



Mechanical Modules  
and Components for  
Factory Automation

*Introducing mk*  
mk – We live our  
passion for technology



### *Mechanical Modules and Components for your Factory Automation*

Maschinenbau Kitz GmbH, was founded in 1966 and is headquartered in Troisdorf, near Bonn, operates internationally; together with its subsidiaries and sales partners as the “mk Technology Group”. Backed by over 40 years of experience, mk sells mechanical modules, components for profile, conveyor and linear technology, as well as factory equipment. These products are based on more than 250 different aluminum profiles and extensive stainless steel sheet metal work.

The modular construction principle these products offer ensure full compatibility between all products. The resulting benefits include considerable cost savings during installation of the system, as well as a high degree of flexibility for future extensions and re-configurations. Our most important target markets include original machine constructions, as well as work in the automotive, electrical, packaging, pharmaceutical, and food industries.

# Introducing mk

## Our mk modular system



### *Advantages of the mk modular system*

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



*Our products –*  
mk Profile Technology



*Advantages of mk Profile Technology*

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

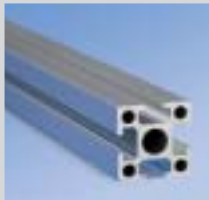
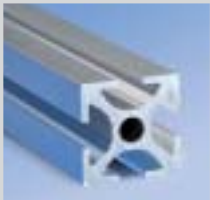
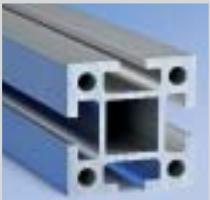

# Our Profile Series

With four aluminum profile series – categorized by their base dimensions of 25, 40, 50, 60 mm – the ideal profile series is available for any application.

Simple frames with small space requirements can be realized just as effectively as load-bearing structures for heavy machinery.



## Profile Series

				
	<i>Series 25</i>	<i>Series 40</i>	<i>Series 50</i>	<i>Series 60</i>
Versions	normal	normal, light, extra light	normal, light	normal
Material	EN AW 6063 T66 AlMgSi 0.5 F25	EN AW 6063 T66 AlMgSi 0.5 F25	EN AW 6005A T6 AlMgSi 0.7 F28	EN AW 6005A T6 AlMgSi 0.7 F28
Classic applications	lightweight frames, display cases, display cabinets, intricate test setups, measuring and test equipment, control cabinets, electronic housings	lightweight machine racks, frames, guarding, assembly workstations, show booths, work platforms	heavy machine racks, load-bearing structures	machine frames for maximum loads, portals
Base dimensions	25 x 25 mm	40 x 40 mm	50 x 50 mm	60 x 60 mm

# Our Assembly Components

mk connection technology offers you freedom in design. Both 90° connections and variable angles connections can be used, based on your application requirements. The following table lists the most

important criteria for selecting the right connector for your design. mk does not require, for example, any system-specific screws in its construction kit. Standard screws can be used for all assembly work.



## Selection of Assembly Components

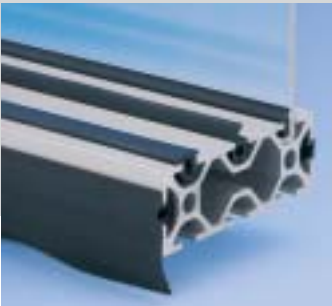
					
	<i>Tension plugs</i>	<i>Angles</i>	<i>Corner blocks</i>	<i>Plate</i>	<i>Clamps</i>
Locking element	no	yes	no	yes	no
T-slots remain open	yes	no	no	no	no
Loading capacity	medium	high	medium	high	medium
End services	yes	no	yes	no	no



# Our Accessory Components

Accessory components from mk fit perfectly into the mk construction kit system. The comprehensive assortment includes floor mountings, fixed and swivel casters, various operating elements, elements for

doors, paneling for guarding, elements for closing and sealing profiles, as well as pneumatic and electric components. As a result, profile designs can be configured based on the customer's requirements.

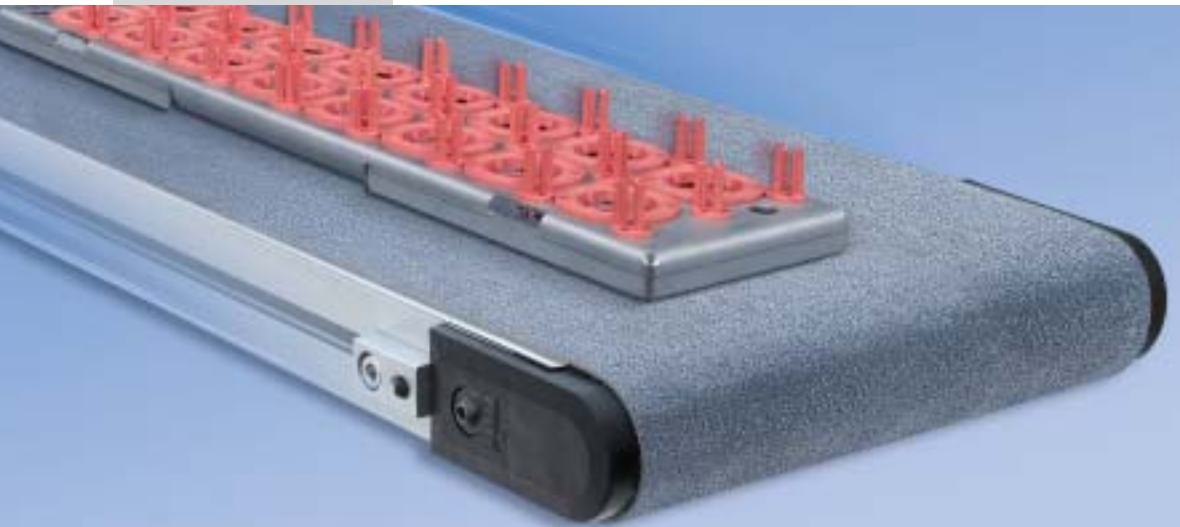


## *Advantages of Accessory Components*

- Comprehensive range of components for all profile systems
- Profile designs completed to the required customer-specific functions
- Range of accessories perfectly tailored to the profile systems based on years of experience
- High-quality accessories ensure high loading capacity and long service life
- Short assembly times due to quick and easy assembly and disassembly
- mk accessories largely consist of reusable components
- Assembly and disassembly with standard conventional tools
- mk offers all special tools that may be required at reasonable prices



## *Our products –* mk Conveyor Technology



### *Advantages of mk Conveyor Technology*

- A wide selection of more than 20 different conveyor systems for all goods in transit and operating conditions
- Simplified planning and design due to standardized modules
- Cost savings and short delivery times due to standard modular construction
- Robust construction and high quality components reduce operating expenses and increase productivity
- High flexibility in the system design & modification due to compatibility within the construction kit system
- Worldwide fast spare part supply
- Competent advice and application support from mk sales engineers
- Online comparison and selection tool, motor calculation program and online CAD library
- Customer-specific modifications of our standard modules are possible at any time thanks to our modular design



By selecting the optimal system for your conveyor requirements, mk guarantees maximum process safety. To select the conveyor best

suitable for your transportation requirements please use the list of criteria below. It is best to use our online tool at [www.mk-group.com](http://www.mk-group.com).



### *Conveyor Technology selection criteria*

#### **Properties of the product to be transported**

- Weight
- Shape
- Temperature
- Size
- Sensitivity to shock
- Dry vs. damp

#### **Environment**

- Temperature
- Soiling, e.g. due to dust
- Explosion protection requirements
- Clean room conditions
- Food regulations
- Chemical resistance requirements

#### **Transport path**

- Straight-line and curved transport
- Transport on one level or on different elevations

#### **Acceptance and handover of the product being transported**

- Defined acceptance and handover

#### **Type of transport**

- Accumulated or good traction properties
- Indexing
- Defined orientation during transport

#### **Speed and cycle time**

- Degree of discharge



## *mk Conveyor Technology –* Belt Conveyors



### *Advantages of mk Belt Conveyors*

- Can be integrated perfectly in complex machines thanks to its compact design
- Use of lateral T-slots for optional attachments of stands, side rails or other accessories
- Profile design ensures torsion-resistant setup with good load-bearing properties
- Drive rollers can be rubberized when the high torque of a motor has to be transferred
- Crowned drive or return rollers simplify belt tracking and tensioning
- The GUF and KGF belt conveyors have continuous slider beds made of stainless steel to achieve lasting durability
- Support rollers ensure the belt returns tight to the bottom of the frame
- Quick Delivery Program (QDP) offers fast delivery of current belt conveyors

### GUF-P MINI



This is a conveyor with a compact design for optimal integration in complex machines. Integrated belt return for direct support on underframe. For light products.

- Conveyor width B: 75, 100 and 150 mm
- Conveyor length: between 530-5000 mm
- Belt Width: B-15 mm
- Load Capacity max.: 25 kg (55 lbs)
- Drive and Speed: up to 60 m/min (200 ft/min)
- Part of the Quick Delivery Program

### GUF-P 2000



Versatile conveyor due to the variety of tails and drives. Suitable for light and medium-weight products.

- Standard Conveyor width B: 50, 100, 150, 200, 250, 300, 400, 500, 600, 700, 800 mm
- Conveyor length: between 410-10000 mm
- Belt Width: B-10 mm
- Load Capacity max.: 75 kg (165 lbs)
- Drive and Speed: up to 80 m/min (260 ft/min)
- Part of the Quick Delivery Program

### GUF-P 2041



Conveyor for high load capacities and/or wide products.

- Standard Conveyor width B: 200-1200 mm (in 100 mm increments)
- Conveyor length: between 500-10000 mm
- Belt Width: B-10 mm
- Load Capacity max.: 150 kg (330 lbs)
- Drive and Speed: up to 60 m/min (200 ft/min)

### GUF-P 2004



Special conveyor for particularly high load capacities and/or particularly wide products.

- Standard Conveyor width B: 200-2000 mm (in 100 mm increments)
- Conveyor length: between 660-20000 mm
- Belt Width: B-50 mm
- Load Capacity max.: 200 kg (440 lbs)
- Drive and Speed: up to 60 m/min (200 ft/min)

# mk Conveyor Technology – Belt Conveyors

## KGF-P 2040



Extremely low wear and low maintenance curved conveyor. Used for interlinking solutions.

- Conveyor Angle: 90° and 180°
- Usable Widths B: 300 at Ra=600 mm, Ri=300 mm, FB=706  
400 at Ra=900 mm, Ri=500 mm, FB=1006  
500 at Ra=900 mm, Ri=400 mm, FB=1006  
600 at Ra=900 mm, Ri=300 mm, FB=1006
- Load Capacity max.: 30 kg (65 lbs)
- Drive and Speed: 5 to 30 m/min (15 to 100 ft/min)

## DGF-P 2001



Dual belt conveyor for light products. Ideal for transporting small pallets.

- Standard Conveyor width B: 100, 125, 150, 175, 200 and 250 mm
- Conveyor length: between 300-2000 mm
- Belt Width: 18 mm
- Load Capacity max.: 15 kg (33 lbs)
- Drive and Speed: up to 15 m/min (50 ft/min)

## GUF-I mk INOX Belt Conveyors

➔ Page 27

# Belt Conveyors

## Application Examples



GUF-P 2000 as transverse conveyor and singulator following a cooling section



Two conveyor belts driven by one motor at the head drive



Two GUF-P 2041 in tandem arrangement with mobile stand system for mobile double feeding of a system



GUF-P 2004 with separate working and return side of belt



GUF-P 2000 as transverse conveyor and singulator following a cooling section

## *mk Conveyor Technology –* Modular Belt Conveyors



### *Advantages of mk Modular Belt Conveyors*

- High load capacities possible
- Positive belt tracking means no lateral wander
- Belt material is highly resistant to wear and abrasion
- A wide variety of belting is available; standard, food grade, chemical resistant and high temperature
- Accessories available include sidewalls and longitudinal cleat profiles
- Maintenance work such as tensioning the belt or replacing individual components is quick and easy



*MBF-P 2040.02*



MBF-P 2040.02 for high loads. Various chain materials available.

- Conveyor width B: 210 to 1010 mm (in 50 mm increments)
- Conveyor length: between 475-10000 mm
- Modular Belt width: B-10 mm
- Load Capacity max.: 150 kg (330 lbs)
- Drive and Speed: up to 30 m/min (100 ft/min)

## Modular Belt Conveyors

### *Application Examples*



MBF-P 2040.02 with side flights and cleats



MBF-P 2040.02 with cleats for loosening and transporting smaller products



MBF-P 2040.02 with brushes for sheets which are easily scratched

## *mk Conveyor Technology –* Incline Conveyors



### *Advantages of mk Incline Conveyors*

- Cost-effective option for incline transport of loose small parts
- Compact design (KFG) makes integration in existing systems such as presses and injection molding machines easier
- Designed for continuous operation in multi-shift operation
- With rollers (optional) and suitable as a mobile transport unit for filling containers
- Accessories such as side rails, stands or funnels and discharge chutes are easy to attach to the T-slots

### *KFG-P 2000*



For transporting small parts. Compact frame makes setup and integration into existing systems easier.

- Conveyor width B: 300 to 700 mm (in 100 mm increments)
- Conveyor length: variable to approx. 4000 mm
- Bend: 15, 30, 45 and 60°
- Load Capacity max.: up to 30 kg (65 lbs)
- Drive and Speed: up to 15 m/min (50 ft/min)

### *KFM-P 2040.86*



For transporting injection molded parts, light punched parts or foodstuffs. Various chain materials allow use at high temperatures.

- Conveyor width B: 210 to 710 mm (in 50 mm increments)
- Conveyor length: up to 10000 mm
- Bend: 15, 30, 45 and 60°
- Load Capacity max.: up to 150 kg (330 lbs)
- Drive and Speed: up to 30 m/min (100 ft/min)

### *KFS-P 2040.86*



For transporting punched, cast, forged or wood parts. Particularly well-suited for transporting hot workpieces.

- Conveyor width B: 210 to 710 mm (in 50 mm increments)
- Conveyor length: up to 10000 mm
- Bend: 15, 30, 45 and 60°
- Load Capacity max.: up to 150 kg (330 lbs)
- Drive and Speed: up to 12 m/min (39 ft/min)

## *mk Conveyor Technology –* Timing Belt Conveyor



### *Advantages of mk Timing Belt Conveyor*

- Well-suited for transporting heavy workpiece frames or dimensionally stable products
- Synchronous operation of the drive belts via interlocking connection between drive pulley and timing belt
- Suitable for indexing
- Low friction with very good wear characteristics
- Minimized risk of accidents thanks to belt return in the interior of the profile
- Connection options for stands, side rails and stoppers in the existing T-slots (10 mm width)
- This system forms the basis for setting up complex transfer systems for workpiece frames
- Various backings of the timing belts make traction of the workpiece optimally matched for the application case

### ZRF-P 2010



Ideal for transporting heavy workpiece frames or dimensionally stable products.

- Conveyor width B: 200 to 1000 mm
- Conveyor length: between 500-6000 mm
- Timing Belt Width: 32 mm
- Load Capacity max.: 100 kg (220 lbs)
- Drive and Speed: up to 30 m/min (100 ft/min)

### ZRF-P 2040.02



Well-suited for the synchronized transport of products.  
 For conveying, handling and positioning.

- Conveyor width B: 40, 80, 120 and 160 mm
- Conveyor length: between 650-6000 mm
- Timing Belt Width: 32, 70, 110 and 150 mm
- Load Capacity max.: up to 200 kg (440 lbs)
- Drive and Speed: up to 30 m/min (100 ft/min)

## *mk Conveyor Technology –* Chain Conveyors



### *Advantages of mk Chain Conveyors*

- Base element for building transfer systems
- Various chains or wear strip types (PE1000) make optional support of the workpiece on the conveyor possible
- Very good accumulation properties
- Extremely low maintenance and robust
- Longitudinal grooves in the profile frame provide versatile mounting options for braces, guides, stops, stands and rails



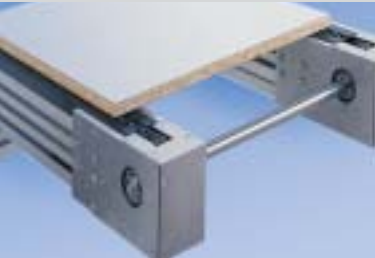
### *KTF-P 2010*



Chain conveyor for medium loads. Idea for pallet transport (single, double and multi-strand systems).

- Conveyor width B: 200 to 2000 mm
- Conveyor length: between 500-10000 mm
- Chain: 1/2" single or dual strand
- Load Capacity max.: 200 kg (440 lbs)
- Drive and Speed: up to 30 m/min (100 ft/min)

### *SRF-P 2010*



Accumulating roller chain conveyor for medium loads. Suitable for accumulated operation. Thus ideal for interlinking and buffering between workstations.

- Conveyor width B: 200 to 2000 mm
- Conveyor length: between 500-10000 mm
- Chain: Accumulating Roller Chain 1/2" with Plastic or Steel Roller
- Load Capacity max.: 200 kg (440 lbs)
- Drive and Speed: up to 30 m/min (100 ft/min)

### *SRF-P 2012*



Accumulating roller chain conveyor for the high load range up to 300 kg. Very smooth running even in accumulated operation.

- Conveyor width B: 200 to 2000 mm
- Conveyor length: between 1000-10000 mm
- Chain: Accumulating Roller Chain 3/4" with Plastic or Steel Roller
- Load Capacity max.: 300 kg (660 lbs)
- Drive and Speed: up to 30 m/min (100 ft/min)

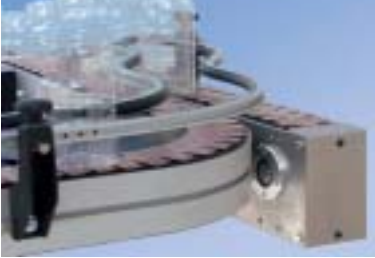
## *mk Conveyor Technology –* Flat Top Chain Conveyors



### *Advantages of mk Flat Top Chain Conveyors*

- Ideally suited for use in delivery and interlinking technology
- A complex conveyor systems can be quickly and cost effectively be realized thanks to the modular design
- Production-related changes in the routing can be realized without great effort
- Available in various widths
- Accessories such as side rails, stands, etc. can be mounted to the lateral T-slots (10 mm width) of the conveyor frame
- Chain is guided entirely in a wear strip (PE1000) track, which is fastened to the profile frame

*SBF-P 2254*



For transport requirements in the beverages, glass, food, pharmaceutical and paint industries.

- Conveyor width B: 100 mm and 130 mm
- Conveyor length: between 530-5000 mm
- Belt Width: B-15 mm
- Drive and Speed: up to 60 m/min (200 ft/min)

*SBF-I mk INOX Flat Top Chain Conveyors*

➔ Page 27

# Flat Top Chain Conveyors

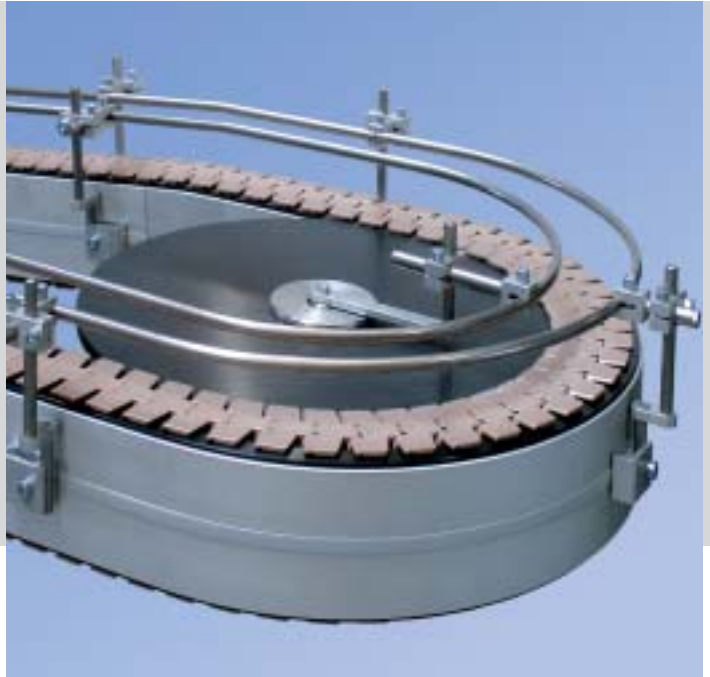
## *Application Examples*



SBF-P 2254 with transfer pusher, e.g. for the packaging industry



Flat top chain with cleats



180° Curve

## *mk Conveyor Technology –* Roller Conveyors



### *Advantages of mk Roller Conveyors*

- Wide range of applications thanks to the different drive concepts (gravity, tangential chain, motor rollers)
- Very well-suited for integration in complex machines due to its compact design
- All systems available straight and curved
- All roller conveyors of system 2255 can be combined
- Wide range of different roller types
- Easy to assemble and maintain
- Quick roller replacement
- Chain guide and protective guard integrated in the side rail

### RBS-P 2065/2066



Gravity roller conveyer for transporting light to medium-weight products. System 2065 can transport extra wide workpieces.

For straight run

- Frame widths: depending upon type of roller between 150 and 1050 mm
- Conveyor length: 200-5000 mm

For curve

- Frame widths: 250-800 mm
- Inner radius: 800 and 850 mm depending upon usable width

### RBS-P 2255



Gravity roller conveyer for transporting medium-weight products. Can be combined with our driven roller conveyors.

For straight run

- Frame widths: 290, 390, 490, 590 and 690 mm
- Conveyor length: 500-10000 mm

For curve

- Frame widths: 290, 390, 490, 590 and 690 mm
- Inner radius: 800 mm

### RBT-P 2255



Roller conveyor with tangential chain drive. Also suitable for dirty or oily environments.

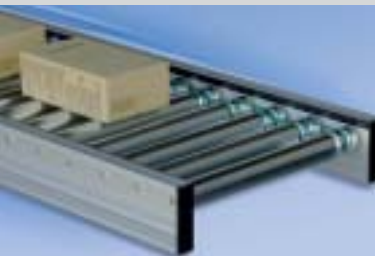
For straight run

- Frame widths: 420, 520, 620 and 720 mm
- Conveyor length: 600-10000 mm

For curve

- Frame widths: 420, 520, 620 and 720 mm
- Inner radius: 800 mm

### RBM-P 2255



Roller conveyor with motorized drive roller. Different speeds and start/stop functions can be realized due to separately driven sections.

For straight run

- Frame widths: 380, 480, 580 and 680 mm
- Conveyor length: 500-10000 mm

For curve

- Frame widths: 380, 480, 580 and 680 mm
- Inner radius: 800 mm

*mk Conveyor Technology –*  
**mk INOX Stainless Steel Conveyors**



*Advantages of*  
*mk INOX Stainless Steel Conveyors*

- Designed for use in medical technology, as well as in the pharmaceutical, cosmetic and food industries
- Consistent implementation of time-tested principles of modularization from aluminum and conveyor technology
- Use of stainless steel of different grades depending on intended use and operating conditions
- Use of FDA-compliant materials, components and transport media
- Simple, fast and thorough cleaning due to the open design
- Assembly/disassembly accessories for transport media
- Standardized or customized punched and formed plate construction for easy integration in existing systems and for attaching accessories
- Adaptable and expandable for future requirements



### GUF-I



For optimal transport of packaged goods in areas with high cleanliness requirements. Compact design with integrated belt return for optimal integration in complex machines. For light to medium-weight products.

- Conveyor width B: 100, 150, 200, 250, 300, 400, 500 mm
- Conveyor length: between 410-10000 mm
- Belt Width: B-15 mm
- Load Capacity max.: 75 kg (165 lbs)
- Speed: up to  $v = 80$  m/min (260 ft/min)

### RBS-I



For optimal transport of containers or pallets in areas with high cleanliness requirements. Wide range of conveyor rollers for different size and weight classes.

- Conveyor length: 500-5000 mm
- $\varnothing$  Rollers: 20, 40 and 50 mm
- Load Capacity max.: 50 kg (110 lbs)

### SBF-I



For optimal transport of containers and packages in areas with high cleanliness requirements. Fully modularized program of straight sections, curves, vertical inclines, side transfers, as well as drives and trails.

- Conveyor width B: 100 mm and 130 mm
- Conveyor length: dependent on application
- Drive and Speed: up to 40 m/min (130 ft/min)

*Our products –*  
mk Linear Motion



*Advantages of mk Linear Motion*

- Optimal functionality thanks to the wide range of tracks designed to meet customer needs
- Material, cost and space savings due to compatibility with mk profile series: Tracks can be mounted to the existing supporting structure directly
- Fast and easy installation of linear tracks due to add-on principle
- Precision running with mk clamping profile ensures maximum parallelism of the guide rods
- High reliability due to high-quality materials and tested manufactured parts
- Competent advice and support in design from mk sales engineers

## Criteria for the selection of the right guide

### Criteria for Gliding Assemblies

- High static load capacity
- Low maintenance, good wear resistance
- Good damping
- Compact construction
- Quiet

### Criteria for Track Roller Assemblies

- Compensate for relatively large misalignments
- Well suited for dirty environments (dust, chips, etc.)

- Suitable for high accelerations (to  $a = 50 \text{ m/s}^2$ ) and high speeds (to  $v = 10 \text{ m/s}$ )
- Low rolling resistance
- Light to medium loads
- Economically practical solution over longer lengths through simple mounting of track
- Can be loaded in all directions (forces and moments)
- Varying preload setting using eccentric bushings

### Criteria for Recirculating Ball Bearing Guides

- 4-row recirculating ball bearings can be loaded in all directions (forces and moments)
- High load capacity, high stiffness
- Compact construction
- One track accommodates various carriage types
- Lightly preloaded (standard), available with play and higher preloads
- Medium to high accelerations (to  $a = 30 \text{ m/s}^2$ ) and speeds (to  $v = 5 \text{ m/s}$ )
- High precision of carriages



Gliding Assemblies

### Gliding Assemblies

- High static loading capacity due to large contact surfaces ensures low maintenance operation
- Good wear compensation
- Good damping
- Compact design
- Quiet
- For applications with need for manual adjustment



Track Roller Assemblies

### Track Roller Assemblies

- Compensate for relatively large misalignment
- Well-suited to dirty environments
- High accelerations
- Low rolling resistance
- Simple and cost-effective mounting of the track
- Can be loaded in all directions



Recirculating Ball Bearing Guides

### Recirculating Ball Bearing Guides

- Can be loaded in all directions
- High load capacity
- High rigidity
- Compact design
- One track for different carriage types
- High accelerations
- High speeds
- High precision

## Our products – mk Linear Motion



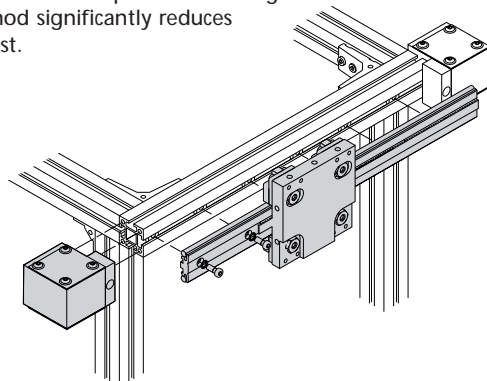
### *Advantages of the Add-on-Principle*

Our product philosophy is focused on providing modular solutions for technically demanding manufacturing and automation applications while maintaining high standards of rigidity, functionality and flexibility.

- Total compatibility with the structural profiles of the mk Profile System
- Quick and economical manufacture of linear modules using the “add-on” principle
- Fast assembly and easy integration into existing structures

The “add-on” principle is a basic concept for integrating linear motion within machine frames or other structures by attaching pre-engineered linear components. Among other advantages, this method significantly reduces the material content and cost.

Application Example  
Structural Profile Series 50  
and LZR 2000-38.41-15.



## *mk Linear Modules*

mk linear modules have been designed for adjusting- and positioning tasks. High-value coating of the wear surface serves for wear protection and reduced friction. Linear modules are available

with one or two slide carriages, optionally travelling in co-rotation or a counter-rotating way. They are available with or without a scale, as well as driven manually or motor-driven. They are maintenance-free to a large extent.



## *mk Linear Modules with Timing Belts*

Due to their bend-proof structure mk LZR linear modules allow for high accelerations and speeds during a long operating times. They are perfectly suitable for applications of single axis or as multiple-axes systems. The track roller assembly is assembled in a bend-proof way by means of

high-performance bearings. The excentrically mounted guide rollers inhibit play. The high-performance drive system permits quick positioning on a high level of repetition the precision. These modules meet highest requirements with regards to technical and economical standards.



## *Our products –* mk Factory Equipment



### *Advantages of mk Factory Equipment*

- Fast and easy design and manufacture of individual guardings and workstations due to the modular design
- Less project-related fabrication leads to reduced costs due to the use of standardized and compatible modules
- Optimal functionality and ergonomics for workplaces and workstations thanks to a comprehensive construction kit system
- Easy conversion or expansion due to compatibility of the modules and reusable connection technology allows constant adjustment for changing assembly processes
- Attractive design of workstations thanks to the use of high-quality aluminum profiles
- Complementary assortment of dimensionally accurate guard rails, treads and platforms for safe work on your systems
- mk Config – the 3D product configurator for guardings simplifies planning and reduces project costs
- Rapid availability of all modules and individual parts from stock



# Our Products in Factory Equipment

Our 3D configurator (mk-Config) allows you to construct guards with swinging, sliding and lift doors. Using individual modules, individual workstations for the

workshop, assembly areas or offices can also be set up. Our modules are complemented by a comprehensive range of stylish and functional guard rails, treads

and platforms that allow you to individually design your work areas and buildings.



Guarding



Workstations



Guard Rails, Treads, Platforms

## Guarding

With guarding from mk, you are opting for a flexible and economic modular design. Choose from a large assortment of guarding modules, swinging door, sliding door and lift door elements that can be electrically secured on request. Pneumatic, hydraulic or electrically operated door elements can be easily integrated. mk allows you to design distance guarding that conforms to the applicable safety standards.

## Workstations

The mk system makes it easy to custom design workstations in the workshop and in the assembly and office areas. Maximize the functionality and ergonomics of your workstations while remaining flexible and economical. The mk profile technology allows you to easily and cost-effectively design workstations based on your needs thanks to the modular design.

## Guard Rails, Treads, Platforms

Safe access and platforms for your plant can be easily build with the mk GTP-System. Based on the proven mk profile technology, dimensionally accurate individual solutions for access, transitions or even work platforms can also be set up.

## *mk Factory Equipment –* **Guarding**



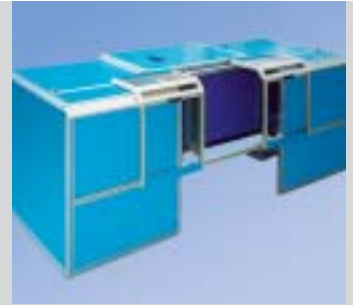
### *Advantages of mk Guarding*

- Universal compatibility and modularity thanks to two different standards based on the same base dimension
- An ergonomically advantageous result due to the favorable mass/strength ratio of the profile design during the handling and assembly of the elements
- Field connections with angles ensure maximum stability with little assembly effort
- Disassembly if necessary thanks to screw connections
- A large assortment of installation elements (partitions, posts, doors, etc.) and paneling
- Maximum flexibility for system extensions or alterations due to combinability and reusability of individual components and modules
- A wide variety options are available
- mk Config – the 3D product configurator for guardings simplifies planning and reduces project costs

## *mk Distance Guardings*

mk offers various compatible standards of guarding. The range of products includes protective fields, sliding and lift doors, paneling and accessories for electrical

protection. mk also offers the "mk QuickDesigner" configuration software which uses current standards that greatly simplifies and accelerates inquiry and order handling.



## *mk Machine Housings and Protective Enclosures*

With years of experience, mk supports both production and mechanical engineering companies as well as system integrators by tackling tasks related to occupational safety. Examples are safety devices for robots and integrated machines, clean rooms and soundproof booths or parti-

tions and room dividers. The mk aluminum profile system provides flexible connections, stability and an attractive design. All thanks to a large selection of components and modules, which create customer-specific guarding that is cost effective.



## *mk Factory Equipment –* **Workstations**



### *Advantages of mk Workstations*

- Know-how in the area of customer-specific workstations guarantees a standardized and modular product platform for custom designs based on specific customer requirements
- mk workstation systems fit the person, not the reverse
- With changing production conditions, simple and economic adjustment to the new situation is easy and cost-effective
- Consistent system design of compatible elements, quality in material and workmanship and above all, a high level of utility ensure cost efficiency in the long term
- Competent advice and support in design from mk engineers

# mk Factory Equipment – Guard Rails, Treads, Platforms



## *Advantages of mk GTP (Guard Rails, Treads, Platforms)*

- This range of products is the perfect companion to the mk guarding and mk profile technology
- Through a variety of design options, the range of products combines safety requirements with the desired workplace ergonomics.
- As a result of the lightweight aluminum, assembly platforms can be mobile thanks to air cushions and swivel casters
- With changing production conditions, simple and economic adjustment to new situation is easy





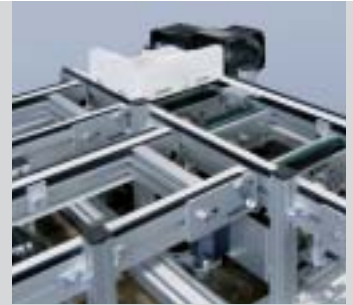
# mk Transfer Systems



## *Advantages of mk Transfer Systems*

- Planning, assembly and initial operation of client-specific systems for transporting products
- They are based on standardized components and modules of the mk conveyor, linear and profile technology as well as mk factory equipment
- We offer maintenance and service contracts with uniquely definable response times
- Locally-based support is available through our global offices
- Internationally represented, notable suppliers provide replacement parts for parts subject to wear





### *Systems Competence for the mk Construction Kit*

mk provides mechanical modules and components with system competence. We achieve this by using our own standard modules and components and then by adapting to the individual client requirements.

The main objective for achieving successful results during client projects lies in the individual solutions for transporting products – whether on simple conveyor units or intricately networked systems. Our service comprises of competent guidance throughout the entire product life cycle and bey-

ond. From the consulting, conception, and development phases through the implementation, maintenance and repair, mk is the primary contact for the client.

Particularly efficient and proven solutions that demonstrate general validity become the norm and have continual influence on the mk modular profile system. For this reason, a continual process of improvement is established for the modules and components as well as for future, client-specific transfer systems.



# Our range of services

## *mk Parts*



**Reduce your planning time by using the "mk Parts" CAD parts library!**

- Online at [www.mk-group.com](http://www.mk-group.com)
- Off-line in the "mk QuickDesigner" software package
- Free access to CAD data
- Simple processing with native and neutral CAD formats
- Automatic part list information for the components
- Part configuration online
- Shopping cart function for online requests

## *mk Config*



**Quick and easy design of your guarding!**

- Contained in the "mk QuickDesigner" software package
- Conveniently create guarding without costly design
- Cost optimization through automatic selection of default fields
- Exporting of 3D drawings for further processing or enhancement in your CAD system

## *mk Comparison- and Selection Tool: Conveyor Technology and Linear Motion*



**Immediately obtain your matching mk conveyor or linear technology system online based on your requirements!**

- Online selection tool for determining the optimal system based on the parameters entered
- Comparison of up to 3 systems at a glance
- Motor selection program
- Direct link to our e-catalog

### *mk Profile Technology Online Shop*



Order profiles, connectors and accessory elements at [mk-group.com/shop](http://mk-group.com/shop) – 24 hours a day!

- Visual parts selection prevents confusion
- Search function by name or ID number
- Direct price calculation
- Order online

### *mk Online Order Tracking*



**Check the status of your order at any time – online!**

As a registered user, you can view the history of your orders at mk in our online shop. Follow the status of your online or off-line orders. Find out, for example, whether your order is currently in assembly or whether it has already been shipped.

### *mk Quick Delivery Programm (QDP)*



**We deliver your GUF-P MINI and GUF-P 2000 fast!**

- Top adherence to delivery dates and availability thanks to optimized storage and a lean manufacturing process
- We cover a wide range of applications due to standardization and modularization of these units
- Fast delivery of spare parts
- Price advantage

We're there  
where you need us



Headquarters, Troisdorf,  
Germany

Every hour of downtime for you or one of your customers cost you money and reputation. Therefore, we are on your side in the planning and design phase, as well in after-sales business as a partner. Our international network of

production, sales and service sites make it possible to quickly respond to your requirements and make the service you are used to possible. Our site addresses are available on our website at [www.mk-group.com/contact](http://www.mk-group.com/contact).

# Our Information material



Our catalogs are organized by our 4 main business areas. Various product flyers compliment our catalogs.

Current information about mk products and other interesting topics is also available on our website at [www.mk-group.com](http://www.mk-group.com).

## *mk Profile Technology Catalog*



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

## *mk Conveyor Technology Catalog*



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

## *mk Linear Motion Catalog*



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

## *mk Factory Equipment Catalog*



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

## *CD mk QuickDesigner*



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

## *Mini-CD mk E-Catalog*



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



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