr>
</tbody>
</table>
Information about GTP (Guard Rails, Treads, Platforms)

Advantages mk GTP (Guard Rails, Treads, Platforms)

- mk’s guard rails, treads and platform range is the perfect supplement to mk guarding.
- Whether mobile or fixed work platforms, safe crossovers or access to elevated workplaces, mk transforms customer inquiries into reality with exacting profile designs.
- If production conditions change, simple and economic reconfiguration can be accomplished smoothly and easily.
Safe access and safe work with the mk GTP System

The Guardrail-, Tread- and Platform-System from mk is the perfect combination of the various local safety requirements between Platform and Workstation ergonomics. In order to carry out service and repair work on large equipment, appropriate access is necessary. Even elevated workplaces on machines and equipment require suitable platforms. Further, production and assembly lines often require crossovers for access to process-relevant locations. Under these aspects, and with respect to surfaces, traffic patterns and minimum clearance requirements, mk transforms customer requests into reality using pre-engineered Profile Technology.
GTP (Guardrails, Treads, Platforms)

**Knee braces**
As a rule, guardrails are designed with knee braces (additional cross braces between posts). The distance between the knee braces and both the Guardrail and Platform is maximum 500 mm.

**Post spacing**
The distance between the posts must be less than 1500 mm. It must be designed in such a way as to support a force of at least 500 N/m (370 lb/ft).

Using the advantages of mk Profile Technology, mk Guardrails can be used in a variety of situations. Applications include industrial work platforms or as handrails along stairways. Treads require handrails as of four steps.

For tread widths of less than 1500 mm, a handrail must be installed on the right-hand side (as seen when descending). Wider treads require handrails on both sides. As a rule, industrial platforms at an elevation of >200 mm should be designed with Guardrails. The standard program is designed exclusively for indoor use. Appropriate versions for outdoor use may also be available on request.

**Handrails**
Profile mk 2040.16, with its 40 mm diameter, conforms to DIN 59410 requirements. The connecting elements as well as the end caps are designed with large radii, in order to enhance operator safety.

**Rail height**
The minimum height requirements vary with the application. Stair rails must be at least 900 mm tall and platforms require rails to be at 1100 mm.

**Toe kicks**
min. height = 100 mm
Guardrails

Joint 40/H5
B46.01.026
Al

T-Connector 40/H2
79.00.0011
Al

Post/Corner Brace connection
Angle E25
82.40.0701
Al

Post/Straight Brace connection
Angle E25
82.40.0701
Al

Corner Post/Platform connection
Angle E25
82.40.0701
Al

Straight Post/Platform connection
Angle E25
82.40.0701
Al
Guardrails

Joint 40/H2
B46.01.023
Al

Post/Angled Brace connection

Angle Block 45°
79.01.0066

Angle Block 35°
79.01.0064

Angle Block 30°
79.01.0062
Al

Joint 40/H3
B46.01.024
Al

Wall connection
for Profile mk
2040.16 (shown)
50.03.0034
Al

Wall connection
for Profile mk
2040.01 (rectangular)
50.03.0033
Al

Post/Stair connection

Angle E25
82.40.0701
Al

Joint 40/H4
B46.01.025
Al

End Cap for Profile
mk 2040.16
76.01.0002
Al
Guardrails

Application Examples

Assembly platform, one side secured by guard rail

Platform with handrail, diameter 40 mm
Components such as the electronic supply can be attached to the guard rail posts from the mk profile technology range.

Joint for the crossover from stair to platform

Example of the end of a guard rail

Knee rail construction for the crossover from stair to platform

Platform with guard rail as crossover above a conveyor section

Components such as the electronic supply can be attached to the guard rail posts from the mk profile technology range.
GTP (Guardrails, Treads, Platforms)

Treads

mk Treads (stairs) are manufactured using Profiles mk 2040.68, mk 2040.69 and mk 2040.06. The profiles used for the treads feature a grooved top surface to help prevent slippage. The screwed connection in the Profile T-slots makes any further rework unnecessary.

Stair inclines
Angles are used to attach stairs of various incline angles to the platform structure. The recommended angle depends on the application. Stairs used often should be designed with a 30° or 35° angle. Steeper angles should only be used for stairs which are rarely utilized (as in a service situation, for example).

Note:
Vertical tread spacing of 160 mm is ideal for traffic with heavy loads.

Step spacing TA - 160 mm
Number of steps = H/160-1 (round off)
Step spacing TA - 190 mm
Number of steps = H/190-1 (round off)

Order Example:
Stairs should be suitable for use with heavy loads:

Width (B) = 1000 mm
Height (H) = 1800 mm
Angle = 45°
Number of Steps = 10

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**Calculations:**

30°  \[ T = H_1 \times 1.732 \]
    \[ L_2 = H \times 2 - 314.5 \]

35°  \[ T = H_1 \times 1.428 \]
    \[ L_2 = H \times 1.743 - 267.5 \]

45°  \[ T = H_1 \]
    \[ L_2 = H \times 1.414 - 204.4 \]

55°  \[ T = H_1 \times 0.7002 \]
    \[ L_2 = H \times 1.22 - 163.5 \]

60°  \[ T = H_1 \times 0.5774 \]
    \[ L_2 = H \times 1.155 - 147.7 \]

\[ H = \text{Platform height} \]
GTP (Guardrails, Treads, Platforms)

Treads

- **Profile mk 2040.06**
  - 5406AC0150, $\alpha = 15^\circ$, Al
  - Plate 60°
  - 50.05.0124, Al
  - Base Bow
  - 67.03.0001, Steel

- **Riser 40/30°**
  - B02.34.006

- **Profile mk 2040.06**
  - 5406AC0150, $\alpha = 17.5^\circ$, Al
  - Plate 55°
  - 50.05.0123, Al
  - Base Bow
  - 67.03.0001, Steel

- **Riser 40/35°**
  - B02.34.007

- **Profile mk 2040.06**
  - 5406AC0150, $\alpha = 22.5^\circ$, Al
  - Plate 45°
  - 50.05.0122, Al
  - Base Bow
  - 67.03.0001, Steel

- **Riser 40/45°**
  - B02.34.008

- **Profile mk 2040.06**
  - 5406AC0150, $\alpha = 27.5^\circ$, Al
  - Plate 35°
  - 50.05.0121, Al
  - Base Bow
  - 67.03.0001, Steel

- **Riser 40/55°**
  - B02.34.009

- **Profile mk 2040.06**
  - 5406AC0150, $\alpha = 30^\circ$, Al
  - Plate 30°
  - 50.05.0120, Al
  - Base Bow
  - 67.03.0001, Steel

- **Riser 40/60°**
  - B02.34.010

- **Step 40/300**
  - B02.33.004

- **Step 40/250**
  - B02.33.003

- **Step 40/200**
  - B02.33.005

- **Step 40/150**
  - B02.33.002

- **Riser 40/30°**
  - B02.34.006

- **Riser 40/35°**
  - B02.34.007

- **Riser 40/45°**
  - B02.34.008

- **Riser 40/55°**
  - B02.34.009

- **Riser 40/60°**
  - B02.34.010
Treads

Application Examples

High-traffic stairs provide secure hold and high loading capacity.

Step with Riser

Plate
Standard stairs with grooved surface structure

Universal floor support for the stair slope

Rigid connectors for high load capacities
The mk Profile Technology System with its four profile series offers nearly unlimited possibilities for the construction of Platforms. Spans of up to 8 m can be manufactured, for example, in combination with our Foamed Structural Profiles. The mk Profile Technology catalog shows many such application examples. The following components show some of the basics. Platforms are covered with mk Profiles or customer requested materials. For industrial applications, the platforms can be supplied with toe kicks (minimum height 100 mm) per DIN 31003.
Assembly Details

Connecting Plates
A simple and secure connection is provided using the Connecting Plate. Three Profiles can be attached with this one element.

Consoles
Consoles are designed for the highest stability requirements. This cast aluminum console features a total of 12 attachment holes and is ideally suited for larger spans.

Leveling Pads
The leveling pad features an 80 mm adjustment range as well as a high load capacity of 25,000 N.

Floor Mounting
The floor mounting plate can be lagged to the floor after the frame has been positioned.
GTP (Guardrails, Treads, Platforms)

Assembly Details

**Tread Profile Attachment**
The tread profiles feature a tongue and groove, and are further attached to each other and to the sub-structure using specially designed clamps.

**Riser Attachment**
The riser is constructed with two angle cut profiles joined using the appropriate plate, and attached to the platform with angle E80.
Platforms

Application Examples

Assembly platform for helicopters. Air cushion floor elements enable effortless movement of the whole structure on the factory floor.

*mk stairs are compatible with mk profile technology*

*The mk profiles provide space for electric, pneumatic and hydraulic supply lines*
Individual platform as warehouse mezzanine

Console connection

Floor profile with slip-resistant grooves
Network and Support
## Contents Network and Support

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Under www.mk-group.com you find our CAD Parts Library. There you will find CAD files via email. Data formats for all common 2D and 3D CAD systems. Individual components as well as configured assemblies.

On request we can also send you our electronic product catalog on CD-ROM. On our CD-ROM you will find the following data formats: DXF 2D, DWG 2D, STEP 3D and IGES 3D. The CD-ROM also features RFQ and Ordering forms, as well as parts lists.

Further advantages include product search functions according to product name and part number as well as a shopping cart function.
Internet

Current information regarding mk products, trade shows, training, catalogs and other relevant news can be found on our home page.

- Check the status of your order at any time in using our new order tracking system.
- With your personal password you have direct access to all orders registered with our company.
- Order from our new online shop 24 hours a day.

Configurator for guarding

Design your guarding quickly and easily with the following advantages:

- Create guarding yourself without expensive engineering design
- Cost optimization thanks to the automatic selection of standard panels
- Very fast design, even of complex assemblies
- Software requires no additional CAD package

- Automatic creation of 3D guards on 2D floor plans
- Stand-alone configurator - no installation required
- Export 3D drawings in native file formats or exchange formats for further processing or inserting in your own CAD system
- Generation of parts lists for the guarding for placing an order with mk
We’re there where you need us

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Each hour of machine downtime for one of your customers costs you money and reputation. That’s why we are always at your side as a partner in an emergency. mk’s numerous sales, production and service locations in Germany, Europe and USA will support you with the expertise and service you have come to expect from us. And you don’t only profit from our widespread local presence after the sale. Right from the design phase our motto is: The implementation of economic and forward looking planning pays off. So use our international network.

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