TECHNOLOGY GROUP

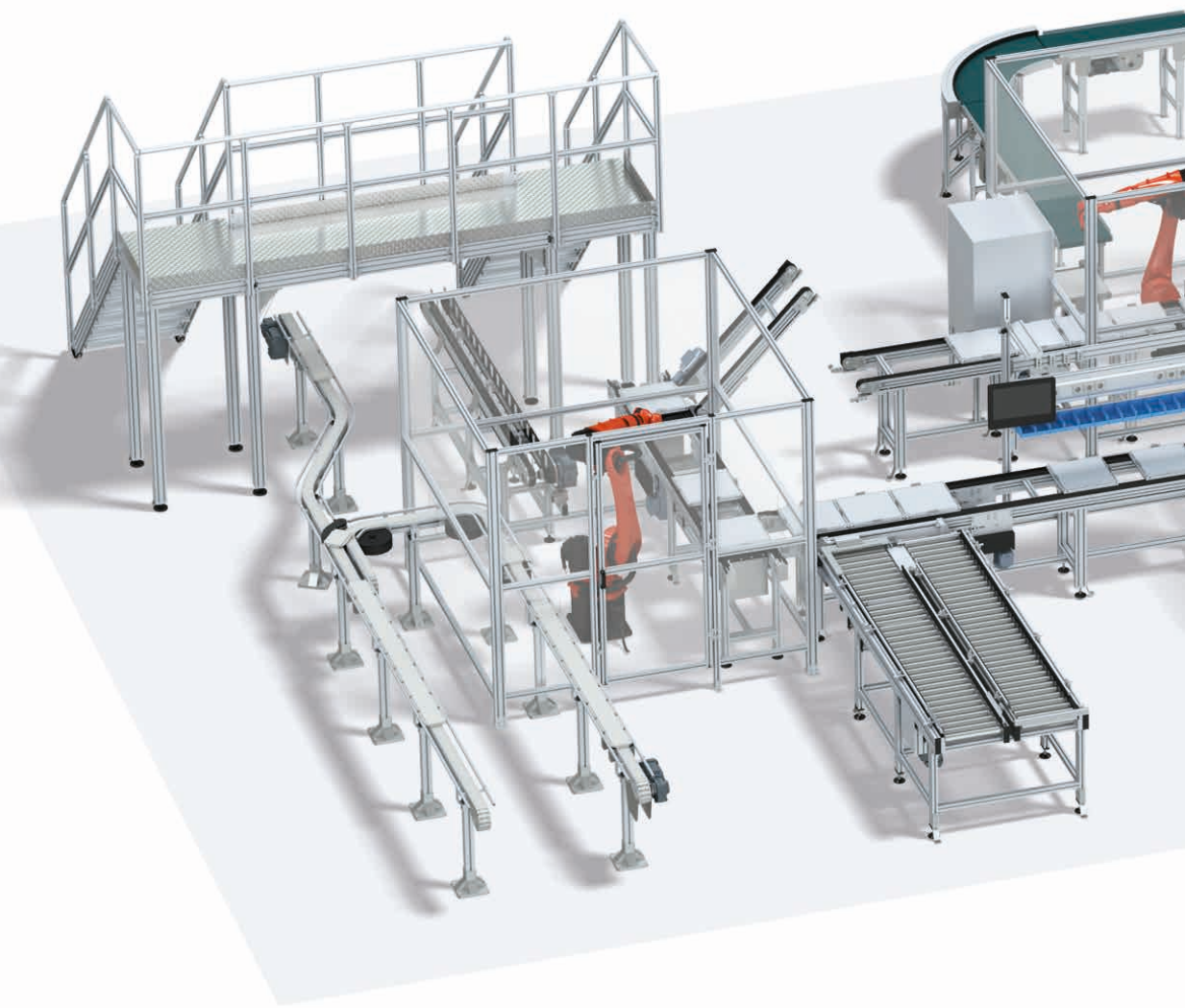
Conveyor Technology

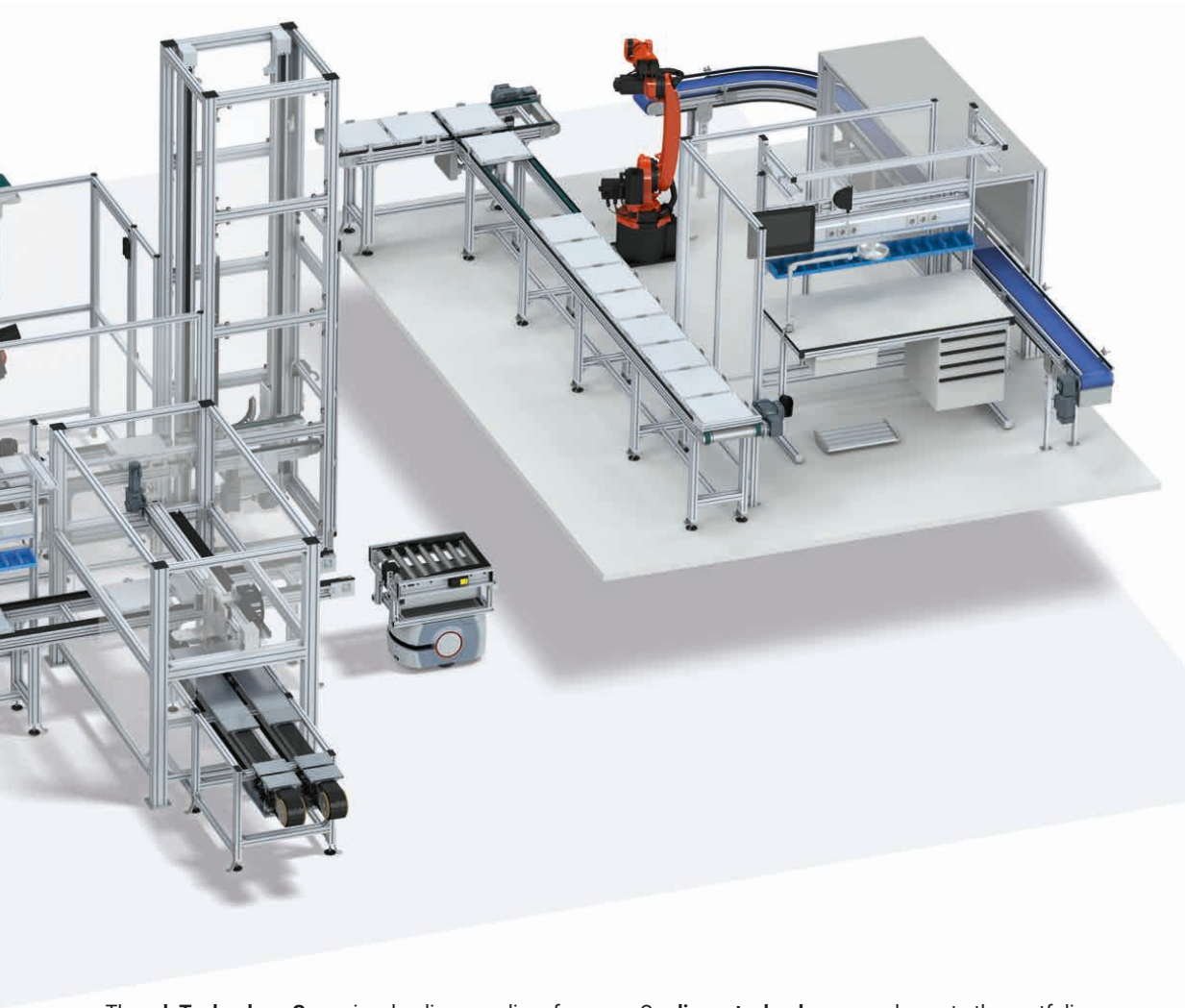


Always the right conveyor.

Edition 7.0

» From individual components
to complete solutions. «





The **mk Technology Group** is a leading supplier of profile and conveyor technology. The mk construction kit is based on an aluminium profile system that makes it modular and scalable.

Our **conveyor technology** includes belt conveyors, timing belt conveyors, modular belt conveyors, chain conveyors and roller conveyors in numerous designs as well as pallet systems for the reliable interlinking of assembly and production processes.

Our **profile technology** includes the profile system and the guarding, workstations, stairs, platforms and machine frames that are based on it.

Our **linear technology** complements the portfolio with functions for precise linear movements and handling applications.

mk also uses the modular construction kit to develop tried-and-tested **solutions** for in-house material flows – customised to specific customer requirements.

Reliable **after-sales service** completes our offering.

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Introduction and Benefits

1



» Always the right conveyor. «

With conveyor technology from mk, almost all requirements for the transport and handling of piece goods can be realised – from individual conveyors to pallet systems. Different conveyor types and configurations enable precise adaptation to the specific goods to be transported, the process flow and the environment.

Based on our own aluminium profile system, our conveyors are characterised by high material quality and a wide range of equipment variants and customisation options.

Our portfolio includes belt conveyors, timing belt conveyors, modular belt conveyors, chain conveyors, flat top chain conveyors and roller conveyors, ensuring that the right conveyor is always available.

For automated assembly and manufacturing processes, mk offers pallet systems such as Versamove, Versaflex, SPU and TKU. These enable position-based transport and reliable interlinking of individual stations.

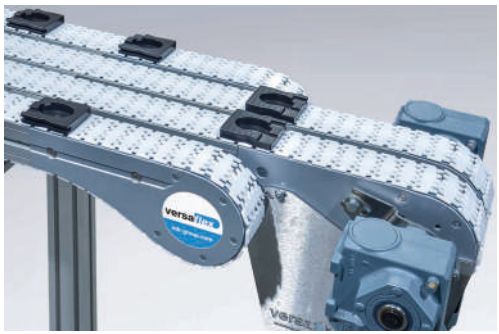
We also offer special conveyors for special tasks and operating conditions, rotary tables for buffering and an extensive range of accessories.

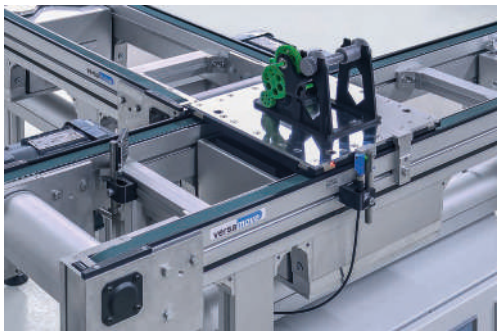
Benefits of mk Conveyor Technology

- Always the right conveyor for your specific goods, environment and process
- High process reliability thanks to robust and proven technology from the mk construction kit
- Design expertise for optimally designed conveyors and pallet systems
- Expandable modular system with linear technology, rotary tables, guarding and accessories
- Quick project planning under your control with the QuickDesigner online configurator
- Comprehensive after-sales service including commissioning, maintenance and technical support









Operating Conditions

1 Standard operating conditions

Our conveyor systems are always designed for use under production conditions in indoor industrial areas.

Due to their design, some systems are also suitable for higher ambient temperatures and for conveying hot, abrasive or oily products.

We will be happy to advise you on selecting the right conveyor system.

Climatic conditions

The permissible ambient temperatures are +10° C to +60° C and a relative humidity of 30% to 60%, in each case without condensation or droplet formation. A clean production environment is also a prerequisite.

Chemical influences

No chemically aggressive media act on the conveyor systems.

Physical influences

There are no abrasive materials such as sand, dust or chips, nor any strong impacts, shocks or vibrations.

Special operating conditions

Special operating conditions place special demands on materials, components and design. mk offers conveyors and conveying media adapted to these applications.



ESD

ESD stands for electrostatic discharge. To avoid electrostatic phenomena, specific ESD requirements must be met to protect sensitive products such as electronic components. mk offers conveyors in conductive designs and with earthing concepts.



Food & pharma

If food, including packaged food, or pharmaceutical products are transported, a number of specific regulations and hygiene requirements must be met. Conveyor belts with FDA certification are used in such applications. The abbreviation FDA stands for „Food and Drug Administration“ and refers to the US regulatory agency.



Cleanroom & technical cleanliness

Conveyors that are used in processes with technical cleanliness requirements or in cleanrooms are designed for the specific application in order to minimise particle emissions.



PWIS-free zone

If conveyed products are to be painted or provided with another coating, they must not be exposed to any substances that may impair the wetting of the paint (PWIS-free). These include, for example, silicones, oils, greases or fluorine-containing substances. mk carefully selects all components of the conveyor based on these requirements and the respective application.



ATEX area

In ATEX areas, i.e. in zones with potentially explosive atmospheres, ESD requirements apply in addition to certain fire protection classes in order to avoid sparks caused by electrostatic discharges. mk supplies suitable conveyors with ATEX-certified components and conductively connected parts.



Dry room

Dry rooms are special areas with extremely low humidity, usually between one and two per cent. They are used in various industrial sectors to prevent corrosion, condensation and material damage. The very low humidity changes the material properties of individual materials, which is why all components of the conveyor need to be carefully selected.

Selecting the Conveyor Type

1

Belt Conveyors

→ Page 18



- For transporting bulk and piece goods without specific requirements regarding the product's position, orientation or the product geometry
- Compact design makes it ideal for integrating into existing and complex systems
- Reliable product transfer with a knife edge, even for small products
- Large selection of belts, suitable for the goods being transported and the task, e.g. with product accumulation, FDA compliant, antistatic, etc.

Widths [mm]	Lengths [mm]	Total load [kg]	Speed [m/min]	Incline	Curve
50-2,000	380-10,000	up to 500	up to 80	up to 60°	•

Modular Belt Conveyors

→ Page 84



- For transporting piece goods without specific requirements regarding the product's position, orientation or the product geometry
- Positive drive mechanism eliminates slippage and makes it suitable for wet applications, permeable chains also available
- Stable chain travel regardless of the length-width ratio
- Chain material is highly resistant to wear and abrasion, making it suitable for high temperatures, contact with chemicals or food, etc.

Widths [mm]	Lengths [mm]	Total load [kg]	Speed [m/min]	Incline	Curve
200-1,000	400-10,000	up to 250	up to 30	up to 60°	•

Timing Belt Conveyors

→ Page 112



- As a double-line system, ideal for the cycled transport of pallets or products with a rigid structure
- Positive drive mechanism ensures exact positioning and synchronisation of the lines
- High speeds and accelerations with quiet and smooth operation
- Suitable pallets, stoppers, positioning units and rotating units are available as part of the Versamove pallet system

Widths [mm]	Lengths [mm]	Total load [kg]	Speed [m/min]	Incline	Curve
40-2,000	500-10,000	up to 250	up to 60	-	

Chain Conveyors

→ Page 136

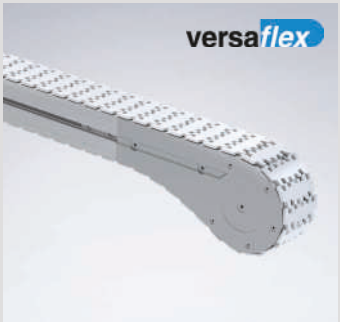


- As double-line systems, ideal for transporting pallets or products with a rigid structure under heavy loads in accumulated operation
- Sturdy in accumulated operation and temperature resistant
- Suitable for dirty and oily environments
- Suitable pallets, stoppers, positioning units and rotating units are available as part of the Versamove pallet system.

Widths [mm]	Lengths [mm]	Total load [kg]	Speed [m/min]	Incline	Curve
200-2,000	500-10,000	up to 1000	up to 30	-	•

Flat Top Chain Conveyors

→ Page 182



- Versaflex, for transporting bottles, cans, small cardboard boxes or similar on complex routes
- Convey products in three-dimensional space, including changing levels, with one drive and without separation points
- Good for gravity-assisted conveying with friction rollers
- Positive drive mechanism eliminates slippage and makes it suitable for wet applications
- Suitable for position-based transport using pallets

Widths [mm]	Lengths [mm]	Total load [kg]	Speed [m/min]	Incline	Curve
45-300	up to 30,000	up to 200	up to 60	up to 10°	•

Roller Conveyors

→ Page 196



- For transporting piece goods with a stable, flat base, such as boxes, cartons or containers
- Gravity roller conveyors can be used manually or operated with a slight incline
- Segmentation can be used to realise different speeds or start and stop functions along a conveying path
- Zone-operated motor driven rollers enable zero-pressure accumulation (ZPA)

Usable width [mm]	Lengths [mm]	Total load [kg]*	Speed [m/min]	Incline	Curve
150-700	up to 6,000	up to 55	up to 60	up to 3°	•

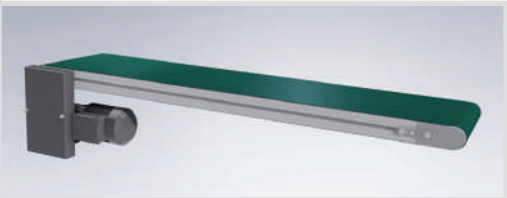
* per conveyed product

Selecting the Drive

1

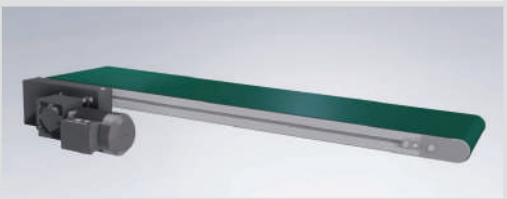
Head drive

The head drive is located on the discharge end of the conveyor as standard and pulls the transport medium. If you have location restrictions, you can also install the drive on the infeed end to push the transport medium. In this case, belts require a higher pre-tension to prevent the belt from kinking.



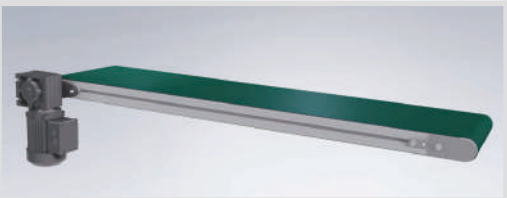
AC - Indirect head drive

With power transmission via chain or timing belt, the indirect drive enables a wide range of motor, gearbox and sprocket wheel combinations as well as fine speed gradation.



AS | AU - Indirect head drive, laterally on the outside

The indirect drive with the external motor mounted on the side keeps the space above and below the conveyor free and allows for flexible motor, gearbox and sprocket wheel combinations as well as fine speed gradations.



AF - Direct head drive

With the direct drive, the motor is connected directly to the drive shaft, resulting in a particularly compact and low-maintenance design.

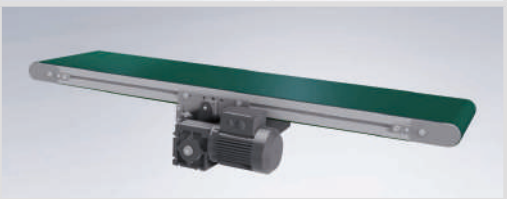
Centre drive

Centre drives, also known as lower belt drives, are arranged below the transport level in various locations, usually in the centre. They can be used to enable reverse operation, since the transport medium is always pulled and thus difficult pushing is avoided. Fixed installation lengths are available and a knife edge can be installed at the infeed and discharge ends.



BC - Indirect centre drive

The indirect centre drive offers flexible motor, gearbox and sprocket wheel combinations, fine speed gradation, reverse operation and the option of installing knife edges at the infeed and discharge ends.



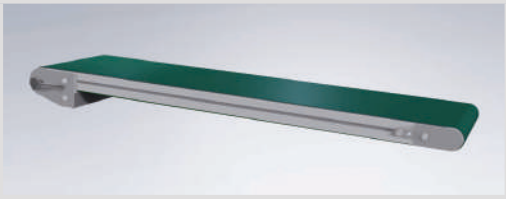
BF - Direct centre drive

The direct centre drive offers a particularly compact and low-maintenance design as well as the option of reverse operation and knife edges at the infeed and discharge ends.

The drive versions are shown on the belt conveyor in the example.

Internal drive

Internal drives with a drum motor produce few obstructing edges, making them particularly popular for applications with limited installation space. They are also popular in clean environments, since they feature low particle emissions and have few surfaces on which dirt can deposit.



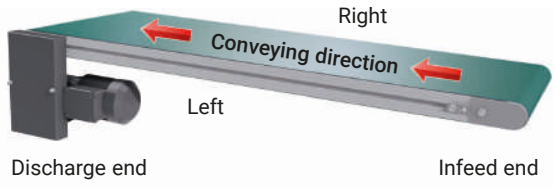
CA | CB - Internal drive with drum motor

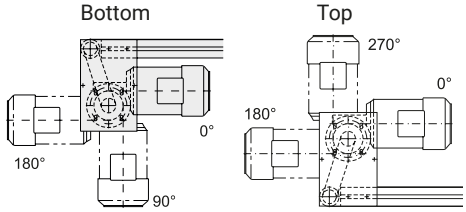
The maintenance-free and compact drive version with drum motor has minimised obstructing edges and low particle emissions, making it particularly suitable for tight installation conditions and clean environments.

The drive versions are shown on the belt conveyor in the example.

Drive location and motor orientation

Various drive types are available with numerous options for drive location and motor orientation. The standard design is an indirect head drive on the discharge end at the bottom left with a motor orientation of 0°.





1

Operational modes

The configuration of the drive and the motor selection depend on the operational mode.

Continuous operation

In continuous operation, the conveyor and the products run without interruption. The goods to be conveyed are fed onto the running conveyor.

On/off operation

In on/off operation, the conveyor is switched on and off up to four times per minute as required, e.g. to feed in parts or for manual removal.

Cycle operation

Cycle operation usually takes place in fixed, repeating cycles. For operation with over 30 cycles per minute, servo drives are usually required. More than 60 cycles per minute are possible on request. The required repeatability and positioning accuracy play a key role:

- ±10 mm: with simple sensor systems such as initiators or photoelectric sensors
- ±5 mm: usually with positive drive mechanism and closed-loop controller
- ±1 mm: at the boundary to linear technology

Accumulated operation

In accumulated operation, the conveyor continues to run underneath the accumulated products. The drive works against the friction of the stationary products, which requires twice as much motor power.

Running direction and reverse operation

- **One running direction:** The conveyor always transports the product in one direction only.
- **Reversing:** The conveyor runs in one direction, but can be reversed by one belt length, e.g. for positioning.
- **Two running directions:** The conveyor is designed for continuous operation in both directions.

Motor selection

Our standard range includes a large selection of in-stock motors from well-known manufacturers: gearmotors with three-phase asynchronous motors or three-phase motors, combined with Spiroplan, helical-worm or helical gearboxes, in efficiency class IE3 and protection class IP 54. Custom motors, servomotors, UL-CSA approval and multi-range motors are also available as options.

Speeds

The maximum conveying speed depends on the motor selected, the load on the belt, the operational mode and other factors. The speeds provided here are nominal values and may deviate by -10% to +20% due to the speed tolerances of the motors. Higher speeds are also achieved when the system is operated on a 60 Hz grid (for example, in the USA).

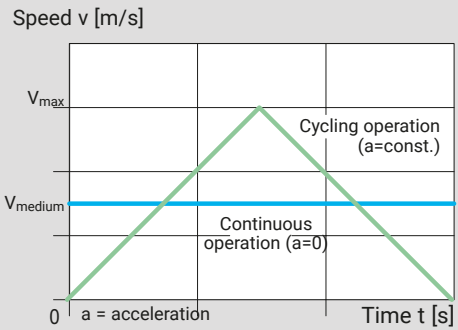
The speed can be precisely defined using a frequency inverter (three-phase current) or reglomat (direct current). The adjustment range is as follows:

- **Three-phase current:** in the range from 10 to 70 Hz (1:7) based on a nominal speed at 50 Hz; 20 to 60 Hz (1:3) for drum motors
- **Direct current:** 1:6 (0.25-1.5 A or 0.5-3 A)

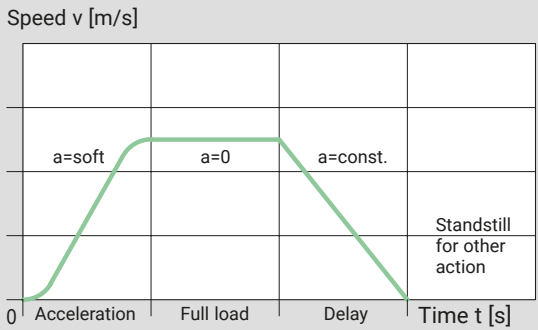
Speed – continuous operation compared to cycling operation

The diagrams show the need for a higher maximum speed in cycling operation compared to continuous operation. In addition, they show an example of the course of a cycling operation with soft start-up and standstill for a different action (e.g. to process the conveyed product).

Continuous operation compared to cycling operation

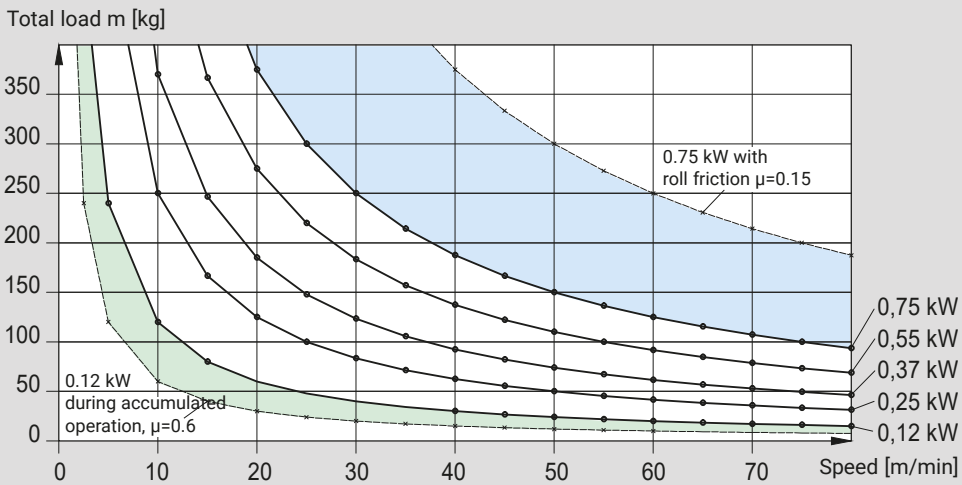


Example of cycling operation



Selecting motors based on speed and load

This diagram can be used to determine the motor power required based on the total load (transported material + medium of transport) and the speed. The values shown correspond to a kinetic friction value of μ=0.3, which is the friction between the belt and the underlying plate in a belt conveyor.

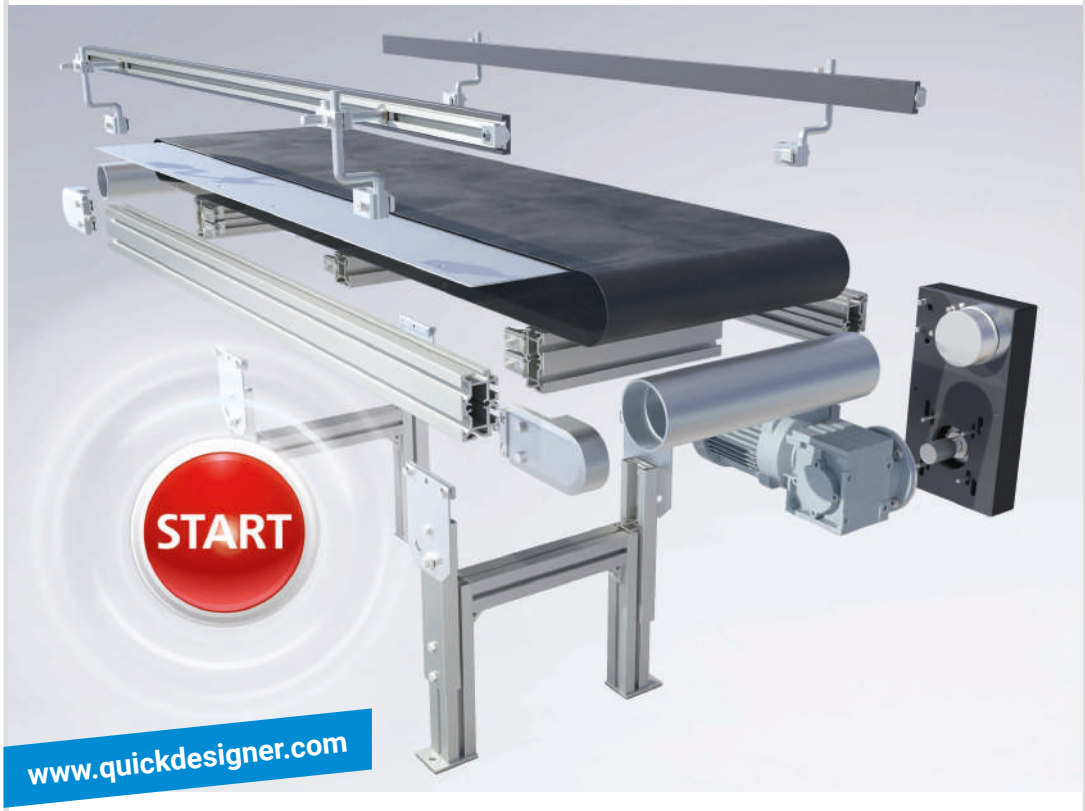


Example of the effect on the permissible total load and speed when the friction coefficient is halved from a belt conveyor (μ=0.3) to a roller conveyor (μ=0.15)

Example of the effect on the permissible total load and speed when the friction coefficient is doubled from continuous operation (μ=0.3) to accumulated operation (μ=0.6)

1

QuickDesigner online configurator



» Your personalised conveyor at the push of a button. «

Our “QuickDesigner” online configurator enables you to create a custom belt conveyor based on your exact requirements quickly and easily. You do not require any software; time-consuming installation is dispensed with.

Simply enter **www.quickdesigner.com** in your browser and that’s it.

Your on-screen entries are checked for plausibility immediately, to ensure that you are always offered the optimal conveyor.

When your desired conveyor is complete, you can generate a CAD model and a quote.

We are constantly expanding the range of configurable conveyor systems – so it’s worth subscribing to our newsletter to stay up to date: www.mk-group.com/newsletter.

Request/Order

You are also welcome to use our web enquiry forms to request or order your individual conveyor.

www.mk-group.com



Information for the request/order
Conveyor system name
Dimensions and weight of the goods to be conveyed
Distributed load and overall load
Conveyor length and width
Drive version
Drive location with motor orientation
Speed
Constant or controllable mode
Controller type
Mode (continuous, accumulating, fixed-cycle)
Tail (infeed end and discharge end)
Belt, modular belt, chain, timing belt type
Any cleats/side walls
Stand version, including working height
Side rail type
Any other accessories

Your contact person



Naturally, our field team are also happy to assist you on site or by video conference, phone or e-mail.

www.mk-group.com/kontakt

Chapter 2 Belt Conveyors

2



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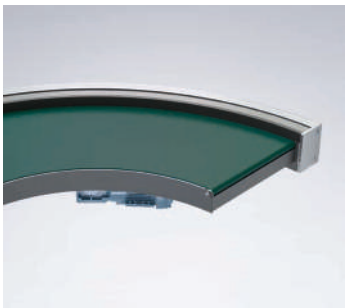
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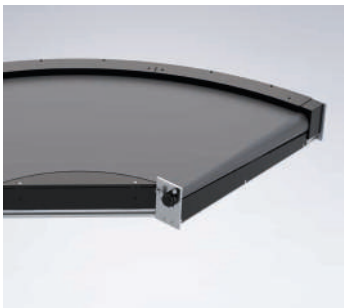
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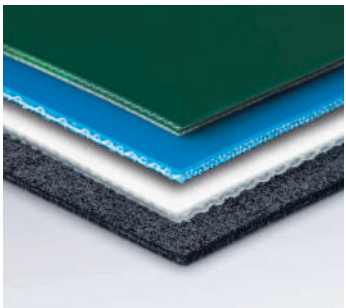
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Technical data – overview

Conveyor system	Width [mm]	Length [mm]	Total load as standard, up to [kg]	Speed up to [m/min]	ø of tails [mm]	Cycling	Accumu-lation	Revers-ing
Belt conveyor								
GUF-P MINI	50-300	490-3,000	15	30	12/33	•	•	•
GUF-P 2000	50-800	380-10,000	125	80	12/19/53	•	•	•
GUF-P 2041	200-1,200	525-10,000	250	60	22/85	•	•	•
GUF-P 2004	1,000-2,000	720-10,000	500	60	105	•	•	
Incline conveyor belt								
KFG-P 2000	300-700	1,400-4,000	40	16	53	•		
Curved belt conveyor								
KGF-P 2040	300-600	90°/180°	30	30	19			•
KGF-P 2040.02	300-900	90°	50	60	88			

Total load

The total loads in the catalogue are guide values that are achieved with a large number of configurations. The actual maximum loads depend on the following factors and will vary accordingly.

Required belt pull strength
The greater the bending resistance of the belt and the more frequently and strongly it is deflected, the higher the belt pull strength required; small tail radii and high belt tension increase this further.

Power transmission from driving roll to belt
In addition to the coefficient of friction between roller and belt, wider driving rolls, higher belt tension and a larger roller diameter and wrap angle will increase the traction and thus the maximum transmittable force.

Motor selection
You require a motor of suitable size that can be connected to the configured conveyor system and provide the required torque at the desired speed.

Mechanical stability
Drive and idler rollers must not bend too much under load. Excessive bearing forces significantly shorten the service life of the roller bearings. Conveyor frames and stands must be able to safely absorb point and surface loads.

Operational mode
In cycle operation, the motor must overcome the mass inertia of the conveyed product each time it starts up and must therefore be dimensioned accordingly. In accumulated operation, the required belt pull strength increases due to the additional friction between the conveyed product and the belt.

Environmental conditions
Unfavourable environmental conditions such as very low temperatures or humidity reduce the maximum permissible load.

Conveyor width

The conveyor width is the width of the conveyor frame without the tails. The belt is between 10 and 50 mm narrower depending on the system to allow for self-adjustment of tracking.

Conveyor length

The conveyor length is defined as the outer distance between the head parts in the untensioned state. The actual conveyor length differs and is calculated based on the nominal dimension (at an ambient temperature of approximately 20°):

+ 1-3 mm per side
(rollers protruding beyond head parts)

+ 1-5 mm per side (belt thickness)

± 0.8% of the conveyor length (belt length tolerance)

+ 0.3% of the conveyor length
(belt tensioning distance)

A precisely defined installation length can be implemented with centre drives.

Length-width ratio

Length to width ratios of 1:1 to 50:1 are possible for reliable tracking.

Length-width ratio	Information
1:1 to 1,5:1	Only with additional measures, e.g. lengthwise fence
1,5:1 to 2:1	Usually no restrictions, check design
2:1 to 20:1	**No restrictions**
20:1 to 50:1	Only with laterally stiff belts, no lateral forces

Lateral forces can be caused by, for example, lateral pushing off of product, lateral product feeding, product transfer or alignment by means of side rails and asymmetrical load distribution.

Speed

The maximum conveying speed depends on the motor selected, the load, the operational mode and other factors.

For 30 m/min and higher, a drive with timing belts is recommended; this is standard for speeds greater than 60 m/min and for cycle operation.

Higher speeds can be achieved on request.

The speed can be precisely defined using a frequency inverter (three-phase current) or reglomat (direct current). The adjustment range is as follows:

- **Three-phase current**: in the range from 10 to 70 Hz (1:7) based on a nominal speed at 50 Hz; 20 to 60 Hz (1:3) for drum motors
- **Direct current**: 1:6 (0.25-1.5 A or 0.5-3 A)

Belt Conveyor GUF-P MINI

2



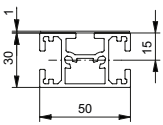
Small. Lightweight. Easy to integrate.

Thanks to its minimal height, the GUF-P MINI is ideal for use in systems with limited installation space. The small tails (with optional ø 12 mm knife edge) allow small products to be transferred reliably.

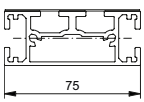
Crowned driving rolls and idler rollers ensure centred tracking.

10 mm T-slots running along both sides let you easily mount the conveyors on existing machine frames or attach stands, side rails, initiators and other accessories.

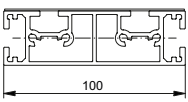
Cross sections



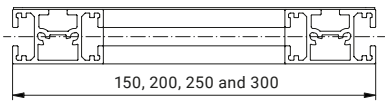
Profile mk 2020



Profile mk 2021



Profile mk 2022



Profile mk 2020 frame construction

Benefits of the GUF-P MINI

- Economical transport of small, lightweight products
- Low height for easy integration in restricted installation conditions
- Straight lines and inclines up to 20°
- Reliable transfer of small products with ø 12 mm knife edge
- Wide variety of drive options and belt designs to suit any application
- Large selection of three-phase asynchronous motors, three-phase motors and stepper motors

Technical data

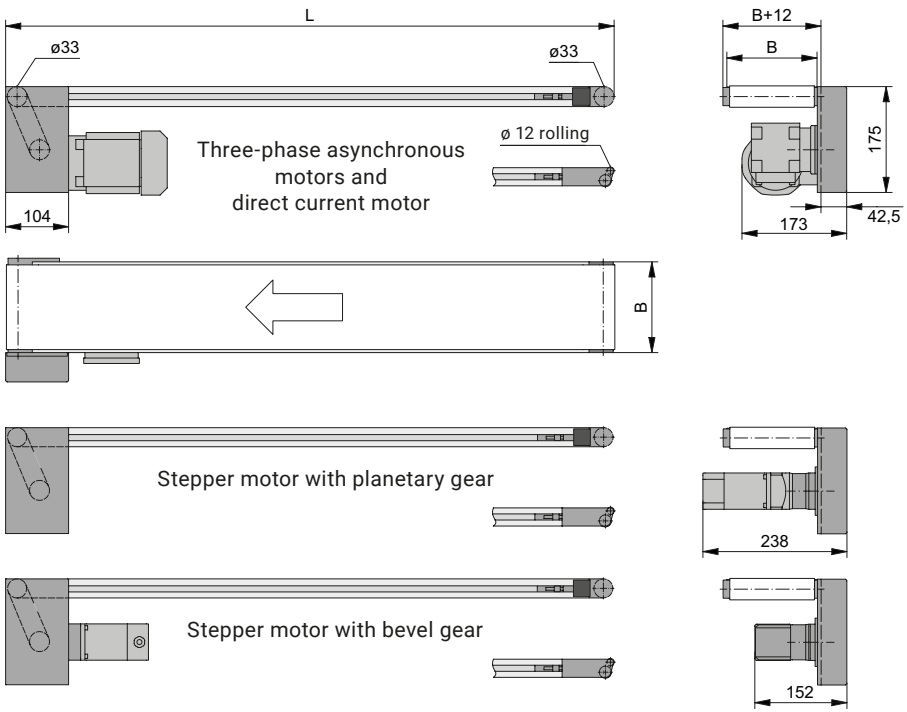
Conveyed product	piece goods, bulk goods > 10 mm	
Conveyor length L	individual from 490-3,000 mm	
Conveyor width B	50, 75, 100, 150, 200, 250 and 300 mm	
Total load	up to 15 kg, higher on request	→ p. 20
Speed	up to 30 m/min depending on drive	
Drive version	head drive AC, AF (direct), centre drive BC, BF (direct)	→ p. 24
Tail	tail 11 (ø 33 mm), tail 13 (ø 12 mm knife edge)	→ p. 28
Belt properties	laterally stiff, antistatic, FDA compliant, oil-resistant, cut-resistant	→ p. 72
Side rail	SF1.3 (fixed), SF01 (adjustable)	→ p. 240
Stand	single stand, H-design stand, mobile, height-adjustable	→ p. 224
Operational mode	continuous operation, cycle operation, accumulated operation, reverse operation	

AC – Indirect head drive

B20.75.040

2

The compact conveyor frame design with the most popular drive variants makes it easier to integrate the conveyor into existing systems.



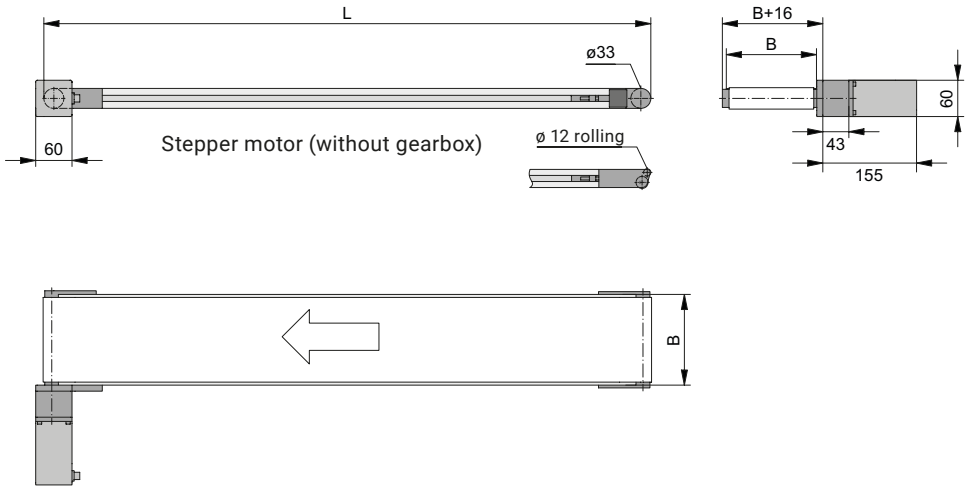
Technical data

Conveyor length L	individual from 490-3,000 mm
Conveyor width B	50, 75, 100, 150, 200, 250 and 300 mm
Belt width	B-10 mm → p. 72
Drive location	discharge end left/right underneath/above
Motor options	Three-phase asynchronous motors 230 V, direct current motors 24 V and stepper motors 48 V
Drive and speed	Intermediate chain drive; up to 30 m/min.
Stand and side rail	→ p. 224
Total load	up to 15 kg, higher on request → p. 20

AF – Direct head drive

B20.75.041

The compact conveyor frame design makes it easier to integrate the conveyor into existing systems. Since the motor is fitted directly onto the drive shaft, the space requirements and maintenance effort for this drive version are reduced to a minimum.



Technical data

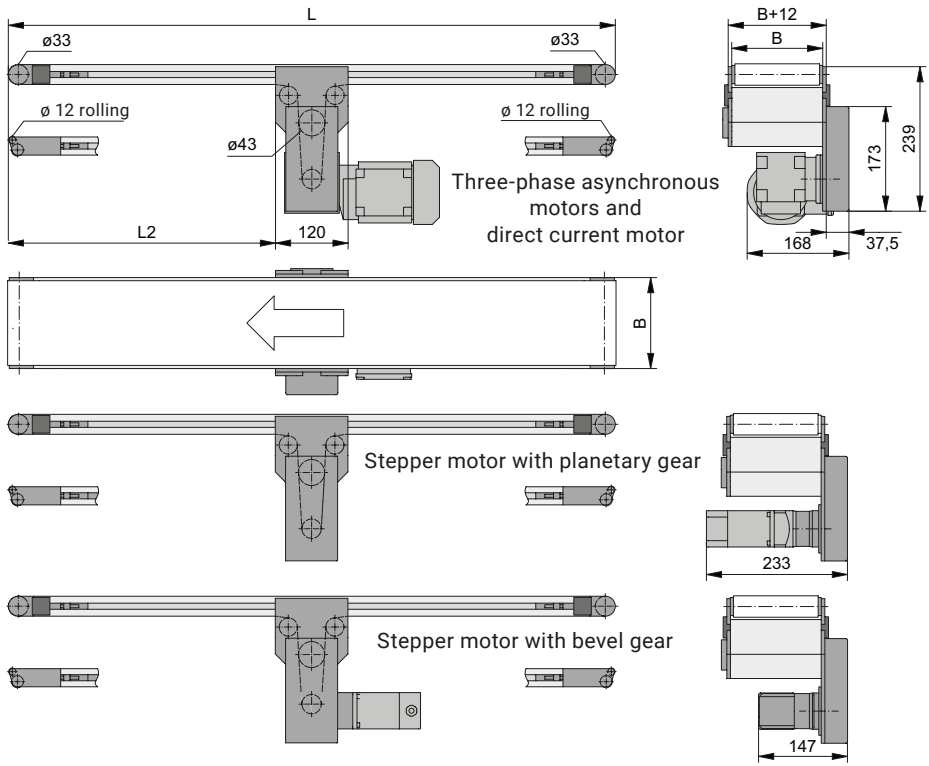
Conveyor length L	individual from 490-3,000 mm	
Conveyor width B	50, 75, 100, 150, 200, 250 and 300 mm	
Belt width	B-10 mm	→ p. 72
Drive location	discharge end left/right	
Motor options	Stepper motors 48 V	
Drive and speed	Direct drive; up to 30 m/min.	
Stand and side rail		→ p. 224
Total load	up to 15 kg, higher on request	→ p. 20

BC – Indirect centre drive

B20.75.042

2

The position of the drive between the tensioning elements can be freely selected by specifying L2.
This makes the conveyor extremely flexible when integrating into existing systems.



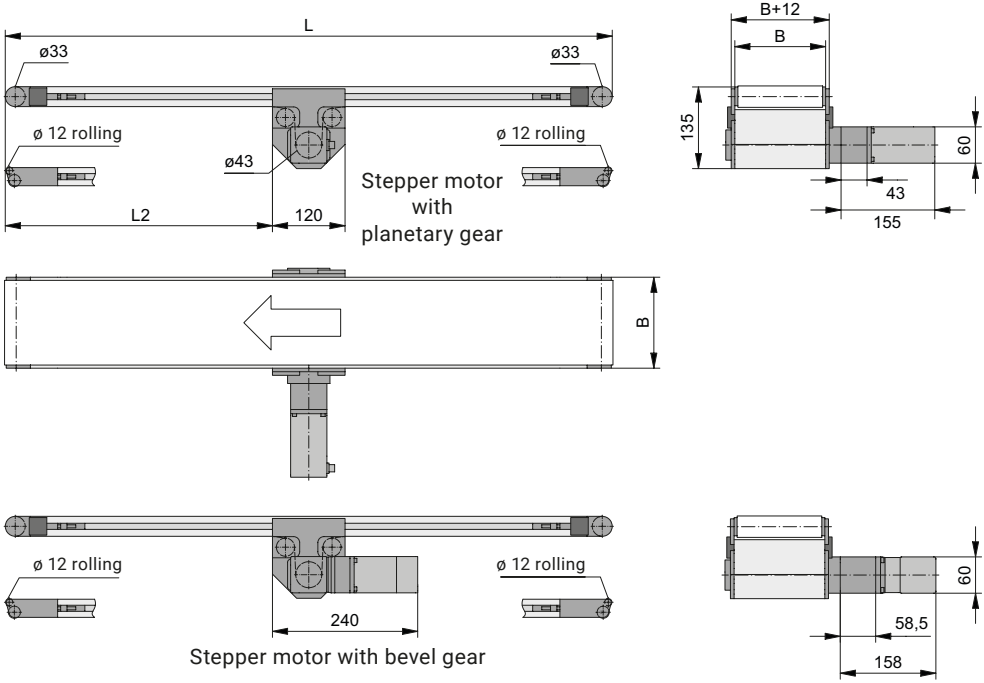
Technical data

Conveyor length L	individual from 660-3,000 mm
Conveyor width B	50, 75, 100, 150, 200, 250 and 300 mm
Belt width	B-10 mm → p. 72
Drive location	left/right
Motor options	Three-phase asynchronous motors 230 V, direct current motors 24 V and stepper motors 48 V
Drive and speed	Intermediate chain drive; up to 30 m/min
Stand and side rail	→ p. 224
Total load	up to 15 kg, higher on request → p. 20

BF – Direct centre drive

B20.75.043

The position of the drive between the tensioning elements can be freely selected by specifying L2. This makes the conveyor extremely flexible when integrating into existing systems. Since the motor is fitted directly onto the drive shaft, the space requirements and maintenance effort for this drive version are reduced to a minimum.

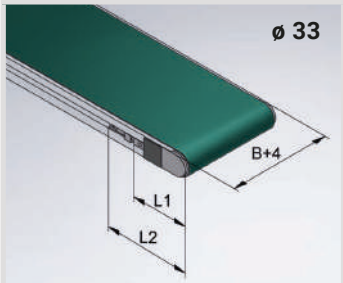


Technical data

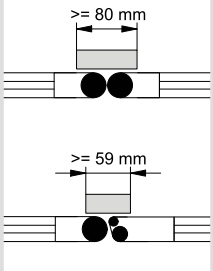
Conveyor length L	individual from 660-3,000 mm	
Conveyor width B	50, 75, 100, 150, 200, 250 and 300 mm	
Belt width	B-10 mm	→ p. 72
Drive location	left/right	
Motor options	Stepper motors 48 V	
Drive and speed	Direct drive; up to 20 m/min	
Stand and side rail		→ p. 224
Total load	up to 15 kg, higher on request	→ p. 20

Tail 11, standard

B8001AA ....



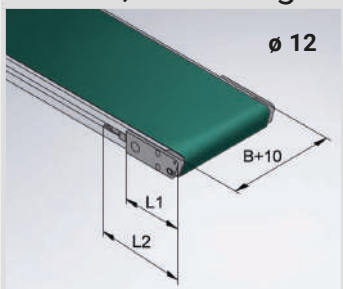
- Crowned roller ø 33 mm
- Tail, flush to the side
- Belt tensioning and adjustment on the side using the tensioning elements



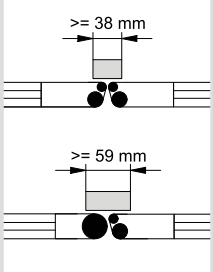
Conveyor length L	Conveyor width B	L1	L2	Head part material	Item number
≤ 3,000 mm	50 mm	85 mm	130 mm	Aluminium	**B8001AA0050**
	75 mm				**B8001AA0075**
	100 mm				**B8001AA0100**
	150 mm				**B8001AA0150**
	200 mm				**B8001AA0200**
	250 mm				**B8001AA0250**
	300 mm				**B8001AA0300**

Tail 13, knife edge

B8001AB ....



- Rolling knife edge ø 12 mm
- Belt tensioning and adjustment on the side using the tensioning elements
- Due to the permissible minimum bending radius only with belt:
  - GU-T0105-003BL
  - GU-U0305-004WE
  - GU-U0305-024LB



Conveyor length L	Conveyor width B	L1	L2	Head part material	Item number
≤ 3,000 mm	50 mm	85 mm	130 mm	Aluminium	**B8001AB0050**
	75 mm				**B8001AB0075**
	100 mm				**B8001AB0100**
	150 mm				**B8001AB0150**
	200 mm				**B8001AB0200**
	250 mm				**B8001AB0250**
	300 mm				**B8001AB0300**

Notes

Belt Conveyor GUF-P 2000

2



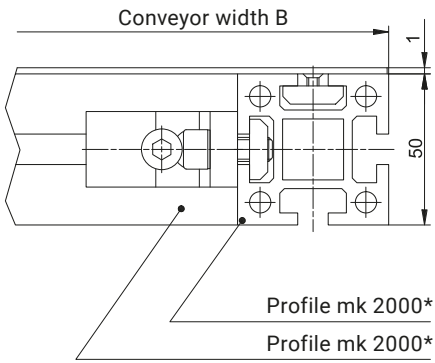
Versatile. Rich in variants. Robust.

The GUF-P 2000 belt conveyor is extremely variable thanks to a wide selection of drives, tails, stands, side rails and belt types. The low overall height of just 50 mm ensures a high load-bearing capacity and a sturdy, torsion-resistant design.

Crowned driving rolls and idler rollers ensure centred tracking. 10 mm T-slots running along both sides let you easily mount the conveyors on existing machine frames or attach stands, side rails, initiators and other accessories.

The GUF-P 2000 is UR+ approved and optimised for use with cobots. With the URCap plug-in, the operational mode and speed can be controlled directly from the robot.

Cross section



* For conveyor widths 75, 100, 150, 200 and 250 mm, custom profiles are used

Benefits of the GUF-P 2000

- Belt conveyor for moderately heavy products with a wide range of drives, tails, stands and belt types
- High load-bearing capacity and torsion-resistant construction thanks to sturdy mk 2000 profile
- Also with powerful drum motor for confined spaces
- Straight lines and inclines up to 20°
- Reliable transfer of small products with ø 19 mm knife edge
- Easy to integrate into UR cobot application

Technical data

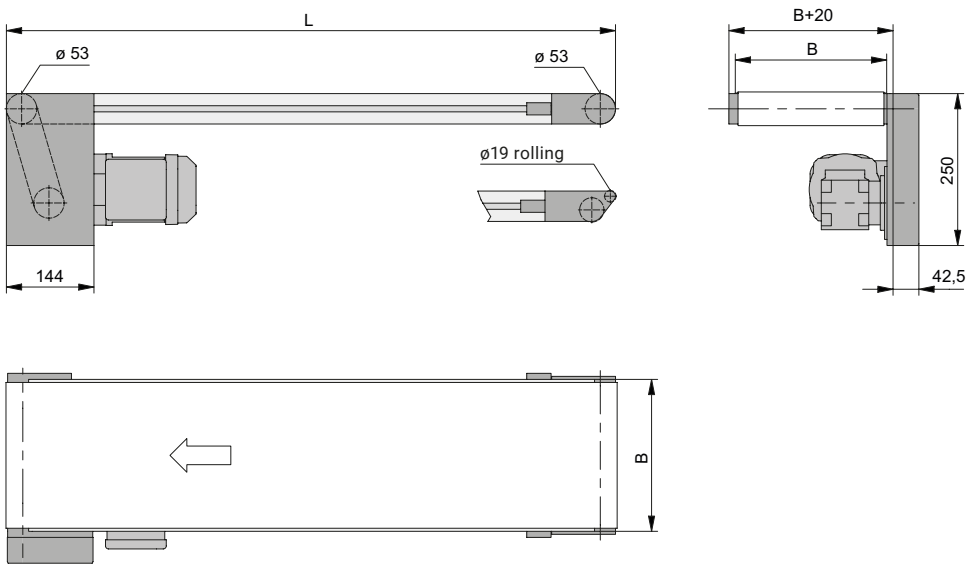
Conveyed product	piece goods, bulk goods > 10 mm	
Conveyor length L	individual from 380-10,000 mm	
Conveyor width B	50, 75, 100, 150, 200, 250, 300, 400, 500, 600, 700, 800 mm	
Total load	up to 125 kg, higher on request	→ p. 20
Speed	up to 80 m/min depending on drive	
Drive version	head drive AC, AU, AF (direct), centre drive BC, BF (direct) and internal drive with drum motor CA and CB	→ p. 32
Tail	tail 01, 09, 11 (ø 53 mm), tail 13 (ø 19 mm knife edge)	→ p. 40
Belt properties	laterally stiff, antistatic, FDA compliant, oil-resistant, cut-resistant	→ p. 72
Side rail	SF1.3 (fixed), SF01 (adjustable)	→ p. 240
Stand	single stand, H-design stand, mobile, height-adjustable	→ p. 224
Operational mode	continuous operation, cycle operation, accumulated operation, reverse operation	

AC – Indirect head drive

B20.00.031

2

The compact conveyor frame design with the most popular drive options makes it easier to integrate the conveyor into existing systems. The ø 53 mm driving roller ensures excellent transmission of the motor power. Operation with cleated belts is possible with this version.



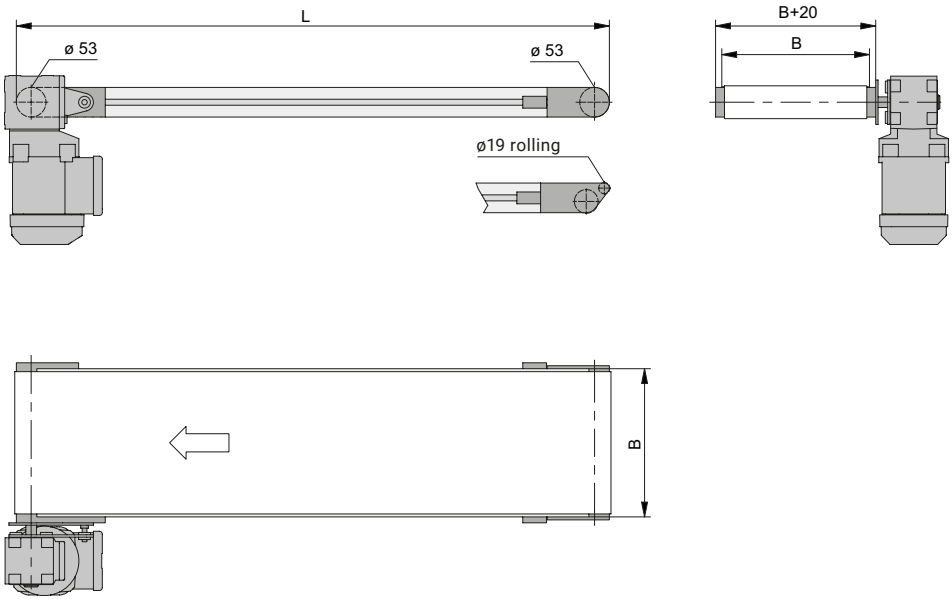
Technical data

Conveyor length L	individual from 410-10,000 mm
Conveyor width B	50, 75, 100, 150, 200, 250, 300, 400, 500, 600, 700, 800 mm, others on request
Belt width	B-10 mm → p. 72
Drive location	discharge end left/right, underneath/above, infeed end on request
Drive and speed	up to v=80 m/min
Stand and side rail	→ p. 224
Total load	up to 125 kg, higher on request → p. 20

AF – Direct head drive

B20.00.032

The compact conveyor frame design makes it easier to integrate the conveyor into existing systems. Since the motor is fitted directly onto the drive shaft, the space requirements and maintenance effort for this drive version are reduced to a minimum.



Technical data

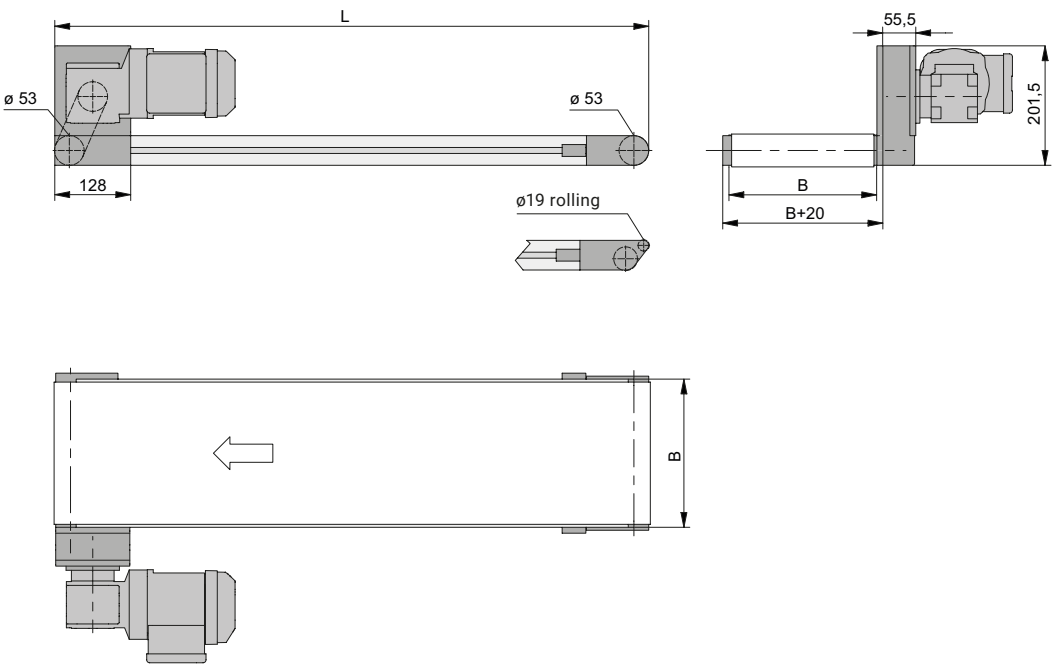
Conveyor length L	individual from 410-10,000 mm
Conveyor width B	50, 75, 100, 150, 200, 250, 300, 400, 500, 600, 700, 800 mm, others on request
Belt width	B-10 mm → p. 72
Drive location	discharge end left/right, infeed end on request
Drive and speed	3,0; 3,8; 4,8; 5,8; 7,0; 8,3; 9,3; 11,8; 14,0 and 16,0 m/min, others on request
Stand and side rail	→ p. 224
Total load	up to 125 kg, higher on request → p. 20

AU – Indirect head drive, laterally on the outside

B20.00.036

2

The advantage of the drive version AU is that the motor is fitted on the outside of the conveyor belt. The space requirements for the conveyor are comparatively much smaller in the lower run. This drive version can transport even very tall products with ease. The ø 53 mm driving roller ensures excellent transmission of the motor power. Operation with cleated belts is possible with this version.



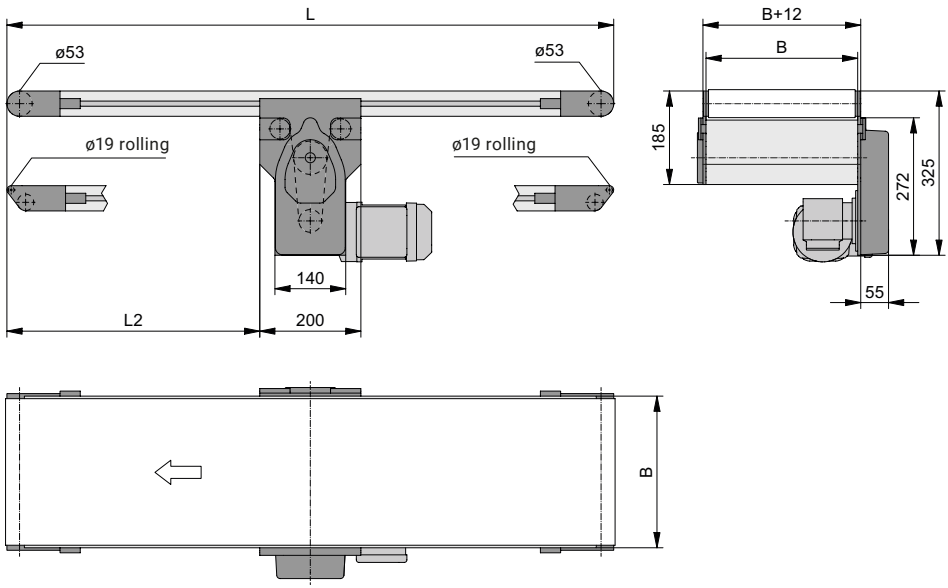
Technical data

Conveyor length L	individual from 430-10,000 mm
Conveyor width B	50, 75, 100, 150, 200, 250, 300, 400, 500, 600, 700, 800 mm, others on request
Belt width	B-10 mm → p. 72
Drive location	discharge end left/right, underneath/above, infeed end on request
Drive and speed	up to v=80 m/min
Stand and side rail	→ p. 224
Total load	up to 125 kg, higher on request → p. 20

BC – Indirect centre drive

B20.00.041

The compact conveyor frame design and the ability to freely select the drive position over the entire length of the conveyor make it easier to integrate the conveyor into existing systems. Limited reverse operation is available on request. Knife edges can be configured on both the infeed and discharge end. Operation with cleated belts is not possible with this version. The drive can be variably positioned below the conveyor (drive offset L2).



Technical data

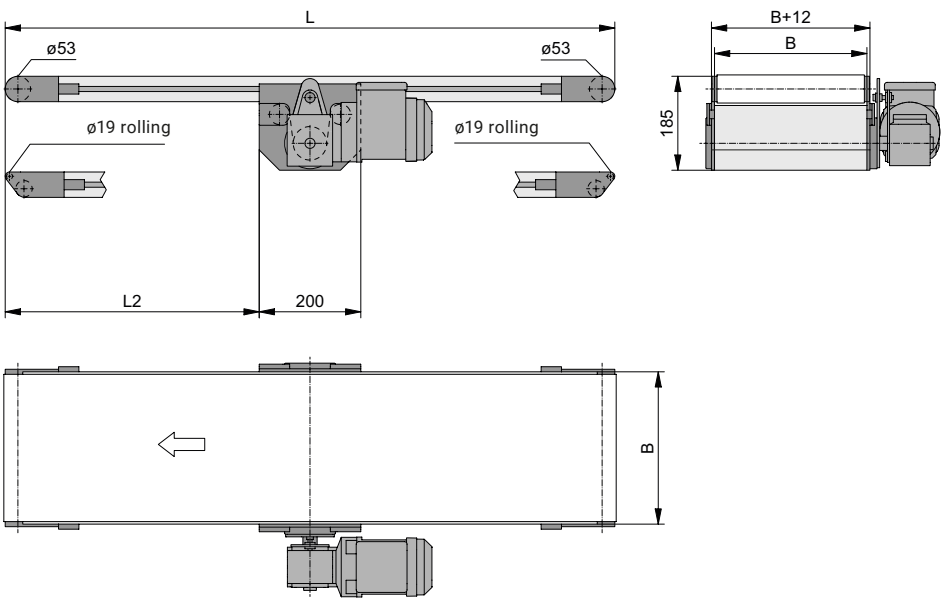
Conveyor length L	individual from 700-10,000 mm	
Conveyor width B	50, 75, 100, 150, 200, 250, 300, 400, 500, 600, 700, 800 mm, others on request	
Belt width	B-10 mm	→ p. 72
Drive location	left/right underneath	
Drive and speed	up to v=80 m/min	
Stand and side rail		→ p. 224
Total load	up to 125 kg, higher on request	→ p. 20

BF – Direct centre drive

B20.00.042

2

Since the motor is fitted directly onto the drive shaft, the space requirements and maintenance effort for this drive version are reduced to a minimum. The compact conveyor frame design and the ability to freely select the drive position over the entire length of the conveyor make it easier to integrate the conveyor into existing systems. Limited reverse operation is available on request. Knife edges can be configured on both the infeed and discharge end. Operation with cleated belts is not possible with this version. The drive can be variably positioned below the conveyor (drive offset L2).



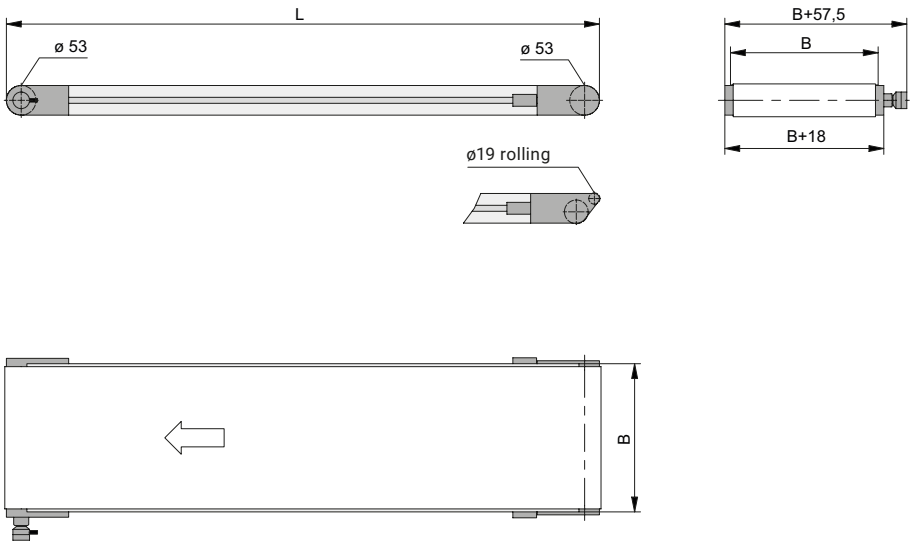
Technical data

Conveyor length L	individual from 700-10,000 mm
Conveyor width B	50, 75, 100, 150, 200, 250, 300, 400, 500, 600, 700, 800 mm, others on request
Belt width	B-10 mm → p. 72
Drive location	left/right underneath
Drive and speed	up to v=60 m/min
Stand and side rail	→ p. 224
Total load	up to 125 kg, higher on request → p. 20

CA – Internal drive with drum motor

B20.00.038

The drive version CA with drum motor is the most compact option of the conveyors in the GUF-P 2000 system. Since the motor is integrated into the driving roller, no obstructing edges protrude over the conveyor frame structure. The conveyor can therefore easily be integrated into existing systems.



Technical data

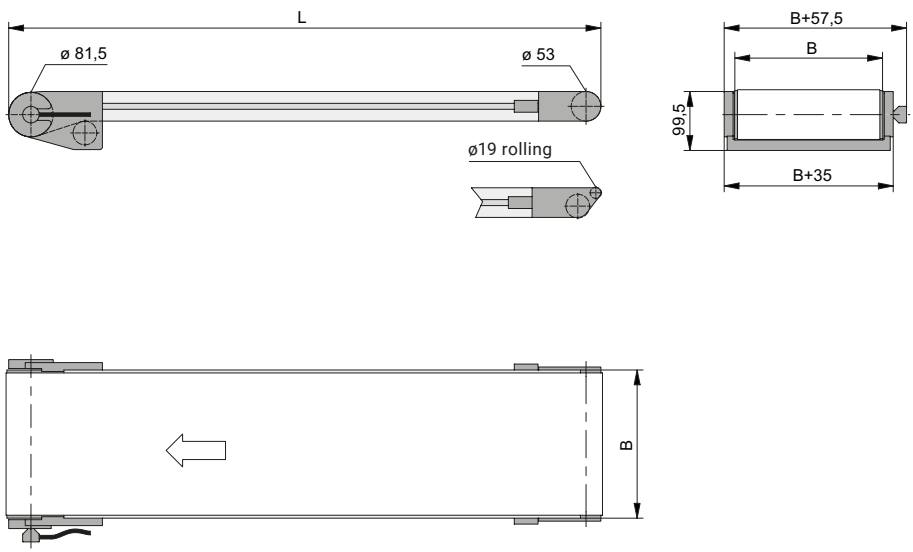
Conveyor length L	individual from 380-5,000 mm	
Conveyor width B	300, 350, 400, 450, 500, 550 and 600 mm, others on request	
Belt width	B-10 mm	→ p. 72
Drive location	discharge end left/right	
Drive and speed	up to v=60 m/min	
Stand and side rail		→ p. 224
Total load	up to 15 kg, higher on request	→ p. 20

CB – Internal drive with drum motor

B20.00.039

2

The drive version CB is also a compact version of the GUF-P 2000, which can be designed to be wider, longer and carry larger loads than drive version CA. Since the motor is integrated into the driving roller, no obstructing edges protrude over the conveyor frame structure. The conveyor can therefore easily be integrated into existing systems. Operation with cleated belts is not possible with this version.



Technical data

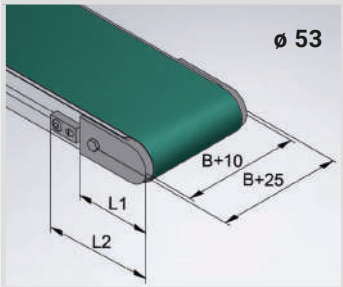
Conveyor length L	individual from 440-10,000 mm	
Conveyor width B	200, 250, 300, 350, 400, 500, 600, 700 and 800 mm, others on request	
Belt width	B-10 mm	→ p. 72
Drive location	discharge end left/right	
Drive and speed	up to v=60 m/min	
Stand and side rail		→ p. 224
Total load	up to 55 kg, higher on request	→ p. 20

Notes

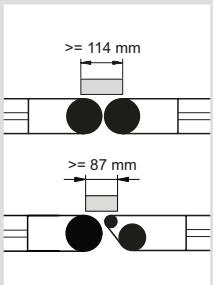
GUF-P 2000 Tails

Tail 01

B80.00.001



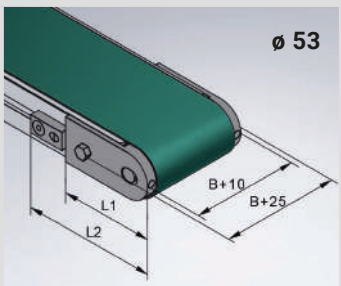
- Crowned roller, ø 53 mm
- Ball bearing 2RS1
- Belt tensioning and adjustment on the side using the tensioning elements
- Min. length of the conveyed product for transfer of 114 mm



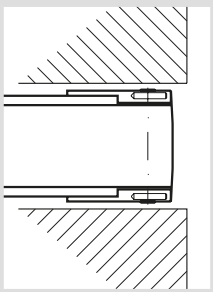
Conveyor length L	Conveyor width B	L1	L2	Head part material
≤ 2,900 mm	≤ 300 mm	105 mm	145 mm	Plastic
≤ 2,900 mm	> 300 mm	105 mm	145 mm	Aluminium
> 2,900 mm	≤ 800 mm	155 mm	195 mm	Aluminium

Tail 09

B80.00.005



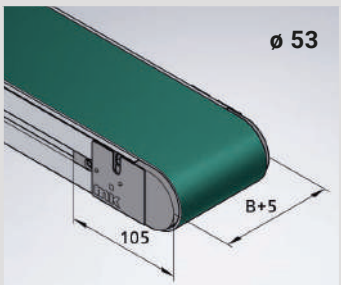
- Crowned roller, ø 53 mm
- Ball bearing 2RS1
- Belt tensioning via head parts
- Belt adjustment from the front using threaded pins
- Obstructing edge-optimised tail
- Min. length of the conveyed product for transfer of 114 mm



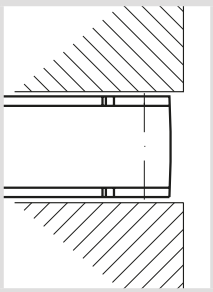
Conveyor length L	Conveyor width B	L1	L2	Head part material
≤ 3,000 mm	≤ 800 mm	105 mm	–	Aluminium

Tail 11

B80.00.007



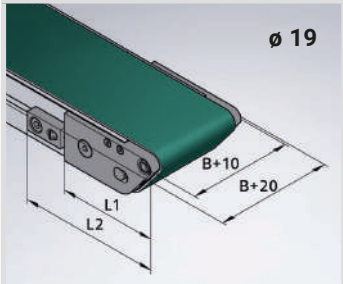
- Crowned roller, ø 53 mm
- Ball bearing 2RS1
- Belt tensioning and adjustment on the side using the head parts (approx. 35 mm of clearance required on each side)
- Flush head parts
- Obstructing edge-optimised tail
- Min. length of the conveyed product for transfer of 114 mm



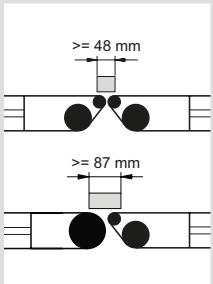
Conveyor length L	Conveyor width B	L1	L2	Head part material
≤ 3,000 mm	≤ 800 mm	105 mm	–	Aluminium

Tail 13

B80.00.018



- Rolling knife edge
- Ball bearing 2RS1, ø 19 mm roller
- Belt tensioning on the side using tensioning elements
- Adjustment using tensioning elements
- Min. length of the conveyed product for transfer of 48 mm
- Note the min. bend radius for the desired belt



Conveyor length L	Conveyor width B	L1	L2	Head part material
≤ 3,000 mm	≤ 800 mm	116 mm	156 mm	Aluminium
> 3,000 mm	≤ 800 mm	166 mm	206 mm	Aluminium

Belt Conveyor GUF-P 2041

2



Wide. Strong. High load capacity.

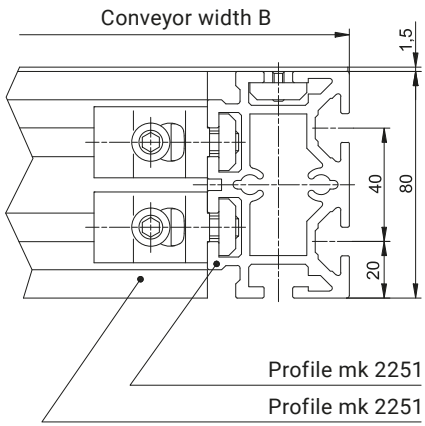
The GUF-P 2041 belt conveyor can handle high loads thanks to its torsion-resistant conveyor frame and appropriately designed tails.

In addition, the large ø 85 mm drive roller is characterised by excellent transmission of motor power to the belt.

Crowned driving rolls and idler rollers ensure centred tracking.

10 mm T-slots running along both sides let you easily mount the conveyors on existing systems or attach stands, side rails, initiators and other accessories.

Cross section*



*different for drive version CA

Benefits of the GUF-P 2041

- Belt conveyor for wide, heavy products with a wide range of drives, tails, stands and belt types
- High load-bearing capacity and torsion-resistant construction thanks to sturdy mk 2251 profile (50x80 mm)
- Optionally available with compact drum motor and knife edge
- Straight lines and inclines up to 20°

Technical data

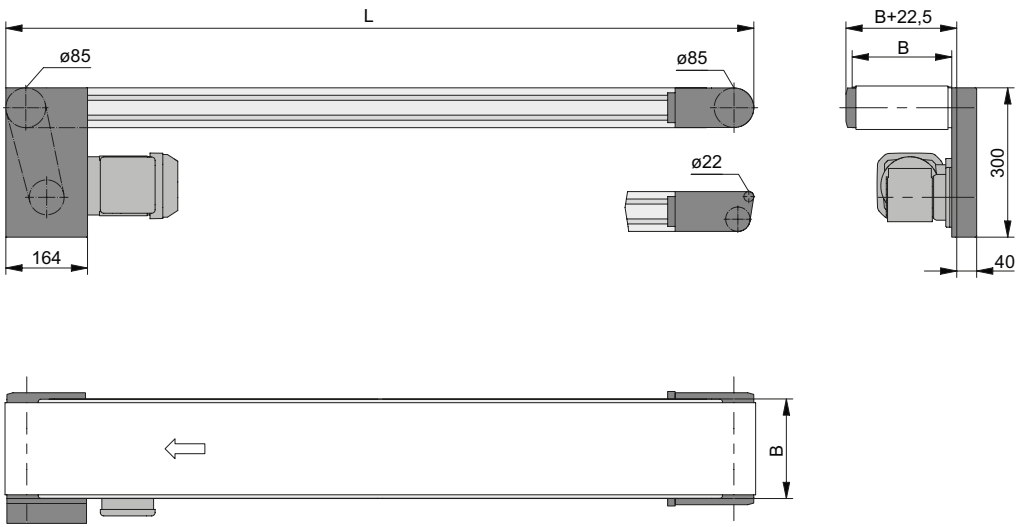
Conveyed product	piece goods, bulk goods > 10 mm	
Conveyor length L	individual from 525-10,000 mm	
Conveyor width B	200-1,200 mm (in 100 mm increments)	
Total load	up to 250 kg, higher on request	→ p. 20
Speed	up to 60 m/min depending on drive	
Drive version	head drive AC, AF (direct), centre drive BC, BF (direct) and internal drive with drum motor CA	→ p. 44
Tail	tail 01 (ø 85 mm) (drive CA ø 81,5 mm), tail 13 (ø 22 mm knife edge)	→ p. 50
Belt properties	laterally stiff, antistatic, FDA compliant, oil-resistant, cut-resistant	→ p. 72
Side rail	SF1.3 (fixed), SF01 (adjustable)	→ p. 240
Stand	H-design stand, mobile, height-adjustable	→ p. 224
Operational mode	continuous operation, cycle operation, accumulated operation, reverse operation	

AC – Indirect head drive

B20.40.001

2

The compact conveyor frame design with the most popular drive options makes it easier to integrate the conveyor into existing systems. The ø 85 mm driving roller ensures excellent transmission of the motor power. Operation with cleated belts is possible with this version.



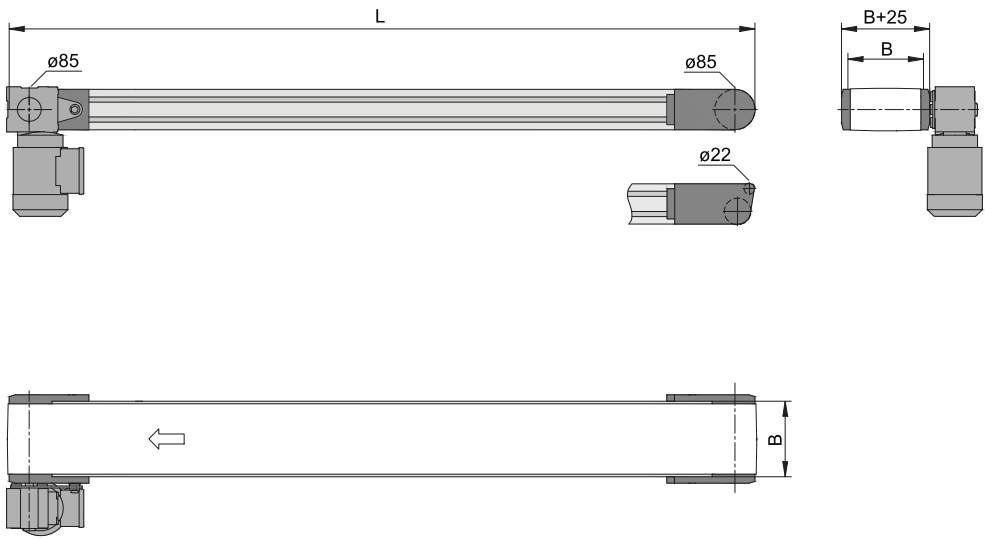
Technical data

Conveyor length L	individual from 540-10,000 mm
Conveyor width B	200-1,200 mm (in 100 mm increments), others on request
Belt width	B-15 mm → p. 72
Drive location	discharge end left/right, underneath/above, infeed end on request
Drive and speed	up to v=60 m/min
Stand and side rail	→ p. 224
Total load	up to 250 kg, higher on request → p. 20

AF – Direct head drive

B20.40.008

The compact conveyor frame design makes it easy to integrate the conveyor into existing systems. Since the motor is fitted directly onto the drive shaft, the space requirements and maintenance effort for this drive version are reduced to a minimum.



Technical data

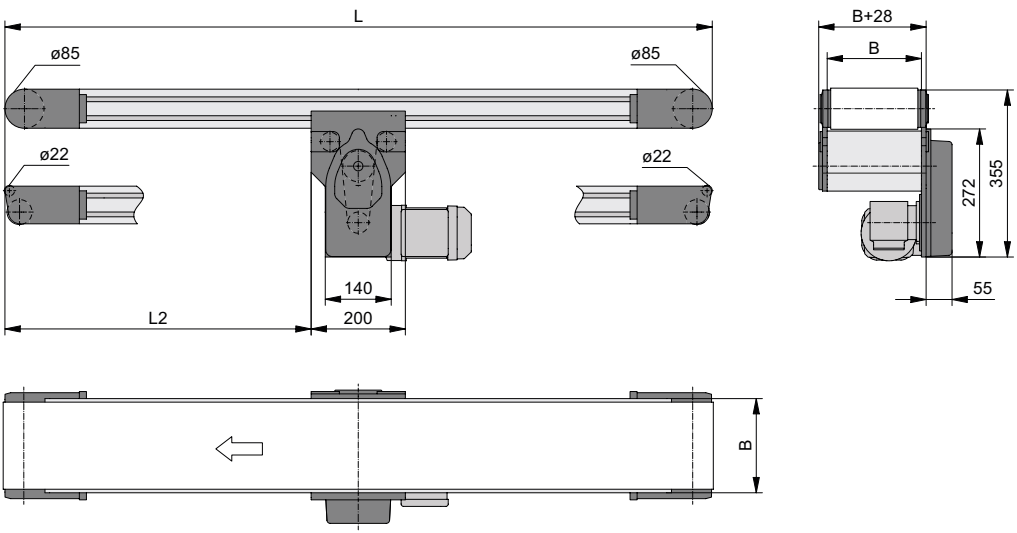
Conveyor length L	individual from 560-10,000 mm	
Conveyor width B	200-1,200 mm (in 100 mm increments), others on request	
Belt width	B-15 mm	→ p. 72
Drive location	discharge end left/right, infeed end on request	
Drive and speed	5,1; 6,1; 7,7; 9,6; 11,5; 13,6; 15,2; 19,2; 22,7; 26,4; 36,9; 45,7 and 52,6 m/min, others on request	
Stand and side rail		→ p. 224
Total load	up to 250 kg, higher on request	→ p. 20

BC – Indirect centre drive

B20.40.004

2

The compact conveyor frame design and the ability to freely select the drive position over the entire length of the conveyor make it easier to integrate the conveyor into existing systems. Limited reverse operation is available on request. Knife edges can be configured on both the infeed and discharge end. Operation with cleated belts is not possible with this version. The drive can be variably positioned below the conveyor (drive offset L2).



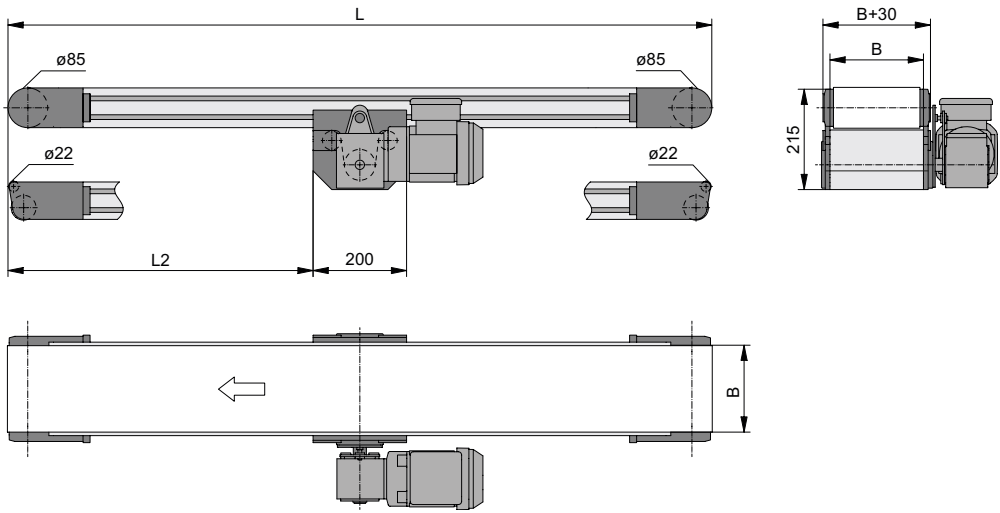
Technical data

Conveyor length L	individual from 800-10,000 mm	
Conveyor width B	200-1,200 mm (in 100 mm increments), others on request	
Belt width	B-15 mm	→ p. 72
Drive location	left/right underneath	
Drive and speed	up to v=80 m/min	
Stand and side rail		→ p. 224
Total load	up to 250 kg, higher on request	→ p. 20

BF – Direct centre drive

B20.40.016

Since the motor is fitted directly onto the drive shaft, the space requirements and maintenance effort for this drive version are reduced to a minimum. The compact conveyor frame design and the ability to freely select the drive position over the entire length of the conveyor make it easier to integrate the conveyor into existing systems. Limited reverse operation is available on request. Knife edges can be configured on both the infeed and discharge end. Operation with cleated belts is not possible with this version. The drive can be variably positioned below the conveyor (drive offset L2).



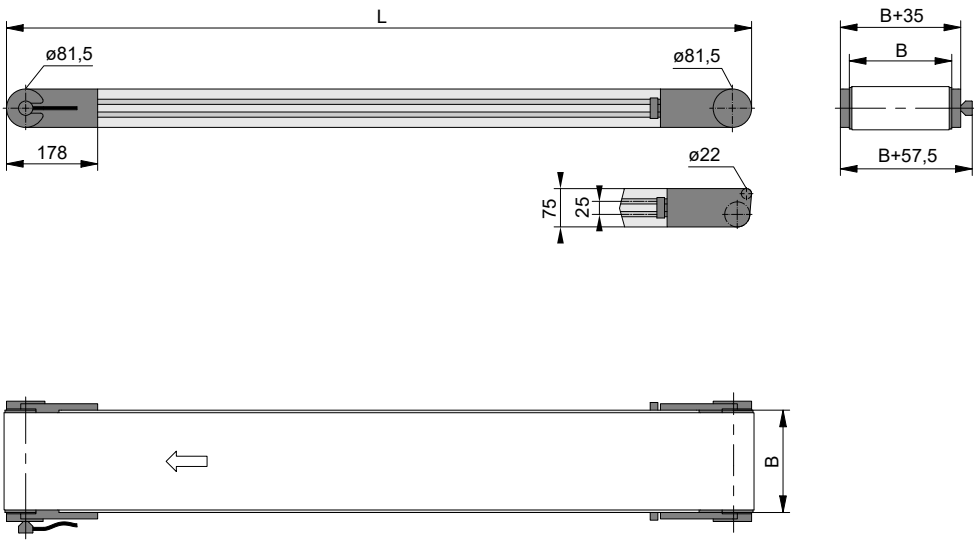
Technical data

Conveyor length L	individual from 800-10,000 mm	
Conveyor width B	200-1,200 mm (in 100 mm increments), others on request	
Belt width	B-15 mm	→ p. 72
Drive location	left/right underneath	
Drive and speed	up to v=60 m/min	
Stand and side rail		→ p. 224
Total load	up to 250 kg, higher on request	→ p. 20

CA – Internal drive with drum motor

B20.23.000

The drive version CA with drum motor is the most compact option of the conveyors in the GUF-P 2041 system. Since the motor is integrated into the driving roller, no obstructing edges protrude over the conveyor frame structure. The conveyor can therefore easily be integrated into existing systems.



Technical data

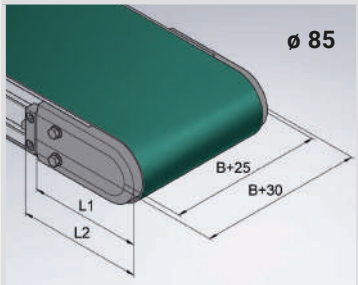
Conveyor length L	individual from 525-5,000 mm	
Conveyor width B	200, 250, 300, 350, 400, 500, 600, 700, 800, 900 and 1,000 mm, others on request	
Belt width	B-15 mm	→ p. 72
Drive location	discharge end left/right	
Drive and speed	up to v=60 m/min	
Stand and side rail		→ p. 224
Total load	up to 55 kg, higher on request	→ p. 20

Notes

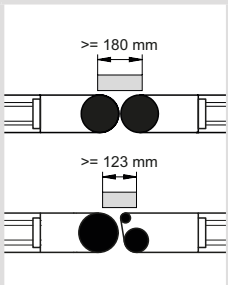
GUF-P 2041 Tails

Tail 01

B80.07.001



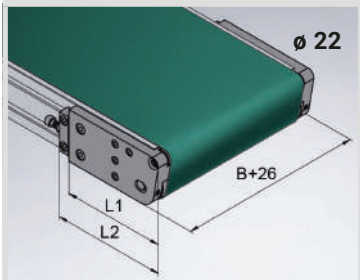
- Crowned roller, ø 85 mm
- Ball bearing 2RS1
- Belt tensioning and adjustment on the side using the tensioning elements
- Min. length of the conveyed product for transfer of 180 mm



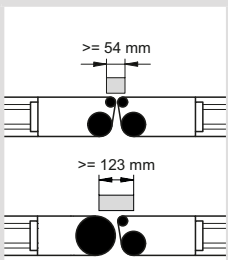
Conveyor length L	Conveyor width B	L1	L2	Head part material
≤ 3,000 mm	≤ 1,200 mm	160 mm	175 mm	Aluminium
> 3,000 mm	≤ 1,200 mm	250 mm	265 mm	Aluminium

Tail 13

B80.07.010



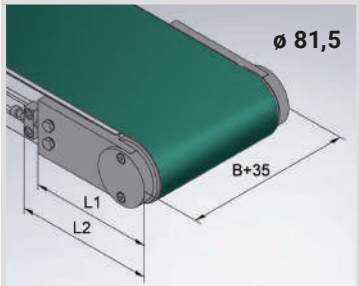
- Roller, ø 22 mm
- Ball bearing 2RS1
- Belt tensioning on the side using tensioning elements
- Adjustment using tracking roller
- Min. length of the conveyed product for transfer of 54 mm
- Note the min. bend radius for the desired belt



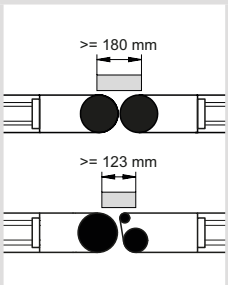
Conveyor length L	Conveyor width B	L1	L2	Head part material
≤ 3,000 mm	≤ 1,200 mm	158 mm	173 mm	Aluminium, short
> 3,000 mm	≤ 1,200 mm	220 mm	235 mm	Aluminium, long

Tail 01

B80.23.000



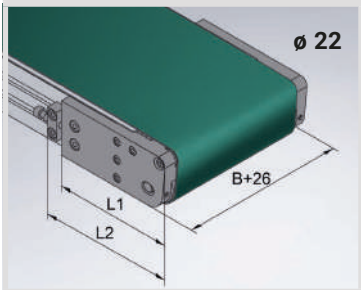
- Crowned roller, ø 81,5 mm
- Ball bearing 2RS1
- Belt tensioning and adjustment on the side using the tensioning elements
- Min. length of the conveyed product for transfer of 180 mm



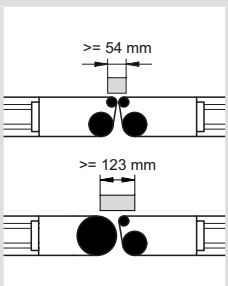
Conveyor length L	Conveyor width B	L1	L2	Head part material
≤ 5,000 mm	≤ 1,200 mm	178 mm	193 mm	Aluminium

Tail 13

B80.23.001



- Roller, ø 22 mm
- Ball bearing 2RS1
- Belt tensioning on the side using tensioning elements
- Adjustment using tracking roller
- Min. length of the conveyed product for transfer of 54 mm
- Note the min. bend radius for the desired belt



Conveyor length L	Conveyor width B	L1	L2	Head part material
≤ 5,000 mm	≤ 1,200 mm	165 mm	180 mm	Aluminium

Belt Conveyor GUF-P 2004

2



Bigger. Stronger. Higher load capacity.

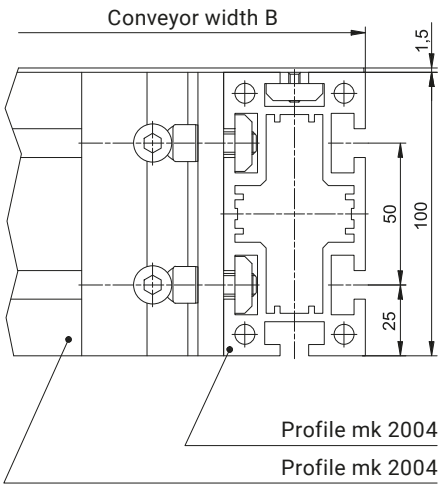
The GUF-P 2004 is mk's largest belt conveyor and can handle high loads thanks to its torsion-resistant conveyor frame and appropriately designed tails.

The large ø 105 mm drive roller also exhibits excellent transfer of motor power to the belt.

Crowned driving rolls and idler rollers ensure centred tracking.

10 mm T-slots running along both sides let you easily mount the conveyors on existing systems or attach stands, side rails, initiators and other accessories.

Cross section



Benefits of the GUF-P 2004

- Belt conveyor for particularly high loads and bulky products
- Very high load-bearing capacity and torsion-resistant construction thanks to sturdy mk 2004 profile (50x100 mm)
- Reinforced stands and side rails available for variable configuration
- Straight lines and inclines up to 20°

Technical data

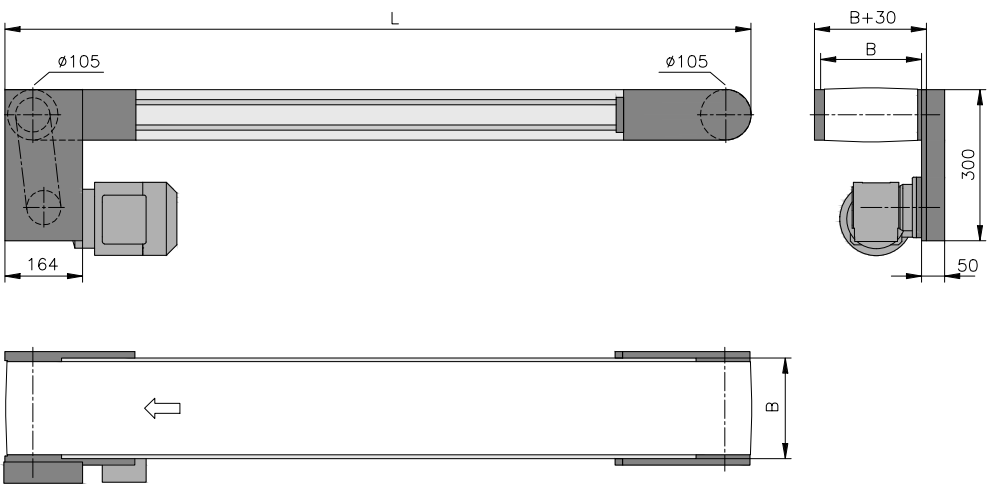
Conveyed product	piece goods, bulk goods > 10 mm
Conveyor length L	individual from 720-10,000 mm
Conveyor width B	1,000-2,000 mm (in 100 mm increments)
Total load	up to 500 kg, higher on request → p. 20
Speed	up to 60 m/min
Drive version	head drive AC → p. 54
Tail	tail 01 (ø 105 mm) → p. 55
Belt properties	laterally stiff, antistatic, FDA compliant, oil-resistant, cut-resistant → p. 72
Side rail	SF1.3 (fixed), SF01 (adjustable) → p. 240
Stand	H-design stand, mobile, height-adjustable → p. 224
Operational mode	continuous operation, cycle operation, accumulated operation

2

AC – Indirect head drive

B20.14.001

The compact conveyor frame design with this drive variant makes it easier to integrate the conveyor into existing systems. The ø 105 mm driving roller ensures excellent transmission of the motor power. Operation with cleated belts is possible with this version.

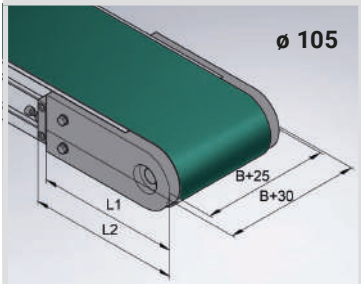


Technical data

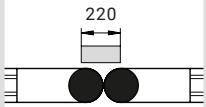
Conveyor length L	individual from 720-10,000 mm
Conveyor width B	1,000-2,000 mm (in 100 mm increments), others on request
Belt width	B-50 mm → p. 72
Drive location	discharge end left/right, underneath/above, infeed end on request
Drive and speed	up to v=60 m/min
Stand and side rail	→ p. 224
Total load	up to 500 kg, higher on request → p. 20

Tail 01

B80.02.004



- Crowned roller, ø 105 mm
- Ball bearing 2RS1
- Belt tensioning and adjustment on the side using the tensioning elements
- Min. length of the conveyed product for transfer of 220 mm



Conveyor length L	Conveyor width B	L1	L2	Head part material
≤ 10,000 mm	≤ 2,000 mm	252 mm	267 mm	Aluminium

Incline Conveyor Belt KFG-P 2000

2



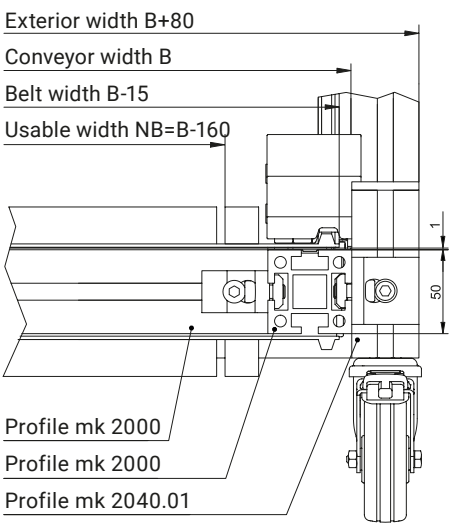
Mobile. Flexible. Compact.

The KFG-P 2000 incline conveyor is used for the inclined conveying of small parts to another level and is ideal for integration into existing machines or as a mobile conveyor. Containers or lattice boxes are ideal for filling with plastic injection moulded parts, for example.

Crowned driving rolls and idler rollers ensure centred tracking.

10 mm T-slots running along both sides let you easily mount the conveyors on existing machine frames or attach stands, side rails, initiators, funnels, discharge slides and other accessories.

Cross section



Benefits of the KFG-P 2000

- Incline conveyor for the incline conveying of small parts to different levels
- Stand with swivel casters for mobile use
- Compact design for optimal integration into existing systems
- Belts can be replaced with little work

Technical data

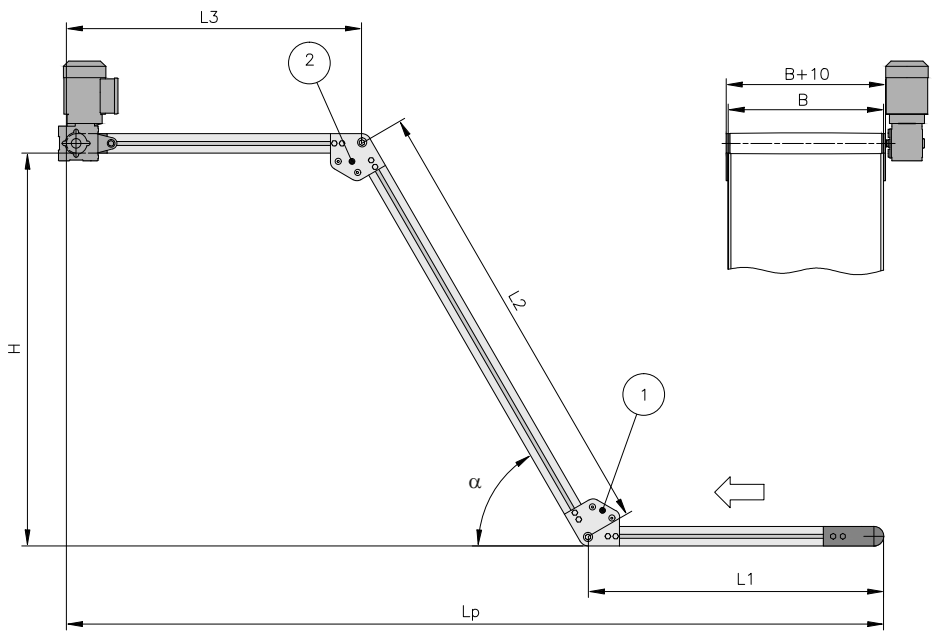
Conveyed product	piece goods, bulk goods > 10 mm
Conveyor length L	individual from 1,400-4,000 mm (L1+L2+L3)
Conveyor width B	300-700 mm (in 100 mm increments)
Total load	up to 40 kg, higher on request → p. 20
Speed	up to 16 m/min
Drive version	drive AF (direct) → p. 58
Tail	tail 01 (ø 53 mm) → p. 40
Belt properties	laterally stiff, FDA-compliant → p. 72
Side rail	individually on request
Stand	stand incline belt conveyor → p. 60
Operational mode	continuous operation, cycle operation

AF – Direct head drive

B20.00.050/051/052

2

The compact conveyor frame design makes it easy to integrate the conveyor into existing systems. Since the motor is fitted directly onto the drive shaft, the space requirements and maintenance effort for this drive version are reduced to a minimum.



Technical data

Conveyor length L (L1+L2+L3)	variable up to approx. 4,000 mm L1/L3 min. = 400, L2 min. = 600	
Conveyor width B	300-700 mm (in 100 mm increments), others on request	
Drive location	discharge end left/right	
Drive and speed	3.0; 5.8; 11.8; 16 m/min, others on request	
Stand and side rail		→ p. 60
Total load	up to 40 kg, higher on request (depending on angle and speed)	→ p. 20
Belt incline α	30, 45 and 60°, others on request	
Belt	GU-V0106-028DG up to 500 mm conveyor width, GU-U0310-029DG from 500 mm conveyor width	→ p. 72

Notes

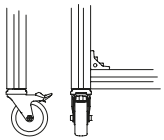


KFG-P 2000

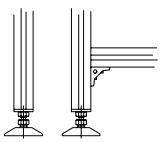
The stand shown can be fitted with either levelling feet or swivel casters for mobile use.

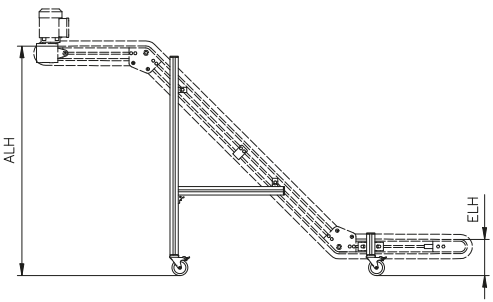
The swivel casters lock completely to guarantee secure support.

Stand with swivel casters



Stand with levelling feet



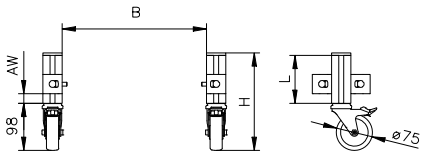


ELH = infeed height
ALH = discharge height
B = conveyor width
H = stand height
L = length of the vertical profile
AW = distance from the angle to the profile edge

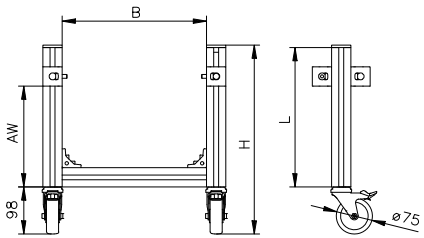
Stand

The stand was developed specially for the incline conveyor belt and incline conveyor modular belt and is characterised by its simplicity and light-weight design with the mk 2040.40 profile.

Infeed End Stand B67.06.014

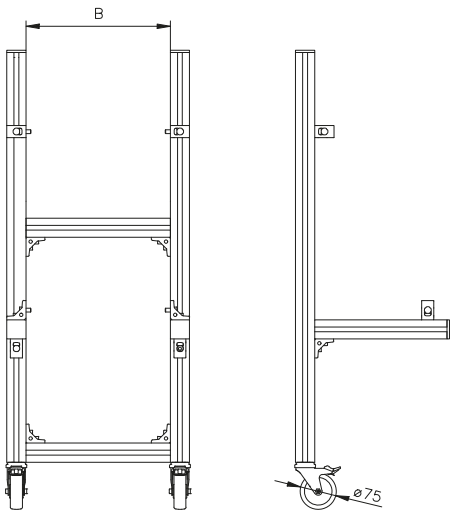


Infeed height (ELH) = 166-349 mm

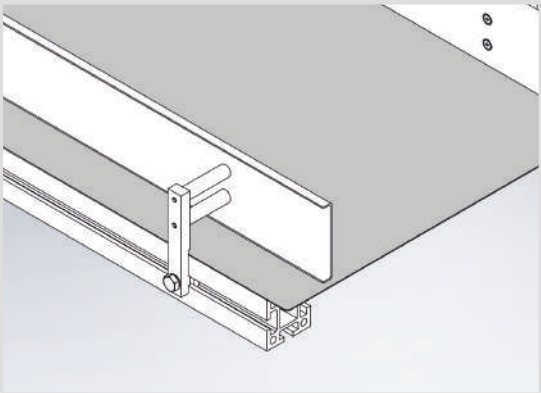


Infeed height (ELH) = 350-500 mm

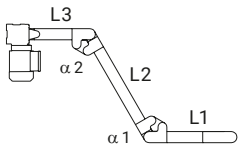
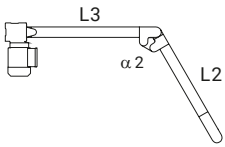
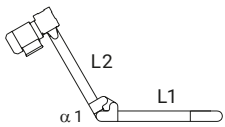
Discharge End Stand B67.06.015



Optional side rail for KFG-P 2000



Customised side rails are available for our incline conveyors, which are precisely adapted to the product, process and installation situation. They ensure reliable guiding of the conveyed product – especially if the side wall of the belt is not sufficient for lateral stability.

Sample order	Type designation	Drive AF
KFG-P 2000 type S	**Type S** 	**B20.00.050**
Drive AF, 90° motor orientation (as displayed)		
Speed of 16 m/min		
Conveyor width B = 500 mm		
Conveyor length L1 = 500 mm; L2 = 1,000 mm; L3 = 600 mm	**Type K** 	**B20.00.051**
Belt incline α 1 = 60°; belt incline α 2 = 60°		
Cleat type T20		
Stand with swivel casters	**Type L** 	**B20.00.052**
Infeed height ELH = 200 mm		
Discharge height ALH = 1200 mm		

Curved Belt Conveyor KGF-P 2040

2



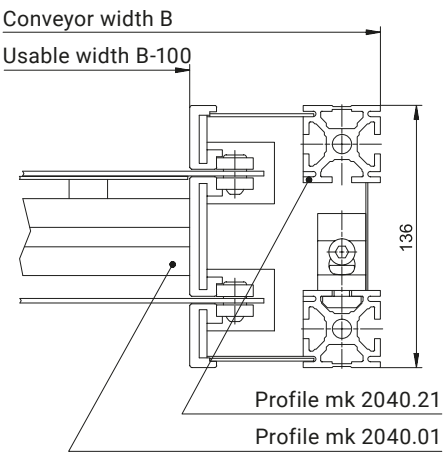
Compatible. Flexible. Versatile.

The KGF-P 2040 curved belt conveyor is a belt conveyor for transporting small and light parts around curves with an overall load of up to 30 kg. The goods to be transported can be conveyed 90° or 180° around the curve while maintaining their alignment.

The curved belt is equipped with a ø 20 mm rolling knife edge that allows even small products to be smoothly transferred to the next system. Belt tensioning is handled by an automatic tensioning station, which is integrated in the tail, keeping the conveyor's outer dimensions constant.

For variants with a standard motor, the compact centre drive ensures that there are no obstructing edges.

Cross section



Benefits of the KGF-P 2040

- Curved belt conveyor for horizontal 90°/180° curved transport for lightweight goods
- Product is conveyed around the curve while maintaining alignment
- ø 20 rolling knife edge ensures reliable transfer of small products
- Centre drive leaves no obstructing edges

Technical data

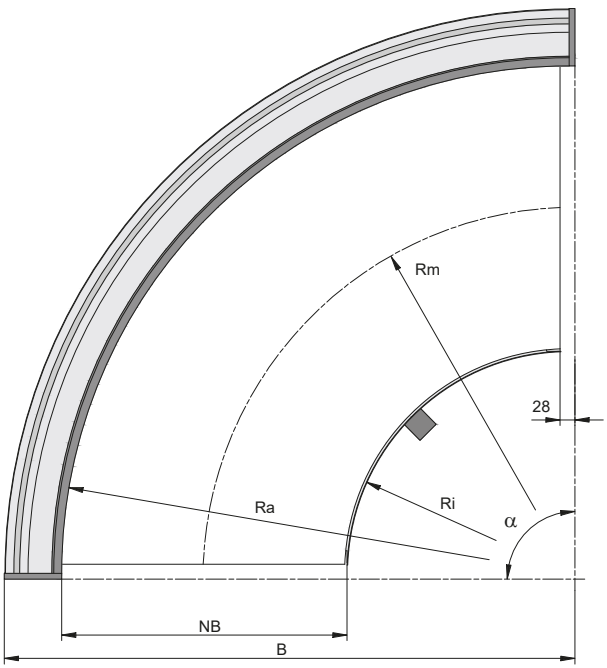
Conveyed product	piece goods	
Outer radius of curve	Ra 600 and 900 mm for 90° and 180° curves	
Usable width NB	300, 400, 500, 600 mm	
Total load	up to 30 kg, higher on request	→ p. 20
Speed	up to 30 m/min	
Drive version	centre drive BC	→ p. 64
Tail	ø 19 mm knife edge on both sides	
Belt properties	antistatic, FDA-compliant	→ p. 72
Side rail	provided by conveyor frame	
Stand	type 1 or type 2 stand (with belt changing aid)	→ p. 65
Operational mode	continuous operation, reverse operation	

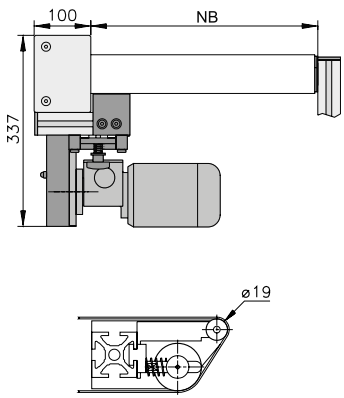
BC – Indirect centre drive

B20.40.020 (90°) | B20.40.021 (180°)

2

With this conveyor, mk offers the BC drive version with a usable width of 300, 400, 500 and 600 mm for 90° and 180° conveying radii. The compact conveyor frame design makes it easy to integrate the conveyor into existing systems. The ø 55 mm driving roller ensures excellent transmission of the motor power.

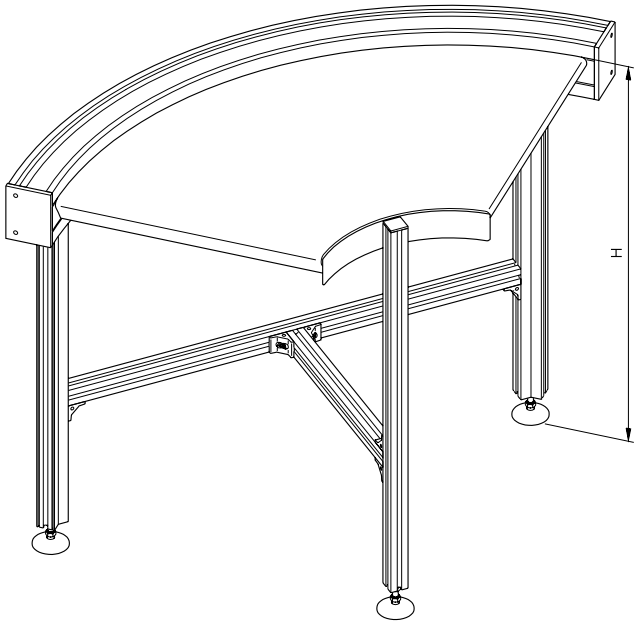




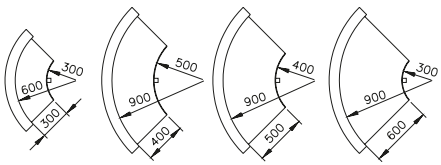
Technical data

Conveying angle	90° and 180°, others on request
Usable width NB	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
Drive location	underneath
Drive and speed	to 30 m/min at Rm, others on request
Stand	standard design or with belt replacement aid → p. 65
Total load	up to 30 kg, higher on request (depending on conveyor radius and conveyed product) → p. 20
Belts	→ p. 72

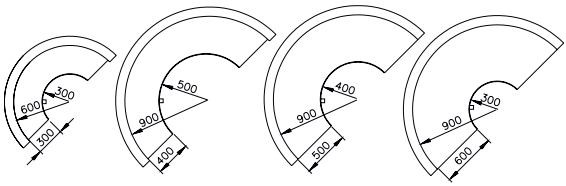
KGF-P 2040 Stands



Radius of 90° Curve Versions
B20.40.020



Radius of 180° Curve Versions
B20.40.021

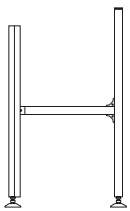


Sample order
KGF-P 2040
Ra 900/Ri 500 version
Speed of 15 m/min
Usable width NB = 400 mm
Belt type
Stand, with or without
Belt replacement support
Conveyor height H = 800 mm

Type designation

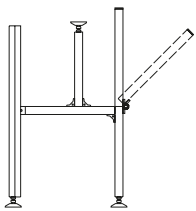
Type 1

Standard stand



Type 2

Stand with
belt replacement aid*



*With usable width
NB = 400 mm or wider

Curved Belt Conveyor KGF-P 2040.02

2

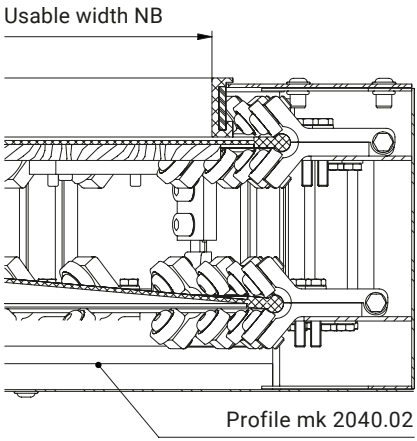


Bigger. Stronger. Faster.

Compared to the smaller KGF-P 2040, the KGF-P 2040.02 has a higher usable width and load capacity, a faster conveyor speed and a more robust design. Piece goods with a total load up to 50 kg can be conveyed around curves while maintaining their alignment.

The conveyor belt is driven by a conical driving roll with a friction-lock connection. A guide geometry on the edge continuously guides the belt in stationary ball bearings at the outer radius. This allows the belt to run extremely smoothly, even at high speeds. The drive is mounted on the outer edge of the curve. The motor can be variably aligned.

Cross section



Benefits of the KGF-P 2040.02

- Curved belt conveyor for horizontal 90° curved transport of heavy loads
- Product is conveyed around the curve while maintaining alignment
- Two outer radii available, either 1,000 or 1,500 mm, each with various usable widths
- Particularly quiet
- Long maintenance intervals and low maintenance effort
- With left-hand or right-hand curve design

Technical data

Conveyed product	piece goods	
Outer radius of curve	Ra 1,000 and 1,500 mm for 90° curve	
Usable width NB	300, 400, 500, 600, 700, 800, 900 mm	
Total load	up to 50 kg, higher on request	→ p. 20
Speed	up to 60 m/min	
Drive version	head drive AF	→ p. 68
Tail	conical driving rolls ø 88 mm on both sides	
Belt properties	antistatic, FDA-compliant, oil-resistant, flame-retardant	→ p. 72
Side rail	through conveyor frames	
Stand	stand version R_a 1,000 mm or R_a 1,500 mm	→ p. 70
Operational mode	continuous operation	

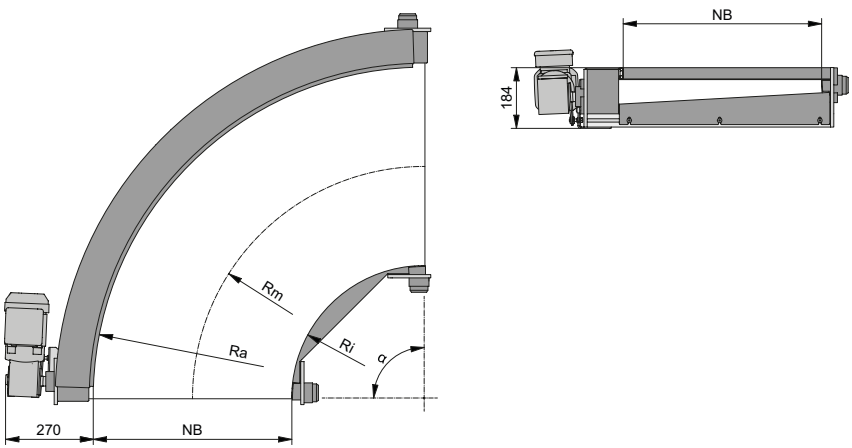
KGF-P 2040.02, Ra 1,000 mm

AF – Direct head drive

B20.40. ..

2

This version of the KGF-P 2040.02 has an outer radius of 1,000 mm and is available in usable widths from 300-600 mm. The conical driving roll has a diameter of 88 mm on the outer edge of the curve.



Versions NB 600 mm, Ra 1,000 mm, Ri 400 mm

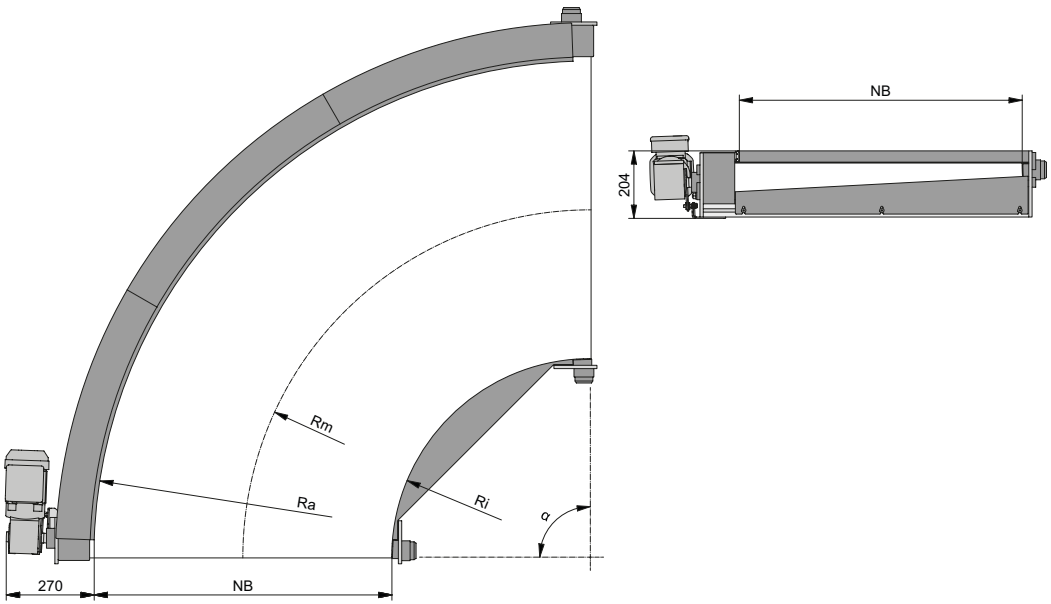
Technical data

Conveying angle α	90°	
Dimensions	usable width 300 mm, Ra 1,000 mm, Ri 700 mm usable width 400 mm, Ra 1,000 mm, Ri 600 mm usable width 500 mm, Ra 1,000 mm, Ri 500 mm usable width 600 mm, Ra 1,000 mm, Ri 400 mm	
Drive location	discharge end on the outer edge of the curve	
Drive and speed	up to 50 m/min (related to R_m)	
Stand	specific stand version R_a 1,000 mm	→ p. 70
Total load	up to 50 kg, higher on request	→ p. 20
Belts	belts with guide geometry	→ p. 72

AF – Direct head drive

B20.40. ..

This version of the KGF-P 2040.02 has an outer radius of 1,500 mm and is available in usable widths from 600-900 mm. The conical driving roll has a diameter of 105 mm on the outer edge of the curve.



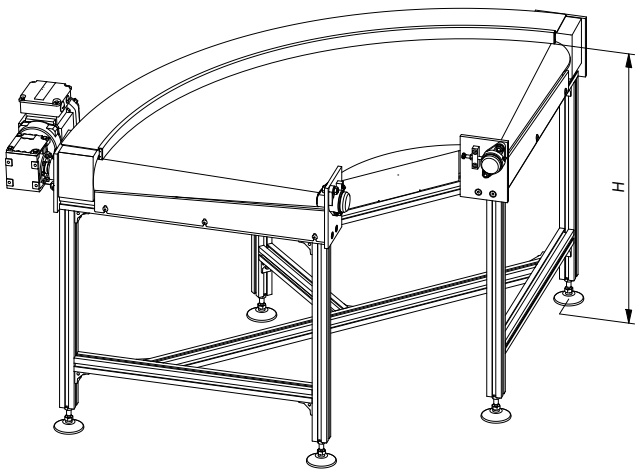
Versions NB 900 mm, Ra 1,500 mm, Ri 600 mm

Technical data

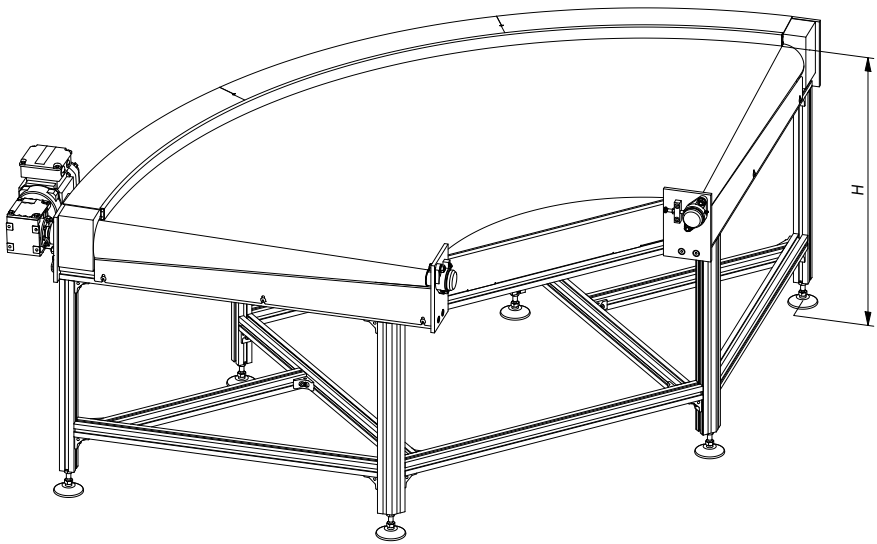
Conveying angle α	90°	
Dimensions	usable width 600 mm, Ra 1,500 mm, Ri 900 mm usable width 700 mm, Ra 1,500 mm, Ri 800 mm usable width 800 mm, Ra 1,500 mm, Ri 700 mm usable width 900 mm, Ra 1,500 mm, Ri 600 mm	
Drive location	discharge end on the outer edge of the curve	
Drive and speed	up to 60 m/min. (related to R_m)	
Stand	specific stand version R_a 1,500 mm	→ p. 70
Total load	up to 50 kg, higher on request	→ p. 20
Belts	belts with guide geometry	→ p. 72

KGF-P 2040.02 Stands

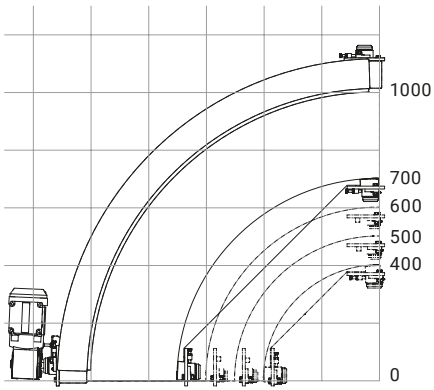
Stand version R_a 1,000 mm

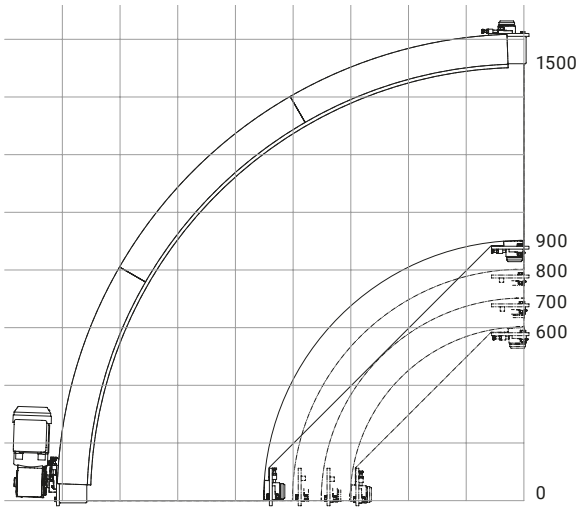


Stand version R_a 1,500 mm



KGF-P 2040.02 Versions





The item number consists of B20.40 and the version number.

Version R_a 1,000 mm	B20.40.	022	023	024	025	026	027	028	029
Usable width NB		300		400		500		600	
Internal radius R_i		700		600		500		400	
Curve in conveying direction*		left (ccw)	right (cw)	left (ccw)	right (cw)	left (ccw)	right (cw)	left (ccw)	right (cw)

Version R_a 1,500 mm	B20.40.	030	031	032	033	034	035	036	037
Usable width NB		600		700		800		900	
Internal radius R_i		900		800		700		600	
Curve in conveying direction*		left (ccw)	right (cw)	left (ccw)	right (cw)	left (ccw)	right (cw)	left (ccw)	right (cw)

* cw: clockwise | ccw: counter-clockwise

Sample order	
Item number	B20.40.037
Conveyor speed m/min relative to the belt centre Rm	15 m/min.
Conveying weight [kg]	30 kg
Belt type	GU-V0206-060SW
Stand yes/no, Conveyor height	Yes, 900 mm

Information on belts

1 Standard

As standard, belt conveyors from mk are supplied with antistatic conveyor belts. These limit the electrostatic charge generated during operation of the conveyor, which is caused by the movement of the conveyor belt relative to the slide bed and rollers as well as to the product. This prevents any danger to persons and ensures that conveyed products without special requirements are transported safely.

2 Special requirements

mk also has extensive experience in creating belt conveyors for special requirements. These are designed specifically for the application and environment, which often requires the use of special conveyor belts.

2.1 ESD-safe conveyor belts

ESD stands for electrostatic discharge. Specially equipped conveyor belts are used to protect sensitive products, such as electrical components, against electrostatic phenomena. These minimise charge build-up and ensure safe dissipation of the charge that does occur. See the table on the next page for details.

2.2 ATEX-compliant conveyor belts

In ATEX areas, i.e. areas with a potentially explosive atmosphere, only conveyor belts with an ATEX certificate may be used. These must fulfil ESD requirements aimed at preventing sparks from electrostatic discharge, as well as having sufficiently low flammability. See the table on the next page for details.

2.3 Conveyor belts for cleanrooms

Belt conveyors that are used in processes with technical cleanliness requirements or even in cleanrooms are adapted to the requirements of the specific application. With regard to the belts, it is particularly important to reduce the particles emitted by the belt and to prevent antistatic adhesion of the particles that do occur.

2.4 Conveyor belts approved for food/pharmaceuticals

If food, including packaged food, or pharmaceutical products are transported, a number of specific requirements must be met. As a rule, conveyor belts with an FDA certificate are used. FDA stands for “Food and Drug Administration”, the US regulatory agency.

2.5 Conveyor belts without paint wetting impairment substances (PWIS)

If conveyed products are later painted or given another coating, they must not be exposed to any substances that might impair the wetting of the paint, such as silicones, oils, greases or fluorine-containing substances. A suitable conveyor belt must be defined on the basis of these requirements and the application.

2.6 Electrically insulating conveyor belts

Electrically insulating conveyor belts can be used for special applications (high frequency, X-rays and microwaves) and with an appropriate protection concept. These belts can build up charges during operation and pose a danger to persons. See the table on the next page for details.

2.7 Metal-free conveyor belts

Metal-free conveyor belts are used for processes in which metal detectors are used.

Details on electrostatic features

Charge or potential difference	mk conveyor design	Resistance R			
		Parallel to the conveyor belt surface*	Conveyor belt surface	Transverse resistance/volume resistance perpendicular to conveyor belt	Conveyor to system ground
>20,000 V	**Insulating**	> 1 x 10^{12} (> 1 TΩ)	> 1 x 10^{12} (> 1 TΩ) on the load-bearing or running side	> 1 x 10^{12} (> 1 TΩ)	> 1 x 10^{12} (> 1 TΩ)
<1,000 V	**Standard (antistatic)**	< 3 x 10^{8} Ω (< 300 MΩ)	n/a	n/a	n/a
<100 V	**ESD**		< 1 x 10^{11} (< 100 GΩ) on the load-bearing (preferred) or running side		< 1 x 10^{9} (< 1 GΩ)
<50 V	**ESD+**		< 3 x 10^{8} (< 300 MΩ) on the load-bearing and running side	< 1 x 10^{9} (< 1 GΩ)	1 x 10^{4} < R < 1 x 10^{9} (10 kΩ < R < 1 GΩ)
	ATEX				< 1 x 10^{9} (< 1 GΩ)

*) Measurement only possible with open ends or on the base material, not on the finished conveyor belt.

Information on belts

Belt designation

Transport medium GU = belt	K1% value rounded down The K1% value is the force with which the belt is stretched by 1% per mm of width. This indicates the strength and load capacity of the belt.	Consecutive mk number

GU -U 03 05 -004 WE

Material, carrying side		Surface condition		Colour, carrying side*	
-F	Felt	1	Allows for accumulated operation	BL	Transparent
-R	Rubber (NBR)	2	Allows for restricted accumulated operation	WE	White
-T	Polyester (PET)	3	Not suitable for accumulated operation	LB	Blue
-U	Polyurethane (PU)			DG	Green
-V	Polyvinyl chloride (PVC)			SW	Black

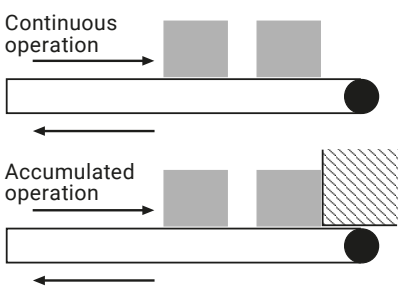
* Depending on the batch, the colour of the belt may differ from the example in the photograph in this catalogue.

Accumulated operation

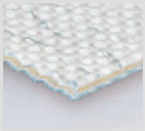
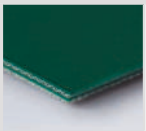
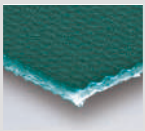
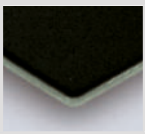
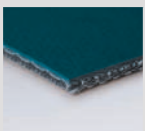
Accumulating belts are designed for long-term accumulated operation and have corresponding surface properties (friction coefficient).

Belts with limited accumulation capability are not designed for long-term accumulated operation. Relative motion is permitted, e.g. when running up against an end stop, in case of slight speed differences from one conveyor to the next, or with transverse movement of light loads (with laterally stiff belts only).

The **non-accumulating belts**, also known as anti-slip belts, have a structure or friction coefficient that provides high grip.

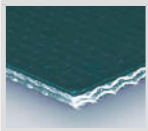
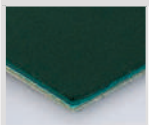
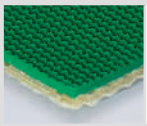
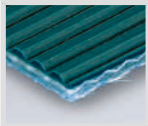
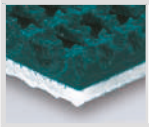


Belts – straight lines

Item no. and designation	Allows accumu-lation	Material	Colour	Surface	min. ø of the tail	Permissi-ble tem-perature	Approx. belt thickness	Belt properties	GUF-P 2000 2041 2004	GUF-P MINI
K1029003 | GU-T0105-003BL										
	•	PET	trans-parent	woven	8 mm	-10 to 90 °C	1,2 mm	laterally stiff, antistatic*, FDA-compliant, oil-resistant	•	•
K1029028 | GU-V0106-028DG										
	•	PVC	green	smooth	14 mm	-15 to 80 °C	1,8 mm	laterally stiff	•	
K1029015 | GU-U0107-015DG										
	•	PU	green	smooth	40 mm	-10 to 70 °C	1,6 mm	laterally stiff, antistatic*, oil-resistant	•	
K1029010 | GU-V0103-010SW										
	•	PVC	black	smooth	30 mm	-10 to 60 °C	1,9 mm	antistatic*	•	•
K1029019 | GU-F0106-019SW										
	•	Filz	black	smooth	30 mm	-10 to 120 °C	2,5 mm	antistatic*	•	
K1029029 | GU-U0310-029DG										
		PU	green	smooth	50 mm	-30 to 90 °C	2,4 mm	laterally stiff, FDA-compliant, oil-resistant	•	
K1029004 | GU-U0305-004WE										
		PU	white	smooth	8 mm	-30 to 90 °C	1,5 mm	laterally stiff, antistatic*, FDA-compliant, oil-resistant	•	•

* antistatic = belts contain antistatic agents that limit charging to < 1,000 V during operation.
Certain conveyor belts have significantly better antistatic properties.

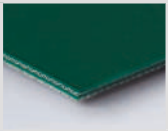
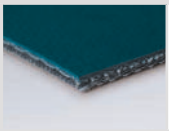
Belts – straight lines

Item no. and designation	Allows accumu-lation	Material	Colour	Surface	min. ø of the tail	Permissi-ble tem-perature	Approx. belt thickness	Belt properties	GUF-P 2000 2041 2004	GUF-P MINI
K1029024 | GU-U0305-024LB										
		PU	blue	smooth	6 mm	-30 to 100 °C	1,5 mm	laterally stiff, antistatic*, FDA-compliant, oil-resistant	•	•
K1029012 | GU-U0306-012DG										
		PU	green	smooth	10 mm	-30 to 100 °C	1,4 mm	laterally stiff, antistatic*, FDA-compliant, oil-resistant	•	
K1029009 | GU-V0303-009DG										
		PVC	green	smooth	14 mm	-10 to 70 °C	2,0 mm	antistatic*	•	•
K1029005 | GU-R0303-005DG										
		NBR	green	woven	25 mm	0 to 80 °C	2,0 mm	antistatic*, oil-resistant, cut-proof**	•	•
K1029016 | GU-U0305-016DG										
		PU	green	struc-tured	40 mm	-30 to 80 °C	1,9 mm	antistatic*, oil-resistant	•	
K1029014 | GU-V0306-014DG (not suitable for conveyors with snub roller)										
		PVC	green	struc-tured	50 mm	-10 to 60 °C	4,9 mm	laterally stiff, antistatic*	•	
K1029018 | GU-V0307-018SW										
		PVC	black	struc-tured	40 mm	-10 to 60 °C	2,3 mm	laterally stiff, antistatic*	•	

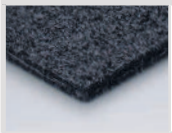
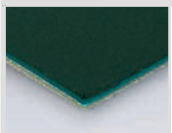
* antistatic = belts contain antistatic agents that limit charging to < 1,000 V during operation.
Certain conveyor belts have significantly better antistatic properties.

** Cut-proof belts ensure a longer service life when transporting sharp products such as stamped parts.

Belts – incline conveyors

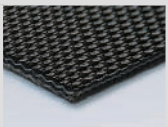
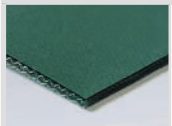
Item no. and designation	Allows accumulation	Material	Colour	Surface	min. ø of the tail	Permissible temperature	Approx. belt thickness	Belt properties
K1029028 | GU-V0106-028DG								
	•	PVC	green	smooth	14 mm	-15 to 80 °C	1,8 mm	laterally stiff
K1029029 | GU-U0310-029DG								
		PU	green	smooth	50 mm	-30 to 90 °C	2,4 mm	laterally stiff, antistatic*, FDA-compliant, oil-resistant

Belts – curved belt conveyors KGF-P 2040

Item no. and designation	Allows accumulation	Material	Colour	Surface	min. ø of the tail	Permissible temperature	Approx. belt thickness	Belt properties
K1029019 | GU-F0106-019SW								
	•	Filz	black	smooth	30 mm	-10 to 120 °C	2,5 mm	antistatic*
K1029009 | GU-V0303-009DG								
		PVC	green	smooth	14 mm	-10 to 70 °C	2,0 mm	antistatic*
K1029008 | GU-T0101-008BL								
	•	PET	trans-parent	woven	20 mm	-10 to 70 °C	1,3 mm	antistatic*, FDA-compliant
K1029057 | GU-U0305-057WE								
		PET	white	smooth	12 mm	-30 to 100 °C	1,3 mm	antistatic*, FDA-compliant

* antistatic = belts contain antistatic agents that limit charging to < 1,000 V during operation.
Certain conveyor belts have significantly better antistatic properties.

Belts – curved belt conveyors KGF-P 2040.02

Item no. and designation	Allows accumulation	Material	Colour	Surface	min. ø of the tail	Permissible temperature	Approx. belt thickness	Belt properties
K1029060 | GU-V0306-060SW (recommendation)								
		PVC	black	structured	30 mm	-15 to 80 °C	2,3 mm	antistatic*, flame-retardant
K1029061 | GU-U0308-061DG								
		PU	green	smooth	14 mm	-20 to 90 °C	1,5 mm	antistatic*, FDA-compliant, oil-resistant
K1029062 | GU-U0310-062-LB								
		PU	blue	smooth	15 mm	-20 to 90 °C	1,5 mm	FDA-compliant, oil-resistant
K1029063 | GU-U0310-063-WE								
		PU	white	smooth	12 mm	-20 to 90 °C	1,5 mm	FDA-compliant, oil-resistant
K1029064 | GU-V0312-064SW (recommendation)								
		PVC	black	smooth	35 mm	-10 to 80 °C	2,2 mm	antistatic*, flame-retardant

* antistatic = belts contain antistatic agents that limit charging to < 1,000 V during operation.
Certain conveyor belts have significantly better antistatic properties.

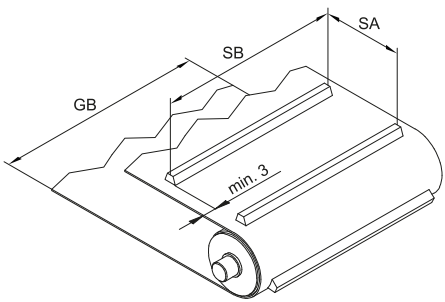
Cleats and side walls

When selecting a cleat profile, please note that the cleat must be of the same material as the belt. Segmented transverse cleats are possible, as are combinations of longitudinal and transverse cleats.

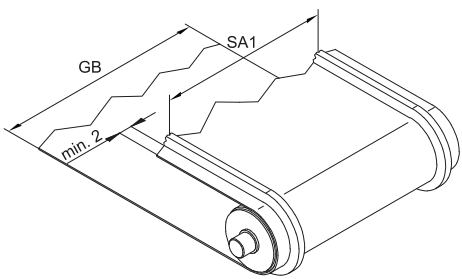
The bonding points on the cleats generally have more limited temperature range than the belt and cleat material itself. More robust designs, such as woven fabric cleats, are available on request.

Cleat material	Temperature range
PVC	-10 to +70°C
PU	-30 to +80°C
PE	-30 to +100°C

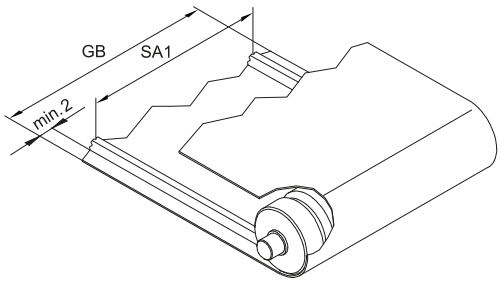
Transverse cleats (carrying side)
serve as the carrying mechanism for the conveyed product, especially in inclined conveyors.



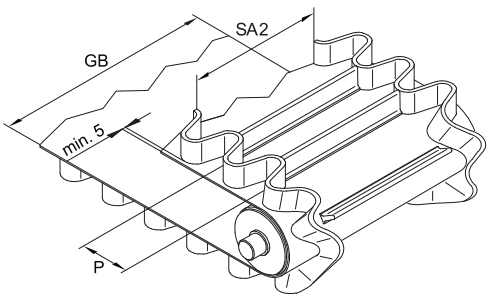
Longitudinal cleats, external (carrying side)
are used to guide the belt on concave tracks (for example, on incline conveyors).



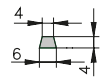
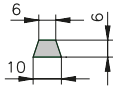
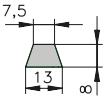
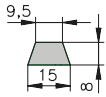
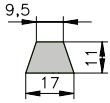
Longitudinal cleats, internal (running side)
are a belt guide option and are usually used where lateral forces act on the belt. In the area of the longitudinal cleats, the belt may be uneven.



Side walls, external (carrying side)
can be used instead of side rails and are often employed in incline conveyors.

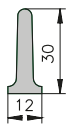
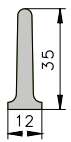
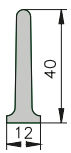
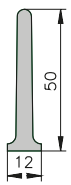
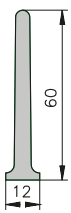


Longitudinal cleats (can also be used as lateral cleats)

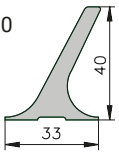
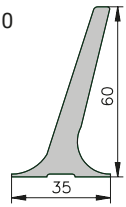
Designation	Material/colour				Min. SA/SA1*	Weight	Min. ø of idler roller [mm]		
	PVC		PU				Longitudinal cleats		Transverse cleats
	Green	White	Trans-parent	Green	[mm]	[g/m]	Running side	Carrying side	Carrying side
K6 	•	•	•		30	25	40	30	30
K10** 	•	•	•	•	30	60	70	60	50
K13 	•	•	•		30	100	90	60	80
K15 	•		•		30	120	90	60	90
K17 	•	•	•		30	180	90	90	-

*SA1 = minimum distance between longitudinal cleats/SA = minimum distance between transverse cleats
**This cleat must be used for the belt guide on the carrying side for the incline conveyor.

Transverse cleats

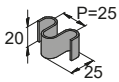
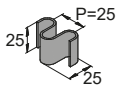
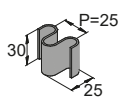
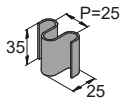
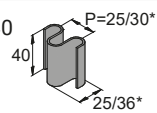
Designation	Min. SA*	Material/colour				Weight [g/m]	Min. ø of idler roller [mm]
		PVC		PU			Transverse cleats carrying side
		Green	White	Green	White		
T20U 	40			•	•	140	50
T30U 	40			•	•	180	50
T35U 	40			•	•	200	50
T40U 	40			•	•	220	50
T50U 	40			•	•	250	50
T60U 	40			•	•	280	50
T20 	55	•	•			160	90

Transverse cleats

Designation	Min. SA*	Material/colour				Weight [g/m]	Min. ø of idler roller [mm] Transverse cleats, carrying side
		PVC		PU			
		Green	White	Green	White		
L40 	55	•	•			140	85
L60 	55	•	•			180	85

*SA = minimum distance between transverse cleats

Side walls

Designation	Material/colour						Min. ø of idler roller [mm] (≙ 2 x side wall height)
	PVC			PU			
	Green	White	Blue	Green	White	Blue	
WK20 	•	•	•	•	•	•	40
WK25 	•	•	•	•	•	•	50
WK30 	•	•	•	•	•	•	60
WK35 	•	•	•	•	•	•	70
WK40 	•	•	•	•	•	•	80

The minimum distance from the side wall to the edge of the belt is 5 mm. Min. SA2 = 60; min. A = 5
*Varies based on the version

Chapter 3 Modular Belt Conveyors



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Modular Belt Conveyor MBF-P 2040 88

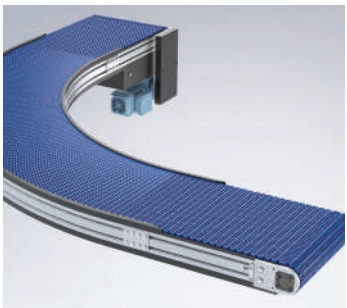
Head Drives 90



Incline Conveyor Modular Belt KFM-P 2040 92

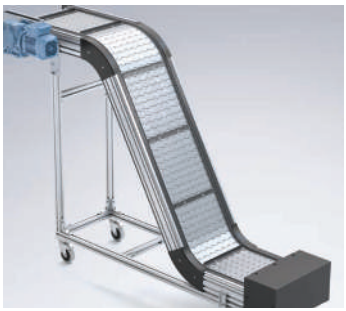
Head Drives 94

Stands 96



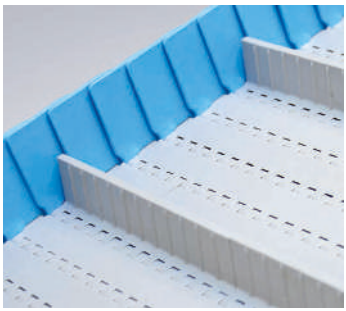
Curved Modular Belt Conveyor KMF-P 2040 98

Head Drives 100
Variants 101
Drive Versions 102



Incline Conveyor Modular Belt KFM-P 2040.86 104

Head Drives 106
Stands 107



Modular Belts

for MBF-P 2040 and KFM-P 2040 108
for KMF-P 2040 110
for KFM-P 2040.86 111

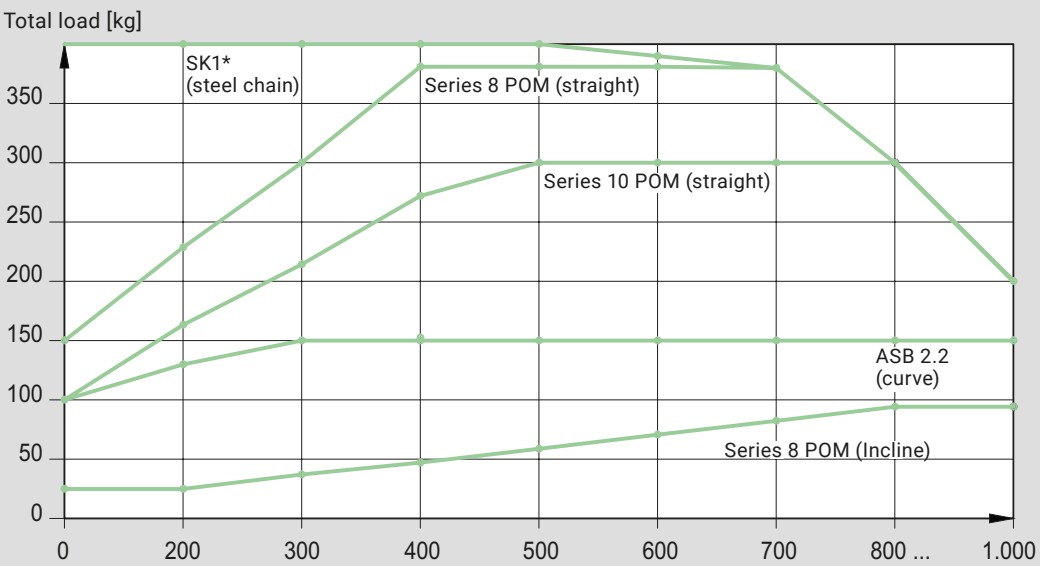
Technical data – overview

Conveyor system	Width [mm]	Length [mm]	Total load as standard, up to [kg]	Speed up to [m/min]	ø of tails [mm]	Cycling	Accumu-lation	Revers-ing
Modular belt conveyor								
MBF-P 2040	200-1,000	475-10,000	250	30	approx. 100		•	
Incline conveyor modular belt								
KFM-P 2040	200-1,000	1,000-10,000	100	30	approx. 100			
Curved modular belt conveyor								
KMF-P 2040	200-1,000	475-10,000	150	30	approx. 100			
Incline conveyor modular belt with hinged plate belt								
KFM-P 2040.86	210-710	1,400-10,000	150	12	88	•		

* Usual load limits that may be exceeded based on the configuration and influencing factors. Influencing factors: width, number of teeth on the drive sprocket wheels, chain type, load distribution, operational mode and environmental conditions.

Selecting based on load and width

For plastic modular belts, the coefficient of friction is μ = 0.3, for steel modular belts μ = 0.15. In accumulated operation, an additional coefficient of friction of μ = 0.3 must be taken into account, which almost doubles the effective mass compared to continuous operation.



*The total load for the steel chain is the sum of the payload and the weight of the chain itself.

Possible applications

Thanks to the positive drive mechanism and lateral guide, modular belts are ideal where a single belt is not possible due to slippage, an unfavourable length-width ratio or lateral forces. A further benefit is that liquids from the product can drip through the chain.

The system's modular design allows you to combine the segments with straight, curved and incline conveyors to achieve virtually any three-dimensional track layout. Widths of up to 2 metres are possible on request for an additional charge.

Conveyors with steel hinged plate belt
The incline conveyor modular belt made of steel plates is ideal for harsh environmental conditions and for transporting stamped, cast, forged or wooden parts, for example. It is particularly suitable for hot products up to 200° C.

On request, transverse cleats can be screwed or welded on. Stainless steel or perforated variants of the chain are available. Due to the gap of 1 to 3 mm between the side rail and chain, this system is not suitable for pointed stamping scraps or metal chips.

Modular belts

Series 8 is characterised by its robustness and is used in industrial applications in particular.

Series 10 is intended for transporting lightweight to medium-weight products in sanitary environments, such as those found in the food industry and the pharmaceutical sector. The module geometry and the sprocket wheels were therefore designed to ensure easy cleaning.

Transverse cleats up to 75 mm in height and side plates up to 100 mm in height are available for both series. This eliminates the need for a complex side rail, as well as the associated problems arising from gaps and from relative motion between the chain and side rail.

At a length of 3 metres, the usual chain slack can be dispensed with, which allows for reverse operation. At lengths of more than 3 metres or under heavy loads, the conveyor is run with a balance option (e.g. chain sagging or a tensioning station).

The **ASB 2.2** chain for curves is highly resistant to wear and abrasion, making it suitable for high temperatures, contact with chemicals or food, etc.

Chain material
Polyoxymethylene (POM, POM-CR) is particularly suitable for applications requiring high maximum load and cut resistance. This material can even handle the occasional impact from product landing forcefully on the chain or the transverse cleats.

Modular Belt Conveyor MBF-P 2040

3



Versatile. Flexible. Robust.

Thanks to its positive drive mechanism, the MBF-P 2040 modular belt conveyor provides high load capacity even with narrow conveyor widths. The belt guide prevents the belt from running sideways and thus enables conveyed products to be pushed off without any problems.

The modular belt is wear and abrasion resistant, is suitable for food, and is resistant to heat and chemicals thanks to the various chain materials available.

10 mm T-slots running along both sides let you easily mount the conveyors on existing machine frames or attach stands, side rails, initiators, funnels, discharge slides and other accessories.

Cross section*

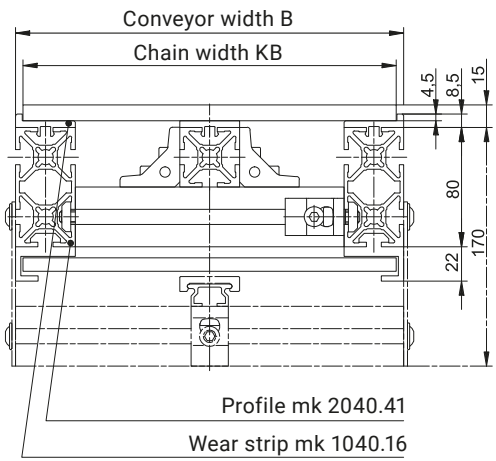


*Diagram includes a modular belt support in the lower run (dashed line). Only necessary with B > 700 mm.

Benefits of the MBF-P 2040

- Positive drive mechanism eliminates slippage and makes it suitable for wet applications
- Liquids from the product can drip through the chain.
- Stable chain travel regardless of the length-width ratio
- Lateral movement of product
- Chain material is highly resistant to wear and abrasion, making it suitable for high temperatures, contact with chemicals or food, etc.

Technical data

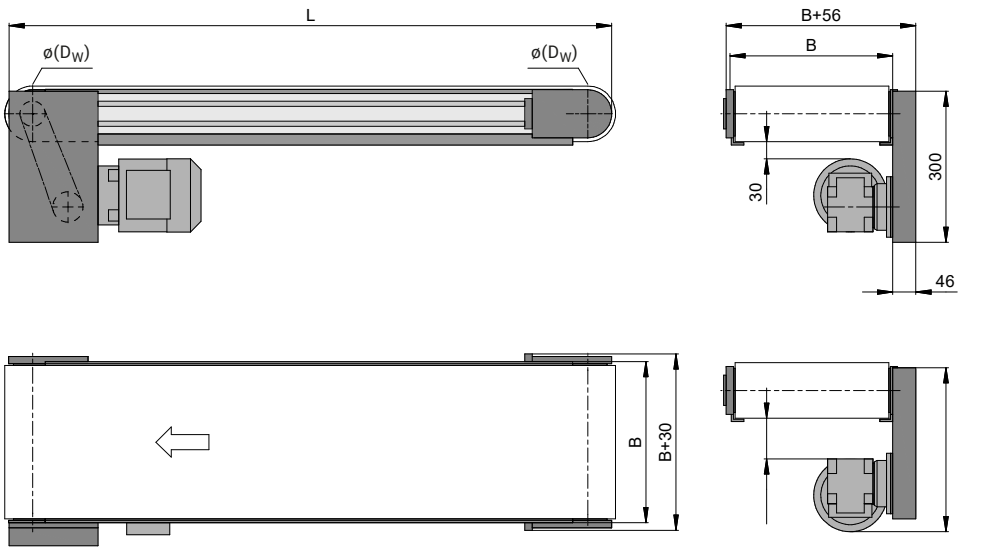
Conveyed product	piece goods	
Conveyor length L	individual from 475-10,000 mm	
Conveyor width B	approx. 200-1,000 mm depending on the chain type	
Total load*	up to 250 kg, higher on request	→ p. 86
Speed	up to 30 m/min depending on drive	
Drive version	head drive AC, AF (direct)	→ p. 90
Tail	tail 01 (ø 100 mm)	
Modular belt	series 8 and series 10 with or without cam	→ p. 108
Side rail	SF 2.1 (fixed), SF01 and SF02 (adjustable)	→ p. 240
Stand	H-design stand, mobile, height-adjustable	→ p. 224
Operational mode	continuous operation, accumulated operation	

* Usual load limits that may be exceeded based on the configuration and influencing factors. Influencing factors: width, number of teeth on the drive sprocket wheels, chain type, load distribution, operational mode and environmental conditions.

AC – Indirect head drive

B20.40.806

The compact conveyor frame design makes it easier to integrate the conveyor into existing systems. The sprocket wheel with the positive-locked connection to the modular belt ensures excellent transmission of the motor power. At lengths of up to three metres, the chain does not sag but the belt still runs quietly. With lengths of around three metres or more, there is chain sagging on the drive end, which is enclosed by a protective box. This results in an additional obstructing edge.



* when using transverse cleats

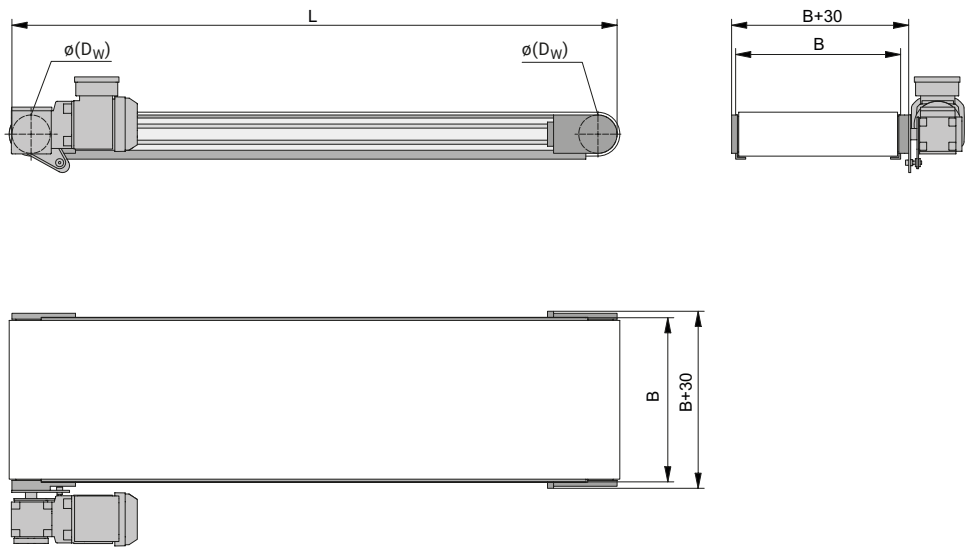
Technical data

Conveyor length L	individual from 475-10,000 mm	
Conveyor width B	approx. 200-1,000 mm depending on the chain type	→ p. 108
Drive location	left/right underneath	
Drive and speed	up to 30 m/min, higher on request	
Stand		→ p. 224
Total load	up to 250 kg, higher on request	→ p. 86
Distributed load	up to 75 kg/m, higher on request	
Pitch diameter (Dp)	chain S8=99.7 mm; chain S10=98 mm	

AF – Direct head drive

B20.40.808

The compact conveyor frame design makes it easier to integrate the conveyor into existing systems. Since the motor is fitted directly onto the drive shaft, the space requirements and maintenance effort for this drive version are reduced to a minimum.



Technical data

Conveyor length L	individual from 475-10,000 mm	
Conveyor width B	approx. 200-1,000 mm depending on the chain type	→ p. 108
Drive location	left/right	
Drive and speed	up to 30 m/min, higher on request	
Stand		→ p. 224
Total load	up to 250 kg, higher on request	→ p. 86
Distributed load	up to 75 kg/m, higher on request	
Pitch diameter (DP)	chain S8=99.7 mm; chain S10=98 mm	

Incline Conveyor Modular Belt KFM-P 2040



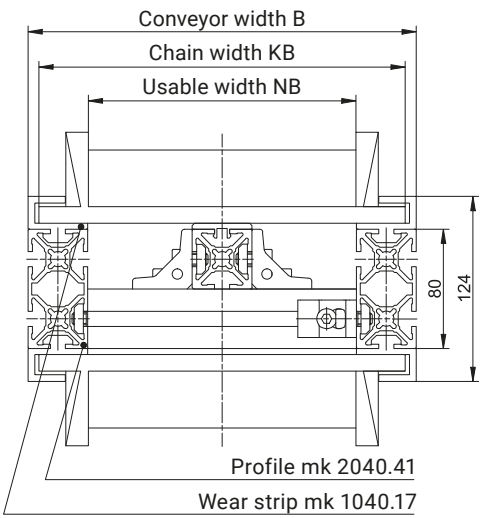
Variable. Mobile. Compact.

The KFM-P 2000 incline conveyor is used for the inclined conveying of small parts to another level and is ideal for integration into existing machines or as a mobile conveyor. Containers or lattice boxes are ideal for filling with plastic injection moulded or lightweight stamped parts, for example.

The modular belt is wear and abrasion resistant, is suitable for food, and is resistant to heat and chemicals thanks to the various chain materials available.

10 mm T-slots running along both sides let you easily mount the conveyors on existing machine frames or attach stands, side rails, initiators, funnels, discharge slides and other accessories.

Cross section



Benefits of the KFM-P 2040

- Incline conveyor for the incline conveying of small parts to different levels
- Compact design for optimal integration into existing systems
- Positive drive mechanism eliminates slippage and makes it suitable for wet applications
- Liquids from the product can drip through the chain.
- Modular belts are optionally available with side plates and transverse cleats
- Chain material is highly resistant to wear and abrasion, making it suitable for high temperatures, contact with chemicals or food, etc.

Technical data

Conveyed product	piece goods
Conveyor length L	individual from 1,000-10,000 mm (L1+L2+L3)
Conveyor width B	approx. 200-1,000 mm depending on the chain type
Total load*	up to 100 kg, higher on request → p. 86
Speed	up to 30 m/min depending on drive
Drive version	head drive AC, AF (direct) → p. 94
Tail	tail 01 (ø 100 mm)
Modular belt	series 8 with or without cam → p. 108
Side rail	optionally with side plates or individual on request
Stand	stand incline conveyor → p. 96
Operational mode	continuous operation

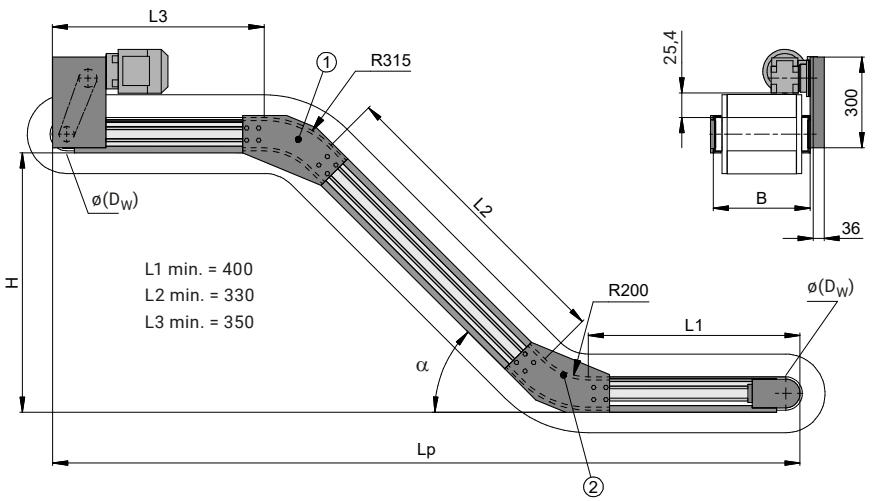
* Usual load limits that may be exceeded based on the configuration and influencing factors. Influencing factors: width, number of teeth on the drive sprocket wheels, chain type, load distribution, operational mode and environmental conditions.

3

AC – Indirect head drive

B20.40.810/811/812

For the drive version AC, mk offers a multitude of drive motors tailored to various speed and load capacity requirements. The sprocket wheels ensure excellent transmission of the motor power. At lengths of up to three metres, the chain does not sag but the belt still runs quietly. With lengths of around three metres or more, there is chain sagging on the drive end, which is enclosed by a protective box. This results in an additional obstructing edge.



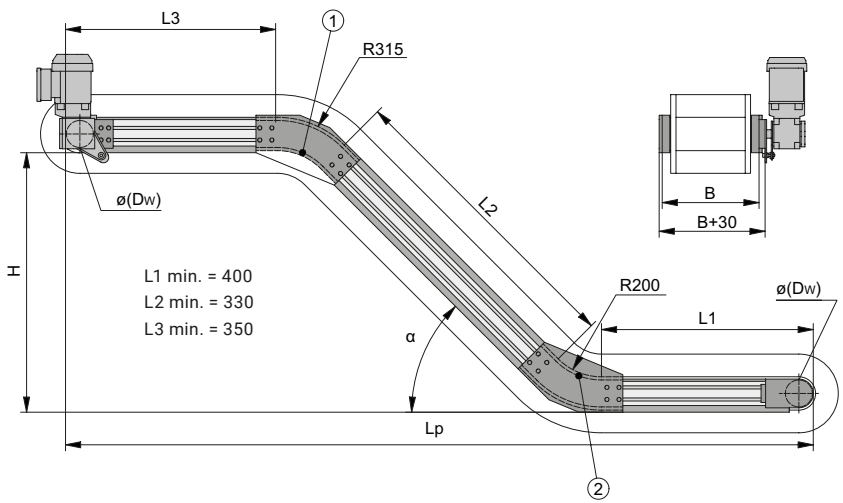
Technical data

Conveyor length L (L1+L2+L3)	variable up to 10,000 mm (L1+L2+L3) depending on belt shape (angle α and L2) and load	
Conveyor width B	approx. 200-1,000 mm depending on the chain type	→ p. 108
Drive location	discharge end left/right, underneath/above	
Drive and speed	up to 30 m/min	
Stand		→ p. 96
Total load	up to 100 kg (including chain weight), higher on request	→ p. 86
Distributed load	up to 50 kg/m, 15 kg/compartment	
Belt incline α 1 and 2	30, 45 and 60°, others on request	
Pitch diameter (Dp)	chain S8=99.7 mm; chain S10=98 mm	

AF – Direct head drive

B20.40.816/817/818

The compact conveyor frame design makes it easier to integrate the conveyor into existing systems. Since the motor is fitted directly onto the drive shaft, the space requirements and maintenance effort for this drive version are reduced to a minimum.



Technical data

Conveyor length L (L1+L2+L3)	variable up to 10,000 mm (L1+L2+L3) depending on belt shape (angle α and L2) and load	
Conveyor width B	approx. 200-1,000 mm depending on the chain type	→ p. 108
Drive location	discharge end left/right	
Drive and speed	up to 30 m/min	
Stand		→ p. 96
Total load	up to 100 kg (including chain weight), higher on request	→ p. 86
Distributed load	up to 50 kg/m, 15 kg/compartment	
Belt incline α 1 and 2	30, 45 and 60°, others on request	
Pitch diameter (DP)	chain S8=99.7 mm; chain S10=98 mm	



KFM-P 2040

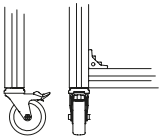
Stand

The stand was developed specially for the incline conveyor belt and incline conveyor modular belt and is characterised by its simplicity and light-weight design with the mk 2040.40 profile.

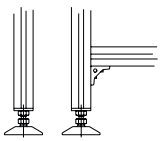
The stand shown can be fitted with either levelling feet or swivel casters for mobile use.

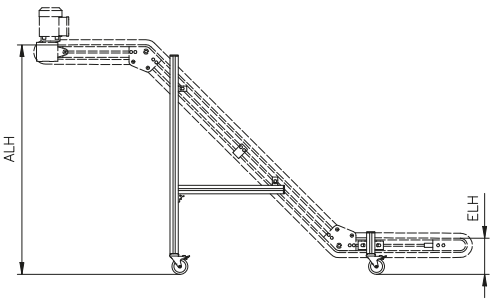
The swivel casters lock completely to guarantee secure support.

Stand with swivel casters



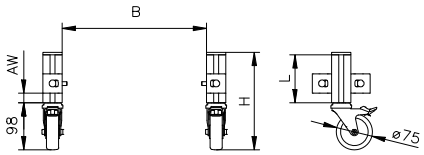
Stand with levelling feet



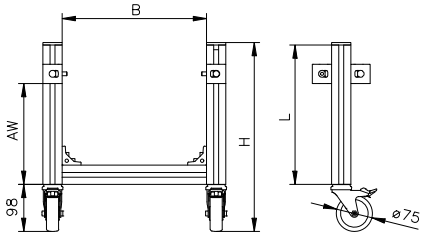


ELH = infeed height
ALH = discharge height
B = conveyor width
H = stand height
L = length of the vertical profile
AW = distance from the angle to the profile edge

Infeed End Stand B67.06.014

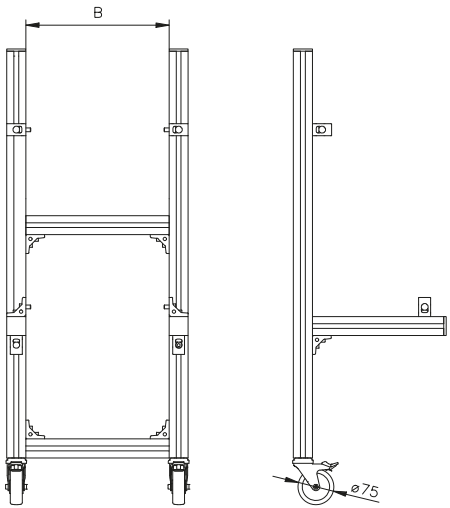


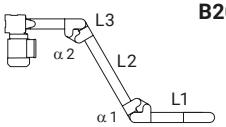
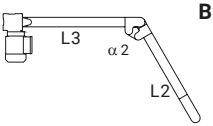
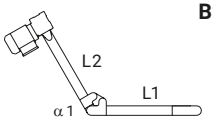
Infeed height (ELH) = 166-349 mm



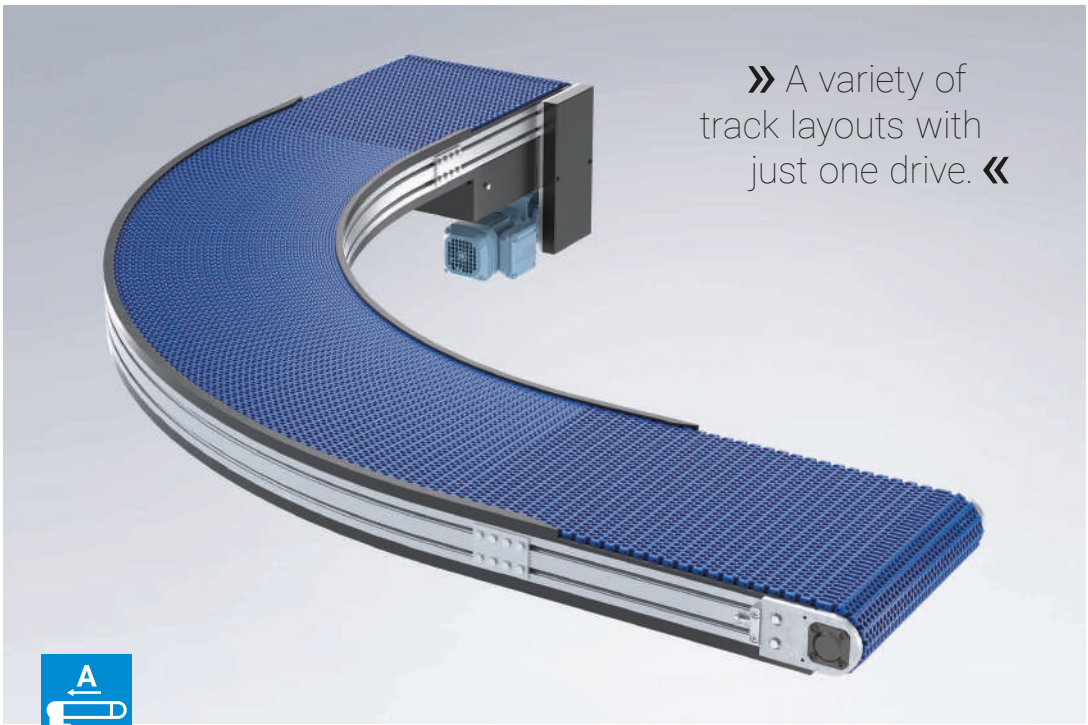
Infeed height (ELH) = 350-500 mm

Discharge End Stand B67.06.015



Sample order	Type designation			
KFM-P 2040 type S (B20.40.810)		Drive	AC	AF
Drive AC, 0° motor orientation (as shown)	Type S 	B20.40. ...	810	816
Speed of 15 m/min				
Conveyor width B = 460 mm				
Conveyor length L1 = 500 mm; L2 = 1,000 mm; L3 = 600 mm	Type K 	B20.40. ...	811	817
Belt incline a 1 = 60°; belt incline a 2 = 60°				
Cam height H1/S8 = 25.4 mm (see page 109)				
Stand with swivel casters	Type L 	B20.40. ...	812	818
Infeed height ELH = 200 mm				
Discharge height ALH = 1200 mm				

Curved Modular Belt Conveyor KMF-P 2040



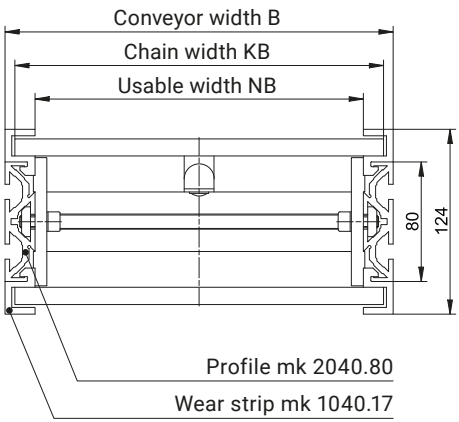
Versatile. Compact. Robust.

The KMF-P 2040 curved modular belt conveyor is robust and suitable for almost all transport tasks. The curve is available in L, S and U curves as well as 45° or 90° angles. In combination with straight lines and inclines, the track layout can be flexibly adapted to any environment.

The modular belt is wear and abrasion resistant, is suitable for food, and is resistant to heat and chemicals thanks to the various chain materials available.

10 mm T-slots running along both sides let you easily mount the conveyors on existing machine frames or attach stands, side rails, initiators, funnels, discharge slides and other accessories.

Cross section



Benefits of the KMF-P 2040

- Variety of track layouts (L/S/U shape) possible with just one drive
- Positive drive mechanism eliminates slippage and makes it suitable for wet applications
- Liquids from the product can drip through the chain.
- Lateral movement of product
- Chain material is highly resistant to wear and abrasion, making it suitable for high temperatures, contact with chemicals or food, etc.

Technical data

Conveyed product	piece goods	
Conveyor length L	individual up to 10,000 mm (L1+L2+L3)	
Conveyor width B	approx. 200-1,000 mm depending on the chain type	
Total load*	up to 150 kg, higher on request	→ p. 86
Speed	up to 30 m/min depending on drive	
Drive version	head drive AC, AF (direct)	→ p. 100
Tail	tail 01 (ø 100 mm)	
Modular belt	ASB 2.2	→ p. 110
Side rail	SF 2.1 (fixed), SF01 and SF02 (adjustable)	→ p. 240
Stand	H-design stand, mobile, height-adjustable	→ p. 224
Operational mode	continuous operation	

* Usual load limits that may be exceeded based on the configuration and influencing factors. Influencing factors: width, number of teeth on the drive sprocket wheels, chain type, load distribution, operational mode and environmental conditions.

Head drives AC indirect and AF direct

B20.40.8 _ _

The curved modular belt conveyor KMF-P 2040 has a modular design and, with just one drive for complex track layouts, is extremely efficient. There is chain sagging on the drive end, which is enclosed by a protective box.

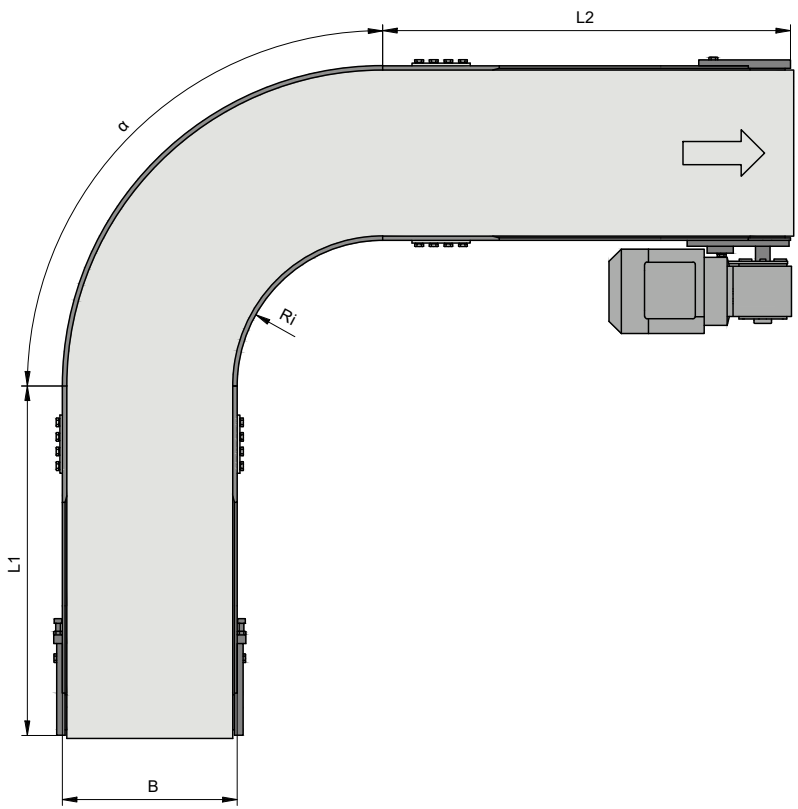


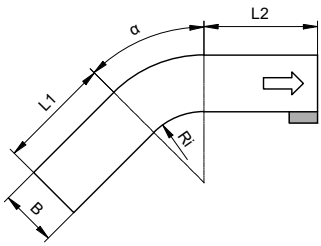
Illustration shows head drive AC indirect

Technical data

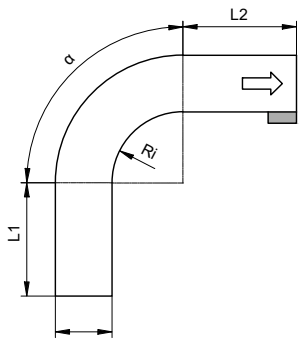
Curve angle α	45° and 90° (in combination, also 135° and 180°)	
Drive	head drives AC and AF	→ p. 102
Speed	up to 30 m/min	
Total load	up to 150 kg (depending on the track layout and conveyor length and width), higher on request	→ p. 86
Cleats and side plates	the modular belt can be fitted with optional transverse cleats and side plates with H = 25 mm	

KMF-P 2040 Variants

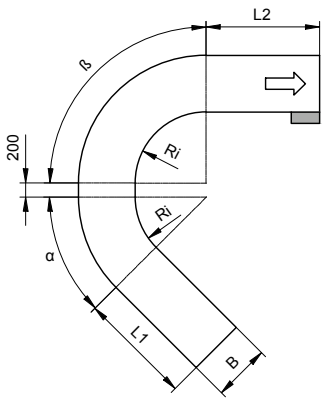
Curve L45°



Curve L90°

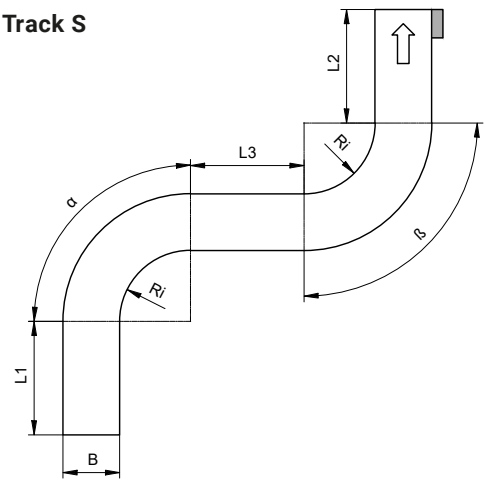


Curve L135°
(also available as L180°)

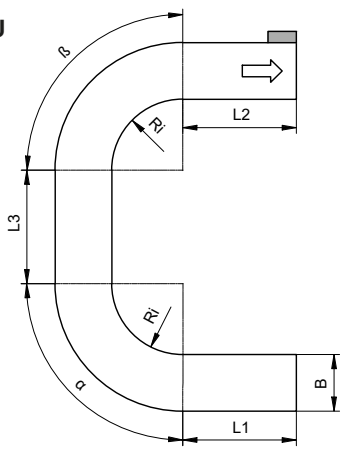


Examples of a Track Layout

Track S



Track U



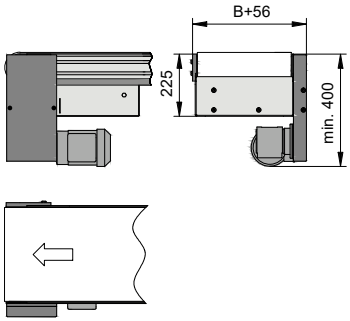
Dimensions [mm]

									only for L45° or L90°			
Conveyor width B		164	241	317	394	470	546	623	699	776	852	928	1005
Chain width KB		149	226	302	379	455	531	608	684	761	837	913	990
Usable width NB		134	211	287	364	435	511	588	664	741	817	893	970
Length L1 (min.)		224	339	453	569	683	797	912	1026	1142	1256	1370	1485
Length L2 (min.)		645	645	645	758	910	1062	1216	1368	1522	1674	1826	1980
Length L3 (min.)	**Track S**	400	452	604	758	910	1062	1216	1368	1522	1674	1826	1980
	Track U	400	400	400	400	400	400	400	400	400	400	400	400
Inner radius (Ri)		324	493	660	830	997	1164	1334	1501	1670	1837	2005	2174

KMF-P 2040 Drive Versions

Head drive AC

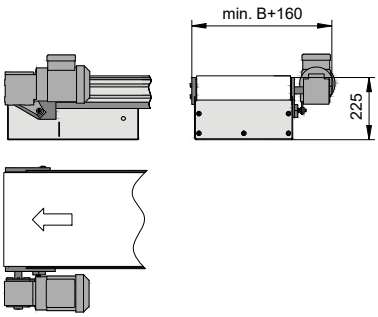
type L: B20.40.826 | type S: B20.40.827 | type U: B20.40.828



Properties	Indirect head drive. Drive version with a variety of combination options for motors, gearboxes and sprocket wheels.
Drive location	discharge end left/right
Motor orientation	0°, 90°, 180°
Speed	5-30 m/min

Head drive AF

type L: B20.40.823 | type S: B20.40.824 | type U: B20.40.825



Properties	Direct head drive. Compact and low-maintenance drive version with a motor that is fitted directly on the drive shaft.
Drive location	discharge end left/right
Motor orientation	0°, 90° (front terminal box), 180°, 270°
Speed	5; 7; 10; 12.5; 17; 20.5; 26; 29.5 m/min

Notes

Incline Conveyor Modular Belt KFM-P 2040.86

3



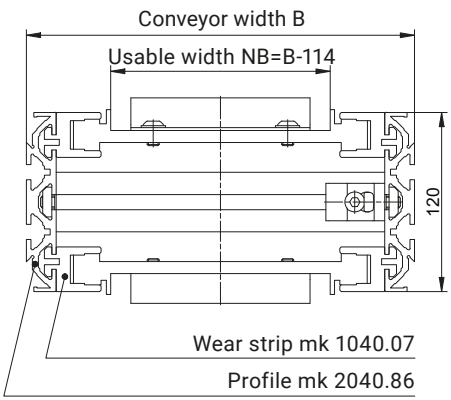
Robust. Compact. Flexible.

The KFM-P 2040.86 has a robust steel belt and is therefore ideal for transporting sharp-edged or hot products to another level.

Due to the gap of 1 to 3 mm between the side rail and the hinged plate belt, this conveyor is not suitable for pointed stamping scraps or metal chips.

10 mm T-slots running along both sides let you easily mount the conveyors on existing machine frames or attach stands, side rails, initiators, funnels, discharge slides and other accessories.

Cross section



Benefits of the KFM-P 2040.86

- Robust incline conveyor for the incline conveying to different levels
- Compact design for optimal integration into existing systems
- For transporting stamped, cast, forged or wooden parts and for hot product
- Stable belt travel regardless of the length-width ratio
- Hinged plate belt optionally available in stainless steel, perforated and/or with transverse cleats

Technical data

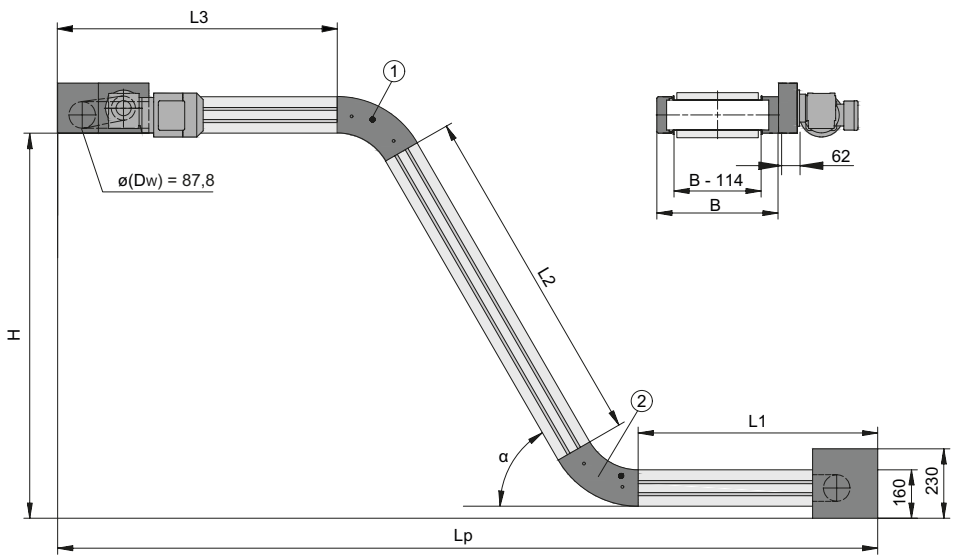
Conveyed product	piece goods	
Conveyor length L	individual up to 10,000 mm	
Conveyor width B	210-710 mm (in 50 mm increments)	
Total load*	up to 150 kg, higher on request	→ p. 86
Speed	up to 12 m/min	
Drive version	Head drive AS	→ p. 106
Tail	Tail 01 (ø 88 mm)	
Hinged plate belt	SK1 ohne oder mit Seitenplatte (optional in Edelstahl)	→ p. 111
Side rail	individual on request	
Stand	stand incline conveyor	→ p. 107
Operational mode	continuous operation, cycle operation	

* Usual load limits that may be exceeded based on the configuration and influencing factors. Influencing factors: width, number of teeth on the drive sprocket wheels, chain type, load distribution, operational mode and environmental conditions.

AS – Indirect head drive, laterally on the outside

B20.40.6 _ _

The drive positioned laterally on the outside allows the total height of the conveyor to be restricted to a minimum. The sprocket wheel with the positive-locked connection to the modular belt ensures excellent transmission of the motor power.



Technical data

Conveyor length L (L1+L2+L3)	depending on belt shape and load, up to 10,000 mm
Conveyor width B	210-760 mm (in 50 mm increments), others on request
Drive location	discharge end left/right
Drive and speed	up to 12 m/min
Stand	individual on request → p. 107
Total load	up to 150 kg, higher on request → p. 86
Distributed load	up to 50 kg/m, 15 kg/compartment
Belt incline α 1 and 2	15, 30, 45 and 60°, others on request



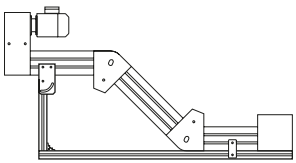
Stands

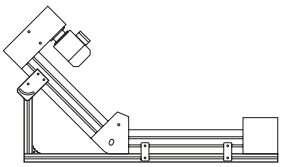
The stand type shown, stand type A, can be equipped with all the pad options. All the stands in the mk conveyor technology range can be used with type G.

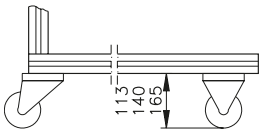
The swivel casters used in pad option 1 have a total locking device and guarantee stability even at high transport speeds.

They are available as ø 75 mm for x=113 mm,
ø 100 mm for x=140 mm and
ø 125 mm for x=165 mm.

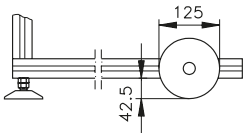
Stand examples



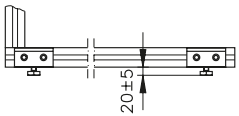




Pad option 1



Pad option 2

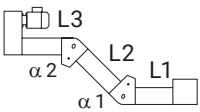
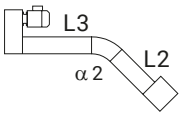
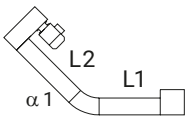


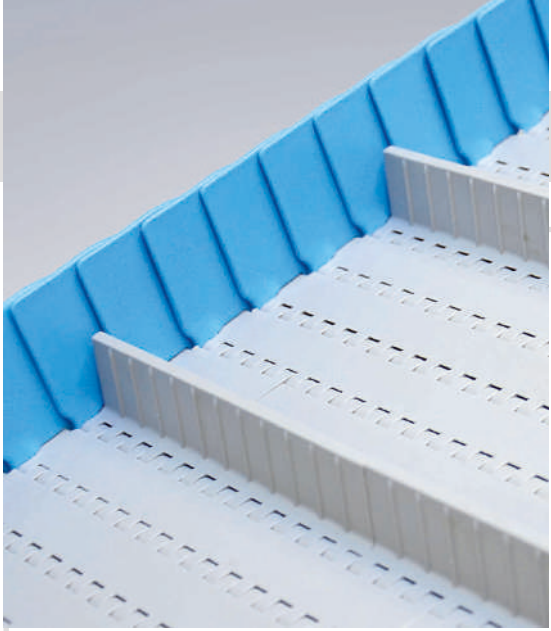
Pad option 3

Sample order

KFM-P 2040.86 type S (B20.40.606)
Drive AC 0° motor orientation (as shown)
Speed of 10 m/min
Conveyor width B = 460 mm
Conveyor length L1 = 500 mm; L2 = 1,000 mm; L3 = 600 mm
Belt incline α 1 = 60°; belt incline α 2 = 60°
Cam height H1 = 20 mm (see page 111)
Custom stand
Infeed height ELH = 200 mm
Discharge height ALH = 1200 mm

Type designation

		Drive	AC	AS
Type S		B20.40. ...	606	610
Type K		B20.40. ...	607	611
Type L		B20.40. ...	608	612



Modular Belts

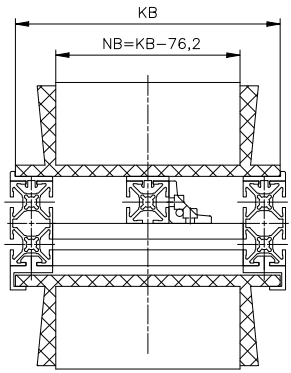
3

... for MBF-P 2040 and KFM-P 2040

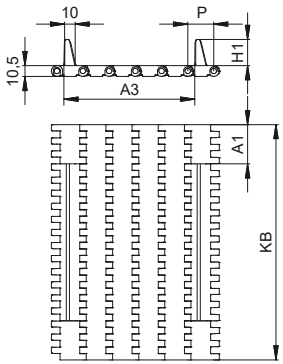
mk offers two chain series for its modular belt conveyor system to meet various customer requirements. Series 8 modular belt chains are suitable for transporting medium-weight to heavy goods such as containers, bottles, boxes, and so on, in industrial applications. Series 10 is suitable for transport of light to medium-heavy goods in hygiene-sensitive areas. The side plates are available in heights of 25, 50, 75 and 100 mm and in the colours light blue and white.

Series 8 (S8)		Series 10 (S10)	
Conveyor width B [mm]	**Chain width KB [mm]**	**Conveyor width B [mm]**	**Chain width KB [mm]**
218.00	203.20	206.00	190.50
269.00	254.00	263.00	247.65
320.00*	304.80*	320.00*	304.80*
371.00	355.60	358.00	342.90
409.00	393.70	416.00	400.50
460.00	444.50	472.00	457.20
510.00*	495.30*	510.00*	495.30*
561.00	546.10	568.00	552.45
612.00	596.90	606.00	590.55
663.00*	647.70*	663.00*	647.70*
714.00	698.50	720.00	704.85
764.00	749.30	758.00	742.95
815.00*	800.10*	815.00*	800.10*
866.00	850.90	872.00	857.25
917.00	901.70	910.00	895.35
968.00*	952.50*	968.00*	952.50*
1018.00	1003.30	1006.00	990.60

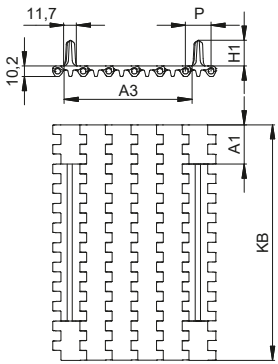
*Belt width/chain width is identical for Series 8 and 10. They can be swapped with each other without changing the conveyor frame.



MB1

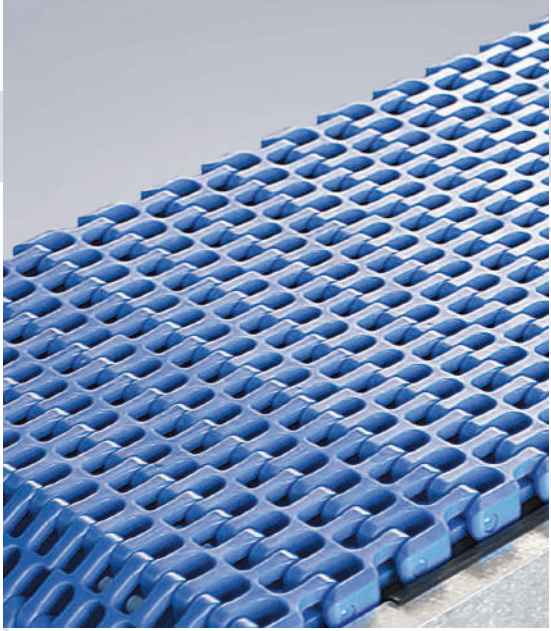


MB2

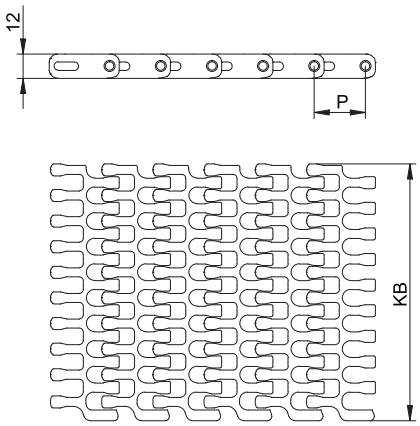


Modular belt	Series 8 (S8)	Series 10 (S10)
Cam height H1	25.4 mm and 76.2 mm others on request	25 mm and 100 mm others on request
Cam partition A3	25.4 mm in grid	25.4 mm in grid
Pitch P	25.4 mm	25.4 mm
Modular belt thickness	10.5 mm	10.2 mm
Min. edge clearance A1	With KFM, 38.1 mm	With KFM 38.1 mm
FDA/USDA suitability	Partly	FDA approval
Material	**POM:** -40 to +90° C Colours: blue **POM CR:** -45 to +90° C Colours: anthracite ■ Specially resistant to impacts and cuts ■ Easy to clean ■ Minimal scoring ■ Low risk of material separation	**POM:** -45 to +90° C Colours: white

Modular Belts



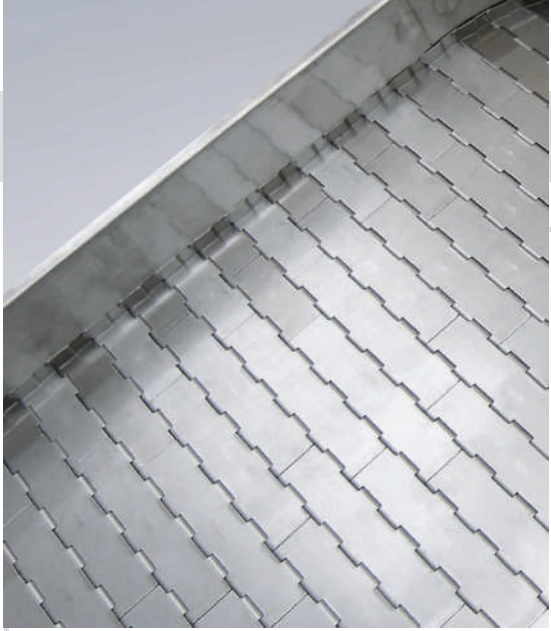
... for KMF-P 2040



The modular belt ASB 2.2 is highly resistant to wear and abrasion, making it suitable for high temperatures, contact with chemicals or food, etc.

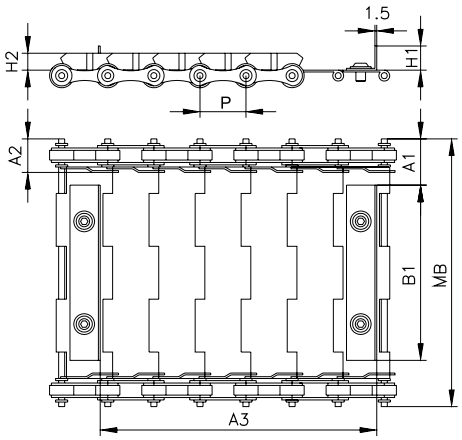
Other designs available on request, e.g. ESD or high portability.

Modular belt	ASB 2.2
Chain width KB	149, 162, 226, 302, 379, 455, 531, 608, 684, 761, 837 and 914 mm
Pitch P	25.4 mm
Modular belt thickness	12 mm
Minimum radius (internal)	2.2 x chain width (KB)
Back-flex radius	25.0 mm
FDA/USDA suitability	FDA approval
Material	**POM:** -40 to +90° C Colours: blue



The particularly robust hinged plate belt is also available in a stainless steel or perforated design on request.

... for KFM-P 2040.86



Hinged plate belt	SK1
A1 (without side plate/with side plate)	38.1 mm
A2	25 mm
MB	147-647 mm
Cam height H1	20/40 mm
Side plate height H2	14 mm
Cam partition A3	38.1 mm in grid
Colour	Bright steel
Pitch P	38.1 mm
Chain thickness	13 mm
Material	Steel
FDA/USDA suitability	No
Technical properties	Steel Wear-resistant Heat-resistant up to 300° C Resistant to impact Low friction coefficient

Max. total width MB Tolerance ± 3.0 mm	147	197	247	297	347	397	447	497	547	597	647
Weight, kg/linear metre	4.6	5.6	6.6	7.7	8.7	9.7	10.8	11.8	12.8	13.9	14.9

Chapter 4 Timing Belt Conveyors

4

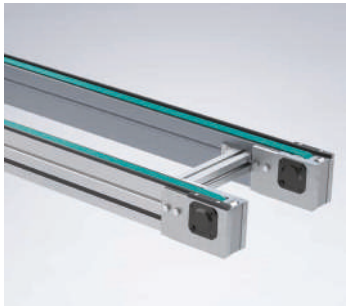


Timing Belt Conveyors – Overview and Selection 114



Timing Belt Conveyor ZRF-P 2040 116

Head Drives 118



Timing Belt Conveyor ZRF-P 2010 120

Head Drives 122

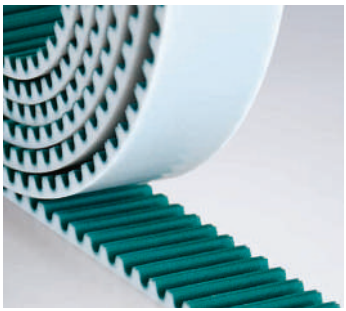
Centre Drives 124

Wear Strips 126



Timing Belt Conveyor ZRF-P 2010 128

Head Drives 130
Centre Drives 132
Wear Strips 134



Timing Belts 135

Timing Belt Conveyors – Overview and Selection

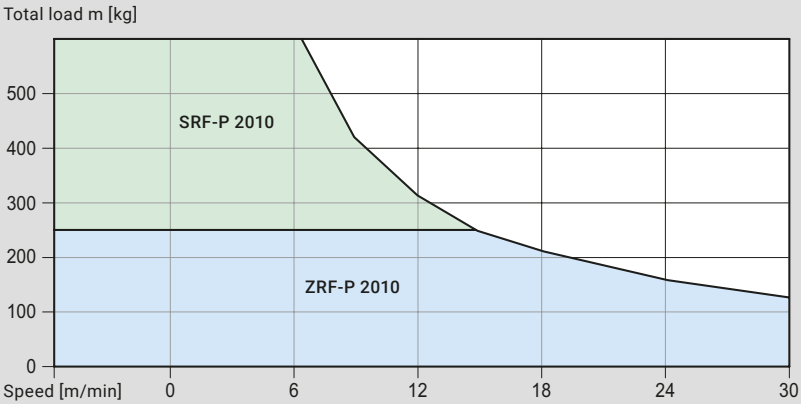
Technical data – overview

Conveyor system	Width [mm]	Length [mm]	Total load as standard, up to [kg]	Speed up to [m/min]	ø of tails [mm]	Cycling	Accumu-lation	Revers-ing
Timing belt conveyor (single-line)								
ZRF-P 2040	40/80/120/160	650-6,000	250	60	approx. 102	•	•	
Timing belt conveyor (double-line)								
ZRF-P 2045	255-655	600-6,000	200	30	approx. 76	•	•	•
ZRF-P 2010	260-1,000	500-10,000	250	60	approx. 89	•	•	•

* Usual load limits that may be exceeded based on the configuration and influencing factors.
Influencing factors: width, timing belt material, load distribution, operational mode and environmental conditions.

Permissible load (using 2010 systems as an example)

The diagram shows double-line conveyor systems as a function of load and speed and compares the ZRF-P 2010 timing belt conveyor with the SRF-P 2010 accumulating roller chain conveyor.



SRF-P 2010 is preferred for buffer lines with a high load and accumulation of up to 15 m/min

ZRF-P 2010 is preferred for the rapid transfer of single pallets with high acceleration

Total load m [kg] per conveying path, per drive in continuous operation (accumulated operation $m_{accumulated} = 2 \times m_{continuous}$)

Application options

Timing belt conveyors are ideal for the cycled transport of piece goods where high speeds and accelerations are required. Chain conveyors are usually used for heavy loads with moderate speeds. The timing belt return inside the profile allows for a compact design and reduces the risk of accidents to a minimum.

The **ZRF-P 2045** and **ZRF-P 2010** timing belt conveyors are used as the basic conveyors in the Versamove pallet system.

The **ZRF-P 2040** is usually used as a single-line solution. Cams or threaded sleeves can be welded, or preferably screwed, onto the timing belt to hold the product. For screwed-on cams, the AT timing belt is used due to its wider tooth shape.

Timing belts

Our range of different timing belt materials allows you to find the optimal grip for the workpieces in your specific application. They are made from polyurethane reinforced with high-strength steel cords as standard. The belts in the 2010 system have the T10 pitch and are up to 32 mm wide (others available on request). To ensure optimal transport, different surface coatings can be used.

A coating on the teeth side (PAZ = polyamide tooth-side) is recommended, especially for conveyor speeds above 30 m/min. Since standard timing belts with the PU base material on the teeth side tend to produce noise when passing over the aluminium timing belt pulley a PAZ coating, in addition to good lubrication, is a reliable solution to this problem.

The PAZ coating takes the form of a nylon fabric on the teeth side and is also available in an impregnated version to meet ESD requirements. This use of this nylon fabric in cleanroom applications is controversial because of the fine abrasion particles it produces. Many customers prefer the larger, visible particles produced by the PU base material. We can also provide a conductive base material on request for use with electronic parts and in explosive atmospheres.

Timing Belt Conveyor ZRF-P 2040



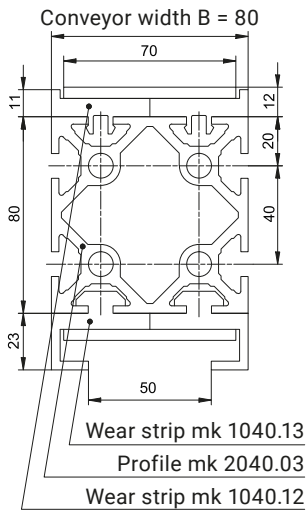
Precise. Fast. Flexible.

Especially as a single-line system, the ZRF-P 2040 timing belt conveyor is ideal for the cycled transport of piece goods where high speeds and accelerations are required.

Cams or threaded sleeves can be welded onto or preferably bolted onto the timing belt for product take-up. For screwed-on cams, the AT timing belt is used due to its wider tooth shape.

10 mm T-slots running along both sides let you easily mount the conveyors on existing systems or attach stands, side rails, initiators and other accessories.

Cross section*



* Example for conveyor width 80 mm

Benefits of the ZRF-P 2040

- Ideal as a single-line conveyor for either orientated or disordered transport of piece goods
- Also available as a double-line or multiple line conveyor
- High speed and acceleration
- Ideal for cycle operation
- Quieter operation than other conveyor types
- Low-maintenance
- Antistatic design optional
- Cams or threaded sleeves can be attached to hold the workpiece

Technical data

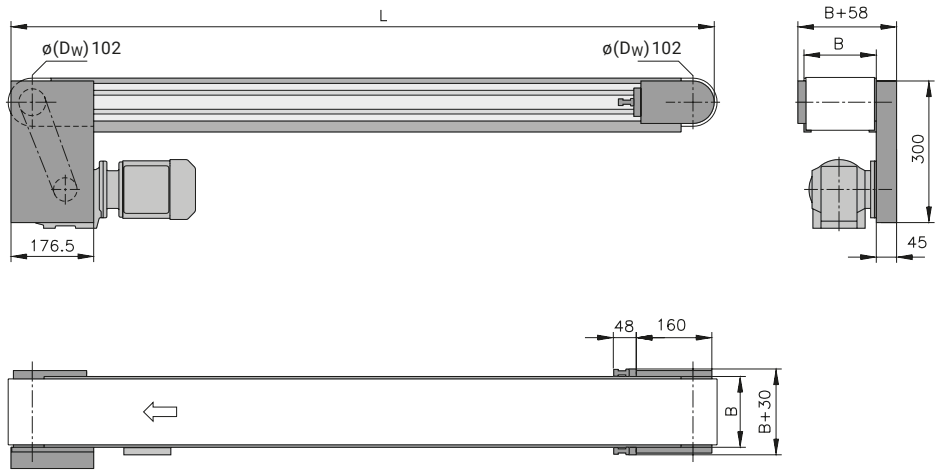
Conveyed product	piece goods, boxes
Conveyor length L	individual from 650-6,000 mm
Conveyor width B	40/80/120/160 mm
Total load*	up to 125 kg for B = 40 mm / up to 250 kg from B = 80 mm, higher on request
Speed	up to 60 m/min
Drive version	head drive AC → p. 118
Tail	tail 01 (ø 100 mm)
Timing belt	Polyurethane reinforced with high-strength steel cords → p. 135
Side rail	SF 2.1 (fixed), SF01 and SF02 (adjustable) → p. 240
Stand	single stand, H-design stand → p. 224
Operational mode	continuous operation, cycle operation, accumulated operation

* Usual load limits that may be exceeded based on the configuration and influencing factors.
Influencing factors: width, timing belt material, load distribution, operational mode and environmental conditions.

AC – Indirect head drive

B20.40.301

The timing belt pulley ensures excellent transmission of the motor power.
When using cams, the max. possible height must be requested.

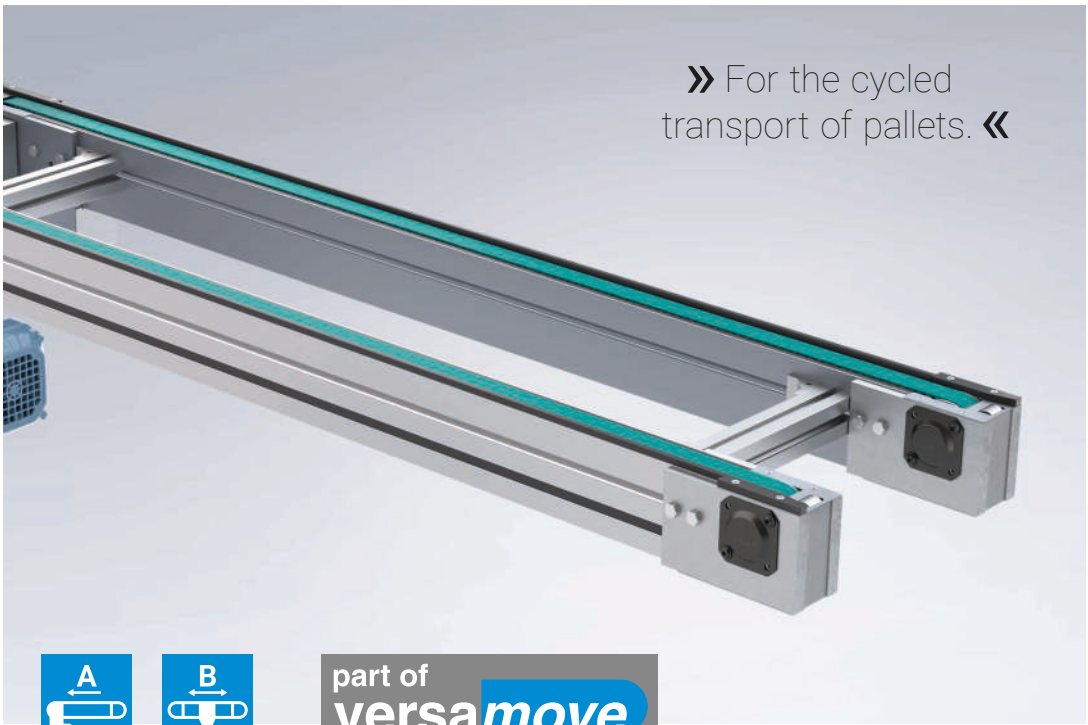


Technical data

Conveyor length L	individual from 650-6,000 mm	
Conveyor width B	40/80/120/160 mm, others on request	
Timing belt width	32/70/110/150 mm	
Timing belt type		→ p. 135
Drive location	discharge end left/right underneath	
Drive and speed	up to 60 m/min, higher on request	
Stand and side rail		→ p. 224
Total load	up to 125 kg for B = 40 mm/up to 250 kg for B = 80 mm or wider	higher on request
Distributed load	up to 50 kg/m for B = 40 mm/up to 100 kg/m for B = 80 mm or wider	

Notes

Timing Belt Conveyor ZRF-P 2045



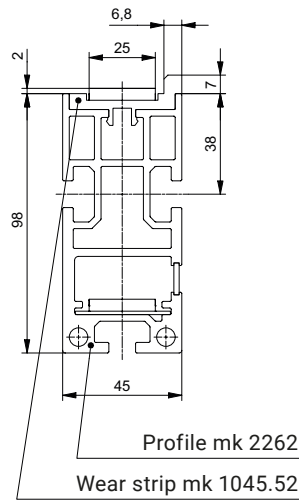
Versatile. Flexible. Modular.

The ZRF-P 2045 timing belt conveyor is part of the Versamove *standard* workpiece pallet system and is particularly suitable as a double-line system for transporting workpiece pallets and goods with a rigid structure at low loads, high speeds and high accelerations.

The positive connection between the drive pulley and timing belt ensures that the two conveyor lines are synchronised. The timing belt return inside the profile allows for a compact design and reduces the risk of accidents to a minimum.

10 mm T-slots running along both sides let you easily mount the conveyors on existing systems or attach stands, side rails, initiators and other accessories.

Cross section



Benefits of the ZRF-P 2045

- Double line or multiple line conveyor for transporting pallets and products with a rigid structure
- Conveyor for Versamove *standard* pallet system
- Ideal for cycle operation
- High speed and acceleration
- Quieter operation than other conveyor types
- Low-maintenance
- Antistatic design optional

Technical data

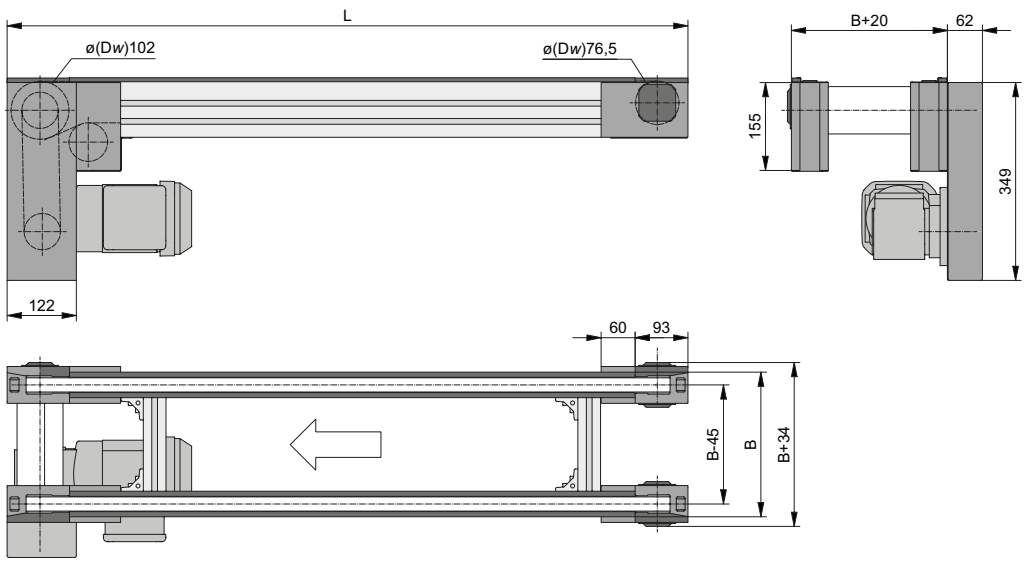
Conveyed product	pallets, boxes
Conveyor length L	individual from 600-6,000 mm
Conveyor width B	255-655 mm
Total load*	up to 200 kg, higher on request
Speed	up to 30 m/min depending on drive
Drive version	head drive AC, AF (direct), centre drive BC, BF (direct) → p. 122
Tail	tail 01 (ø 76,5 mm)
Timing belt	timing belt width 25 mm → p. 135
Side rail	wear strip with shoulder, optionally SF01 and SF02 (adjustable) → p. 240
Stand	S55.1 and S55.2, H-design stand → p. 224
Operational mode	continuous operation, cycle operation, accumulated operation, reverse operation

* Usual load limits that may be exceeded based on the configuration and influencing factors.
Influencing factors: width, timing belt material, load distribution, operational mode and environmental conditions.

AC – Indirect head drive

B20.45.303

The timing belt pulley ensures excellent transmission of the motor power. The recirculation of the timing belt in the profile ensures a compact design and safe operation.



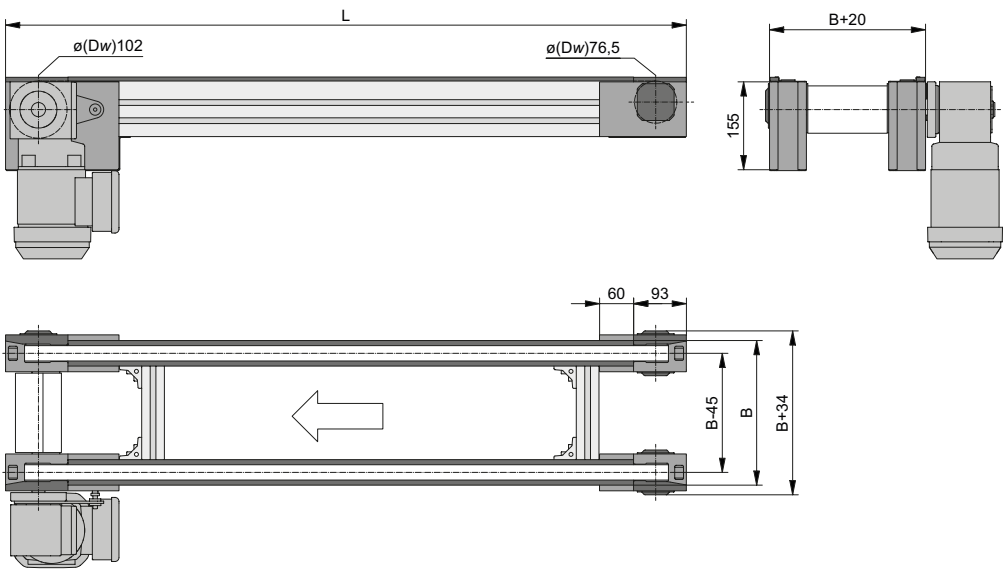
Technical data

Conveyor length L	600-6,000 mm
Conveyor width B	255-655 mm
Timing belt width	25 mm
Timing belt type	→ p. 135
Drive location	discharge end left/right underneath
Drive and speed	up to 30 m/min
Stand	→ p. 224
Total load	up to 200 kg, higher on request
Distributed load	up to 60 kg/m, higher on request

AF – Direct head drive

B20.45.301

Since the motor is fitted directly onto the drive shaft, the space requirements and maintenance effort for this drive version are reduced to a minimum. The recirculation of the timing belt in the profile ensures a compact design and safe operation.



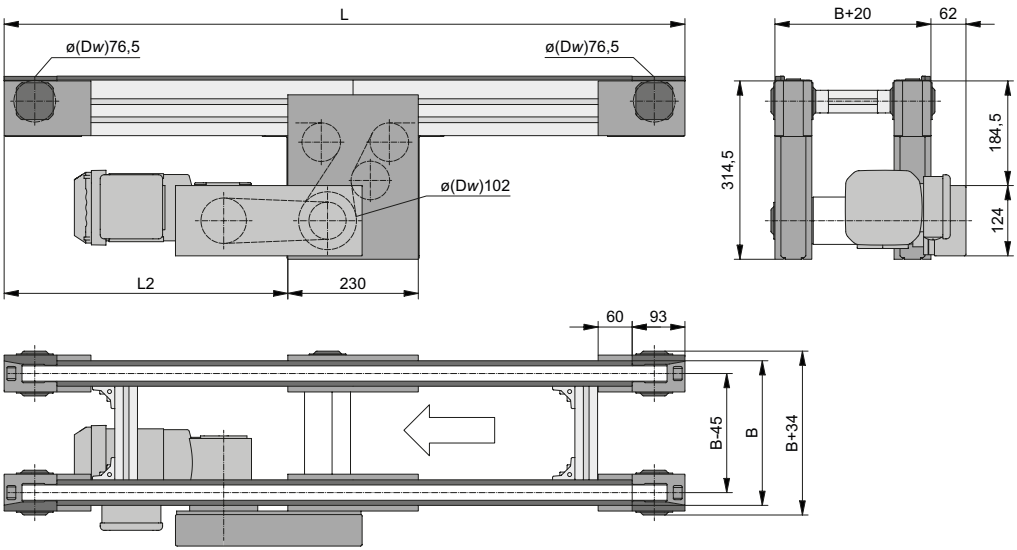
Technical data

Conveyor length L	600-6,000 mm
Conveyor width B	255-655 mm
Timing belt width	25 mm
Timing belt type	→ p. 135
Drive location	discharge end left/right
Drive and speed	up to 30 m/min
Stand	→ p. 224
Total load	up to 200 kg, higher on request
Distributed load	up to 60 kg/m, higher on request

BC – Indirect centre drive

B20.45.307

The compact conveyor frame design and the ability to freely select the drive position between the tensioning elements by specifying L2 make it easier to integrate the conveyor into existing systems.
The timing belt pulley combined with the snub rollers ensures excellent transmission of the motor power.
The recirculation of the timing belt in the profile ensures a compact design and safe operation.



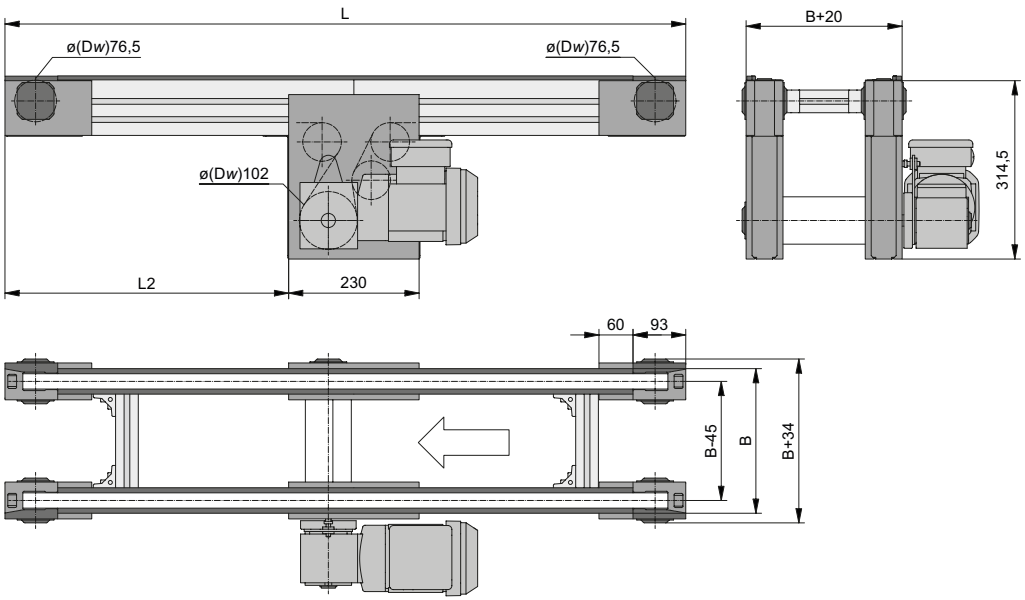
Technical data

Conveyor length L	700-6,000 mm
Conveyor width B	255-655 mm
Timing belt width	25 mm
Timing belt type	→ p. 135
Drive location	left/right underneath
Drive and speed	up to 30 m/min
Stand	→ p. 224
Total load	up to 200 kg, higher on request
Distributed load	up to 60 kg/m, higher on request

BF – Direct centre drive

B20.45.305

Since the motor is fitted directly onto the drive shaft, the space requirements and maintenance effort for this drive version are reduced to a minimum. The compact conveyor frame design and the ability to freely select the drive position between the tensioning elements by specifying L2 make it easier to integrate the conveyor into existing systems. The recirculation of the timing belt in the profile ensures a compact design and safe operation.

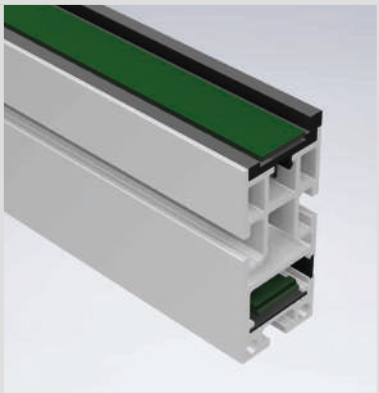


Technical data

Conveyor length L	700-6,000 mm
Conveyor width B	255-655 mm
Timing belt width	25 mm
Timing belt type	→ p. 135
Drive location	left/right underneath
Drive and speed	up to 30 m/min
Stand	→ p. 224
Total load	up to 200 kg, higher on request
Distributed load	up to 60 kg/m, higher on request

ZRF-P 2045 Wear Strips

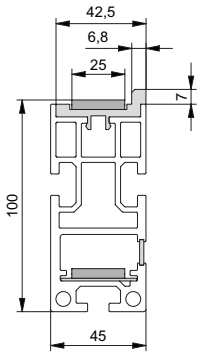
Wear and guide strips from mk ensure low friction.
The wear strips are made from PE-UHMW (PE-1000). Max. temperature 65° C.



Wear strip mk 1045.52, at the top, antistatic
21.52.2000AST

Wear strip mk 1045.57, below, antistatic
21.57.0001

Side closure strip
K10230-12



Notes

Timing Belt Conveyor ZRF-P 2010



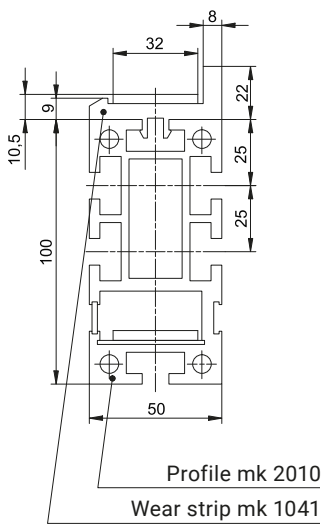
Precise. Fast. Robust.

The ZRF-P 2010 timing belt conveyor is part of the Versamove *plus* workpiece pallet system and is particularly suitable as a double-line system for transporting workpiece pallets and goods with a rigid structure at moderate loads, high speeds and high accelerations.

The positive connection between the drive pulley and timing belt ensures that the two conveyor lines are synchronised. The timing belt return inside the profile allows for a compact design and reduces the risk of accidents to a minimum.

10 mm T-slots running along both sides let you easily mount the conveyors on existing systems or attach stands, side rails, initiators and other accessories.

Cross section



Benefits of the ZRF-P 2010

- Double line and multiple line conveyor for transporting pallets and products with a rigid structure
- Conveyor for Versamove *plus* pallet systems
- Ideal for cycle operation
- High speed and acceleration
- Quieter operation than other conveyor types
- Low-maintenance
- Antistatic design optional

Technical data

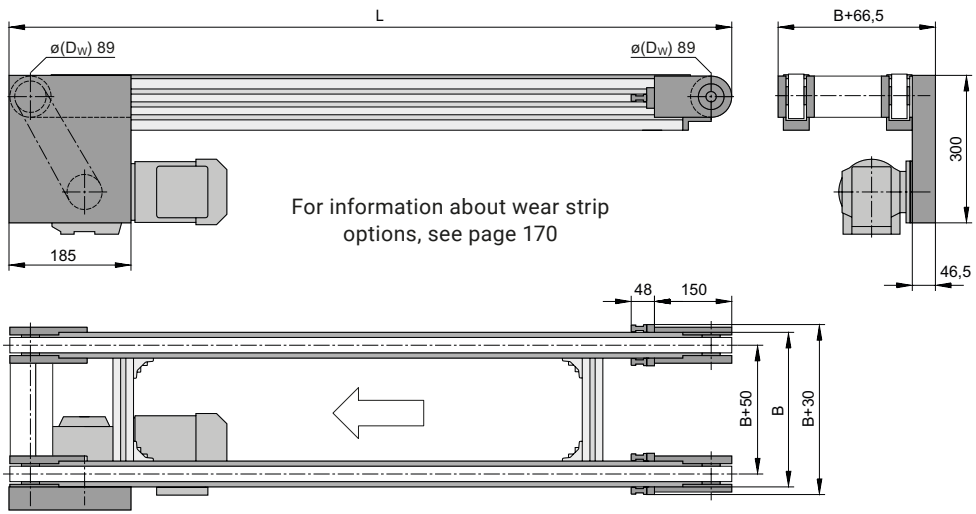
Conveyed product	pallets, boxes	
Conveyor length L	individual from 500-10,000 mm	
Conveyor width B	260-1,000 mm	
Total load*	up to 250 kg, higher on request	→ p. 114
Speed	up to 60 m/min depending on drive	
Drive version	head drive AC, AF (direct), centre drive BC, BF (direct)	→ p. 130
Tail	tail 01 (ø 89 mm)	
Timing belt	timing belt width 32 mm	→ p. 135
Side rail	SF 2.1 (fixed), SF01 and SF02 (adjustable)	→ p. 240
Stand	H-design stand	→ p. 224
Operational mode	continuous operation, cycle operation, accumulated operation, reverse operation	

* Usual load limits that may be exceeded based on the configuration and influencing factors.
Influencing factors: width, timing belt material, load distribution, operational mode and environmental conditions.

AC – Indirect head drive

B20.10.351

The timing belt pulley ensures excellent transmission of the motor power. Since the timing belt returns within the profile, welded-on cams cannot be used. The ZRF-P 2040 should be used for this purpose.



For information about wear strip options, see page 170

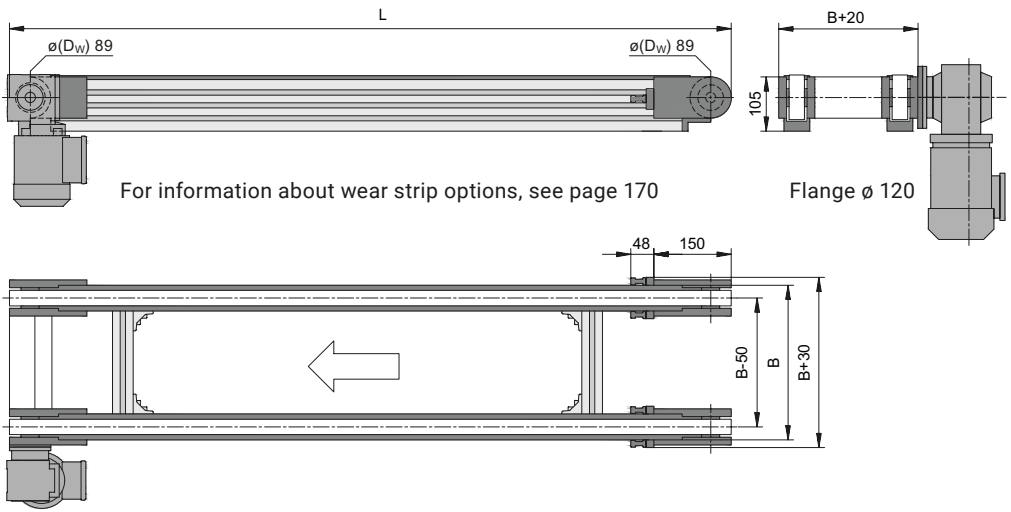
Technical data

Conveyor length L	individual from 500-10,000 mm
Conveyor width B	260-1,000 mm
Timing belt width	32 mm
Timing belt type	→ p. 135
Drive location	discharge end left/right, underneath
Drive and speed	up to 60 m/min, higher on request
Stand and side rail	→ p. 224
Total load	up to 250 kg, higher on request → p. 114
Distributed load	up to 100 kg/m, higher on request

AF – Direct head drive

B20.10.357

Since the motor is fitted directly onto the drive shaft, the space requirements and maintenance effort for this drive version are reduced to a minimum. Since the timing belt returns within the profile, welded-on cams cannot be used. The ZRF-P 2040 should be used for this purpose.



For information about wear strip options, see page 170

Flange ø 120

Technical data

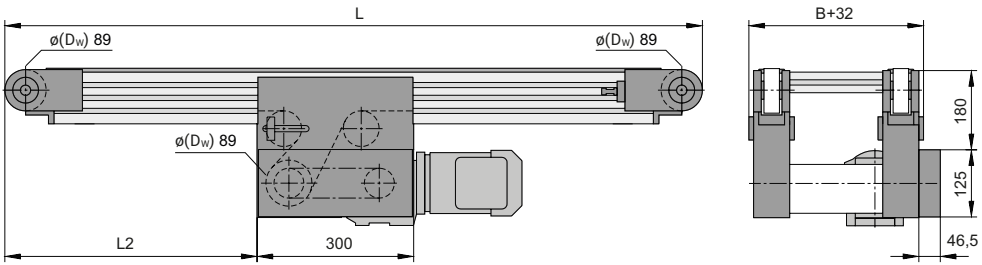
Conveyor length L	individual from 500-10,000 mm	
Conveyor width B	260-1,000 mm	
Timing belt width	32 mm	
Timing belt type		→ p. 135
Drive location	discharge end left/right	
Drive and speed	up to 60 m/min, higher on request	
Stand and side rail		→ p. 224
Total load	up to 250 kg, higher on request	→ p. 114
Distributed load	up to 100 kg/m, higher on request	

BC – Indirect centre drive

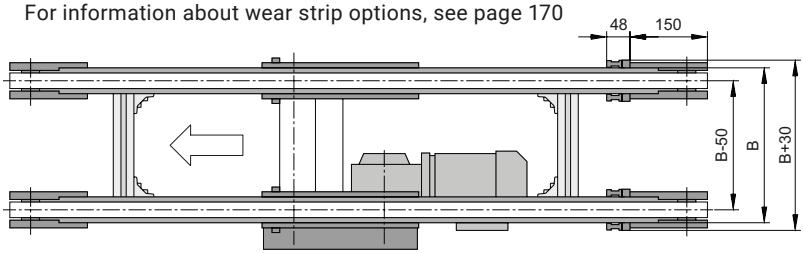
B20.10.356

The compact conveyor frame design and the ability to freely select the drive position over the entire length of the conveyor make it easier to integrate the conveyor into existing systems. The timing belt pulley combined with the snub rollers ensures excellent transmission of the motor power. Since the timing belt returns within the profile, welded-on cams cannot be used. The ZRF-P 2040 should be used for this purpose.

4



For information about wear strip options, see page 170



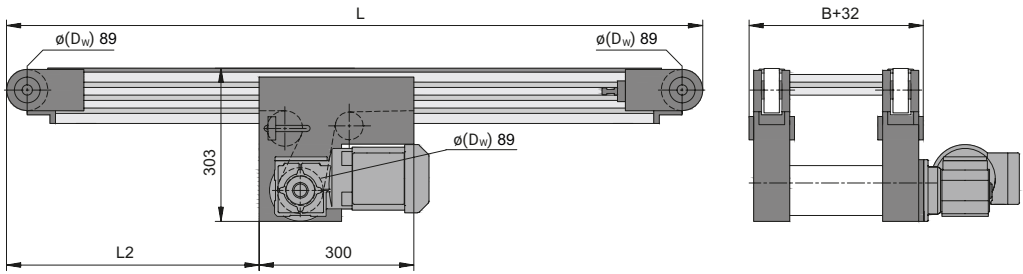
Technical data

Conveyor length L	individual from 700-10,000 mm
Conveyor width B	260-1,000 mm
Timing belt width	32 mm
Timing belt type	→ p. 135
Drive location	left/right underneath, motor orientation 180° and 270° not possible
Drive and speed	up to 60 m/min, higher on request
Stand and side rail	→ p. 224
Total load	up to 250 kg, higher on request → p. 114
Distributed load	up to 100 kg/m, higher on request

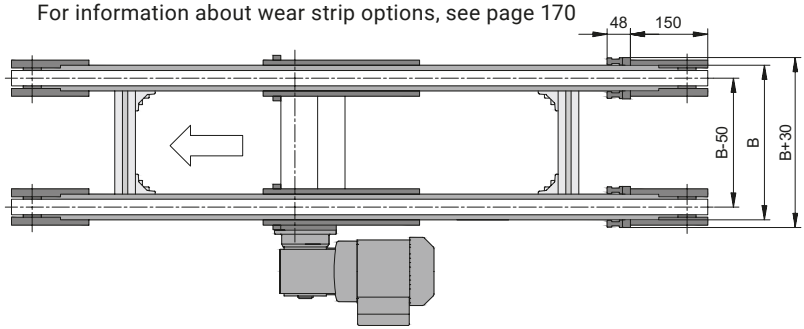
BF – Direct centre drive

B20.10.359

Since the motor is fitted directly onto the drive shaft, the space requirements and maintenance effort for this drive version are reduced to a minimum. The compact conveyor frame design and the ability to freely select the drive position anywhere along the entire length of the conveyor make it easier to integrate the conveyor into existing systems. The conveying direction is reversible. Since the timing belt returns within the profile, welded-on cams cannot be used. The ZRF-P 2040 should be used for this purpose.



For information about wear strip options, see page 170

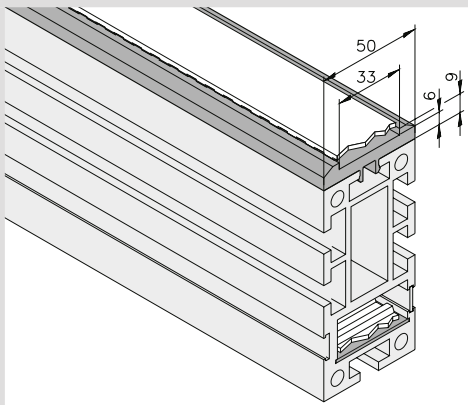
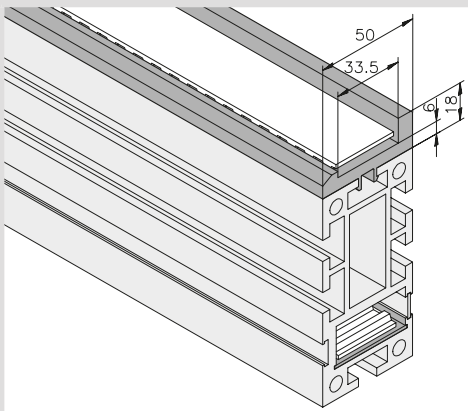


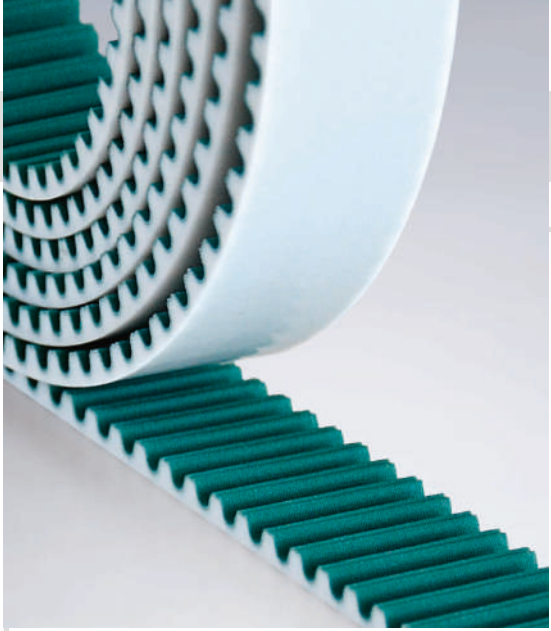
Technical data

Conveyor length L	individual from 700-10,000 mm
Conveyor width B	260-1,000 mm
Timing belt width	32 mm
Timing belt type	→ p. 135
Drive location	left/right underneath
Drive and speed	5; 6.3; 8; 9.5; 11.5; 13.5; 15.2; 19.3; 23; 26; 36.6; 45.7 and 57 m/min, others on request
Stand and side rail	→ p. 224
Total load	up to 250 kg, higher on request → p. 114
Distributed load	up to 100 kg/m, higher on request

ZRF-P 2010 Wear Strips

Wear and guide strips from mk ensure low friction.
The wear strips are made from PE-UHMW (PE-1000). Max. temperature 65° C.

Version without shoulder	Version with shoulder
	
Wear strip mk 1042, at the top antistatic and friction-optimised **22.42.2000LAST**	Wear strip mk 1110, at the top antistatic and friction-optimised **23.10.2000LAST**
Wear strip mk 2010, below antistatic **21.14.0001**	Wear strip mk 2010, below antistatic **21.14.0001**
Side closure strip **K10230-12**	Side closure strip **K10230-12**



Timing belts

The standard timing belts are made from polyurethane reinforced with high-strength steel cords. The belts have the T10 pitch and a width of 25-32 mm (others available on request). To ensure optimal transport, different surface coatings can be used.

For conveying speeds above 30 m/min as well as to reduce friction and noise, an additional coating on the teeth side (PAZ = polyamide tooth side) is recommended, which is already used as standard on the ZRF-P 2045 and ZRF-P 2010.

Timing belts in custom designs are available for special applications.

	ZRF-P 2040	ZRF-P 2045	ZRF-P 2010
Timing belt base material: polyurethane with coating ...			
Properties	**Polyurethan**	**Polyamid PAR/PAZ***	**Polyamid PAR/PAZ***
Resistance to moisture	+		
Resistance to oil and grease	+		
Abrasion resistance	+		
Wear resistance			
Adhesion property (inclined conveying)			
Anti-frictional property (accumulated operation)	-	+	+
Cut resistance	+		
Low noise emissions		+ (PAZ)	+ (PAZ)
Colour	diverse	green	green
Temperature resistance	-20 to +60°C	-20 to +60°C	-20 to +60°C
Hardness	90 Shore A		

*PAR = polyamide rear (carrying) side; PAZ = polyamide tooth side

Chapter 5 Chain Conveyors



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Chain Conveyor KTF-P 2010 164

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Accumulating Roller Chain Conveyor SRF-P 2012 172

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Additional Equipment for Chain Conveyors 180

Chain Conveyors – Overview and Selection

Technical data – overview

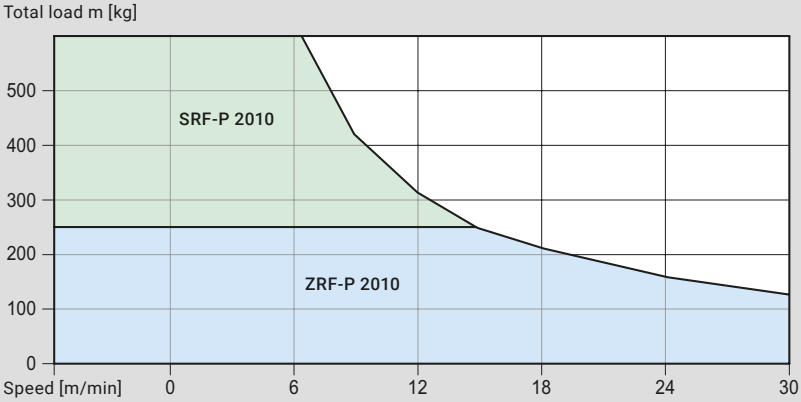
Conveyor system	Width [mm]	Length [mm]	Total load* as standard, up to [kg]	Speed up to [m/min]	ø of tails [mm]	Cycling	Accumu-lation	Revers-ing
Flat top chain conveyor								
FPF-P 2045	235-495	500-6,000	400	18	approx. 66	•	•	
Accumulating roller chain conveyor								
SRF-P 2045	255-655	600-6,000	500	30	approx. 66	•	•	
SRF-P 2010	260-2,000	500-10,000	750	30	approx. 90	•	•	
SRF-P 2012	200-2,000	1,000-10,000	1,000	30	approx. 90	•	•	
Chain conveyor								
KTF-P 2010	260-2,000	500-10,000	500	30	approx. 90	•	•	

* Usual load limits that may be exceeded based on the configuration and influencing factors.
Influencing factors: width, chain type, load distribution, operational mode and environmental conditions.

5

Permissible load (using 2010 systems as an example)

The diagram shows double-line conveyor systems as a function of load and speed and compares the ZRF-P 2010 timing belt conveyor with the SRF-P 2010 accumulating roller chain conveyor.



SRF-P 2010 is preferred for buffer lines with a high load and accumulation of up to 15 m/min

ZRF-P 2010 is preferred for the rapid transfer of single pallets with high acceleration

Total load m [kg] per conveying path, per drive in continuous operation (accumulated operation $m_{accumulated} = 2 \times m_{continuous}$)

Application options

Chain conveyors are ideal for the cycled transport of heavy loads at moderate speeds.

Timing belt conveyors are usually used for high speeds and accelerations.

Chain conveyors are used as the basic conveyors in the Versamove pallet system.

The **FPF-P 2045** flat top chain conveyor is particularly suitable for transporting pallets and products with a rigid structure. It is capable of accumulated operation and enables transfer around 90° and 180° curves.

The **SRF-P 2045**, **SRF-P 2010** and **SRF-P 2012** accumulating roller chain conveyors are ideal for the accumulated operation of pallets and products with a rigid structure – the right conveyor will depend on the load. The SRF-P 2012 is also available in a heavy-duty version with a capacity of up to 2,000 kg total load and line loads up to 500 kg/m.

The **KTF-P 2010** chain conveyor is primarily used as the basic element for constructing transfer lines. It is available as a single, double or multiple line system with a duplex roller chain for heavy loads and a generous support surface.

Chains

Various chain types in combination with our sturdy, solid wear strips ensure reliable, long-term functioning that is optimally suited to your application.

Accumulating roller chains with steel rollers are available for accumulated operation. When using steel rollers, note that plastic wear strips (PE or POM) must be attached to the contact surfaces on the pallets to be transported.

In contrast to timing belts, chains must always be well lubricated. They can used in temperatures up to 60° C or up to 120° C in a special version. Higher temperatures can be achieved on request. Low-maintenance chains are also available as an option.

Accumulating Roller Chain Conveyor SRF-P 2045



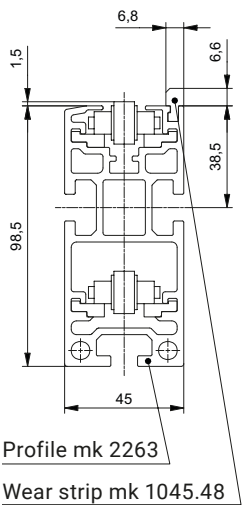
Versatile. Flexible. Modular.

The SRF-P 2045 accumulating roller chain conveyor is part of the Versamove *standard* workpiece pallet system and is particularly suitable as a double-line system for transporting workpiece pallets and goods with a rigid structure at moderate loads and moderate speeds.

The free-spinning conveyor rollers run smoothly, even during accumulated operation. They also reduce back-pressure forces to a minimum. The chain return inside the profile allows for a compact design and reduces the risk of accidents to a minimum.

10 mm T-slots running along both sides let you easily mount the conveyors on existing systems or attach stands, side rails, initiators and other accessories. As an option, the conveyor can be equipped with a tensioning device and permanent lubrication station.

Cross section



Benefits of the SRF-P 2045

- Double line or multiple line conveyor for transporting pallets and products with a rigid struc-ture
- Conveyor for Versamove *standard* pallet systems
- Ideal for durable use in accumulated operation, even at high operating temperatures
- Suitable for dirty and oily environments
- Antistatic design optional

Technical data

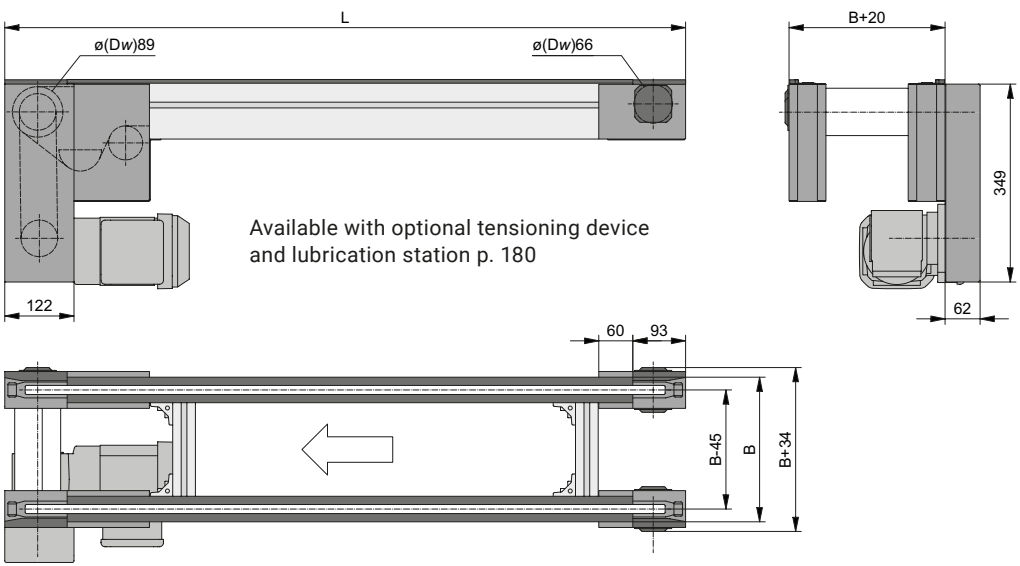
	**Conveyed product**	pallets, boxes
	**Conveyor length L**	individual from 600-6,000 mm
	**Conveyor width B**	255-655 mm
	**Total load***	up to 500 kg, higher on request
	**Speed**	up to 30 m/min
	**Drive version**	head drive AC, AF (direct), centre drive BC, BF (direct) → p. 142
	**Tail**	tail 01 (ø 66 mm)
	**Chain**	accumulating roller chain with accumulating rollers in series → p. 147
	**Side rail**	wear strip with shoulder, optionally SF01 and SF02 (adjustable) → p. 240
	**Stand**	S55.1 and S55.2, H-design stand → p. 224
	**Operational mode**	continuous operation, cycle operation, accumulated operation

* Usual load limits that may be exceeded based on the configuration and influencing factors.
Influencing factors: width, chain type, load distribution, operational mode and environmental conditions.

AC – Indirect head drive

B20.45.503

The drive chain on indirect drives can be used as a reduction gear. This makes it easy to design the conveyor with the appropriate speed, particularly in the low-speed range. The recirculation of the chain in the profile ensures a compact design and safe operation.



Available with optional tensioning device and lubrication station p. 180

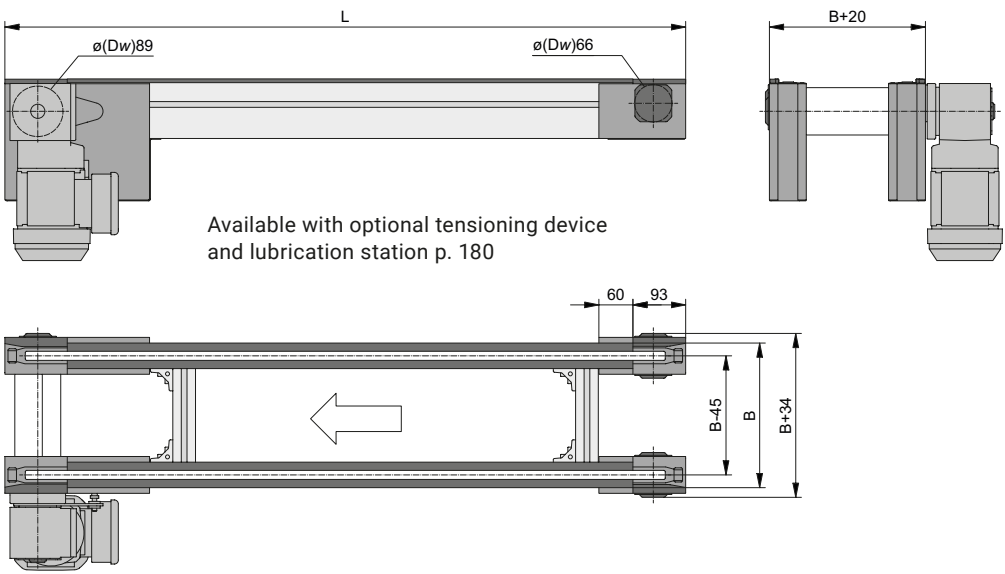
Technical data

Conveyor length L	600-6,000
Conveyor width B	255-655 mm
Chains	Pitch 1/2“, accumulating roller chain ø 16 mm → p. 147
Drive location	discharge end left/right, underneath
Drive and speed	up to 30 m/min
Stand	→ p. 224
Total load	up to 500 kg, higher on request
Distributed load	up to 80 kg/m, higher on request

AF – Direct head drive

B20.45.501

Since the motor is fitted directly onto the drive shaft, the space requirements and maintenance effort for this drive version are reduced to a minimum. The recirculation of the chain in the profile ensures a compact design and safe operation.



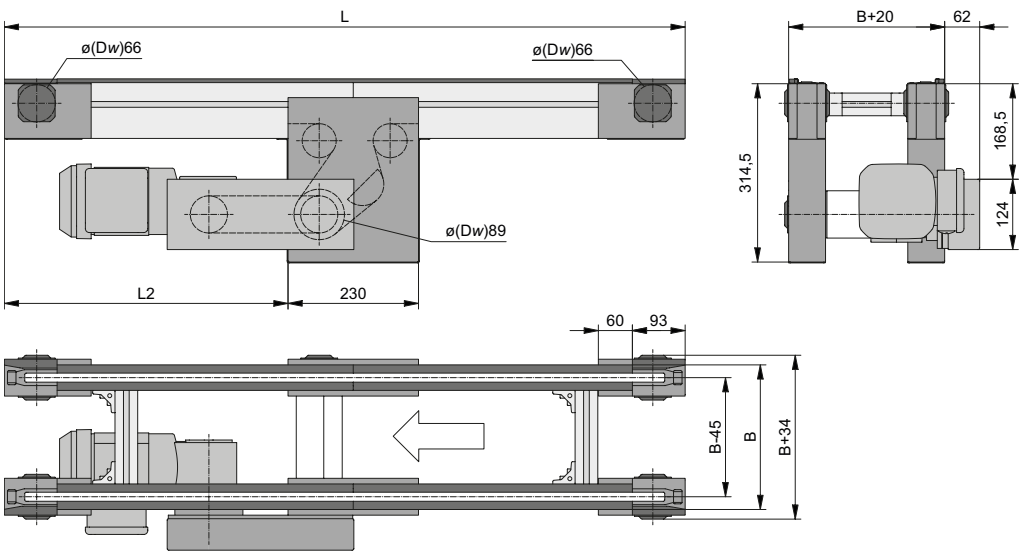
Technical data

Conveyor length L	600-6,000	
Conveyor width B	255-655 mm	
Chains	Pitch 1/2“, accumulating roller chain ø 16 mm	→ p. 147
Drive location	discharge end left/right	
Drive and speed	up to 30 m/min	
Stand		→ p. 224
Total load	up to 500 kg, higher on request	
Distributed load	up to 80 kg/m, higher on request	

BC – Indirect centre drive

B20.45.507

The compact conveyor frame design and the ability to freely select the drive position between the tensioning elements by specifying L2 make it easier to integrate the conveyor into existing systems. The drive sprocket wheel in conjunction with the constriction sprockets ensures excellent transmission of engine power. The recirculation of the chain in the profile ensures a compact design and safe operation.



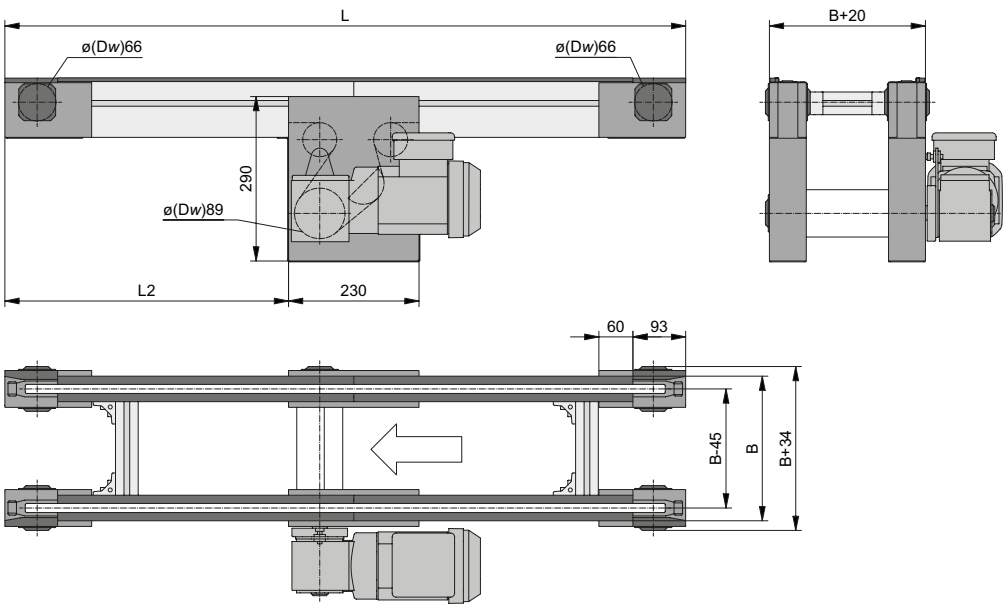
Technical data

Conveyor length L	600-6,000	
Conveyor width B	255-655 mm	
Chains	Pitch 1/2“, accumulating roller chain ø 16 mm	→ p. 147
Drive location	left/right underneath	
Drive and speed	up to 30 m/min	
Stand		→ p. 224
Total load	up to 500 kg, higher on request	
Distributed load	up to 80 kg/m, higher on request	

BF – Direct centre drive

B20.45.505

Since the motor is fitted directly onto the drive shaft, the space requirements and maintenance effort for this drive version are reduced to a minimum. The compact conveyor frame design and the ability to freely select the drive position between the tensioning elements by specifying L2 make it easier to integrate the conveyor into existing systems. The recirculation of the chain in the profile ensures a compact design and safe operation.

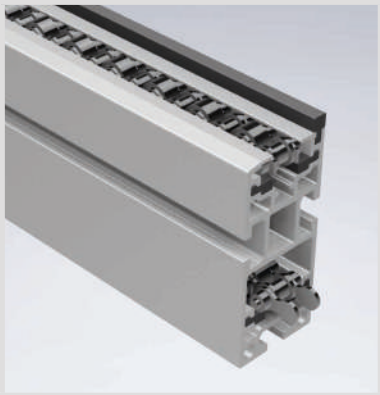


Technical data

Conveyor length L	600-6,000	
Conveyor width B	255-655 mm	
Chains	Pitch 1/2“, accumulating roller chain ø 16 mm	→ p. 147
Drive location	left/right, underneath	
Drive and speed	up to 30 m/min	
Stand		→ p. 224
Total load	up to 500 kg, higher on request	
Distributed load	up to 80 kg/m, higher on request	

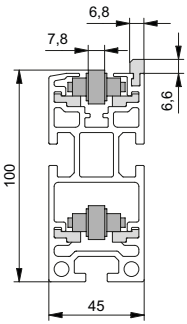
SRF-P 2045 Wear Strips

Wear and guide strips from mk ensure low friction.
The wear strips are made from PE-UHMW (PE-1000). Max. temperature 65° C.



Wear strip mk 1045.58AST,
at the top, outside,
antistatic
21.58.2000AST

Wear strip mk 1112,
at the top and inside,
antistatic
21.53.2000AST

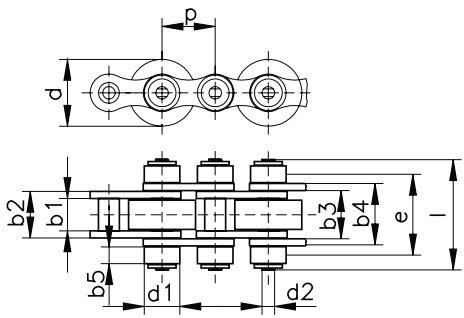


5



... for SRF-P 2045

Accumulating roller chain with
accumulating rollers in series



SRF-P 2045	
K11418	Chain, steel roller
K114180001	Connecting link

Dimensions in mm	
p	12,70 (1/2“)
b1	7,75
b2	11,15
b3	11,40
b4	14,70
d1	8,50
d2	4,45
l	27
b5	4
d	16

up to 60° C, special version up to 120° C

Flat Top Chain Conveyor FPF-P 2045



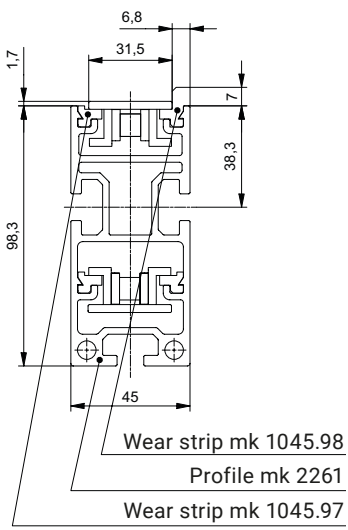
Versatile. Flexible. Modular.

The FPF-P 2045 flat top chain conveyor is part of the Versamove *standard* workpiece pallet system and is particularly suitable as a double-line system for transporting workpiece pallets and goods with a rigid structure at moderate loads and moderate speeds.

The conveyor is capable of accumulated operation and enables transfer around 90° and 180° curves. The chain return inside the profile allows for a compact design and reduces the risk of accidents to a minimum.

10 mm T-slots running along both sides let you easily mount the conveyors on existing systems or attach stands, side rails, initiators and other accessories.

Cross section



Benefits of the FPF-P 2045

- Double line or multiple line conveyor for transporting pallets and products with a rigid structure
- Conveyor for Versamove *standard* pallet systems
- 90° and 180° curves available
- Quieter operation than other conveyor types
- Low-maintenance
- Antistatic design optional

Technical data

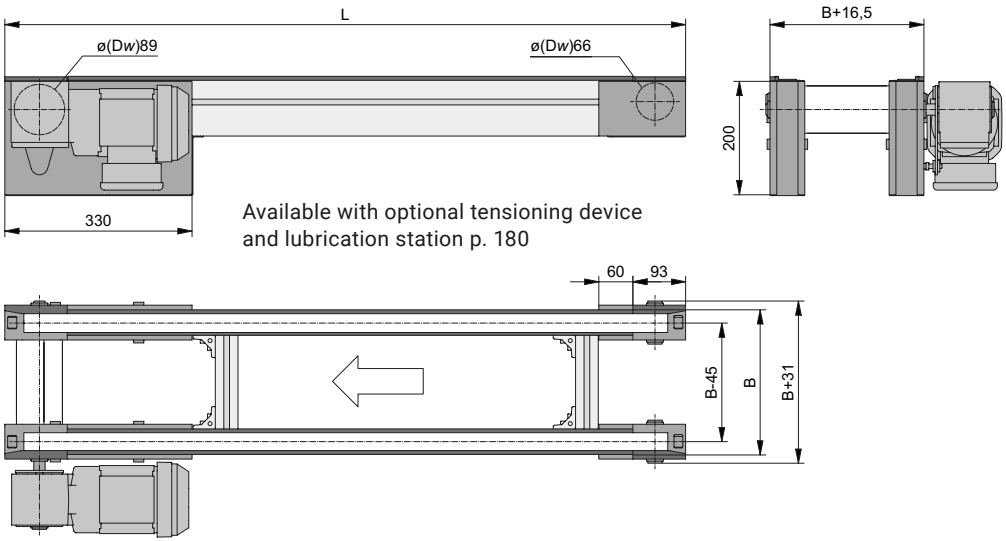
Conveyed product	pallets, boxes	
Conveyor length L	individual from 500-6,000 mm	
Conveyor width B	235-495 mm	
Total load*	up to 400 kg, higher on request	
Speed	up to 18 m/min	
Drive version	head drive AF (direct)	→ p. 150
Tail	tail 01 (ø 66 mm)	
Chain	steel roller chain with plastic plates	→ p. 154
Side rail	wear strip with shoulder, optionally SF01 and SF02 (adjustable)	→ p. 240
Stand	S55.1 and S55.2, H-design stand	→ p. 224
Operational mode	continuous operation, cycle operation, accumulated operation	

* Usual load limits that may be exceeded based on the configuration and influencing factors.
Influencing factors: width, chain type, load distribution, operational mode and environmental conditions.

AF – Direct head drive

B20.45.600

The drive pulley ensures excellent transmission of the motor power. The recirculation of the flat top chain in the profile ensures a compact design and safe operation.

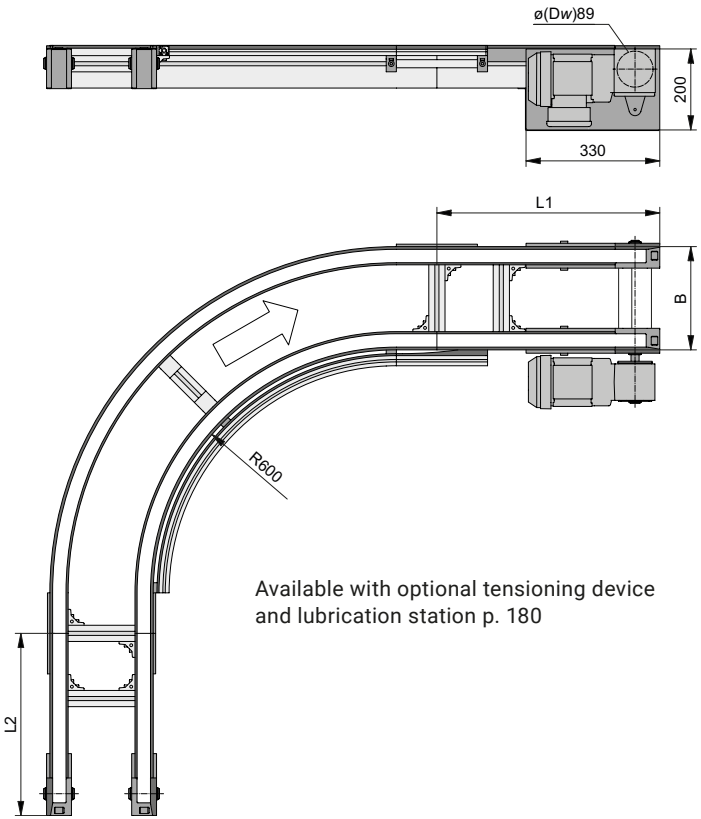


Technical data

Conveyor length L	individual from 600-6,000 mm	
Conveyor width B	255-495 mm	
Flat top chain	Pitch 1/2“, width 5/16“; transport width 31.8 mm	→ p. 154
Drive location	discharge end left/right, underneath	
Drive and speed	up to 7.6; 9.7; 12.0; 14.3; 18.0 m/min, higher on request	
Stand		→ p. 224
Total load	up to 400 kg, higher on request	
Distributed load	up to 70 kg/m, higher on request	

AF – Curved

The curve of the flat top chain conveyor is available for square pallets from 240-480 mm. The drive pulley ensures excellent transmission of the motor power. The recirculation of the flat top chain in the profile ensures a compact design and safe operation.

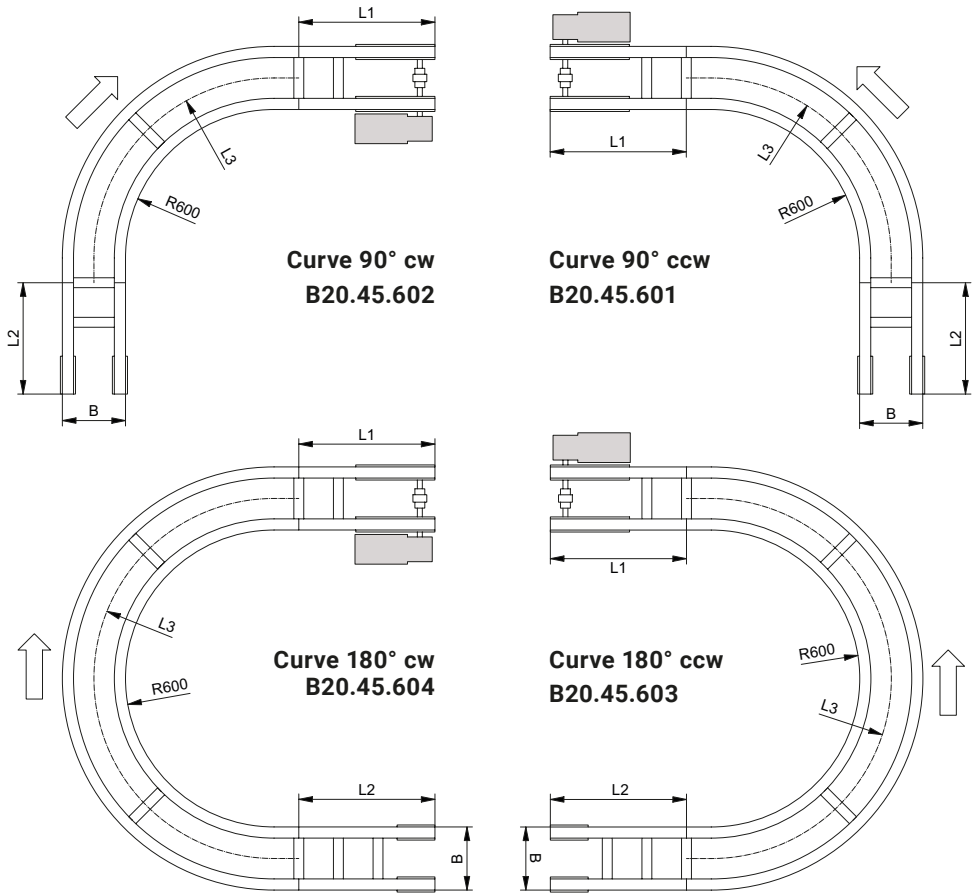


Available with optional tensioning device and lubrication station p. 180

Technical data

Conveyor length L	min. length of straight sections: infeed L2 450 mm, outfeed L1 550 mm (90°/180°), inner radius R: 600 mm	
Conveyor width B	255, 335, 415 and 495 mm	
Flat top chain	Pitch 1/2“, width 5/16“; transport width 31.8 mm	→ p. 154
Drive location	discharge end left/right, underneath	
Drive and speed	up to 7.6; 9.7; 12.0; 14.3; 18.0 m/min, others on request	
Stand		→ p. 224
Total load	up to 400 kg, higher on request	
Distributed load	up to 70 kg/m, higher on request	

FPF-P 2045 Curved



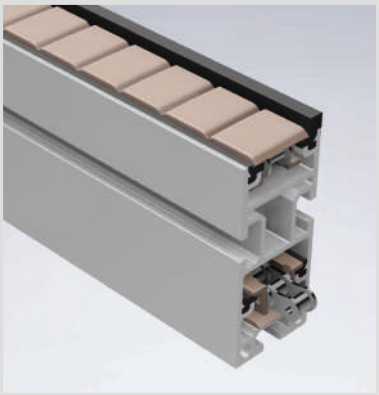
cw: clockwise/right in conveying direction | ccw: counter-clockwise/left in conveying direction

90° Curved				
Dimensions WT [mm]	**L1min [mm]**	**L2min [mm]**	**L3 [mm]**	**Max. (L1+L2+L3) [mm]**
240 x 240	550	450	1,150	6,000
320 x 320			1,250	
400 x 400			1,300	
480 x 480			1,350	

180° Curved				
Dimensions WT [mm]	**L1min [mm]**	**L2min [mm]**	**L3 [mm]**	**Max. (L1+L2+L3) [mm]**
240 x 240	550	450	2,300	6,000
320 x 320			2,450	
400 x 400			2,550	
480 x 480			2,700	

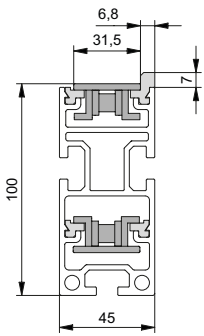
FPF-P 2045 Wear Strips

Wear and guide strips from mk ensure low friction.
The wear strips are made from PE-UHMW (PE-1000). Max. temperature of 65° C.



Wear strip mk 1045.98,
at the top, outside
21.98.2000

Wear strip mk 1045.97,
at the top inside and at the bottom
21.97.2000

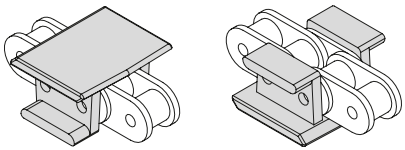


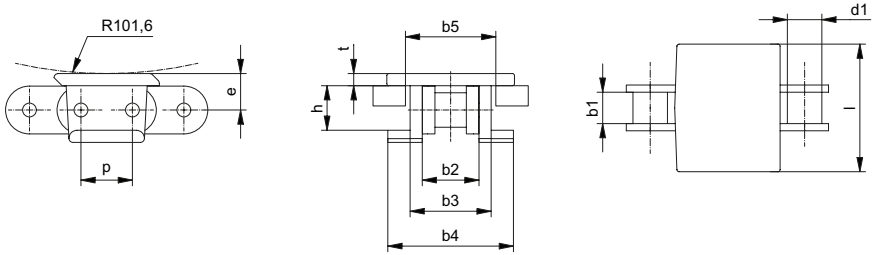
5



... for FPF-P 2045

Flat top chain consisting of
steel roller chain with plastic plates





FPF-P 2045		
K114490001	Flat top chain	Steel roller chain with plastic plates
K114491001	Connecting link	

Dimensions in mm	
p	12.70 (1/2“)
b1	7.95
b2	14
b3	20
b4	31
b5	22.3
d1	7.95
e	9
h	11
l	31.8
t	3

Notes

Accumulating Roller Chain Conveyor SRF-P 2010



Versatile. Robust. Powerful.

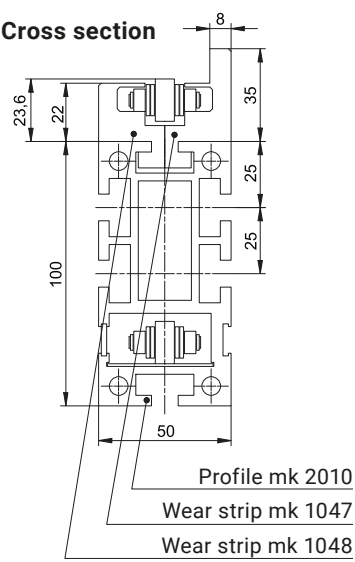
The SRF-P 2010 accumulating roller chain conveyor is part of the Versamove *plus* workpiece pallet system and is particularly suitable as a double-line system for transporting workpiece pallets and goods with a rigid structure at heavy loads and moderate speeds.

The free-spinning conveyor rollers run smoothly, even during accumulated operation. They also reduce back-pressure forces to a minimum. The chain return inside the profile allows for a compact design and reduces the risk of accidents to a minimum.

10 mm T-slots running along both sides let you easily mount the conveyors on existing systems or attach stands, side rails, initiators and other accessories.

As an option, the conveyor can be equipped with a tensioning device and permanent lubrication station.

Cross section



Benefits of the SRF-P 2010

- Double line or multiple line conveyor for transporting pallets and products with a rigid struc-ture
- Conveyor for Versamove *plus* pallet systems
- Ideal for durable use in accumulated operation, even at high operating temperatures
- Suitable for dirty and oily environments
- Antistatic design optional

Technical data

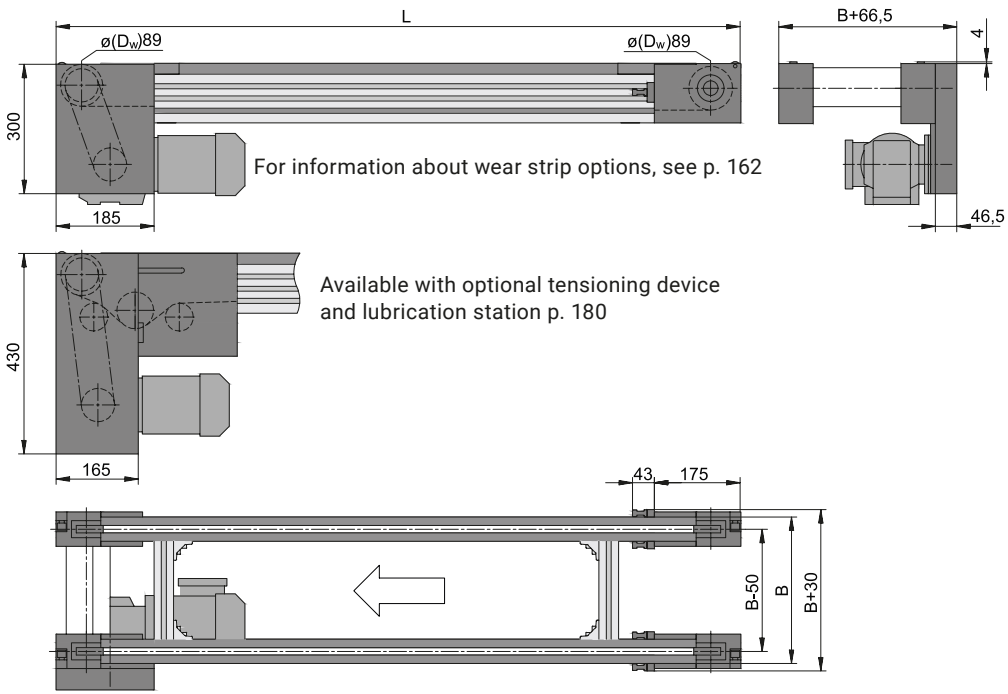
Conveyed product	pallets, boxes	
Conveyor length L	individual from 500-10,000 mm	
Conveyor width B	260-2,000 mm	
Total load*	up to 750 kg, higher on request	→ p. 138
Speed	up to 30 m/min depending on drive	
Drive version	head drive AC, AF (direct), centre drive BC, BF (direct)	→ p. 158
Tail	Tail 01 (ø 90 mm)	
Chain	accumulating roller chain with accumulating steel rollers in series	→ p. 163
Side rail	SF 2.1 (fixed), SF01 and SF02 (adjustable)	→ p. 240
Stand	H-design stand	→ p. 224
Operational mode	continuous operation, cycle operation, accumulated operation	

* Usual load limits that may be exceeded based on the configuration and influencing factors.
Influencing factors: width, chain type, load distribution, operational mode and environmental conditions.

AC – Indirect head drive

B20.10.566

The drive chain on indirect drives can be used as a reduction gear. This makes it easy to design the conveyor with the appropriate speed, particularly in the low-speed range. In addition, the drive chain can compensate for alignment errors and assembly tolerances to ensure that both lines run synchronously.



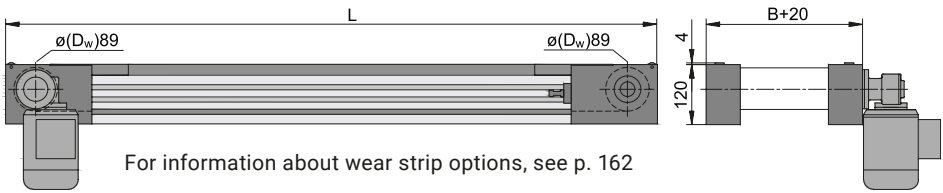
Technical data

Conveyor length L	individual from 730-10,000 mm	
Conveyor width B	260-2,000 mm	
Chains	1/2" accumulating roller chain with steel rollers	→ p. 163
Drive location	discharge end left/right, underneath	
Drive and speed	up to 30 m/min	
Stand and side rail		→ p. 224
Total load	up to 500 kg (750 kg without accumulated operation), higher on request	→ p. 138
Distributed load	up to 100 kg/m (in series) up to 150 kg/m (offset), higher on request	

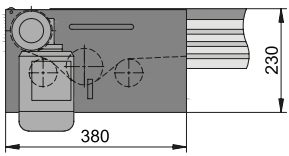
AF – Direct head drive

B20.10.567

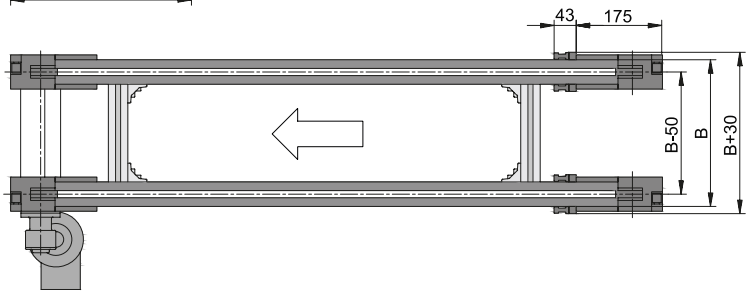
Since the motor is fitted directly onto the drive shaft, the space requirements and maintenance effort for this drive version are reduced to a minimum.



For information about wear strip options, see p. 162



Available with optional tensioning device and lubrication station p. 180



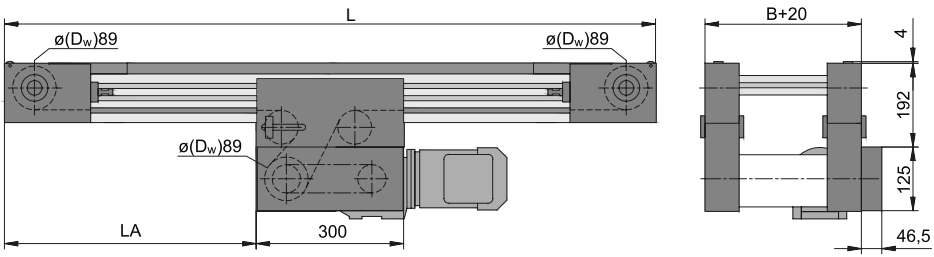
Technical data

Conveyor length L	individual from 730-10,000 mm	
Conveyor width B	260-2,000 mm	
Chains	1/2" accumulating roller chain with steel rollers	→ p. 163
Drive location	discharge end left/right	
Drive and speed	up to 30 m/min	
Stand and side rail		→ p. 224
Total load	up to 500 kg (750 kg without accumulated operation), higher on request	→ p. 138
Distributed load	up to 100 kg/m (in series) up to 150 kg/m (offset), higher on request	

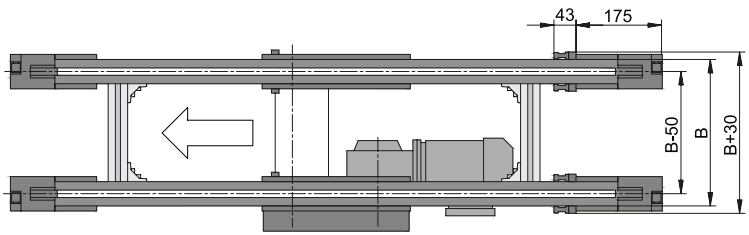
BC – Indirect centre drive

B20.10.571

The compact conveyor frame design and the ability to freely select the drive position over the entire length of the conveyor make it easier to integrate the conveyor into existing systems. The drive sprocket wheel ensures excellent transmission of the motor power.



For information about wear strip options, see p. 162



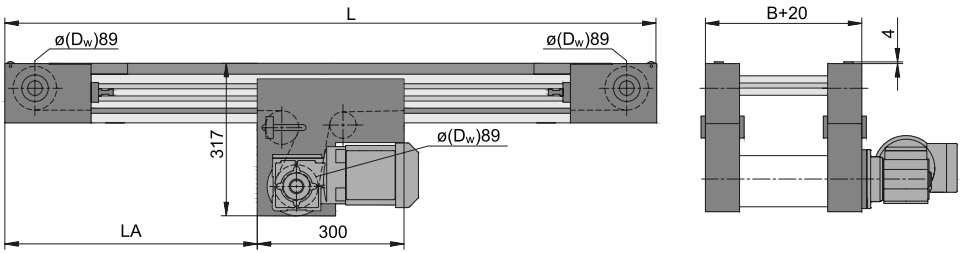
Technical data

Conveyor length L	individual from 730-10,000 mm
Conveyor width B	260-2,000 mm
Chains	1/2" accumulating roller chain with steel rollers → p. 163
Drive location	left/right underneath, motor orientation 180° and 270° not possible
Drive and speed	up to 30 m/min
Stand and side rail	→ p. 224
Total load	up to 500 kg (750 kg without accumulated operation), higher on request → p. 138
Distributed load	up to 100 kg/m (in series) up to 150 kg/m (offset), higher on request

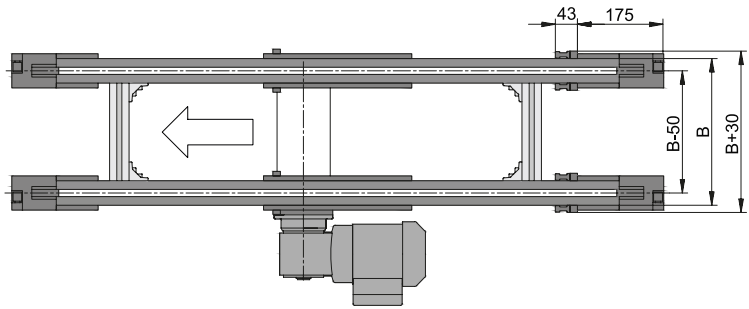
BF – Direct centre drive

B20.10.572

Since the motor is fitted directly onto the drive shaft, the space requirements and maintenance effort for this drive version are reduced to a minimum. The compact conveyor frame design and the ability to freely select the drive position anywhere along the entire length of the conveyor make it easier to integrate the conveyor into existing systems. The conveying direction is reversible. Operation with cleats is not possible with this version.



For information about wear strip options, see p. 162

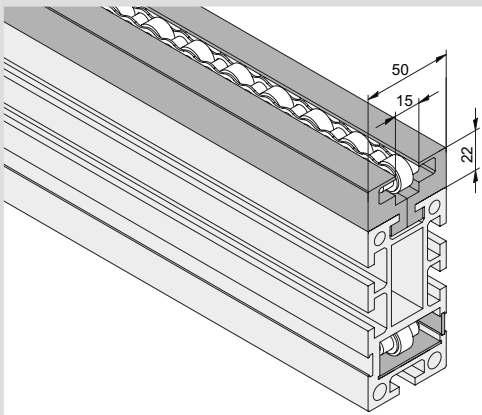
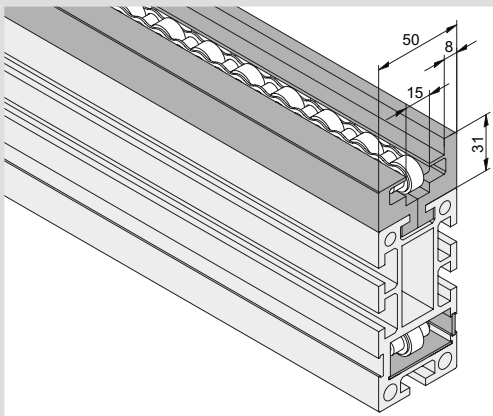


Technical data

Conveyor length L	individual from 730-10,000 mm	
Conveyor width B	260-2,000 mm	
Chains	1/2" accumulating roller chain with steel rollers	→ p. 163
Drive location	left/right underneath	
Drive and speed	5; 6.3; 8; 9.5; 11.5; 13.5; 15.2; 19.3; 23; 26; 36.6; 45.7 and 57 m/min, others on request	
Stand and side rail		→ p. 224
Total load	up to 500 kg (750 kg without accumulated operation), higher on request	→ p. 138
Distributed load	up to 100 kg/m (in series) up to 150 kg/m (offset), higher on request	

SRF-P 2010 Wear Strips

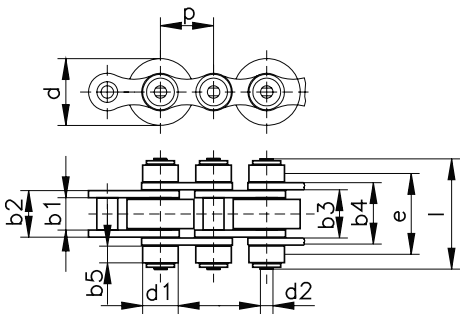
Wear and guide strips from mk ensure low friction.
The wear strips are made from PE-UHMW (PE-1000). Max. temperature of 65° C.

Version without shoulder	Version with shoulder
	
Wear strip mk 1048, at the top, inside, antistatic **22.48.2000AST**	Wear strip mk 1112, at the top, inside, antistatic **23.12.2000AST**
Wear strip mk 1048, at the top, outside, antistatic **22.48.2000AST**	Wear strip mk 1112, at the top, outside, antistatic **23.12.2000AST**
Wear strip mk 2010, below antistatic **21.14.0001**	Wear strip mk 2010, below antistatic **21.14.0001**
Side closure strip **K10230-12**	Side closure strip **K10230-12**



... for SRF-P 2010

Accumulating roller chain with accumulating rollers in series



SRF-P 2010		
K11418	Chain steel roll	
K11425*	Chain steel roll	with protective finger guard
K114180001	Locking link	

* only for head drives without tensioning station

Maße in mm	
p	12.70 (1/2“)
b1	7.75
b2	11.15
b3	11.40
b4	14.70
d1	8.50
g	•
d2	4.45
l1	•
l2	•
e	•
l	27
b5	4
d	16

up to 60 °C, Sonderausführung up to 120 °C

Chain Conveyor KTF-P 2010



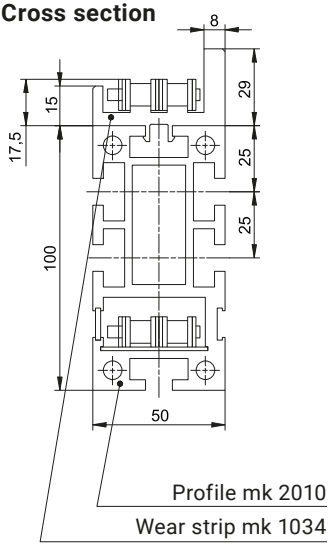
Versatile. Robust. Powerful.

The KTF-P 2010 chain conveyor is part of the Versamove *plus* workpiece pallet system and is particularly suitable as a double-line system for transporting workpiece pallets and goods with a rigid structure at heavy loads and moderate speeds. The chain return inside the profile allows for a compact design and reduces the risk of accidents to a minimum.

10 mm T-slots running along both sides let you easily mount the conveyors on existing systems or attach stands, side rails, initiators and other accessories.

As an option, the conveyor can be equipped with a tensioning device and permanent lubrication station.

Cross section



Benefits of the KTF-P 2010

- Double line or multiple line conveyor for transporting pallets and products with a rigid structure
- Conveyor for Versamove *plus* pallet systems
- Ideal for durable use in harsh environments, even at high operating temperatures
- Suitable for dirty and oily environments
- Antistatic design optional

Technical data

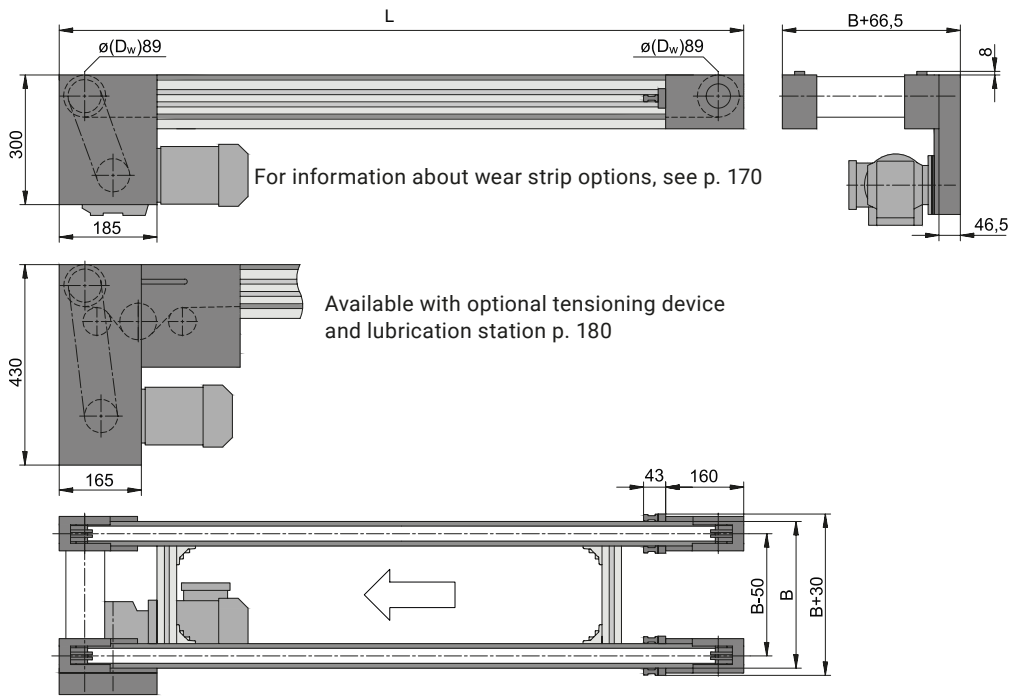
Conveyed product	pallets, boxes	
Conveyor length L	individual from 500-10,000 mm	
Conveyor width B	260-2,000 mm	
Total load*	up to 500 kg, higher on request	
Speed	up to 30 m/min depending on drive	
Drive version	head drive AC, AF (direct), centre drive BC, BF (direct)	→ p. 166
Tail	tail 01 (ø 90 mm)	
Chain	roller chain, double steel roller with straight nuts	→ p. 171
Side rail	SF 2.1 (fixed), SF01 and SF02 (adjustable)	→ p. 240
Stand	H-design stand	→ p. 224
Operational mode	continuous operation, cycle operation, accumulated operation	

* Usual load limits that may be exceeded based on the configuration and influencing factors.
Influencing factors: width, chain type, load distribution, operational mode and environmental conditions.

AC – Indirect head drive

B20.10.466

The drive chain on indirect drives can be used as a reduction gear. This makes it easy to design the conveyor with the appropriate speed, particularly in the low-speed range. In addition, the drive chain can compensate for alignment errors and assembly tolerances to ensure that both lines run synchronously. Operation with cleats is not possible with this version.



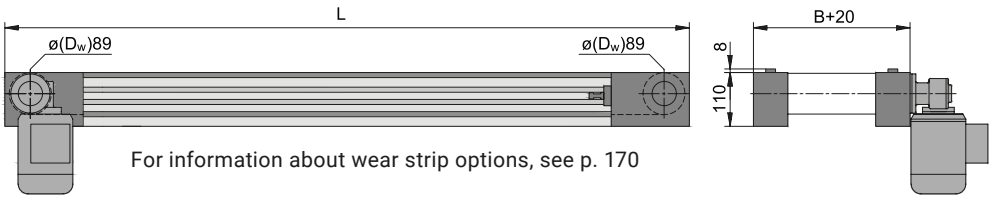
Technical data

Conveyor length L	individual from 500-10,000 mm
Conveyor width B	260-2,000 mm
Chains	1/2" duplex → p. 171
Drive location	discharge end left/right, underneath
Drive and speed	up to 30 m/min
Stand and side rail	→ p. 224
Total load	up to 500 kg, higher on request
Distributed load	up to 150 kg/m (with duplex chain), higher on request

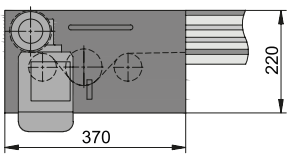
AF – Direct head drive

B20.10.467

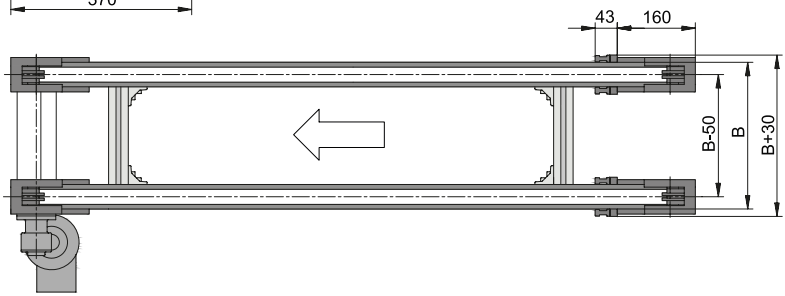
Since the motor is fitted directly onto the drive shaft, the space requirements and maintenance effort for this drive version are reduced to a minimum. Operation with cleats is not possible with this version.



For information about wear strip options, see p. 170



Available with optional tensioning device and lubrication station p. 180



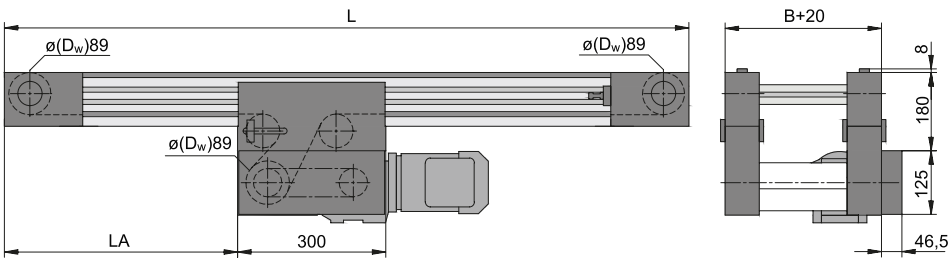
Technical data

Conveyor length L	individual from 500-10,000 mm
Conveyor width B	260-2,000 mm
Chains	1/2" duplex → p. 171
Drive location	discharge end left/right, underneath
Drive and speed	up to 30 m/min
Stand and side rail	→ p. 224
Total load	up to 500 kg, higher on request
Distributed load	up to 150 kg/m (with duplex chain), higher on request

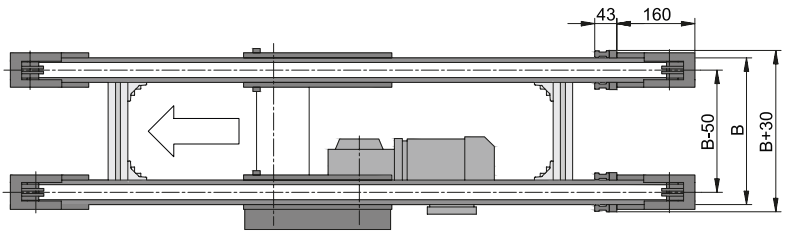
BC – Indirect centre drive

B20.10.471

The compact conveyor frame design and the ability to freely select the drive position over the entire length of the conveyor make it easier to integrate the conveyor into existing systems. The drive sprocket wheel ensures excellent transmission of the motor power. Operation with cleats is not possible with this version.



For information about wear strip options, see p. 170



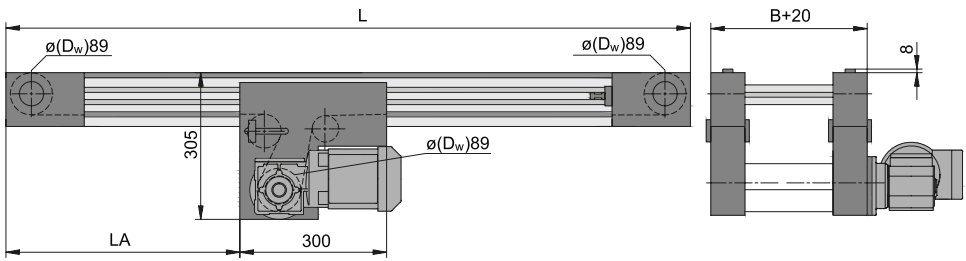
Technical data

Conveyor length L	individual from 700-10,000 mm
Conveyor width B	260-2,000 mm
Chains	1/2" duplex → p. 171
Drive location	left/right underneath, 180° and 270° motor orientations not possible
Drive and speed	up to 30 m/min
Stand and side rail	→ p. 224
Total load	up to 500 kg, higher on request
Distributed load	up to 150 kg/m (with duplex chain), higher on request

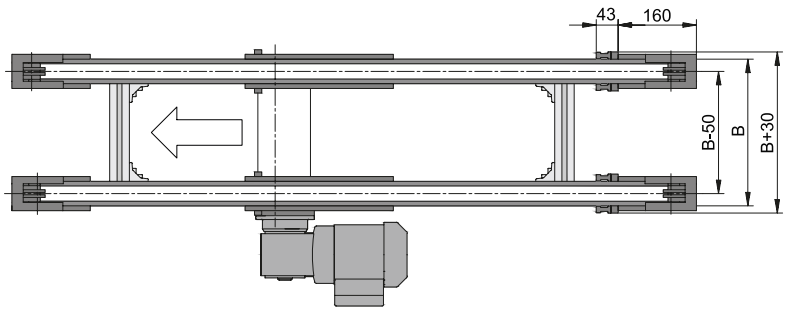
BF – Direct centre drive

B20.10.472

Since the motor is fitted directly onto the drive shaft, the space requirements and maintenance effort for this drive version are reduced to a minimum. The compact conveyor frame design and the ability to freely select the drive position anywhere along the entire length of the conveyor make it easier to integrate the conveyor into existing systems. The conveying direction is reversible. Operation with cleats is not possible with this version.



For information about wear strip options, see p. 170

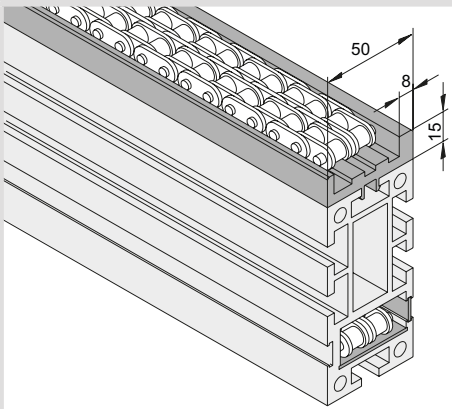
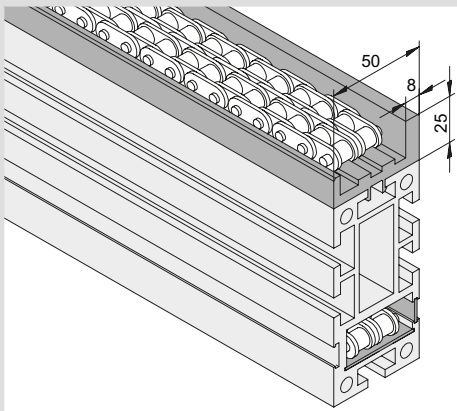


Technical data

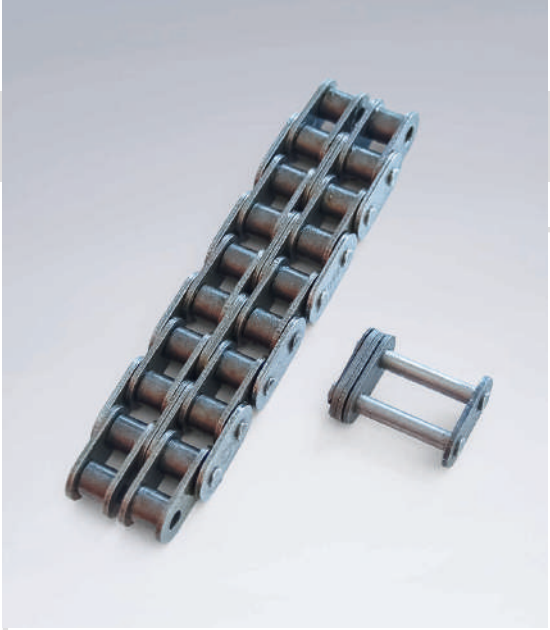
Conveyor length L	individual from 700-10,000 mm
Conveyor width B	260-2,000 mm
Chains	1/2“ duplex → p. 171
Drive location	left/right underneath
Drive and speed	5; 6.3; 8; 9.5; 11.5; 13.5; 15.2; 19.3; 23; 26; 36.6; 45.7 and 57 m/min, others on request
Stand and side rail	→ p. 224
Total load	up to 500 kg, higher on request
Distributed load	up to 150 kg/m (with duplex chain), higher on request

KTF-P 2010 Wear Strips

Wear and guide strips from mk ensure low friction.
The wear strips are made from PE-UHMW (PE-1000). Max. temperature of 65° C.

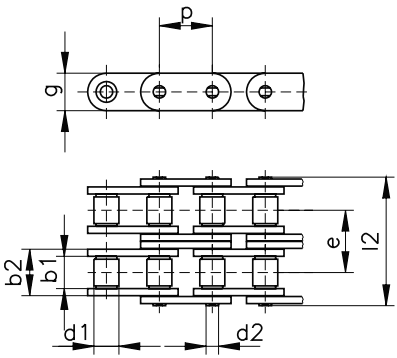
Version without shoulder	Version with shoulder
	
Wear strip mk 1033, at the top, antistatic **22.33.2000AST*** Wear strip mk 2010, below, antistatic **21.14.0001** Side closure strip **K10230-12**	Wear strip mk 1111, at the top, antistatic **23.11.2000AST** Wear strip mk 2010, below, antistatic **21.14.0001** Side closure strip **K10230-12**

* The non-antistatic version may still be delivered until the changeover is complete.
Therefore, when ordering, explicitly request the antistatic design.



... for KTF-P 2010

Roller chain, double with straight nuts



KTF-P 2010	
K11447	Chain
K114470001	Locking link

Dimensions in mm	
p	12.70 (1/2" x 5/16")
b1	7.75
b2	11.30
b3	•
b4	•
d1	8.51
g	11.80
d2	4.45
l1	•
l2	31
e	13.92
l	•
b5	•
d	•

up to 60° C, special version up to 120° C

Accumulating Roller Chain Conveyor SRF-P 2012



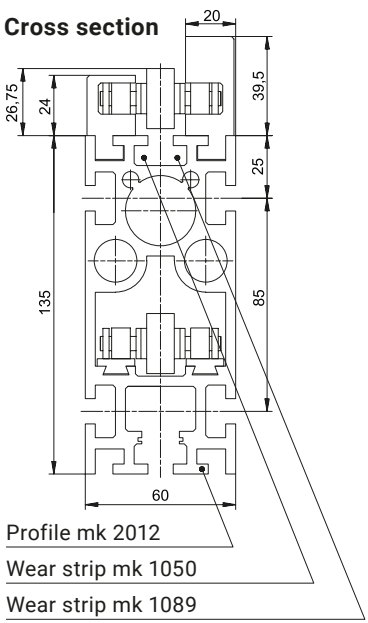
Powerful. Robust. Low maintenance.

The SRF-P 2012 accumulating roller chain conveyor is part of the Versamove *ultra* workpiece pallet system and is particularly suitable as a double-line system for transporting workpiece pallets and goods with a rigid structure at extremely heavy loads and moderate speeds.

The free-spinning conveyor rollers run smoothly, even during accumulated operation. They also reduce back-pressure forces to a minimum. The chain return inside the profile allows for a compact design and reduces the risk of accidents to a minimum.

10 mm T-slots running along both sides let you easily mount the conveyors on existing systems or attach stands, side rails, initiators and other accessories. As an option, the conveyor can be equipped with a tensioning device and permanent lubrication station.

Cross section



Benefits of the SRF-P 2012

- Double line or multiple line conveyor for transporting pallets and products with a rigid structure
- Ideal for durable use in accumulated operation, even at high operating temperatures
- Suitable for dirty and oily environments

SRF-P 2012 Heavy Duty – up to 2 tonnes

By gradually adapting individual components, the SRF-P 2012 can be customised for total loads of up to 2,000 kg and line loads of up to 500 kg/m.

Please contact us for technical configuration.

Technical data

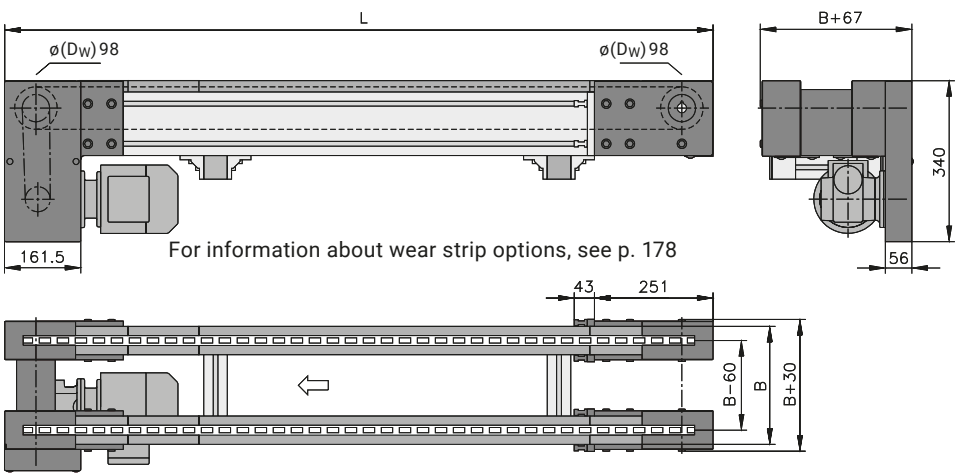
Conveyed product	pallets, boxes	
Conveyor length L	individual from 1,000-10,000 mm	
Conveyor width B	200-2,000 mm	
Total load*	up to 1,000 kg, higher on request	
Speed	up to 30 m/min depending on drive	
Drive version	head drive AC, AS, centre drive BC, BF (direct)	→ p. 174
Tail	tail 01 (ø 90 mm)	
Chain	accumulating roller chain with accumulating steel rollers in series	→ p. 179
Side rail	via wear strip	→ p. 240
Stand	H-design stand	→ p. 224
Operational mode	continuous operation, cycle operation, accumulated operation	

* Usual load limits that may be exceeded based on the configuration and influencing factors.
Influencing factors: width, chain type, load distribution, operational mode and environmental conditions.

AC – Indirect head drive

B20.12.007

The drive chain on indirect drives can be used as a reduction gear. This makes it easy to design the conveyor with the appropriate speed, particularly in the low-speed range. In addition, the drive chain can compensate for alignment errors and assembly tolerances to ensure that both lines run synchronously.



For information about wear strip options, see p. 178

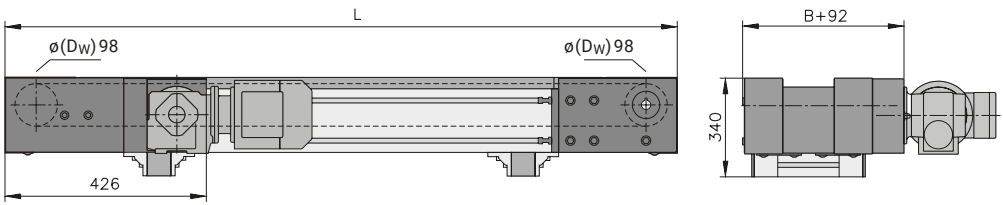
Technical data

Conveyor length L	individual from 1,000-10,000 mm (note the chain pitch)
Conveyor width B	200-2,000 mm
Chains	3/4" accumulating roller chain with plastic or steel rollers → p. 179
Drive location	discharge end left/right, underneath
Drive and speed	up to 30 m/min
Stand and side rail	→ p. 224
Total load	up to 1,000 kg, higher on request
Distributed load	up to 150 kg/m, higher on request

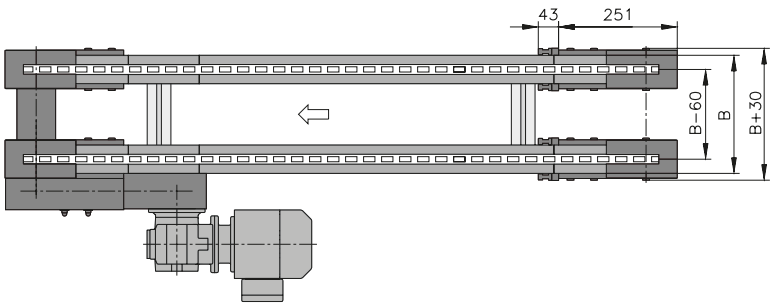
AS – Indirect head drive, laterally on the outside

B20.12.009

The drive positioned laterally on the outside allows the total height of the conveyor to be restricted to a minimum.



For information about wear strip options, see p. 178



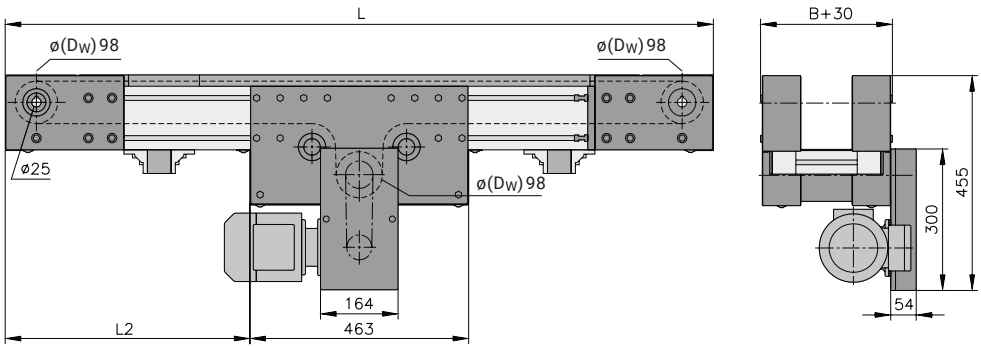
Technical data

Conveyor length L	individual from 1,000-10,000 mm (note the chain pitch)	
Conveyor width B	200-2,000 mm	
Chains	3/4" accumulating roller chain with plastic or steel rollers	→ p. 179
Drive location	discharge end left/right	
Drive and speed	up to 30 m/min	
Stand and side rail		→ p. 224
Total load	up to 1,000 kg, higher on request	
Distributed load	up to 150 kg/m, higher on request	

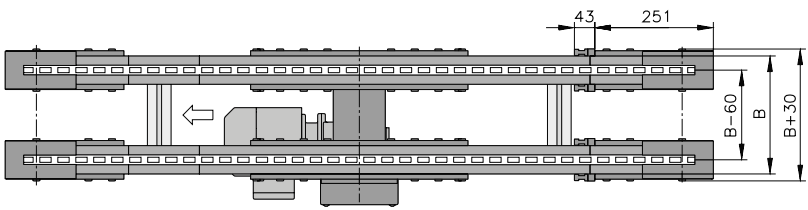
BC – Indirect centre drive

B20.12.010

The compact conveyor frame design and the ability to freely select the drive position over the entire length of the conveyor make it easier to integrate the conveyor into existing systems.



For information about wear strip options, see p. 178



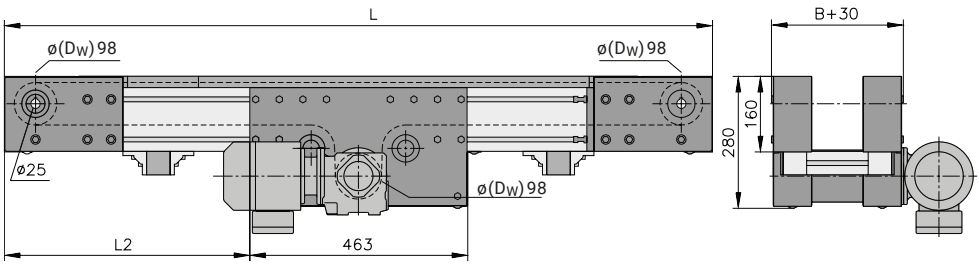
Technical data

Conveyor length L	individual from 1,000-10,000 mm (note the chain pitch)
Conveyor width B	200-2,000 mm
Chains	3/4" accumulating roller chain with plastic or steel rollers → p. 179
Drive location	left/right underneath
Drive and speed	up to 30 m/min
Stand and side rail	→ p. 224
Total load	up to 1,000 kg, higher on request
Distributed load	up to 150 kg/m, higher on request

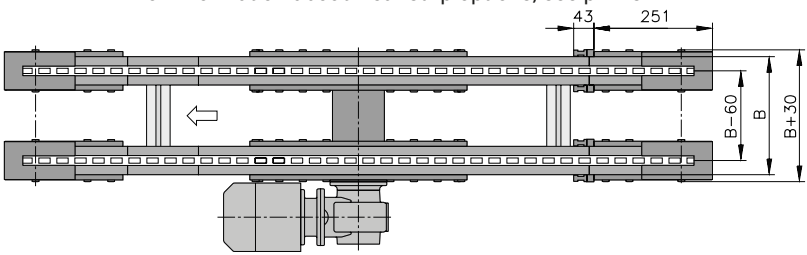
BF – Direct centre drive

B20.12.011

Since the motor is fitted directly onto the drive shaft, the space requirements and maintenance effort for this drive version are reduced to a minimum. The compact conveyor frame design and the ability to freely select the drive position over the entire length of the conveyor make it easier to integrate the conveyor into existing systems.



For information about wear strip options, see p. 178

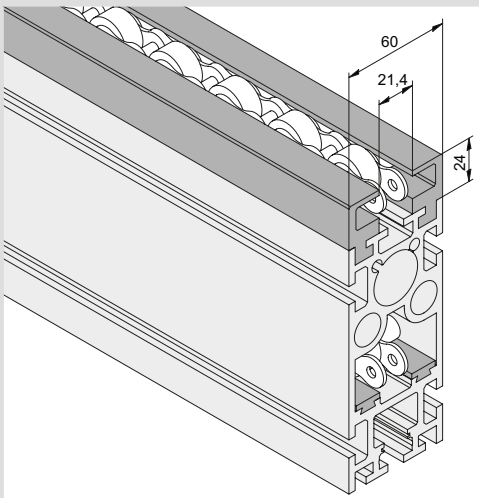
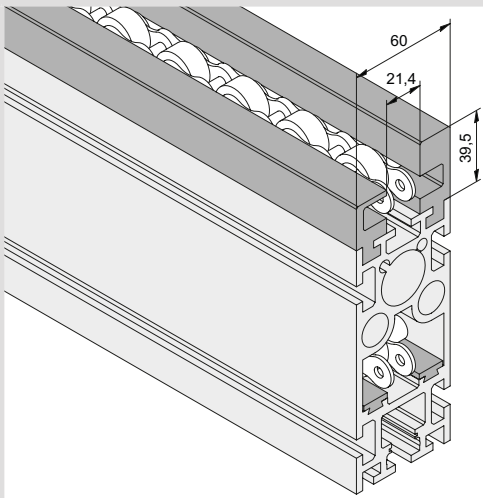


Technical data

Conveyor length L	individual from 1,000-10,000 mm (note the chain pitch)	
Conveyor width B	200-2,000 mm	
Chains	3/4" accumulating roller chain with plastic or steel rollers	→ p. 179
Drive location	left/right underneath	
Drive and speed	up to 30 m/min	
Stand and side rail		→ p. 224
Total load	up to 1,000 kg, higher on request	
Distributed load	up to 150 kg/m, higher on request	

SRF-P 2012 Wear Strips

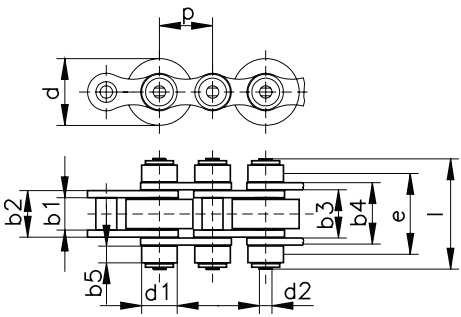
Wear and guide strips from mk ensure low friction.
The wear strips are made from PE-UHMW (PE-1000). Temperature range up to a maximum of 65° C.

Version without shoulder	Version with shoulder
	
Wear strip mk 1089, at the top **22.89.2000**	Wear strip mk 1050, at the top right **22.50.2000**
Wear strip mk 1022, below **22.22.2000**	Wear strip mk 1089, at the top left **22.89.2000**
	Wear strip mk 1022, below **22.22.2000**



... for SRF-P 2012

Accumulating roller chain with accumulating rollers in series



SRF-P 2012	
K11415	Chain steel roll
K114060001	Locking link

Dimensions in mm	
p	19.05 (3/4“)
b1	11.68
b2	15.62
b3	15.80
b4	20
d1	12
g	•
d2	5.72
l1	•
l2	•
e	•
l	48
b5	11.50
d	24

up to 60° C, special version up to 120° C

Additional Equipment for Chain Conveyors



Tensioning and lubrication station for FPF/SRF-P 2045 and KTF/SRF-P 2010

By using the optional automatic tensioning device and lubrication station for head drives, unnecessary maintenance work can be avoided. There is no need to manually retension or manually oil the chain. Automatic tensioning does not change the length of the conveyor. In addition to the visual tensioning distance monitor, a tensioning distance sensor is also available, both with and without a lubricant insert.

Assembly Aid for Chain Replacement

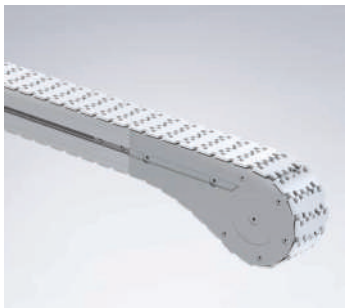
To replace the accumulating roller chain, you must relieve the tension at the tail. The built-in assembly aid makes it easier to replace the chain by allowing you to remove one part of the wear strip separately. You must then advance the accumulating roller chain until the chain lock with the blue ring appears in the opened area. You can now replace the accumulating roller chain.

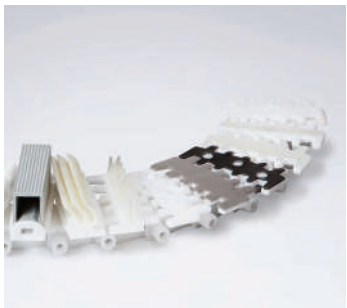


Notes

Chapter 6 Flat Top Chain Conveyors Versaflex







6

Versaflex – Overview and Selection 184

Versaflex A04 ... A29 186

Modular overview 190

Versaflex Flat Top Chains 194

Overview of Options

System	A04*	A06	A08	A10	A17	A29
						
Conveyor						
Conveyor width [mm]	45	65	85	105	182	300
Conveyor height incl. chain [mm]	72	73	85	86	95	95
Total load up to [kg]	150	150	200	200	200	200
Conveyor length up to [mm]	30,000	30,000	30,000	30,000	30,000	30,000
Conveyor speed up to [m/min]**	50	50	50	50	50	50
Chain						
Chain width [mm]	44	63	83	103	175	295
Chain pitch [mm]	25.4	25.4	33.5	35.5	33.5	33.5
Chain traction force [N]	500	500	1250	1250	1250	1250
Product						
Product width [mm]	10-80	15-140	20-200	25-300	70-400	70-400
Product weight horizontal up to [kg]	2	10	15	20	15	15
Product weight rising up to [kg]	1	2	10	15	10	10

* also available as option A045 with a conveyor height of 52 mm and a conveyor width of 43 mm for compact applications
** higher conveying speeds on request

Request/Order

We require the following information to design your Versaflex:

Product Properties
Product dimensions (LxWxH)
Product weight
Surface properties (smooth, sharp-edged, soft, hard, etc.)
Operating Properties
Conveyor speed ([m/min]; [piece/min])
Are the products accumulated?
Cycle operation [start-stop/h]
Process environment (hot, cold, dry, wet, dusty, dirty, etc.)
Conveyor System Data
Track layout
Upper edge of belt conveyor (floor supports, wall brackets, ceiling suspension)
Transitions (product transfer or discharge)
Control technology

Operating Temperature

Versaflex can be continuously operated in a temperature range between -20° C and +60° C. It can also be briefly operated in temperatures of up to 100° C, e.g. for cleaning and rinsing.

Chain tensile force

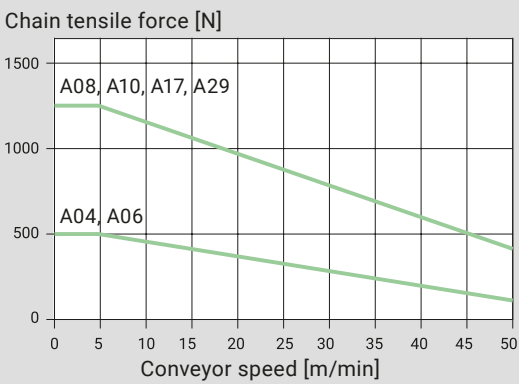
In the following cases, the chain tensile force and the performance of the drive units must generally be calculated and monitored:

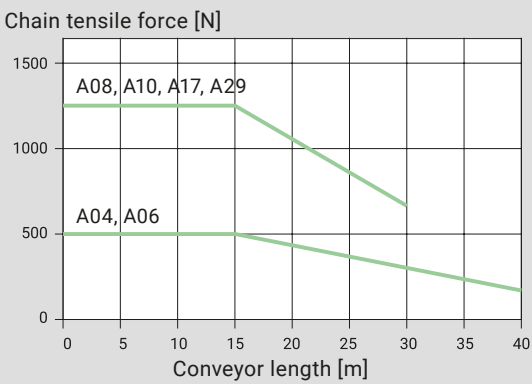
- High load
- Accumulation
- Vertical conveyors
- High conveyor speed
- Very long conveyors
- Conveyors with sliding bends (horizontal or vertical)
- Frequent starts and stops (cycle operation)
- Very high or low ambient temperatures

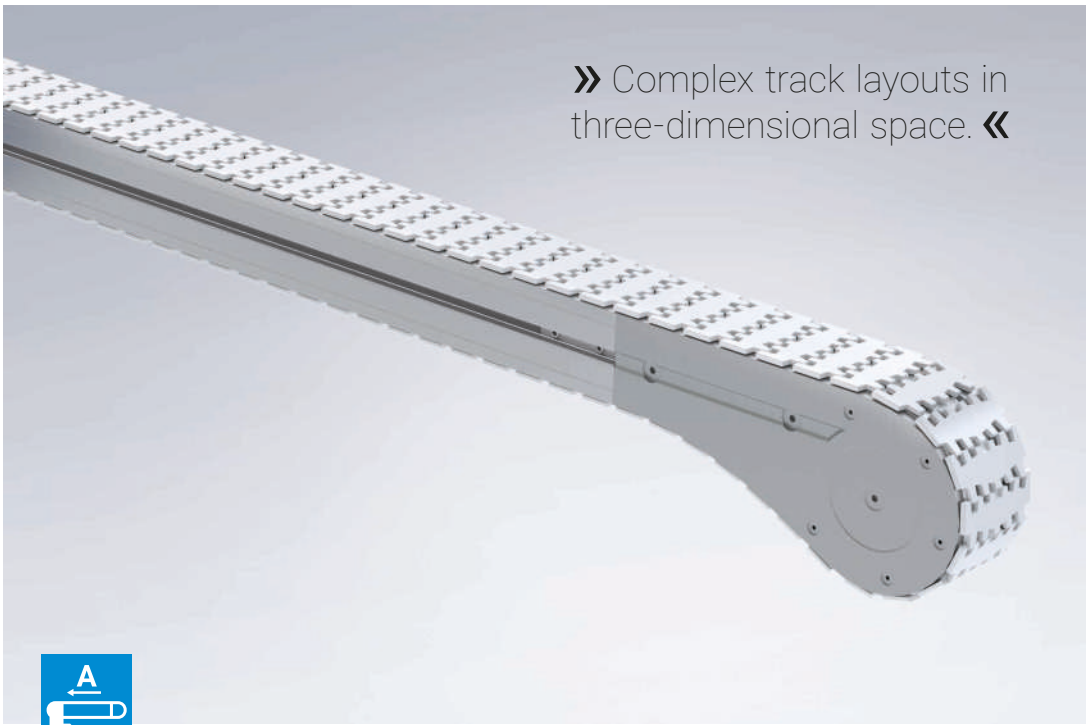
Make it simple and use our request form at

www.mk-group.com

Chain Tensile Forces Based on Conveyor Speed and Conveyor Length







A

Versatile. Flexible. Modular.

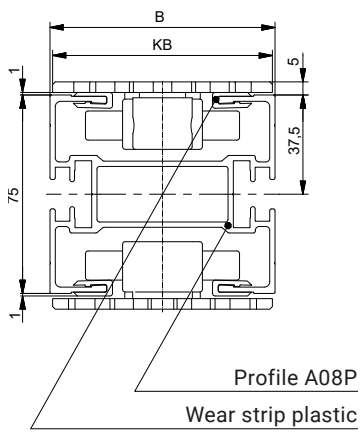
The Versaflex hinged belt conveyor system is more than just a single conveyor. Thanks to numerous options and modules such as curves, inclines, cams, stoppers, switches, side rails and chains, complex track layouts in three-dimensional space can be realised with just one drive.

This makes project planning for the Versaflex easy and economical, as it can be adapted to any production process and expanded at a later date.

The Versaflex P08 and P11, from page 292, are available for gentle transport and exact positioning with pallets.

Cross section

Example Versaflex A08



Benefits of Versaflex

- Economical solution for complex track layouts
- Can be quickly adapted to new production and environmental conditions
- Cross-industry and compatible with existing systems on the market
- Turnkey system or assembly kit
- Saves energy and space
- Large selection of conveyor widths and chains
- Also available as a pallet system, see page 292

Technical data

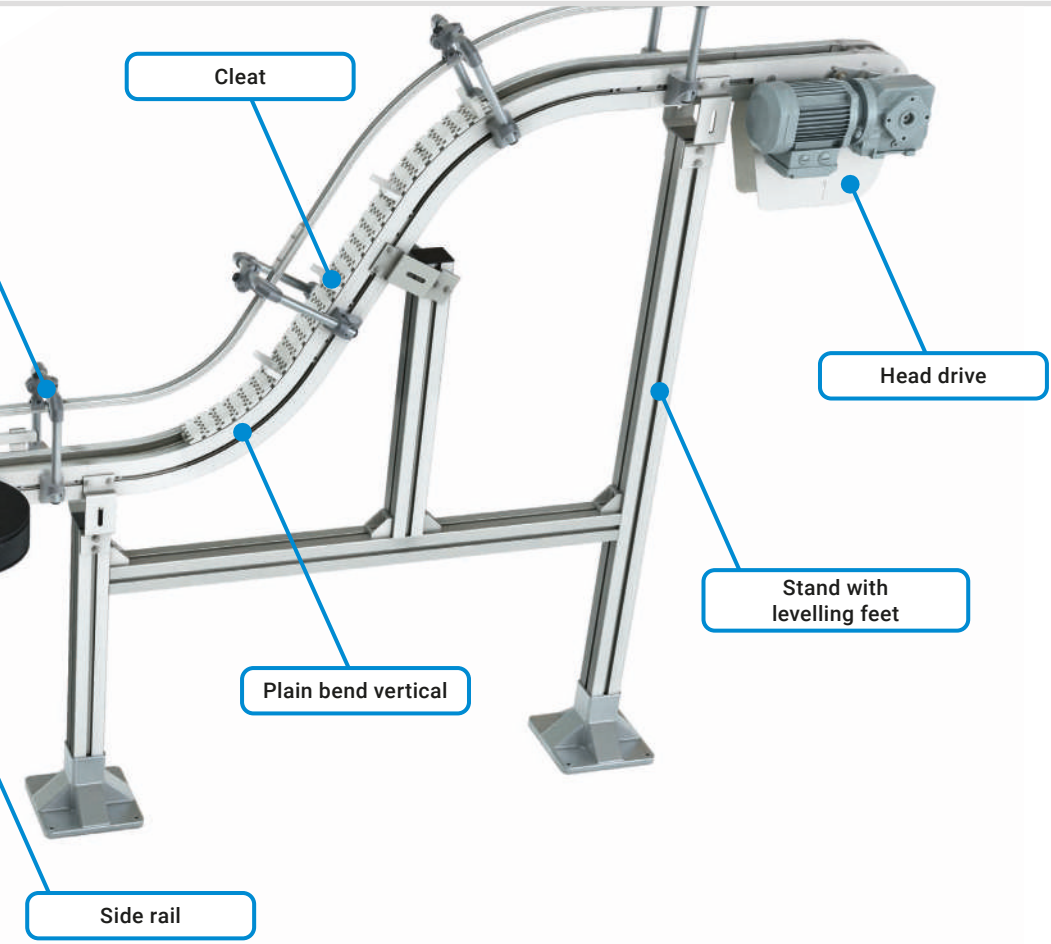
Conveyed product	piece goods	
Conveyor length L	up to 30,000 mm	
Conveyor width B	45, 65, 85, 105, 182 and 300 mm	
Total load*	up to 200 kg, higher on request	
Speed	up to 60 m/min	
Drive version	direct end drive DE1 and DE2 or indirect end drive with slipping clutch DE0	→ p. 190
Tail	tail made of plastic or aluminium	→ p. 192
Flat top chain	smooth standard chain and many other versions	→ p. 194
Side rail	AGRM (fixed): type 11 and type 2.3 AGRP (adjustable): type 1.0 and type 2.0	→ p. 240
Stand	Stand Versaflex type 1 and type 2	→ p. 228
Operational mode	continuous operation, cycle operation, accumulated operation	

* Usual load limits that may be exceeded based on the configuration and influencing factors.
Influencing factors: chain type, load distribution, operational mode and environmental conditions.

Benefits

- ✓ Economical realisation of complex track designs
- ✓ Simple and fast configuration and commissioning
- ✓ Suitable for all industries and compatible with existing systems

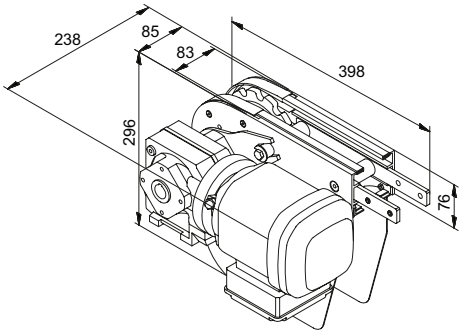




Focus industries

Food and beverage, pharmaceuticals, cosmetics, chemicals or consumer goods. Pallets on automotive assembly lines and for interlinking machines in the manufacturing sector.



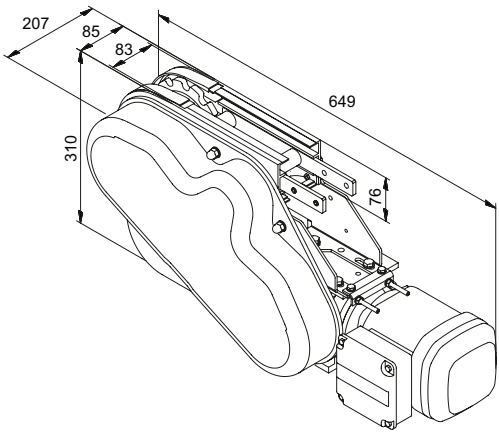


Direct end drive DE1 and DE2

The direct end drive is available with chain slack or as a guided unit without chain slack. It is also available with (DE1) or without a friction clutch (DE2).

Conveyor speeds [m/min]: 5, 10, 15, 20, 25, 30, 40, 50 and 60. Others on request.

System	A04*	A06	A08	A10	A17	A29
max. tensile force [N]	500		1250			

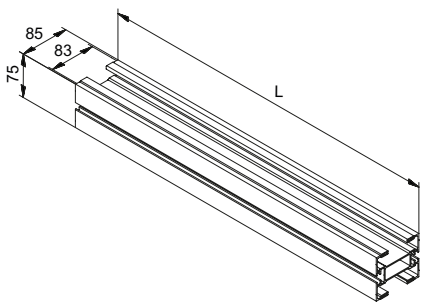


Indirect end drive with Friction Clutch DE0

The indirect end drive is available with chain slack or as a guided unit without chain slack.

Conveyor speeds [m/min]: 5, 10, 15, 20, 25, 30, 40, 50 and 60. Others on request.

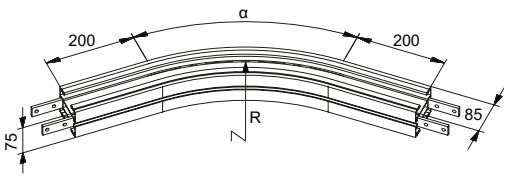
System	A04*	A06	A08	A10
max. tensile force [N]	500		1250	



Line including wear strips

Conveyor frame profile made from high-quality aluminium with wear strips for reducing friction between the profile and chain. The wear strip is easy to screw on or rivet.

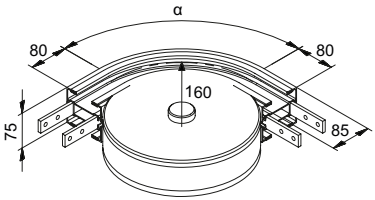
* Drawings show examples of the most common modules of the A08 version. Other versions or modules on request.



Sliding curve

The sliding curve is available with angles of 30°, 45°, 60° and 90° as standard. Angles of up to 180° are available on request.

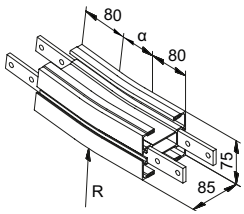
System	A04*	A06	A08	A10	A17	A29
R_{min} [mm]	500					700
R_{max} [mm]	1500					



90° and 180° rolling curve

The rolling curve and rotating plastic washers on the inside of the curve significantly reduce the amount of friction that occurs in the conveyor system. This feature enables higher speeds, longer conveying paths and higher loads to be achieved.

System	A04*	A06	A08	A10	A17	A29
Radius [mm]	150	150	160	170	-	-

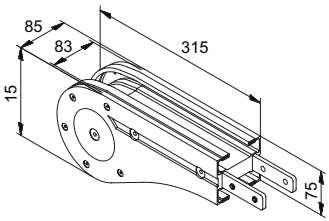


Vertical curve

The curve can be used to overcome height differences at an angle of up to 90°. Depending on the product, we recommend using cleated chains to prevent the product from slipping back. Like in the curve segments, wear strips ensure that the chain runs safely and without much friction.

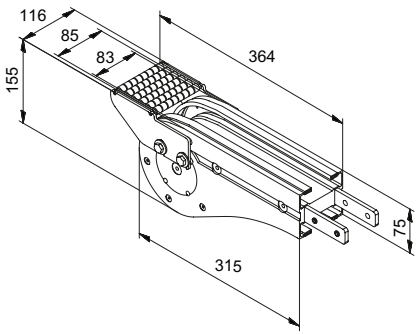
Radius R: 400 mm
Angle α: 5°, 7°, 15°, 30°, 45°, 60° and 90°.

For the variants A17 and A29,
only 5° and 7° angles are available.



Tail

The plastic or aluminium tails safely and precisely guide the chain back into the upper run.



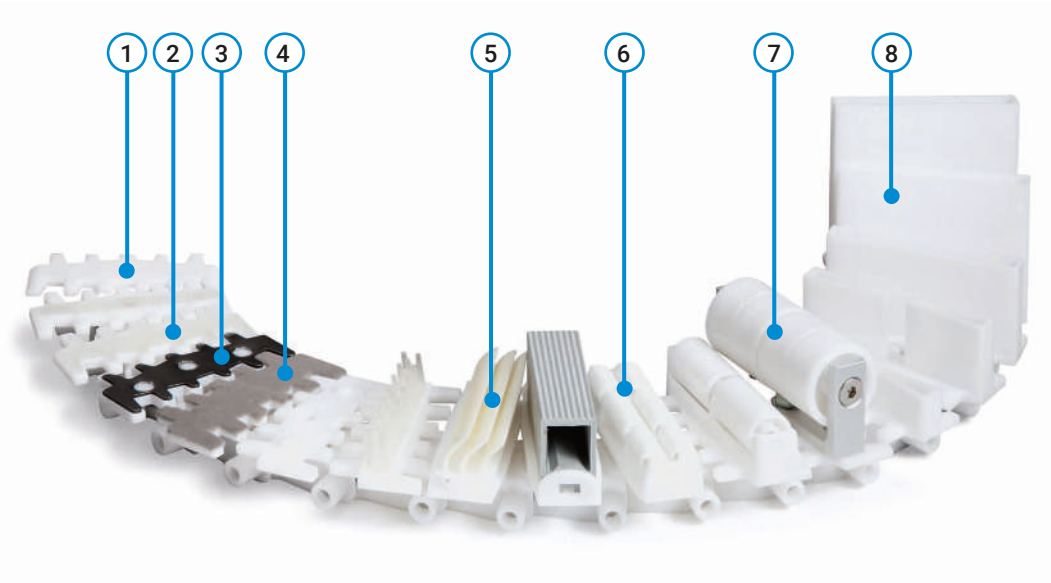
Transfer segment

The roller bridge with an 11 mm roll diameter enables the frontal transfer of small products. The transfer segment can also have a driven design.

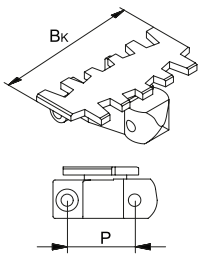
* Drawings show examples of the most common modules of the A08 version. Other versions or modules on request.

Notes

The conveyor chains are made of plastic and are available in a wide variety of designs for virtually all applications – with an adhesive surface for inclines, with steel covering for sharp-edged parts or flocked for transporting very delicate items. In addition, a large number of different cams are available – rolls in a wide range of dimensions for accumulating products, or flexible cams for implementing clamping conveyors. Furthermore, chain links with embedded magnets can be used to transport magnetisable parts.



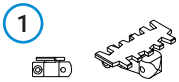
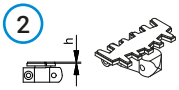
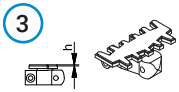
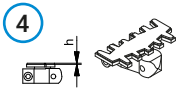
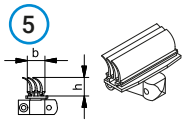
1. Smooth standard chain
2. Chain with hard surface
3. Chain with steel covering
4. Flocked chain
5. Chain with flexible cams or clamping elements



Project-specific on request

6. Accumulating roller chain
7. Cleated roller chain
8. Cleated chain

Chain Options

Chain option	Desig-nation	Cam height h [mm] A04	A06	A08/P08	A10	A17	A29	Properties
1 	... CH	none	none	none	none	none	none	Flat, smooth chain: direct transport or indirect via pallet
2 	... CF/ ... CF-A	none	none	none	none	none	none	High-friction chain/flat, high-friction chain: upward or downward inclines
3 	... CS	-	none	none	none	-	-	Chain with steel covering: parts with sharp edges, products with rough surfaces
4 	... CB	none	none	none	none	-	-	Flocked chain: gentle transport
5 	... CW-C	-	28	27.54	-	-	-	Chain with flexible cams, type C (clamping conveyor chain): different height levels

- = Chain option unavailable for this system

Technical data

System	A04 ...	A06 ...	A08/P08 ...	A10 ...	A17 ...	A29 ...
Chain width KB [mm]	44	63	83	103	175	295
Chain pitch P [mm]	25.4	25.4	33.5	35.5	33.5	33.5
Chain tensile force [N]	500	500	1250	1250	1250	1250

Chapter 7 Roller Conveyors



Roller Conveyors – Overview and Selection 198



Roller Conveyor RBF 2000 – Lines

Line, Motor Driven Roller 202
Line, Gearmotor 204
Line, Gravity 205



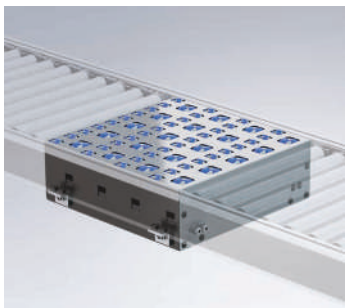
Roller Conveyor RBF 2000 – Curves

Curve 45°/90°, Motor Driven Roller 206



Roller Conveyor RBF 2000 – Functional Lines

Alignment Roller Conveyor 207
Infeeds/Outfeeds 208



Roller Conveyor RBF 2000 – Function Modules

Multi-Transfer Module 209
90° Transfer Module 210



Roller Conveyor RBF 2000 – Accessories

Stands 212
Side Rails 214
Other Accessories 215



Roller Conveyor RBS-P 2065/2066 218

Line, Gravity 220

Roller Conveyors – Overview and Selection

Technical data – overview

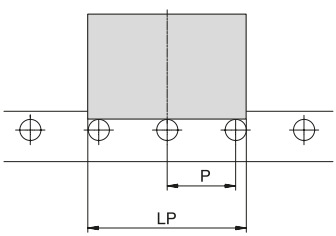
Conveyor system	Usable width NB [mm]	Max. length** [mm]	Max. load* conveyed product [kg]	Speed up to [m/min]	ø rollers [mm]	Driven	Gravity	Curve
Roller Conveyors								
RBF 2000	320, 400, 420, 500, 620, 700	6,000	55	60	50	•	•	•
RBS-P 2065/2066	150-500	5,000	20	30	20-40		•	

* Usual load limits that may be exceeded based on the configuration and operating conditions.
** Length applies per conveyor – the total length is unlimited by connecting individual conveyors.

7

Roller pitch

Pitch based on the product length (LP)
Minimum 3 rollers under product



	Rollers [mm]	Pitch P [mm]
RBF 2000	ø 50	75, 100 and 175
RBS-P 2065/2066	ø 20	25 and 50
	ø 40	50, 75 and 100

Other pitches available on request

Example:

Box 400 x 600 mm lengthwise, support surface lengthwise 540 mm. Minimum: 540/3 = 180 mm => P 175 mm

Information

RBF 2000 – From Module to System

The RBF 2000 is a complete roller conveyor system for intralogistics: Lines with motor driven roller, gearmotors or gravity, curves, roller conveyors for alignment, infeeds/outfeeds as well as 90° transfer and multi-transfer modules can be flexibly combined. This allows standard modules to be used to create customised solutions for goods receipt and dispatch, for picking lines or for connecting the production machine to the warehouse.

The gravity roller conveyor RBS-P 2065/66 complements the roller conveyor portfolio with 20 mm or 40 mm diameter rollers for transporting smaller goods.

Examples of use in intralogistics/production logistics:

- Goods receipt and dispatch
- Connection of production and warehouse
- Transportation between assembly or inspection stations
- Picking lines
- Container snap system
- Connections between different storage areas

Structure

The roller conveyors feature two conveyor frame profiles made of anodised aluminium profiles, which are perforated throughout. The upper section has hexagonal holes for roller mounting via a spring-loaded axle, while the lower section has round holes for crossbeams and other accessories. Power is transmitted from roller to roller via poly-V/V-ribbed belts.

The conveyors are designed to accommodate the container types typically used in internal material flows and can also be customised to individual dimensions.

Various side rail options ensure secure guidance of the conveyed product at all times.

Zero-pressure accumulation

Using logic and sensors (photoelectric sensors), motor driven roller conveyors operate with zero-pressure accumulation (ZPA). For this purpose, the conveying path is divided into zones. Each zone has its own motor driven roller, which drives additional rollers via poly-V belt coupling. The motor driven roller controllers communicate with each other and ensure that only one product is present in each zone. If the following zone is already occupied, the product in the previous zone will automatically stop.

- **Energy efficient:** only the zones that are currently needed are powered
- **Smooth:** accumulation pressure from subsequent conveyed products is prevented
- **Economical**: if conveyed products do not accumulate in the first place, the complicated singulation is eliminated

Drive

The motor driven rollers are powered by brushless 24 V DC motors with planetary gear – powerful, robust and energy-efficient.

Since the same motors are used throughout the system, the control integration is particularly efficient. Compressed air is not required.

For longer lines with continuous transportation, a 230/400 V gearmotor is also available.

Controller

The motor driven roller controllers provide the interface between the motor driven roller, sensors and power supply, and handle the logic processing. Smaller systems can be fully decentralised. In larger systems, the motor driven roller controllers take over the zero-pressure accumulation (ZPA) and simple processes, while a higher-level PLC takes control of decision points and overall process – thereby significantly reducing the amount of programming needed. Alternatively, the system can also be fully controlled via a central PLC.

Electrical installation

The conveyor frame profile holds the controllers and is used for laying cables for power supply as well as for the controller. Suitable inlets and outlets, solutions for cable routing, and integration of photoelectric sensors complete the system. The result is clean, protected cabling – implemented quickly and easily.

Roller Conveyor RBF 2000



7

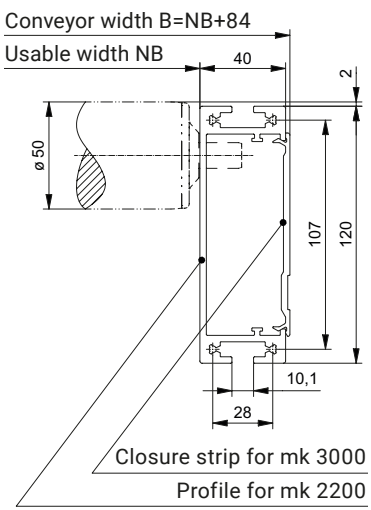
Modular. Decentralised. Tidy.

The RBF 2000 is a modular roller conveyor system for containers, cartons and trays up to 55 kg. Straight lines, curves, conveyors for alignment, infeeds/outfeeds, as well as 90° and multi-transfer modules can be combined to create customised solutions for intralogistics/production logistics – controlled decentrally or with a higher-level PLC.

Zone-operated 24V motor driven rollers enable zero-pressure accumulation (ZPA). Each zone conveys only one product – if the next zone is occupied, transport stops automatically. The system therefore operates in an energy-efficient and smooth manner.

With anodised aluminium profiles and concealed cable routing within the conveyor frame profile, the RBF 2000 is sturdy, durable and neat.

Cross section



Benefits of the RBF 2000

- Standardised modules for implementing even complex route layouts
- Durable, low-maintenance design for reliable continuous operation
- High-performance, energy-efficient drives with clever control options
- Well-planned design for a simple and tidy electrical installation
- Flexibly expandable and adaptable to new requirements

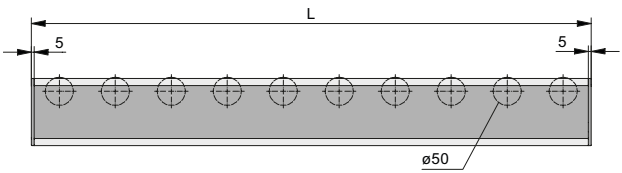
Technical data

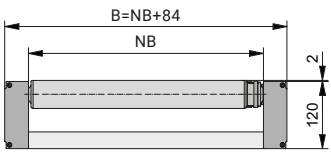
Conveyed product	cartons, boxes, containers e.g. plastic containers, storage bins
Conveyor length L	up to 6,000 mm (total length unlimited by connecting the conveyors)
Usable width NB	320, 400, 420, 500, 620, 700 mm, others on request
Conveyor width B	usable width + 84 mm (conveyor frame profile incl. closure strip)
Load*	up to 55 kg per conveyed product, higher on request
Speed	up to 60 m/min (1.0 m/s)
Rollers	ø 50 mm
Load per roller	40 kg/roller
Side rail	fixed or adjustable → p. 214
Stands	for constant conveyor level or for slope/gradient → p. 212
Operational mode	continuous, zero-pressure accumulation (ZPA)

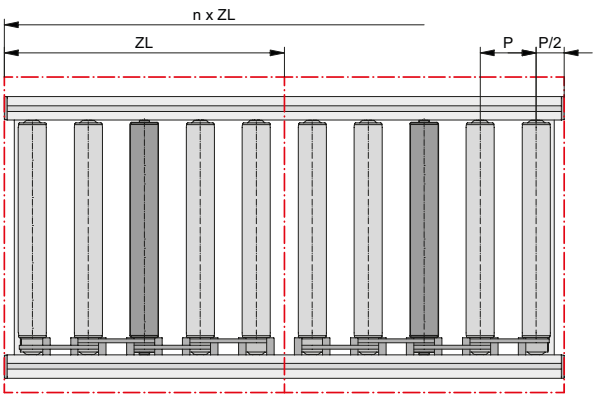
* Usual load limits that may be exceeded based on the configuration and operating conditions.

Line, motor driven roller, for buffering (ZPA)

The motor driven roller conveyor for buffering has one motor driven roller per zone, which drives several rollers. By means of a corresponding controller and sensors, the products can be transported individually and with zero-pressure accumulation.







7

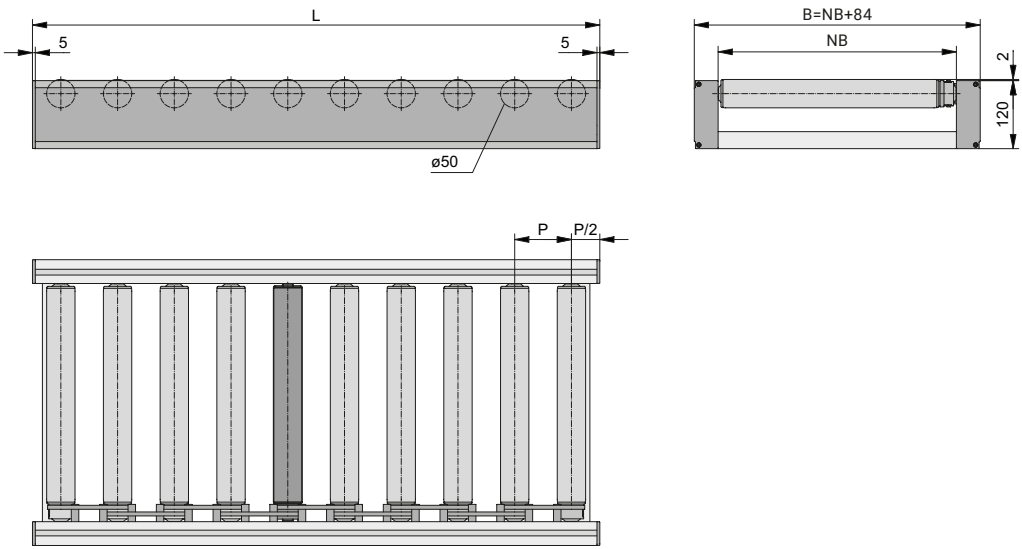
Item no.	Pitch P	Versions
B61.03.010	75 mm	standard version; also for accommodating 90° transfer at T-profile
B61.03.011	100 mm	standard version
B61.03.012	175 mm	standard version
B61.03.013	75 mm	optimised for flush 90° transfer at the end of the line (L or T-profile)
B61.03.014	75 mm	optimised for one flush 90° transfer at each end of the line (U or S-profile)

Technical data

Usable width NB	320, 400, 420, 500, 620, 700 mm, others on request
Conveyor width B	usable width + 84 mm (conveyor frame profile incl. closure strip)
Conveyor length L	up to 6,000 mm
Pitch P	75, 100, 175 mm
Roller attachment	spring-loaded hexagonal axle
Stand	→ p. 212

Line, motor driven roller

Depending on the length, product and speed, the motor driven roller conveyor has at least one or more motor driven rollers, each of which drives several rollers.



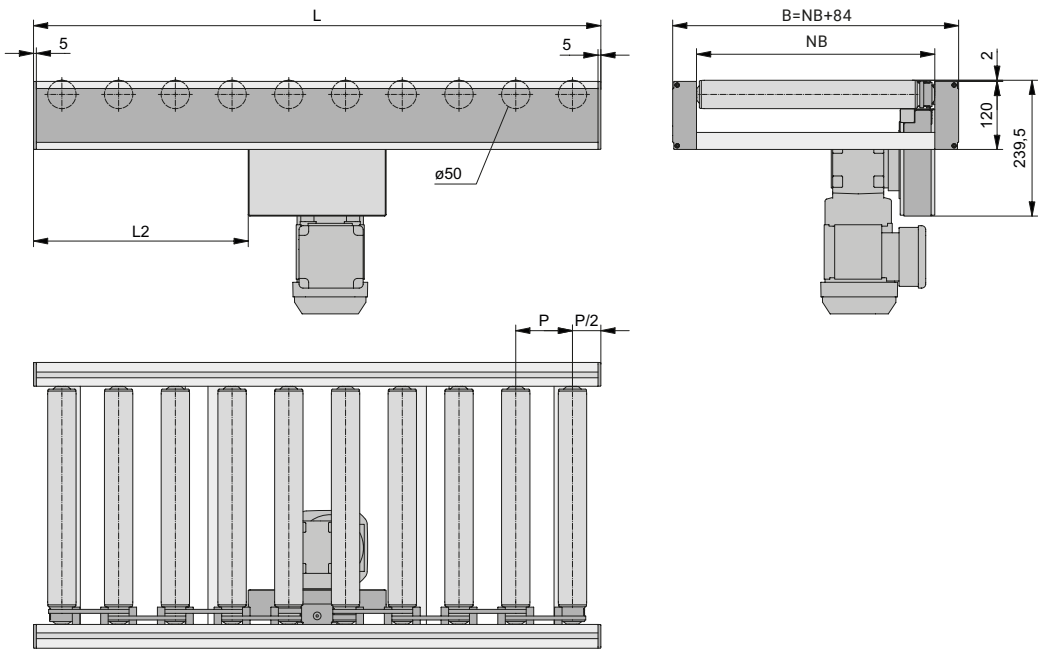
Item no.	Pitch P
B61.03.000	75 mm
B61.03.001	100 mm
B61.03.002	175 mm

Technical data

Usable width NB	320, 400, 420, 500, 620, 700 mm, others on request
Conveyor width B	usable width + 84 mm (conveyor frame profile incl. closure strip)
Conveyor length L	up to 6,000 mm
Pitch P	75, 100, 175 mm
Roller attachment	spring-loaded hexagonal axle
Stand	→ p. 212

Line, gearmotor

The geared roller conveyor is used for cost-effective transport over longer, continuous distances.
A gearmotor, positioned approximately in the centre, drives two rollers via a pulley, which in turn drive the next rollers.



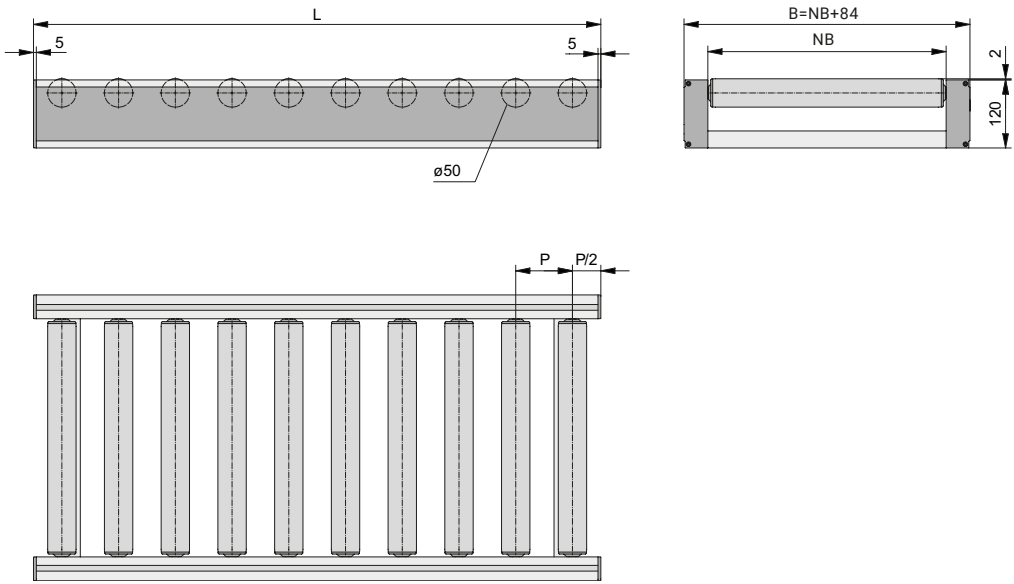
Item no.	Pitch P
B61.03.101	100 mm
B61.03.102	175 mm

Technical data

Usable width NB	320, 400, 420, 500, 620, 700 mm, others on request
Conveyor width B	usable width + 84 mm (conveyor frame profile incl. closure strip)
Conveyor length L	P100: up to 5,000 mm, P175: up to 5,950 mm
Pitch P	100, 175 mm
Roller attachment	spring-loaded hexagonal axle
Stand	→ p. 212

Line, gravity

Gravity roller conveyors do not have a motor; the products are accelerated by gravity or manually.
Brake rollers are available upon request.



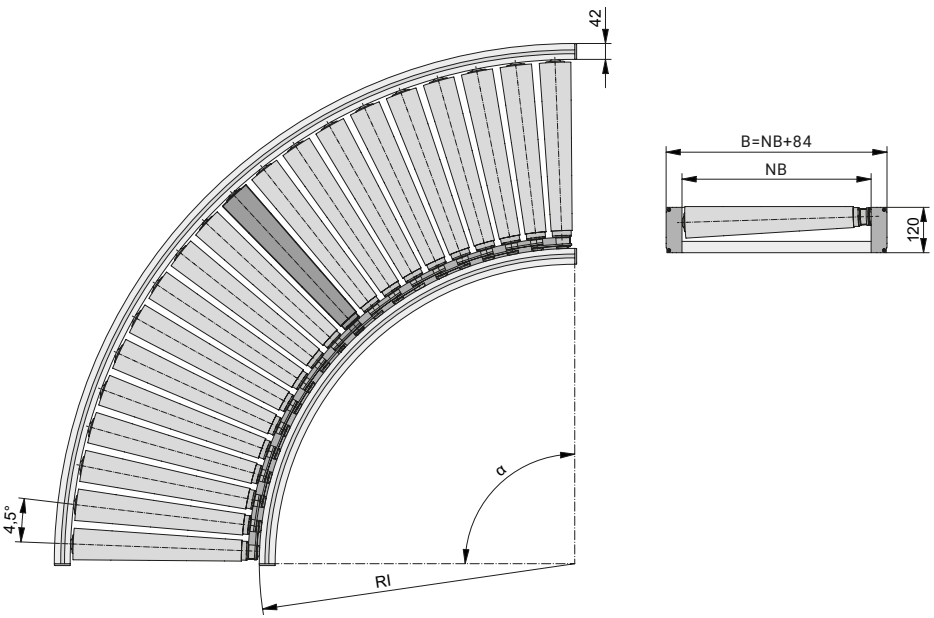
Item no.	Pitch P
B61.03.200	75 mm
B61.03.201	100 mm
B61.03.202	175 mm

Technical data

Usable width NB	320, 400, 420, 500, 620, 700 mm, others on request
Conveyor width B	usable width + 84 mm (conveyor frame profile incl. closure strip)
Conveyor length L	up to 6,000 mm
Pitch P	75, 100, 175 mm
Slope	0-25° (provide suitable braking/stopping measures in case of steep slope)
Roller attachment	spring-loaded hexagonal axle
Stand	→ p. 212

45° or 90° curve, motor driven roller

Depending on the length, product and speed, the motor driven roller conveyor has at least one or more motor driven rollers, each of which drives several rollers. Due to the conical rollers (steel rollers with conical plastic elements), the products retain their alignment even when changing direction. The usable width of the downstream roller conveyor must always be at least as wide as that of the curve.



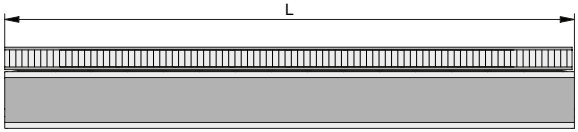
Item no. conveying angle 45°	Item no. conveying angle 90°	Usable width [mm]
B61.03.020	**B61.03.021**	400
B61.03.022	**B61.03.023**	500
B61.03.024	**B61.03.025**	700

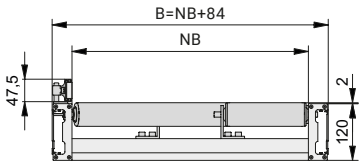
Technical data

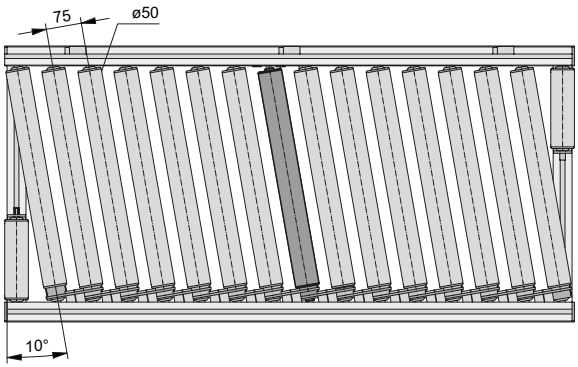
Usable width NB	400, 500, 700 mm, others on request
Conveyor width B	usable width + 84 mm (conveyor frame profile incl. closure strip)
Conveying angle	45° and 90°
Internal radius RI	834 mm (based on usable width)
Roller attachment	spring-loaded hexagonal axle
Stand	→ p. 212

Alignment roller conveyor, motor driven roller

The alignment roller conveyor is driven by one or more motor driven rollers. It moves the products not only in the conveying direction, but also perpendicular to it towards the side rail by tilting the rollers. This is used for alignment in front of functional units, labelling stations, etc., or to reduce the usable width of the roller conveyor along its route.







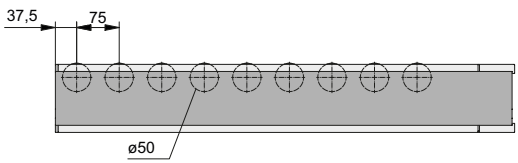
Left	Right	Length [mm]	Width [mm]	Optimised for products LxW [mm]	Lateral movement of the product [mm]
B61.03.030	**B61.03.041**	1112	400	400 x 300	100
B61.03.031	**B61.03.042**	1645	400	300 x 200	200
B61.03.032	**B61.03.043**	1358	500	600 x 400	100
B61.03.033	**B61.03.044**	1739	500	400 x 300	200
B61.03.034	**B61.03.045**	1165	700	400 x 600	100
B61.03.035	**B61.03.046**	2536	700	600 x 400	300
B61.03.036	**B61.03.047**	2993	700	400 x 300	400

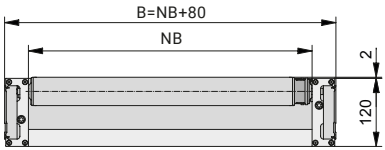
Technical data

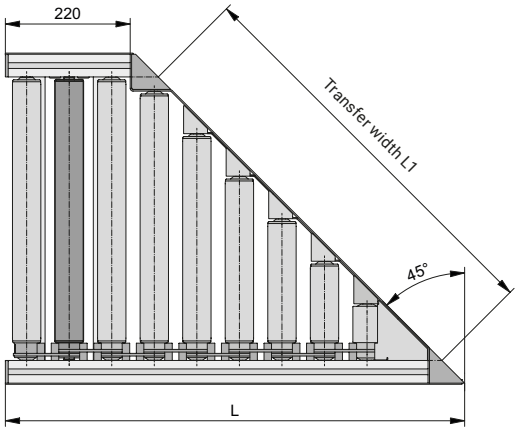
Usable width NB	400, 500, 700 mm, others on request
Conveyor width B	usable width + 84 mm (conveyor frame profile incl. closure strip)
Pitch P	75 mm
Angle of the rollers α	10°
Product movement	perpendicular to conveying direction ~170 mm/m
Roller attachment	spring-loaded hexagonal axle
Stand	→ p. 212

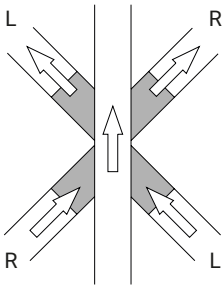
45° infeed/outfeed, motor driven roller

The 45° infeed/outfeed with staggered rollers allows for the merging or branching of product flows. As an infeed, it directly merges two roller conveyors; as an outfeed, it branches the product flow in combination with a multi-transfer module.





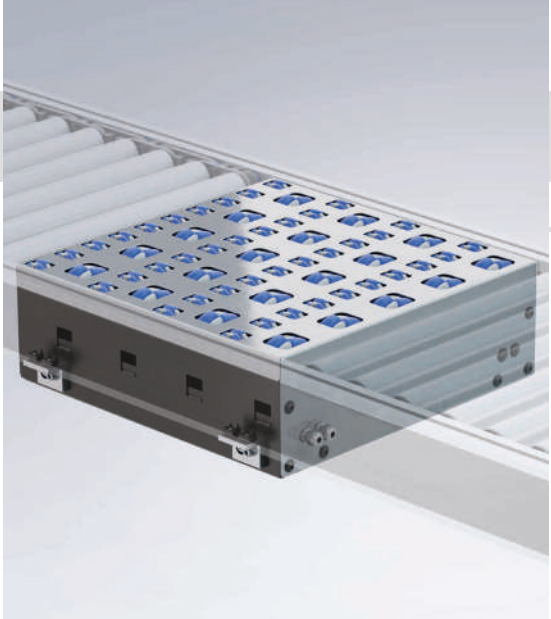




Item no. R	Item no. L	Usable width [mm]	Length L [mm]	Length L1 [mm]
B61.03.050	**B61.03.060**	400	735	566
B61.03.051	**B61.03.061**	500	810	707
B61.03.052	**B61.03.062**	700	1035	990

Technical data

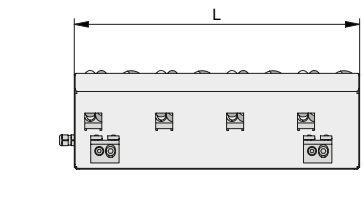
Usable width NB	400, 500 and 700 mm, others on request
Conveyor width B	usable width + 84 mm (conveyor frame profile incl. closure strip)
Pitch P	75 mm
Roller attachment	spring-loaded hexagonal axle

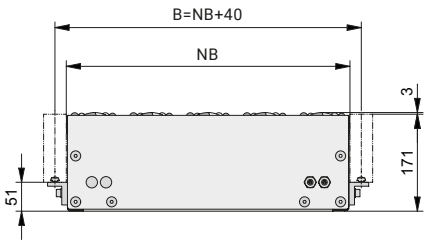


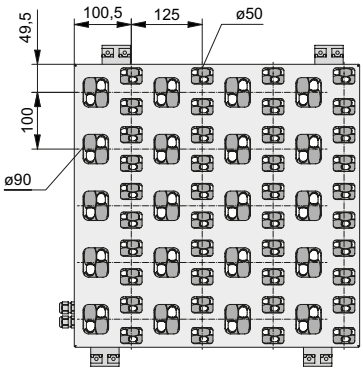
Multi-transfer module

The multi-transfer module features rows of omni-directional rollers arranged perpendicular to each other. It is positioned as a separate zone within a zero-pressure accumulation line.

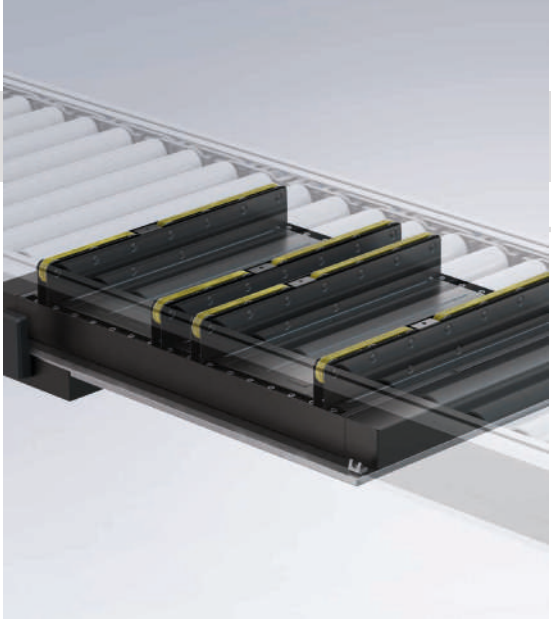
This allows products to be discharged in two different ways:
1) At a 45° angle while maintaining orientation, and in a „flow“ configuration
2) At a 90° angle, where the products must be briefly stopped and their orientation changed







Item no.	Length L [mm]	Usable width [mm]
B61.03.400	503	400
B61.03.401	503	500
B61.03.402	753	500
B61.03.403	753	700



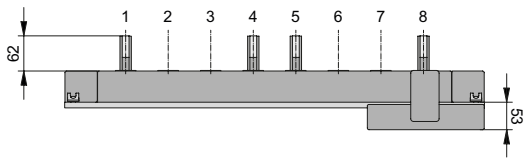
RBF 2000

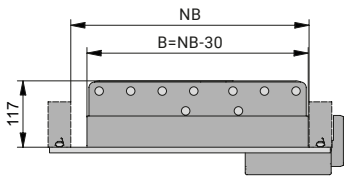
90° transfer module

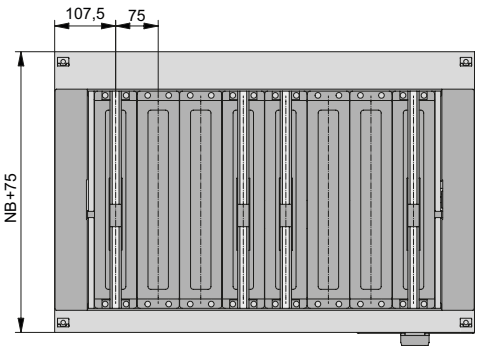
The 90° transfer is used for the infeed or outfeed of products at a right angle. The products change their orientation during this process. The 90° transfer is mounted in a roller conveyor with a motor driven roller (ZPA) with a 75 mm pitch. By raising the belt drives (10 mm above the rollers), the products can be moved perpendicular to their original conveying direction.

Various layouts, such as L-, T-, or cross-shaped, are possible. One 90° transfer module on each parallel line allows for the transfer of conveyed products between the lines.

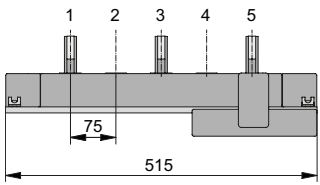
The 90° transfer is selected to match the conveyor width and the products. The number and arrangement of the belt units allow for adaptation to different sizes of products. Standard modules are optimised for standardised containers and boxes.







90° transfer module, short (max. 5 belt units)

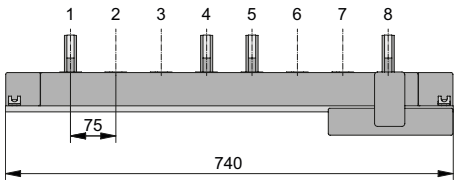


The belt units can be freely positioned.
On request, the number of belt units can be reduced or increased after testing.

Item no.	Usable width NB	Box
B61.03.300	320 mm	400 x 300 mm, lengthwise
B61.03.301	400 mm	
B61.03.302*	420 mm	400 x 300 mm, lengthwise and crosswise
B61.03.304*	500 mm	

*on request

90° transfer module, long (max. 8 belt units)



The belt units can be freely positioned.
On request, the number of belt units can be reduced or increased after testing.

Item no.	Usable width NB	Box
B61.03.303	420 mm	400 x 300 mm, lengthwise and crosswise 600 x 400 mm, lengthwise
B61.03.305	500 mm	
B61.03.306*	620 mm	400 x 300 mm, lengthwise and crosswise 600 x 400 mm, lengthwise and crosswise
B61.03.307*	700 mm	

*on request



Stand RBF 2000

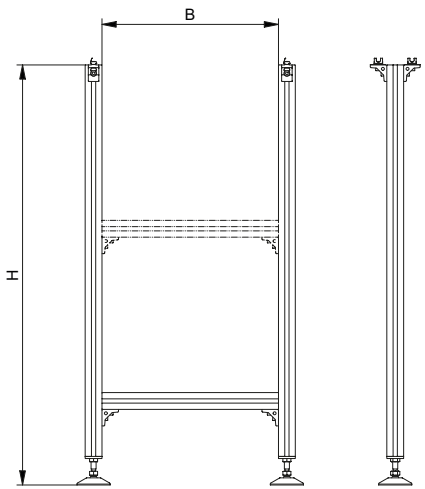
The stand for the RBF 2000 comes with levelling feet and is mounted to the conveyor frame with angle brackets. It offers a good stability and is available for straight lines and curves.

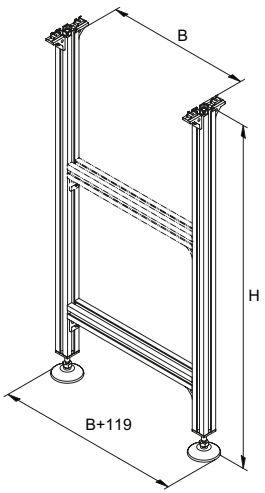
B67.06.017 for lines

B67.06.018 for curves

Height
H = 300-1500 mm

Width
B = 320, 400, 420, 500, 620 and 700 mm







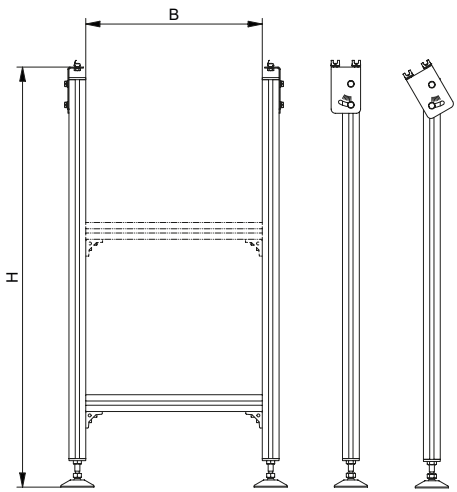
Stand RBF 2000
for lines with sloped sections

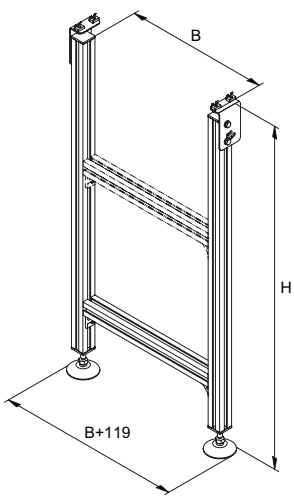
The stand for the RBF 2000 for sloped sections comes with an adjustable connection plate. It is equipped with levelling feet and offers excellent stability.

B67.06.019 for lines with sloped sections

Height
H = 300-1500 mm

Width
B = 320, 400, 420, 500, 620 and 700 mm







Side Rails

The RBF 2000 can be fitted with fixed or adjustable side rails based on the mk 2202 profile. Both are equipped with an insert guide at the beginning and end.

Side rail, fixed



The fixed side rail is the economical, sturdy option. It is fastened to the conveyor frame with clamps.

Photoelectric sensors can be integrated directly into the side rail.

Side rail, adjustable



The adjustable side rail is variable in conveying width and height. Lightweight products, such as empty containers, can be aligned to one side.

Other Accessories

Integrated photoelectric sensor – for fixed side rail



Photoelectric sensors in protective housing, e.g. for zero-pressure accumulation conveying and buffering, are integrated into the side rail.

The self adhesive reflector is places to the recessed portion of the side rail on the opposite side.

Adjustable photoelectric sensor

Sensor



Reflector



Photoelectric sensors in protective housing and reflectors, e.g. for zero-pressure accumulation conveying and buffering, are simply attached to the conveyor frame profile. The sensor and reflector can be rotated.

7

Cable entry for sensor cables — B16.05.004



The cable entry allows up to four sensor cables, usually from photoelectric sensors but also from other sensors, to be inserted into the conveyor frame profile from above.

Cable entry — B16.05.005/B15.05.005

Single



Double



The single or double cable entry at the bottom allows feeding in multiple or stiff cables into the conveyor frame profile, e.g. from the power supply to the motor driven roller controls. The „single“ version is also used for the cable duct.

Other Accessories

Emergency stop — B16.11.001



The emergency stop button can be placed anywhere along the layout.

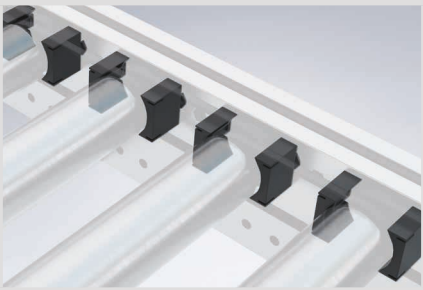
If necessary, additional functions can also be provided via additional keys.

Power supply — B16.08.302



Depending on the specific application (number of motor driven rollers, operating mode of the motor driven rollers, simultaneous operation, etc.), the power supply can be implemented decentrally with short cable lengths directly on the conveying path. Each unit delivers 24 V DC with max. 40 A.

Protective guard — B68.13.000



The two-part protective guard is quickly and easily assembled and protects operators, maintenance personnel, etc. from unintentional contact and pinching between the V-ribbed belt and the rollers' poly-V-head.

Extended protective guard



For freely accessible areas the roller conveyor can be equipped with a full-face sheet-metal cover (available for pitch 100 mm).

Cable duct with cable entries



The cable duct, mounted on a crossbeam, serves to neatly and safely accommodate the cables. Cable entries at the bottom, individually located on the outer sides, allow for easy routing of cables from one side of the conveyor frame to the other.

Longitudinal connecting kit



The connecting kits make it possible to connect two conveyors in a standardised, easy-to-assemble manner – for quick, optimum alignment when mounting on site.

The longitudinal connecting kit joins two conveyors lengthwise. For this purpose, both conveyors are equipped with connection plates and screwed together.

Transverse connecting kit



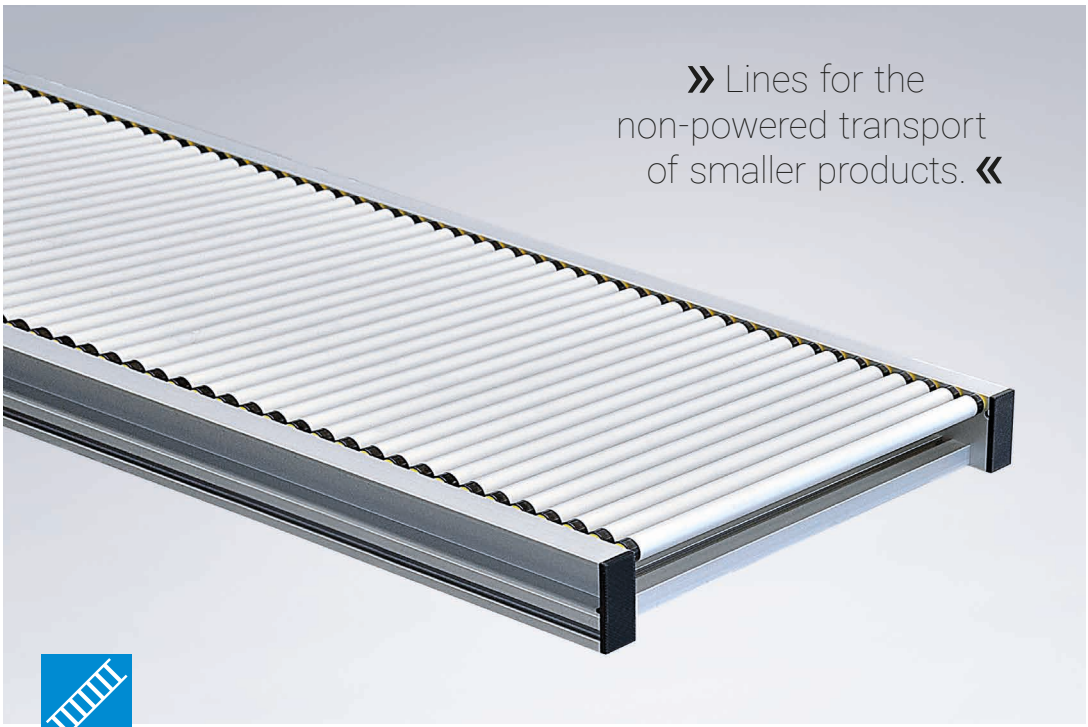
The transverse connecting kit connects two conveyors at a right angle – e.g. when using a 90° transfer.

Slope connecting kit



The variable slope connecting kit is used for gravity roller conveyors and is available in both longitudinal and transverse versions. The connecting kit comes with custom 3D-printed parts that close the resulting gap.

Gravity Roller Conveyor RBS-P 2065/2066



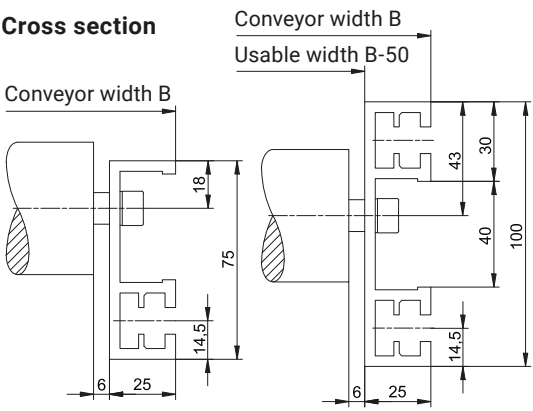
7

Flexible. Versatile. Modular.

The conveyor frame profile of the RBS-P 2066 functions as the side rail. On the RBS-P 2065, the rollers are positioned above the side profile, thus enabling the transport of oversized goods and lateral discharge.

The roller diameters of 20 and 40 mm ensure safe and continuous transport of smaller goods. These can be transported manually or by gravity down a slope. An incline of 1 to 2° is usually sufficient for conveying products with gravitational force.

Cross section



Profile mk 2065 Profile mk 2066

Benefits of the RBS-P 2065/2066

- Transporting small and lightweight products
- Semi-automatic linking systems at picking stations or Kanban racks
- Conveyor frame profile of the RBS-P 2065 allows for extra-wide product and lateral discharging
- Conveyor frame profile of the RBS-P 2066 functions as the side rail
- Side slots on the conveyor frame profile for attaching accessories such as side rails, stands, etc.

Technical data

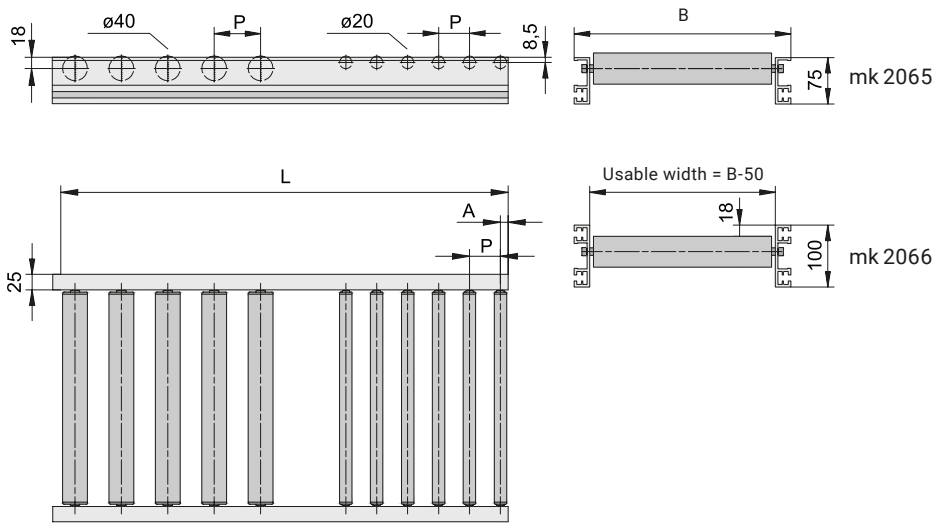
Conveyed product	Cartons, boxes, containers e.g. plastic containers, storage bins
Conveyor length L	up to 5,000 mm (total length unlimited by connecting individual conveyors)
Conveyor width B	for roller ø 20: 150-350 mm for roller ø 40: 150-500 mm
Load*	up to 20 kg per conveyed product, higher on request
Speed	up to 30 m/min (gravity)
Rollers	ø 20 and ø 40 mm
Side rail	the conveyor frame profile of the RBS-P 2066 functions as the side rail
Stands	H-shaped stand, mobile, height-adjustable → p. 224
Operational mode	gravity

* Usual load limits that may be exceeded based on the configuration and operating conditions.

Line, gravity

ø 20: B61.00.001 / ø 40: B61.00.002

The RBS-P 2065 and 2066 gravity roller conveyors differ in that, with the 2065 conveyor frame profile, the rollers extend beyond the upper profile edge (making them suitable for extra-wide product), while with the RBS-P 2066, the conveyor frame profile serves as a side rail. The conveyor length corresponds to a single roller conveyor segment. There is no limit on the lengths that are possible by lining up segments.



Technical data

Conveyor width B	**ø 20 plastic**	**B61.00.001**	150, 200, 250, 300 and 350 mm
	ø 40 plastic	**B61.00.002**	150, 200, 250, 300, 350, 400, 450 and 500 mm
Conveyor length L			up to 5,000 mm
Pitch P	**ø 20**	25, 50 and 75 mm	A = 12,5 mm
	ø 40	50, 75 and 100 mm	A = 25 mm
Conveyor frame profile			mk 2065 or mk 2066
Stand			→ p. 224

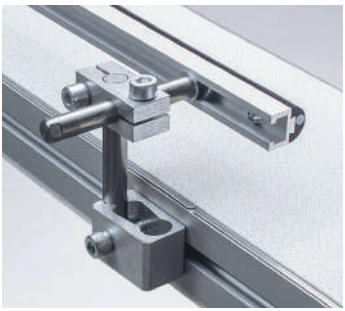
Notes

Chapter 8 Conveyor Technology Accessories



Stands

Stand Versions and Conveyor Stand Fastening Elements 224
Foot Options 225
Single Stands 226
Stands for light loads 230
Stands for heavy loads 235



Side Rails

Fixed Side Rails 240
Adjustable Side Rails 242
Side Rails Versaflex SBF A04...A29 244
Individual Components 246

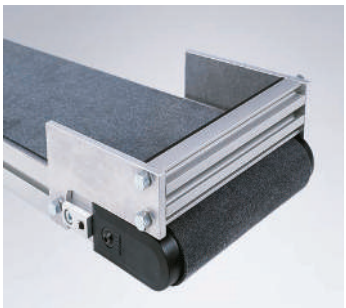


Nuts/T-nuts 250

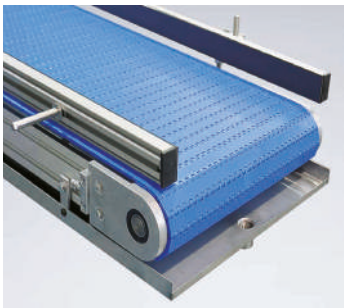
8



Frequency Inverters 252



End Stops 254

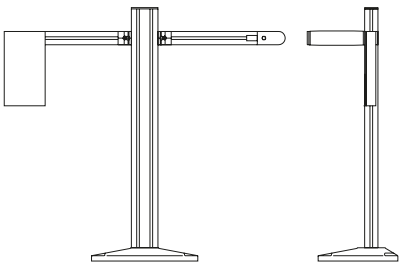


Drip Pan 255

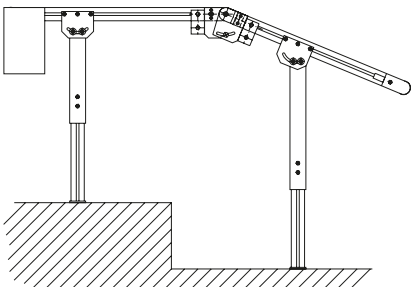
Stand versions

mk delivers the right stand system for every type of conveyor. For system stability, please take into account the ratio of height to width, the centre of gravity of the load and other influences. We would be happy to advise you on the optimal configuration, or you can use our online configurator (www.quickdesigner.com).

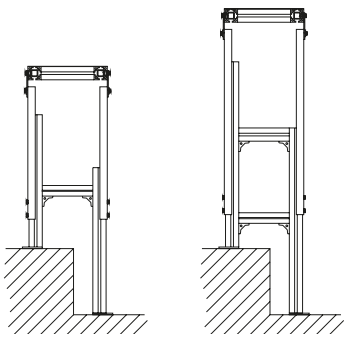
Example of a single stand



Example of a height-adjustable stand



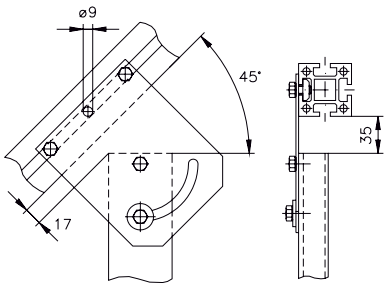
Example of a stand with a special design



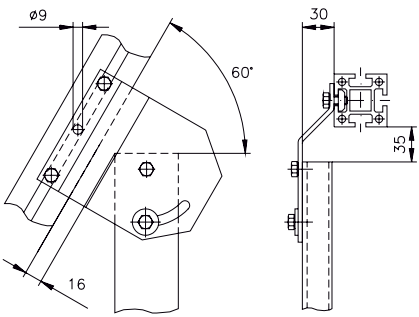
Conveyor stand fastening elements

The conveyor stand fastening elements connect the conveyor to the stand. Various fastening elements with different adjustment angles can be selected.

Example of fastening option B, 45°



Example of fastening option C, 60°

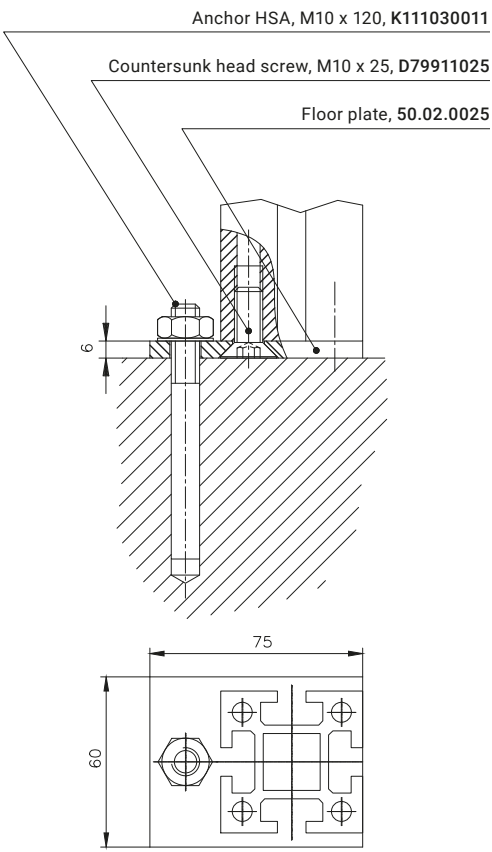




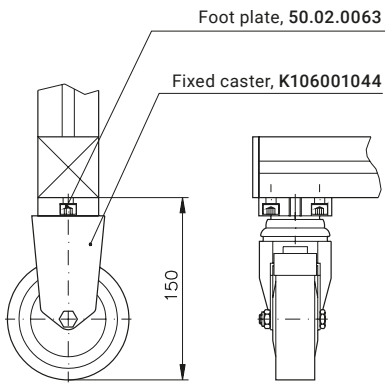
Foot options

A variety of pad options are available depending on the stand that is selected. Examples include levelling feet, floor plates for anchoring or fixed castors and swivel casters.

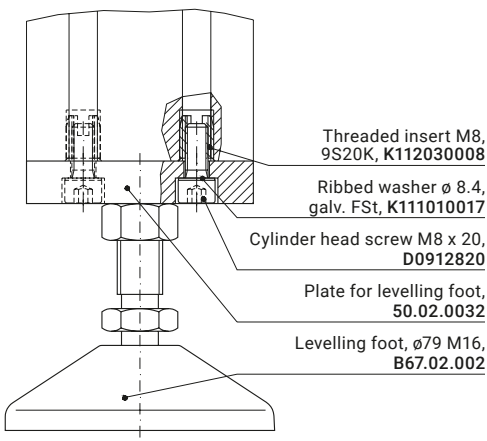
Example of a floor plate



Example of fixed and swivel casters, type A



Example of a levelling foot, ø 79 M16





Single Stands

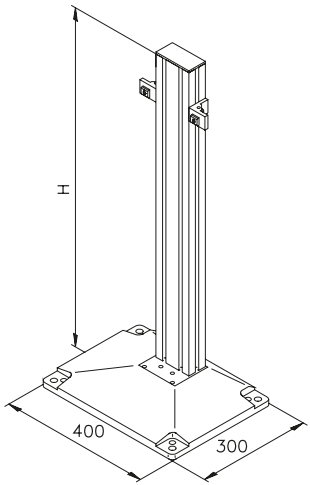
Stand S51.2

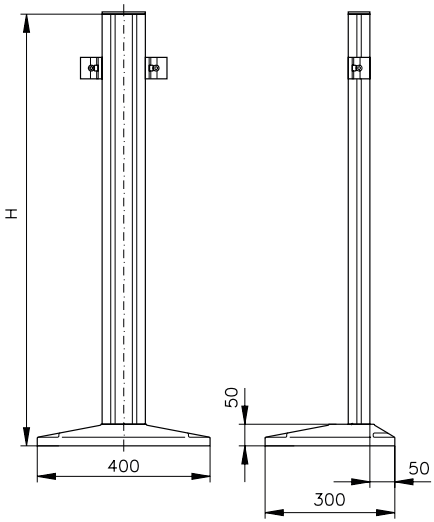
B67.04.002

Single stand with profile mk 2004 for conveyors up to 250 mm wide. Can be used for belt conveyors GUF-P MINI, GUF-P 2000 and ZRF-P 2040.

Standard heights

H 500 mm
H 750 mm
H 1000 mm
H 1250 mm
H 1500 mm





8

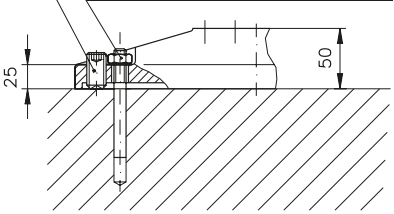


Floor fastening element for single stand

As floor fastening elements for single stands, base plates ensure stability, come with a black paint finish as standard and have a defined drilling pattern for facilitating anchoring to the floor.

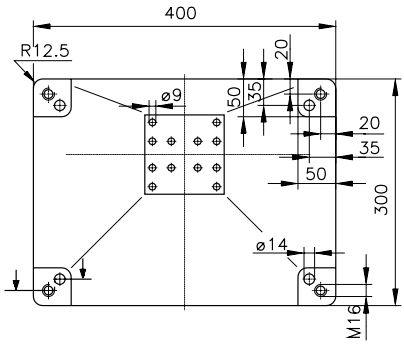
Adjusting screw DIN 916, 8.8 galv., M16 x 40, **D09161640**

Anchor HSA, M10 x 120, **K111030011**



Base Plate 1
50.02.0023

Grey cast-iron, painted black





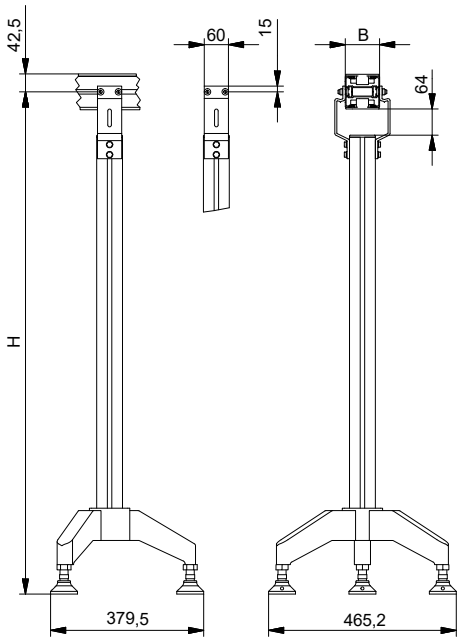
Single Stands

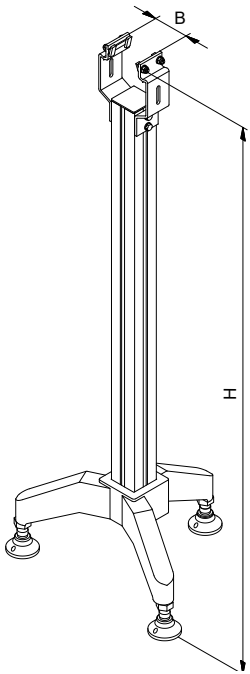
Versaflex Stand type 1

Height-adjustable single stand, can be used for the flat top chain conveyor SBF Versaflex.

Standard heights
H 500 mm-1500 mm
± 50 mm

Standard widths
B 45 mm
B 65 mm
B 85 mm
B 105 mm





8

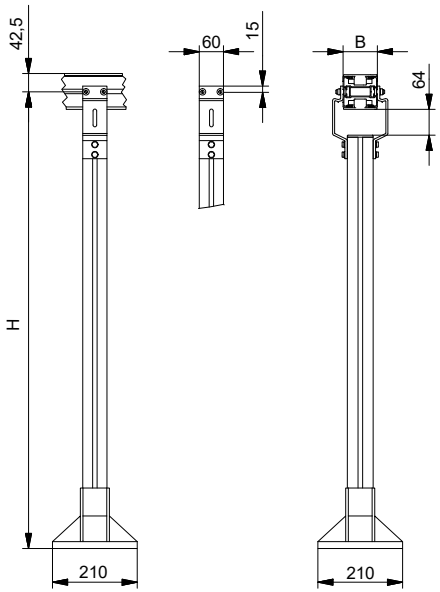


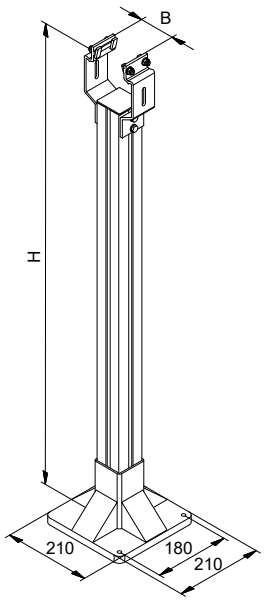
Versaflex Stand type 2

Height-adjustable single stand, can be used for the flat top chain conveyor SBF Versaflex.

Standard heights
H 500 mm-1500 mm
± 30 mm

Standard widths
B 45 mm
B 65 mm
B 85 mm
B 105 mm







... for light loads

Stand S55.1

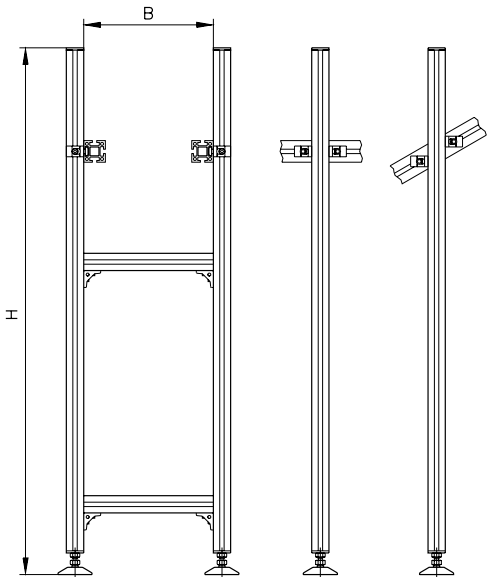
B67.06.011

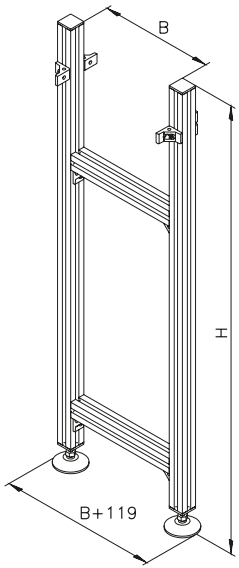
Stand in simple H design with mk 2040.40 profile (light duty). Can be used for virtually all conveyor systems, except curved and roller conveyors.

Standard heights
H 500 mm
H 750 mm
H 1000 mm
H 1200 mm

H max: 1500 mm

Standard widths
B = 300-2000 mm







... for light loads

Stand S55.2

B67.06.020

Stand in H design with mk profile 2040.02, levelling foot ø 76 M16 and floor fastening. The position of the mounting plates can be freely selected up to the point where they are screwed to the floor. The S55.2 stand is typically used with the Versamove pallet system or roller conveyors.

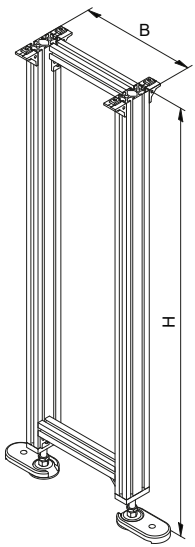
Standard heights with adjustment range

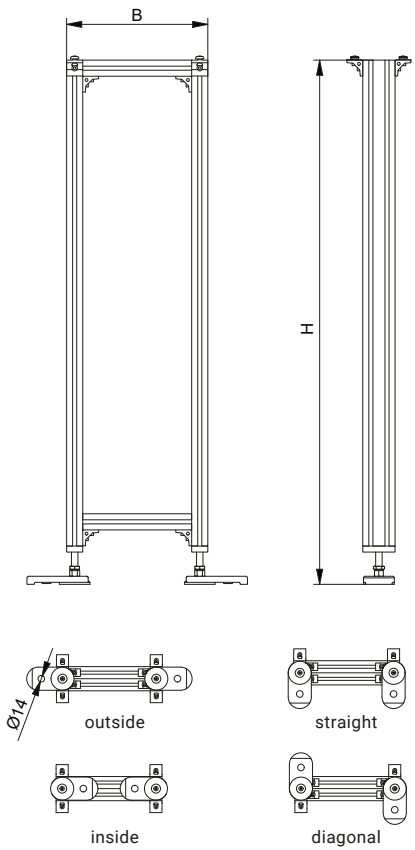
H 500 mm ± 35 mm
H 700 mm ± 35 mm
H 800 mm ± 35 mm
H 900 mm ± 35 mm
H 1000 mm ± 35 mm

H max: 1500 mm

Standard widths

B = 300-2000 mm





8



... for light loads

Stand S53.1

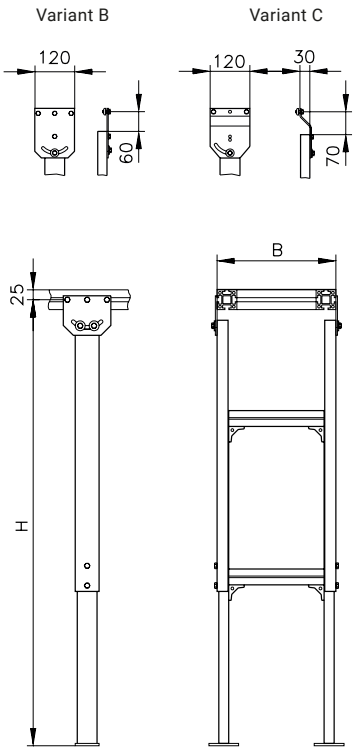
B67.06.001

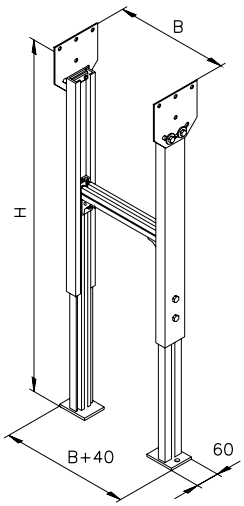
Lightweight height-adjustable stand in H design with mk 2001 profile. Can be used for belt conveyors GUF-P 2000.

Standard heights*
H = 400-1500 mm

Height adjustment range
H < 550 mm: +- 50 mm
H < 700 mm: +- 100 mm
H < 850 mm: +- 150 mm
H >= 850 mm: +- 200 mm

Standard widths
B = 300-500 mm





*from a height of 700 mm with two traverses



... for light loads

Stand S53.11

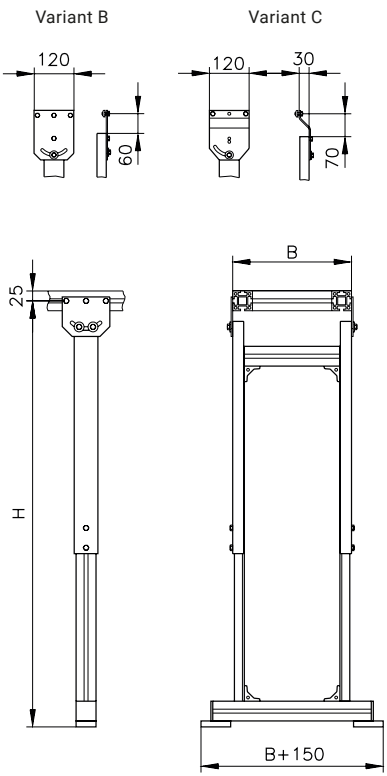
B67.06.002

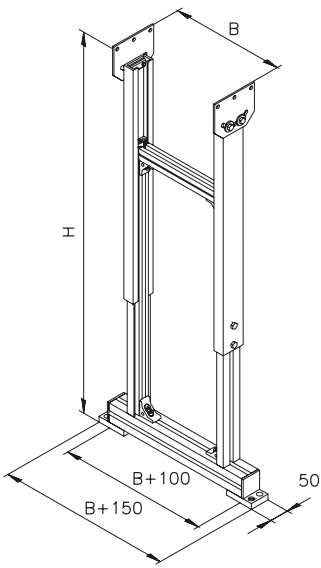
Lightweight height-adjustable stand with foot crossbar in H-design with mk 2001 profile. Can be used for GUF-P MINI and GUF-P 2000 belt conveyors. The stand is suitable for fixed casters and swivel casters.

Standard heights
H = 400-1500 mm

Height adjustment range
H < 550 mm: +- 50 mm
H < 700 mm: +- 100 mm
H < 850 mm: +- 150 mm
H >= 850 mm: +- 200 mm

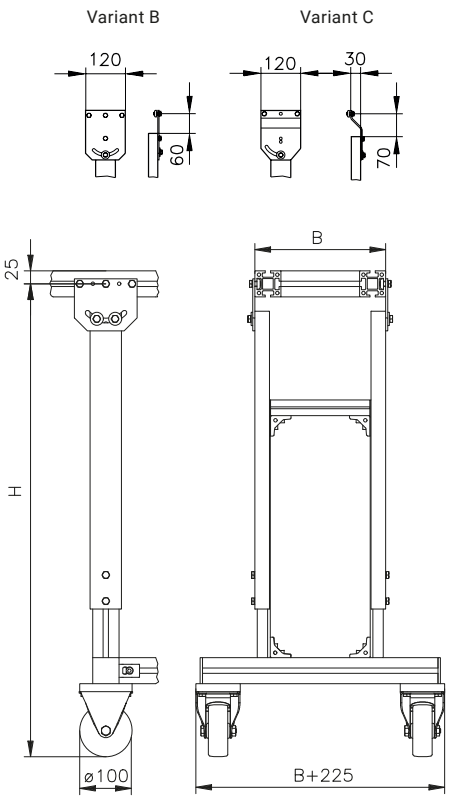
Standard widths
B = 50-300 mm







The illustration shows two B67.06.005 stands with B51.01.025 traverse.



... for light loads

Stand S53.11F – mobile

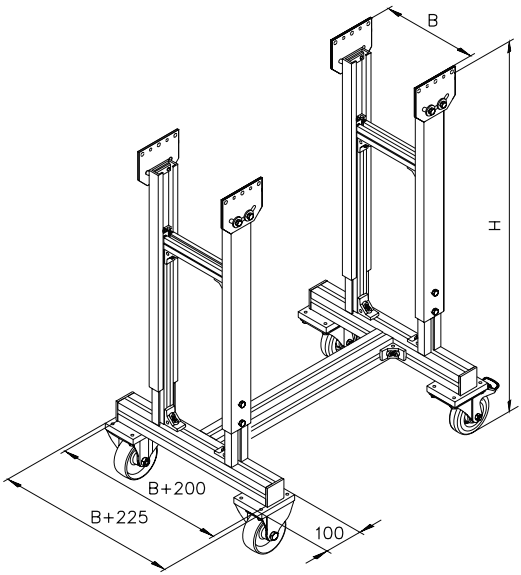
B67.06.005

Lightweight height-adjustable stand with foot crossbar in H-design with mk 2001 profile. Can be used for GUF-P MINI and GUF-P 2000 belt conveyors.

Standard heights
H = 400-1500 mm

Height adjustment range
H < 550 mm: +- 50 mm
H < 700 mm: +- 100 mm
H < 850 mm: +- 150 mm
H >= 850 mm: +- 200 mm

Standard widths
B = 100-500 mm





... for heavy loads

Stand S53.2

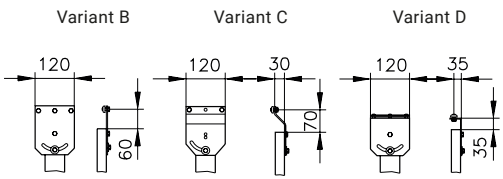
B67.06.003

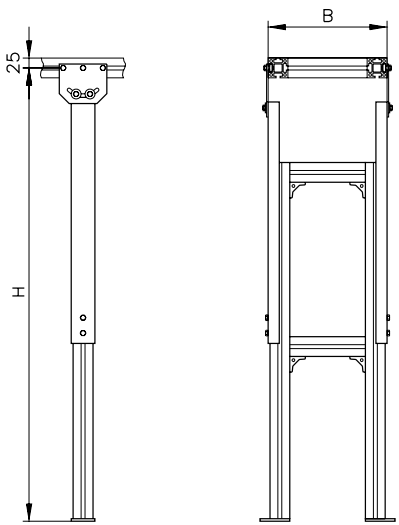
Medium-weight height-adjustable stand in H design with mk 2014 profile. Can be used for belt conveyors, modular belt conveyors and roller conveyors.

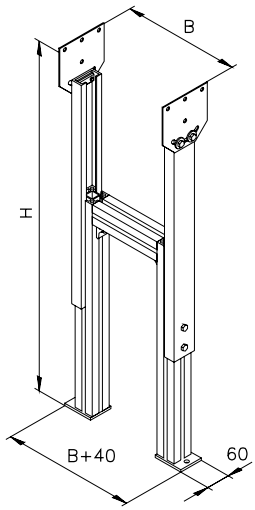
Standard heights*
H = 400-1500 mm

Height adjustment range
H < 550 mm: +- 50 mm
H < 700 mm: +- 100 mm
H < 850 mm: +- 150 mm
H >= 850 mm: +- 200 mm

Standard widths
B = 300-1500 mm







*from a height of 700 mm with two traverses



... for heavy loads

Stand S53.21

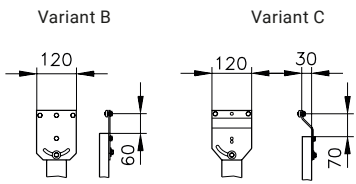
B67.06.004

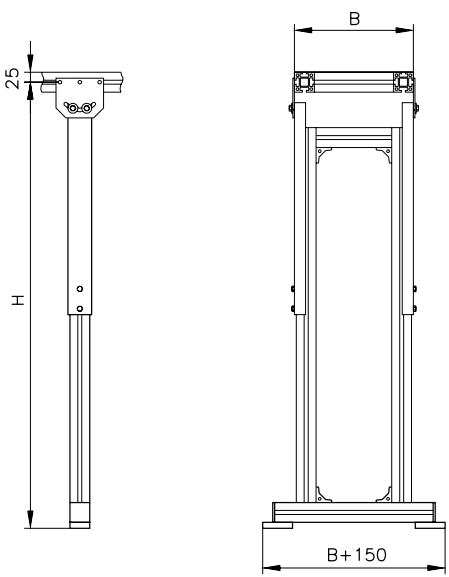
Medium-weight height-adjustable stand with base traverse in H design with mk 2014 profile. Can be used for belt conveyors and modular belt conveyors. The stand is suitable for fixed casters and swivel casters.

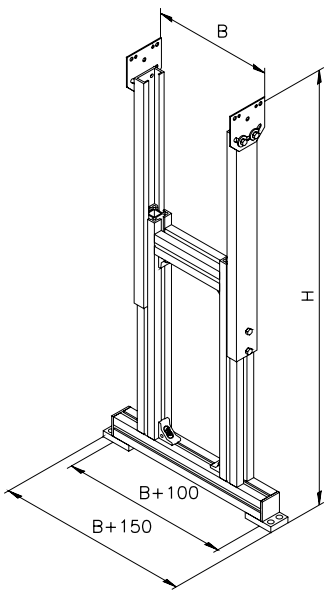
Standard heights
H = 400-1500 mm

Height adjustment range
H < 550 mm: +- 50 mm
H < 700 mm: +- 100 mm
H < 850 mm: +- 150 mm
H >= 850 mm: +- 200 mm

Standard widths
B = 200-300 mm

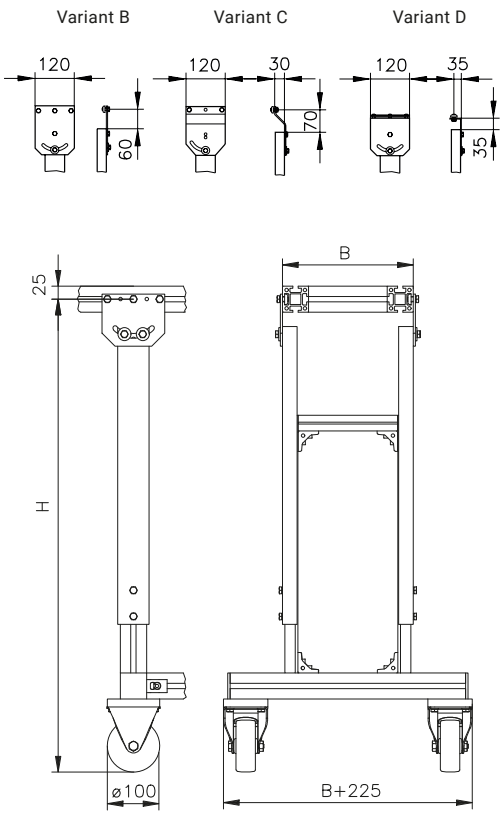








The illustration shows two B67.06.006 stands with B51.01.025 traverse.



... for heavy loads

Stand S53.21F – mobile

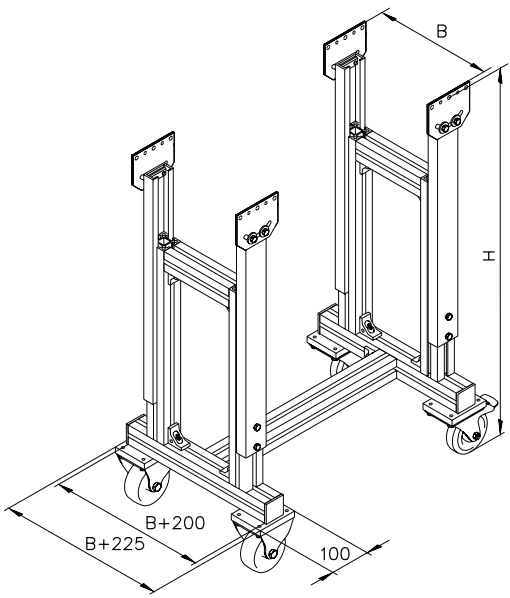
B67.06.006

Medium-weight height-adjustable stand with base traverse in mobile H design with mk 2014 profile. Can be used for belt conveyors, modular belt conveyors and roller conveyors.

Standard heights
H = 400-1500 mm

Height adjustment range
H < 550 mm: +- 50 mm
H < 700 mm: +- 100 mm
H < 850 mm: +- 150 mm
H >= 850 mm: +- 200 mm

Standard widths
B = 200-1500 mm





... for heavy loads

Stand S53.32

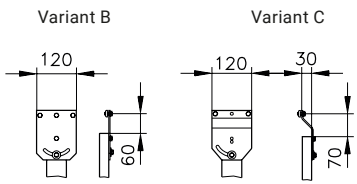
B67.06.016

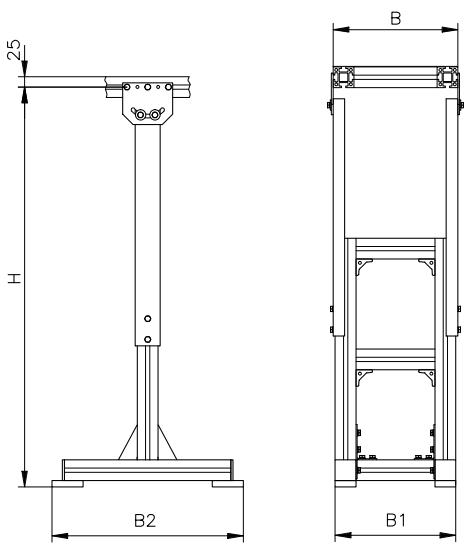
Medium-weight height-adjustable stand with base traverse in H design with mk 2014 profile. Can be used for GUF-P MINI and GUF-P 2000 belt conveyors.

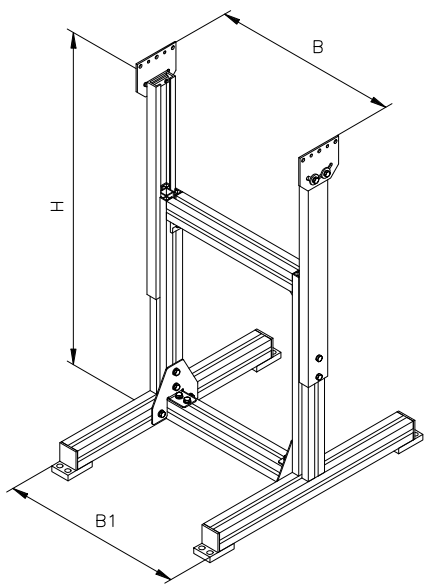
Standard heights
H = 400-1500 mm

Height adjustment range
H < 550 mm: +- 50 mm
H < 700 mm: +- 100 mm
H < 850 mm: +- 150 mm
H >= 850 mm: +- 200 mm

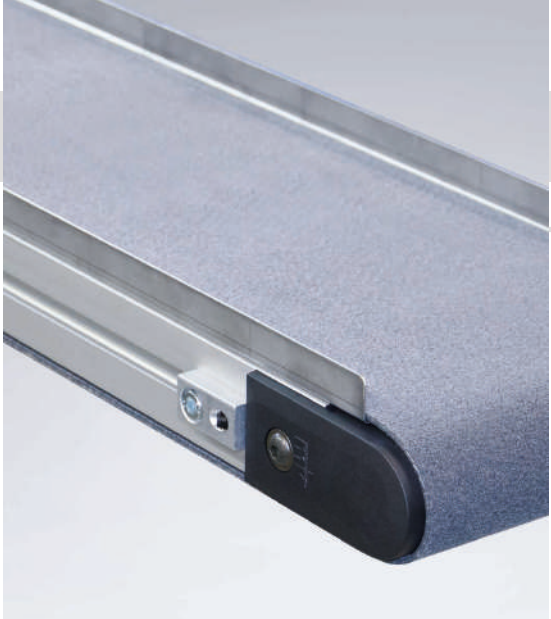
Standard widths
B = 150-500 mm
B1 = B-10
B2 = 460, 660 mm







Notes



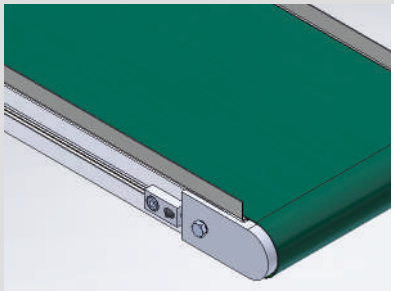
Side Rails

Fixed side rails

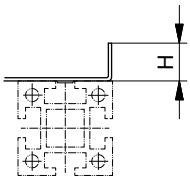
The side rail SF1.3 is a non-adjustable, rigid side rail for belt conveyors. The edges of the slide bed provide a cost-effective side rail with a selection of different heights. Due to its design, the SF cannot be removed and is always fitted on both sides as standard. The length is limited to the length of the slide bed.

Only available for belt conveyors GUF-P MINI and GUF-P 2000.

Side rail SF1.3



Height H = 25, 50 and 75 mm
(others on request)



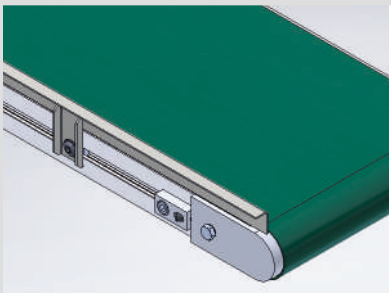
8



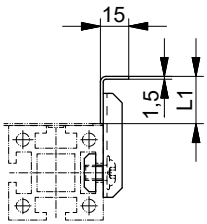
Fixed side rails

Fixed side rails are non-adjustable, rigid side rails that result in a fixed usable width. They can be removed and can be fitted at various heights on one or both sides.

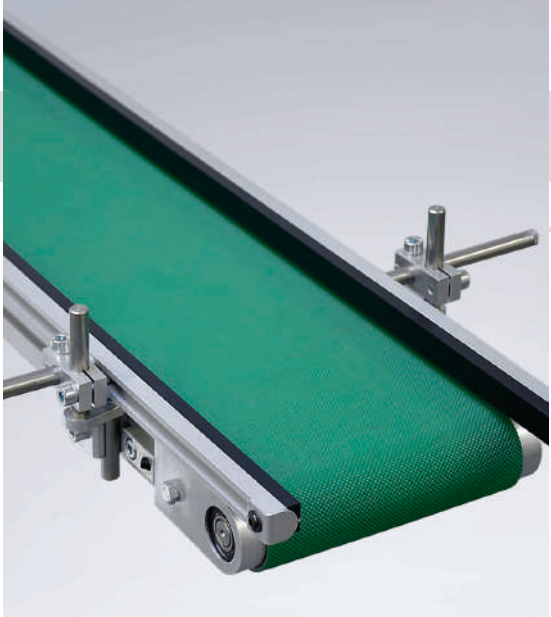
Side rail SF2.1 **B17.00.004**



Height L1 = 25, 50 and 75 mm



8



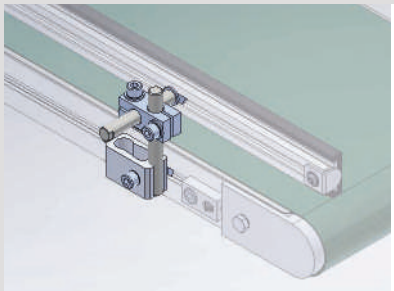
Side Rails

Adjustable side rails

The side rails for occasional adjustment allow you to vary the usable width and height. The conveyor can be quickly and easily adapted to the specific conditions and products.

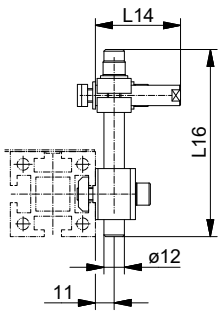
The side rails are comprised of the side rail holders and the side rail strips on the next page. The side rails can be fitted on one or both sides and can be removed.

HSF01 flush holder for SF01 side rail — B27.01.001

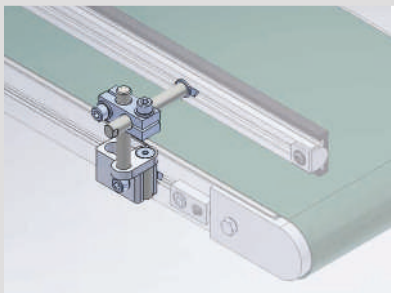


With the SF01 side rail, the HSF01 holder is arranged flush with the conveyor.

L14 = 50, 75, 100 mm
L16 = 75, 100, 150, 200 mm

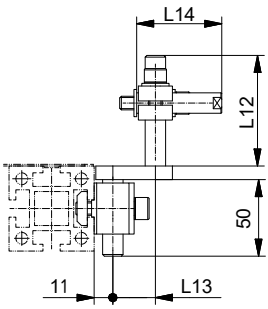


HSF02 offset holder for SF02 side rail — B27.01.002



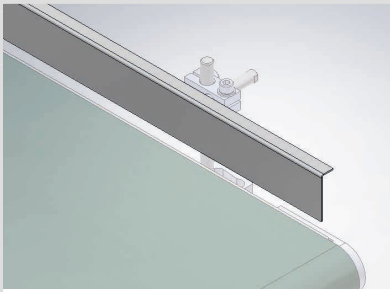
With the SF02 side rail, the HSF02 holder is offset to the side of the conveyor.

L12 = 50, 75, 100, 150 mm
L13 = 25, 50 mm
L14 = 50, 75, 100 mm

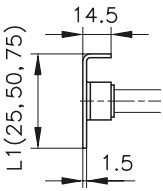


Guide rail type 01, sheet metal

B17.01.013

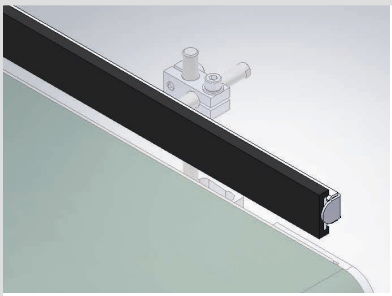


The type 01 guide rail made of sheet metal is the simplest and most cost-effective version.

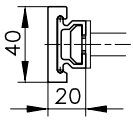


Guide rail type 22, plastic

B17.01.014

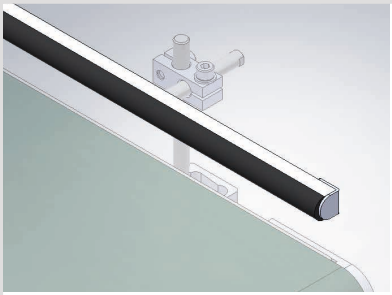


The type 22 guide rail made of plastic offers a more gentle guide for conveyed products.

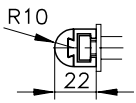


Guide rail type 23, plastic

B17.01.015



The type 23 guide rail made of plastic offers a more gentle guide for conveyed products.



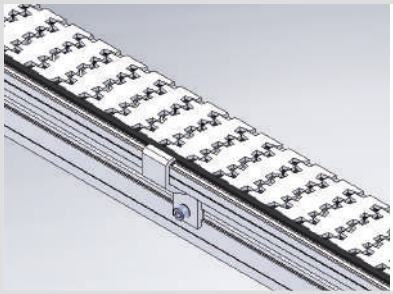


Side Rails

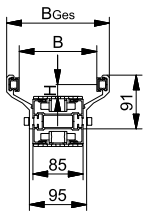
Side rails Versaflex SBF A04...A29

The side rails for the Versaflex flat top chain conveyor system are equipped with holders and profiles made from aluminium with or without polyethylene wear strips that are gentle on the product.

Side rail AGRM type 11



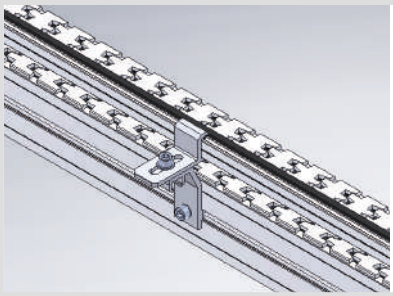
The side rail is available in different fixed heights and widths. It is quick and easy to assemble.



System	A04	A06	A08	A10	A17	A29
Available widths B [mm]*	47, 61, 71, 82, 85, 95, 111, 113, 121, 145, 195	67, 81, 91, 102, 105, 115, 131, 133, 141, 165, 215	87, 111, 135, 153, 161, 185, 235	107, 131, 155, 173, 181, 205, 255	184, 208, 232, 250, 258, 282, 332	302, 326, 350, 368, 376, 400, 450

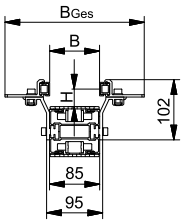
* Different widths are available by using different holders

Side rail AGRM type 2.3



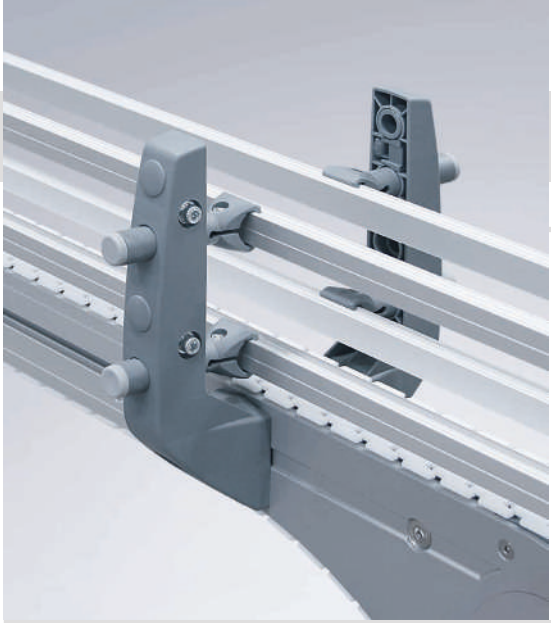
The side rail is available in a number of different fixed heights.

The width can be adapted slightly.



System	A04	A06	A08	A10	A17	A29
Available widths B [mm]*	0-99	0-119	29-139	49-159	182-252	300-370

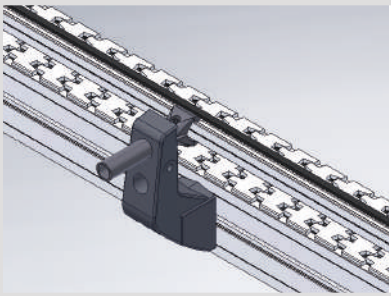
* Different widths are available by using different holders



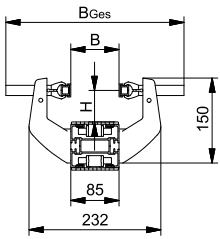
Side rails Versaflex SBF A04...A29

The side rails for occasional adjustment enable the useful width to vary. The conveyor can be quickly and easily adapted to the specific conditions and products. An option with additional height adjustment is available as an option.

Side rail AGRP type 1.0



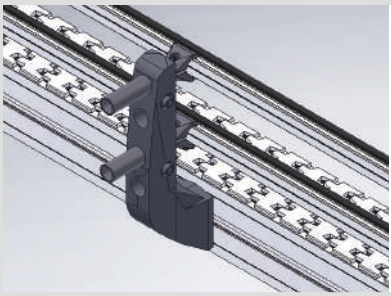
The side rail is available in a number of different fixed heights. The holder can hold up to two side rail profiles. The width can be flexibly adapted.



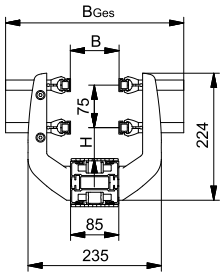
System	A04	A06	A08	A10	A17	A29
Adjustable widths B [mm]*	0-59	0-79	0-99	9-119	86-196	204-314

* Practically all widths are configurable by using different components

Side rail AGRP type 2.0

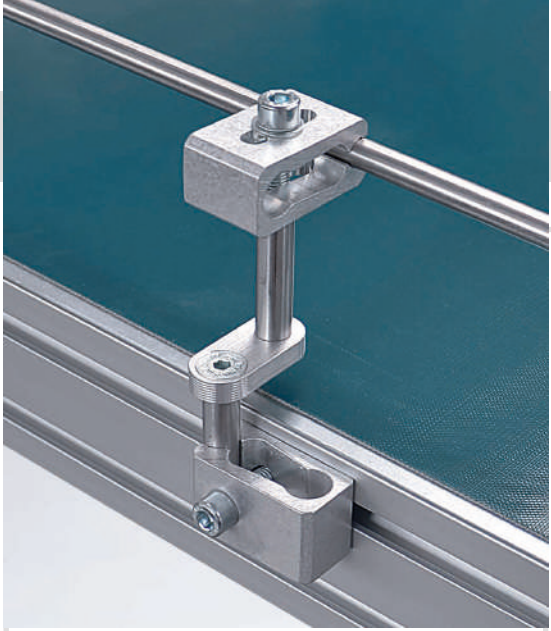


The side rail is available in a number of different fixed heights. The holder can hold up to four side rail profiles. The width can be flexibly adapted.



System	A04	A06	A08	A10	A17	A29
Adjustable widths B [mm]*	0-59	0-79	9-99	29-119	106-196	224-314

* Practically all widths are configurable by using different components

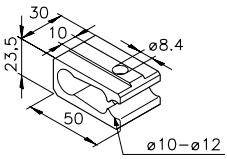


Side Rails

Individual components

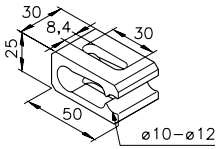
Clamps for round rods

Material: Tumbled aluminium

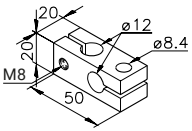


Clamp 1
30.00.0001

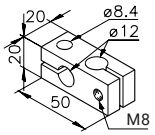
for 10 mm slot width



Clamp 2
30.00.0002



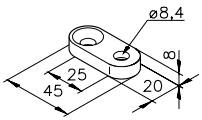
Clamp 3, right
30.00.0013ZN



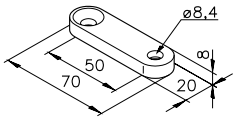
Clamp 3, left
30.00.0047ZN

Nuts for round rods

Material: Tumbled aluminium



Nut 25 mm
34.09.0003



Nut 50 mm
34.09.0004

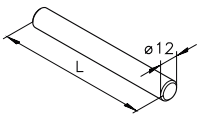
8



Individual components

Round rods

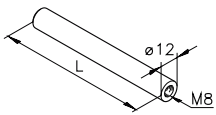
Material: Stainless steel



Rod, ø 12
7000AD. ....*

2-chamfer

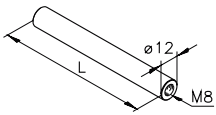
stock length 50, 75, 100, 150, 200 and 250 mm



Rod, ø 12
7000AA....*

M8 female thread, one end

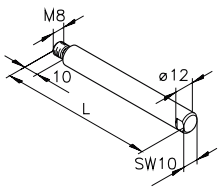
stock length 50, 75, 100, 150 and 200 mm



Rod, ø 12
7000AF. ....*

M8 female thread, both ends

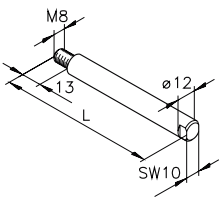
stock length 50, 75, 100 and 150 mm



Rod, ø 12
7000CC. ....*

male thread, M8, one end

stock length 50, 75 and 100 mm

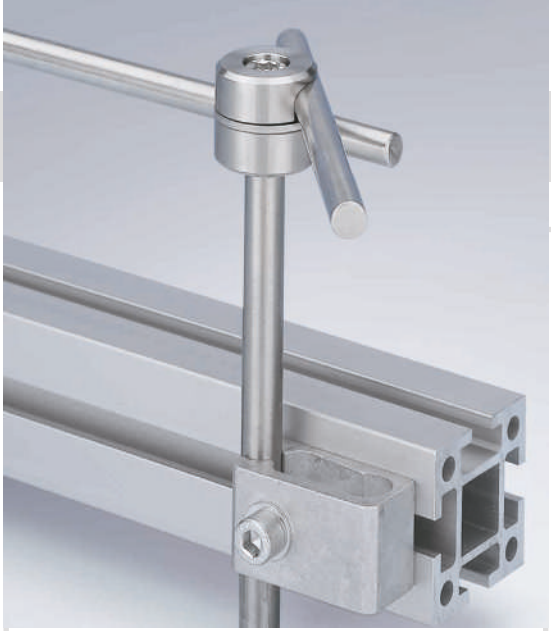


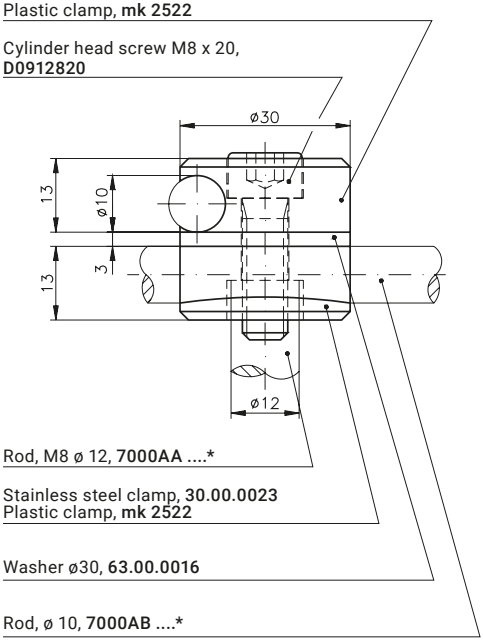
Rod, ø 12
7000CA. ....*

male thread, M8, one end

stock length 50, 75 and 100 mm

* Length in mm (4 digits)

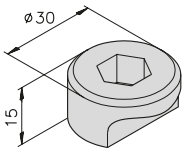




Individual components

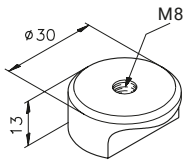
Swivel clamps

Swivel clamps allow for a wide variety of angle and height connections for the guide rods.



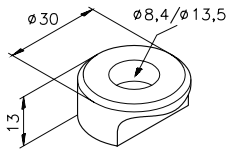
Clamp
mk 2522

PA6GF 30%,
glass fibre reinforced



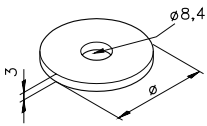
Clamp
30.00.0024

stainless steel 1.4305



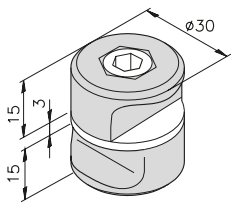
Clamp
30.00.0023

stainless steel 1.4305



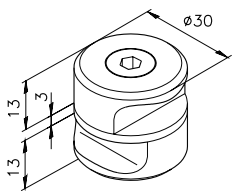
Washer ø30
63.00.0016

stainless steel 1.4305



Clamp, complete
B46.02.005

PA6GF 30%,
glass fibre reinforced



Clamp, complete
B46.02.004

stainless steel 1.4305

* Length in mm (4 digits)

Notes

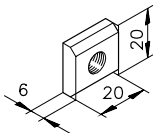


Nuts/T-nuts

Nuts for connecting accessories such as initiators, stoppers, holders, and so on, can be ordered.

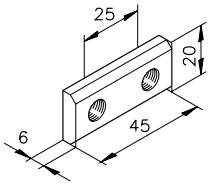
Material: Galvanised steel

Nuts for profile Slot, 10 mm



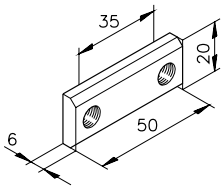
Nut 1

M6	**34.02.0008**
M8	**34.01.0001**



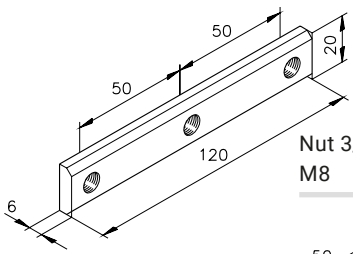
Nut 2/25

M6	**34.02.0010**
M8	**34.01.0002**



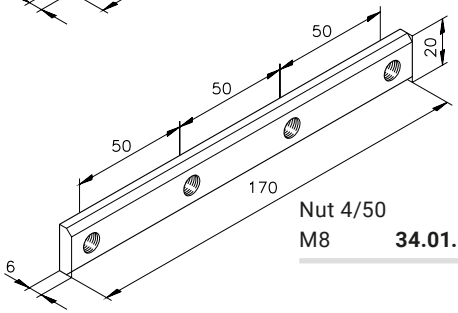
Nut 2/35

M8	**34.01.0011**



Nut 3/50

M8	**34.01.0006**

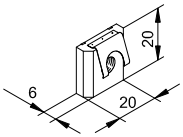


Nut 4/50

M8	**34.01.0007**

8

Nuts for profile Slot, 10 mm



Nut 1 with spring sheet

M6	**34.02.0051**
M8	**34.01.0051**

Nut 1 ESD with spring sheet

M6	**34.02.0050**
M8	**34.01.0050**

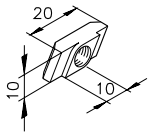


Nuts for later mounting

Nuts for later mounting can be slotted into the profile slot after the assembly has been completed. In addition, they can be used for profiles with closed slots that are only open where the connection is located. The swivel-in nuts with spring sheet also provide an ESD function and an attachment in the slot.

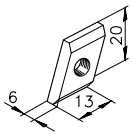
Material: Galvanised steel

Nuts for profile Slot, 10 mm



T-nut

M4	**34.07.0004**
M5	**34.07.0003**
M6	**34.07.0002**
M8	**34.06.0002**

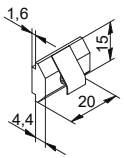


Slot nut

M6	**34.04.0003**
M8	**34.03.0002**

stainless steel

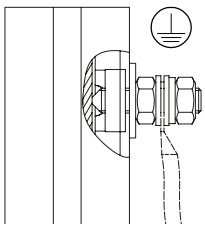
Nuts for Versaflex



Swivel-in nut 1
ESD with spring sheet

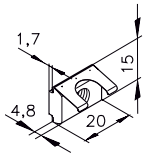
M6	**AFSD-6**
M8	**AFSD-8**

Earth terminal



Earth terminal
B02.99.151

Nuts for profile Slot, 10 mm



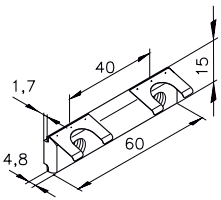
Swivel-in nut 1
ESD with spring sheet

M4	**34.16.0431**
M5	**34.16.0531**
M6	**34.16.0631**
M8	**34.16.0831**

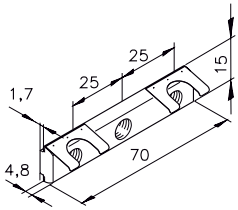
Swivel-in nut 1
ESD with spring sheet

M5	**34.16.0537**
M6	**34.16.0637**
M8	**34.16.0837**

stainless steel



Swivel-in nut 2/40
ESD with spring sheet
M8 **34.16.0834**



Swivel-in nut 3/25
ESD with spring sheet
M8 **34.16.0835**



Frequency inverter (FI) for three-phase motor

Using frequency inverters, the conveying speed of three-phase drives can be infinitely adjusted – in the range from 10 to 70 Hz (1:7) based on a nominal speed at 50 Hz.

Modern frequency inverters enable flexible and energy-efficient control of the conveyor technology. mk integrates this drive and control technology on a project-specific basis – from the design of the drive concept to the construction of the control cabinet to commissioning on site.

Depending on requirements, mk supplies complete controllers or partially wired units, for example on terminal boxes, I/O modules or with suitable bus interfaces.

Reglomats for 24 V DC motors are available on request.

Item no. incl. holder	Designation frequency inverter
B16.08.113	1 x 230 V AC 0,37 kW
B16.08.114	1 x 230 V AC 0,75 kW
B16.08.115	1 x 230 V AC 1,50 kW
B16.08.116	3 x 230 V AC 1,50 kW
B16.08.117	3 x 400 V AC 1,50 kW
B16.08.110	1 x 115 V AC 0,37 kW
B16.08.111	1 x 115 V AC 0,75 kW
B16.08.112	1 x 115 V AC 1,10 kW

- Adjustment range: 10–70 Hz (1:7)
- Degree of protection: IP66
- Analogue input: 0–10 V DC
- Digital inputs: 3 (e.g. enable, reverse direction of rotation, sensors)
- Digital output: 24 V DC / 50 mA
- Dimensions without holder (WxHxD): 237 × 161 × 180 mm
- Dimensions with holder (WxHxD): 380 × 184 × 210 mm

All frequency inverters are suitable for reverse operation and have a 5 m supply cable and a 2 m shielded motor cable.

As an alternative to the IP66 version for placement directly on the conveyor, frequency inverters are also available for installation in control cabinets.

Frequency inverter with basic functions

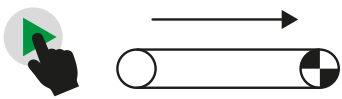
By combining the frequency inverter with an external enable switch or a component sensor (photoelectric sensor), functions and simple sequences can be realised without an additional controller. Alternatively, the frequency inverter can be configured so that a 24 V signal from a higher-level controller controls the conveyor.

Enabling switch and component sensor (photoelectric barrier/sensor) are supplied loose with fastening materials and can be positioned as needed on site.

External enabling with button

Function: The conveyor runs as long as the button is pressed.

Examples from practice: Unacceptable parts are discharged onto a separate conveyor, which is then periodically emptied.

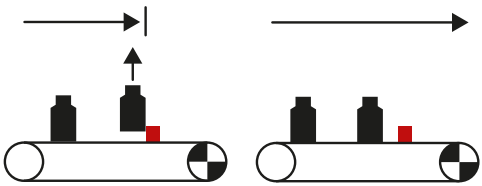


Button on top	Button on the side	Designation frequency inverter
B16.08.120	**B16.08.122**	1 x 230 V AC 0,37 kW
B16.08.121	**B16.08.123**	1 x 230 V AC 0,75 kW

Component sensor

Function: The component sensor (photoelectric barrier/sensor) stops the conveyor. Once the conveyed product has been removed, the conveyor starts again automatically.

Examples from practice: A conveyed product stops at the end of the conveyor and is removed by a robot; the conveyor then starts up again automatically.

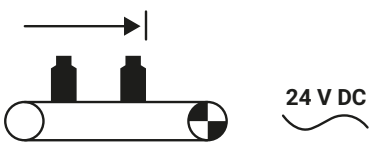


Photoelectric barrier	Photoelectric sensor	Designation frequency inverter
B16.08.124	**B16.08.126**	1 x 230 V AC 0,37 kW
B16.08.125	**B16.08.127**	1 x 230 V AC 0,75 kW

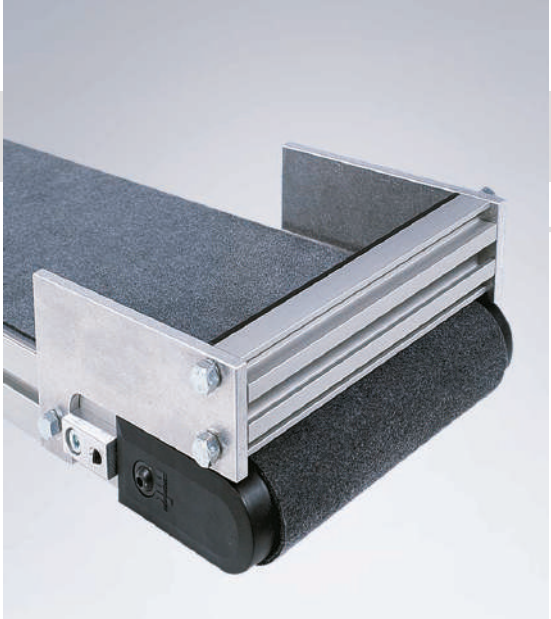
External enable via 24 V signal

Function: A 24 V signal from the customer causes the conveyor to run; without the signal, the conveyor stops.

Examples from practice: Controller of the conveyor via the PLC of a machine control system.



Article no.	Designation frequency inverter
B16.08.128	1 x 230 V AC 0,37 kW
B16.08.129	1 x 230 V AC 0,75 kW

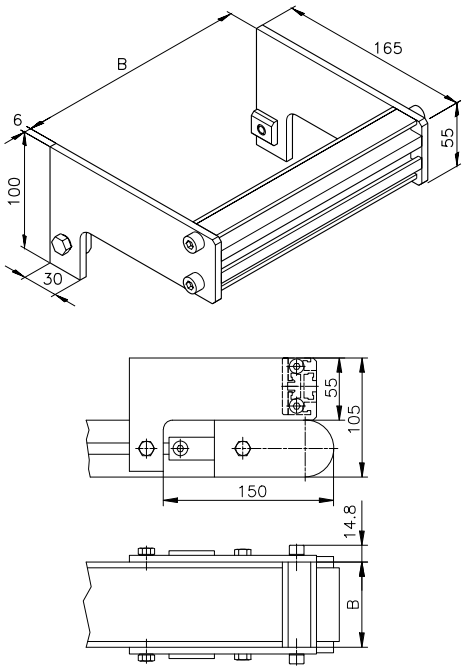


End Stops

Product on the conveyor often need to be stopped for production reasons, especially on belt conveyors and roller conveyors. mk offers its end stop for this very purpose. It is easy to mount on the conveyor frame in the t-slots on the conveyor frame profile. The end stop is equipped with a plastic strip to avoid damaging the product.

End stop GUF-P 2000
B66.00.004

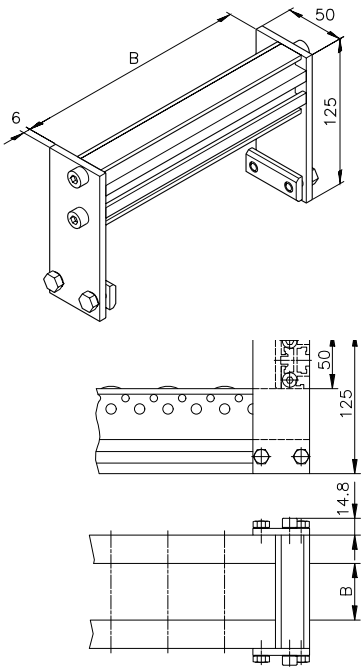
incl. fastening accessories



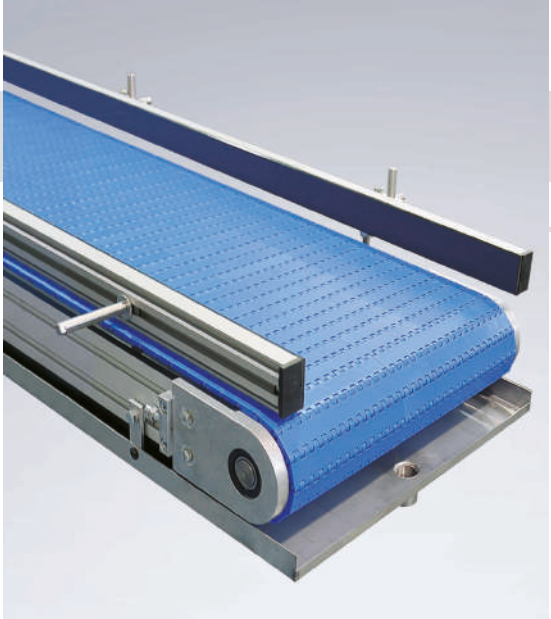
Belt conveyor GUF-P 2000

End stop RBS-P 2065/66
B66.00.003

incl. fastening accessories



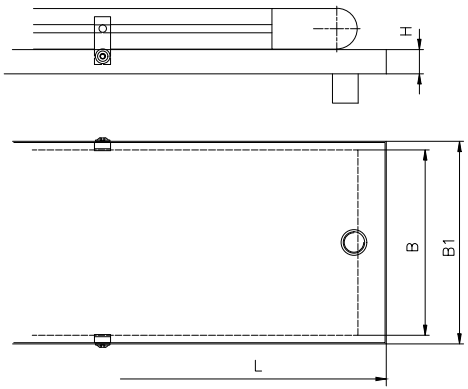
Roller conveyor RBS-P 2065



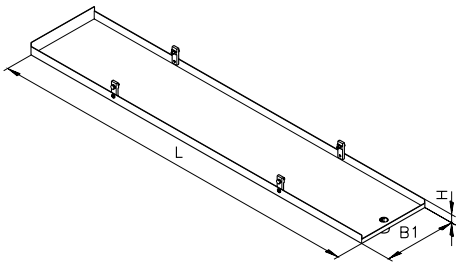
Drip Pan

The stainless steel drip pan is primarily intended for belt and modular belt conveyors, and its length, width and depth can be adapted to your particular conveyor system. It is equipped with a drain nozzle with an R3/4 thread that can be connected to the drain lines. Typical applications include conveying products that are only lightly coated in oil.

Drip pans are always designed and built to order.



Example of the simplest solution



Chapter 9 Pallet Systems







Informations Pallet Systems

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A solution for every requirement 260

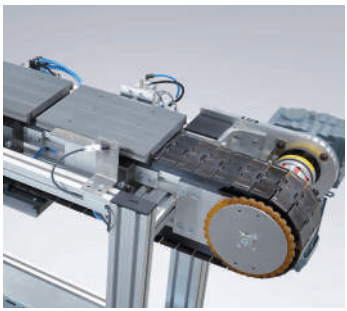
Versamove

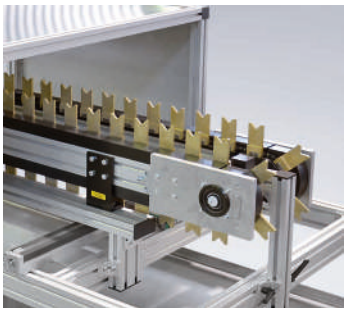
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Versamove *plus* 280
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Versaflex pallet system 292

Modular overview 294





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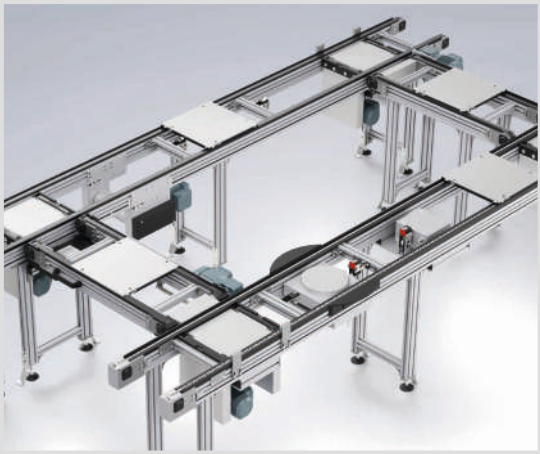
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Pallet Systems – Overview and Selection

versamove

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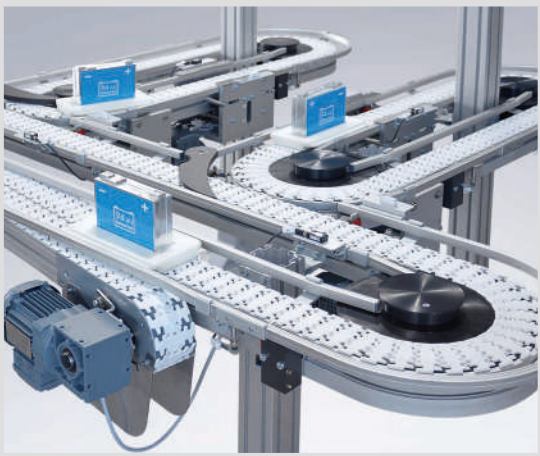
- Three versions according to weight and size: Versamove *standard*, *plus*, *ultra*
- Versamove *standard*: available as fully electric and compatible with third-party pallets
- Various conveyor types: timing belt, chain and accumulating roller conveyors
- Extensive function modules: cross conveyors, lifting units, rotating units, lift and locate units, lifts, maintenance access
- Modular system: quick to plan and expand

Versamove	Pallet sizes [mm]	Total pallet load [kg]	Total load [kg]	Speed [m/min]	Cycle operation	Accumulated operation
standard	240-480	up to 40	up to 200	up to 30	•	•
plus	400-1,000	up to 100	up to 500	up to 30	•	•
ultra	600-1,200	up to 300	up to 1,000	up to 30	•	•

9

versaflex Pallet system

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- Modular, compact pallet system based on the Versaflex flat top chain conveyor
- Ideal for tight spaces and complex track layouts
- Flexible line layouts with curves and tails
- Function modules: stoppers, switches, lift and locate units
- Easy to integrate into existing systems

Pallet sizes [mm]	Total pallet load [kg]	Total load [kg]	Speed [m/min]	Cycle operation	Accumulated operation
150/250/300	up to 10 or 30*	depending on the layout	up to 30	•	•

*up to 10 kg = variant P08 | up to 30 kg = variant P11

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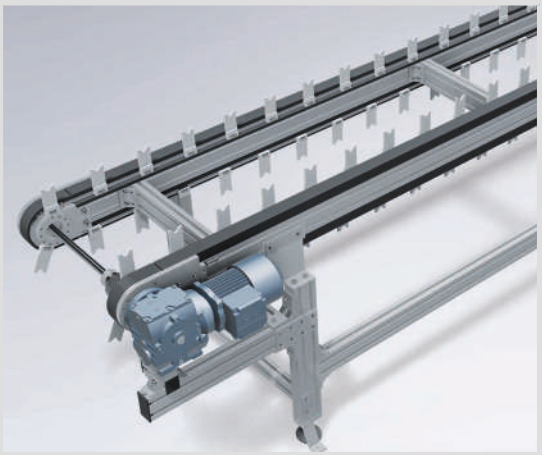
- Accumulating pallet recirculation system for interlinking and buffering
- Automatic and space-saving pallet return below the conveying plane
- Robust steel chain for demanding environments
- Available in single line, double line and multiple line versions
- Compact design for efficient layouts

Pallet sizes [mm]	Total pallet load [kg]	Speed [m/min]	Cycle operation	Accumulated operation
160/variable	up to 600	up to 15	•	•

9

TKU 2040

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- Indexing chain conveyor system for heavy load ranges
- Can be fitted with pallets or prisms for round parts
- Width adjustment allows you to transfer workpieces of different sizes
- Robust design for dirty and hot environments
- Ideal for synchronised feeding and interlinking tasks

Pallet sizes [mm]	Total pallet load [kg]	Total load [kg]	Speed [m/min]	Cycle operation	Accumulated operation
variable	up to 10 (20*)	up to 700	up to 18	•	

* When using pallet

A solution for every requirement

How to achieve the optimal pallet system

1 Information



In addition to the contents of this brochure, please refer to our website **www.mk-group.com**.

For an overview of the key requirements when designing a pallet system, see our request form.

2 Requests and advice



Get in touch with your mk technical contact at **www.mk-group.com/contact**.

Our technical field team will be happy to assist you on site or to discuss your project planning via video conference, telephone or e-mail.

3 System configuration



Based on your task and requirements, the following is determined:

- Layout
- Power supply (fully electric or semi-pneumatic)
- Conveyor types
- Function modules
- Controller

4 Order and production



We design, manufacture and assemble your system. Our qualified fitters are available to perform commissioning on site.

Prior functional tests and approvals can be carried out in full at mk. This ensures that your on-site production can get under way quickly and smoothly.

5 Your production start



Your production can start now – we are on hand both for this step and for subsequent maintenance of the system. Depending on customers' individual requirements, we offer customised maintenance contracts – no matter whether you use modules in your machine or complete systems in your production line.

Benefits of mk service

Planning and project management

- Conceptual design of a feasible process
- Definition and selection of suitable modules
- Pretesting at the quotation phase
- Failure mode and effects analysis (FMEA)
- Life cycle and cost (LCC) analysis



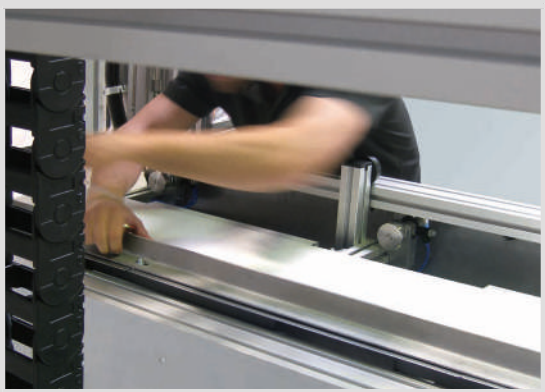
Commissioning and quality assurance

- Installation and commissioning
- Functional inspection
- Customer-specific acceptance
- On-site instruction and training
- Quality assurance

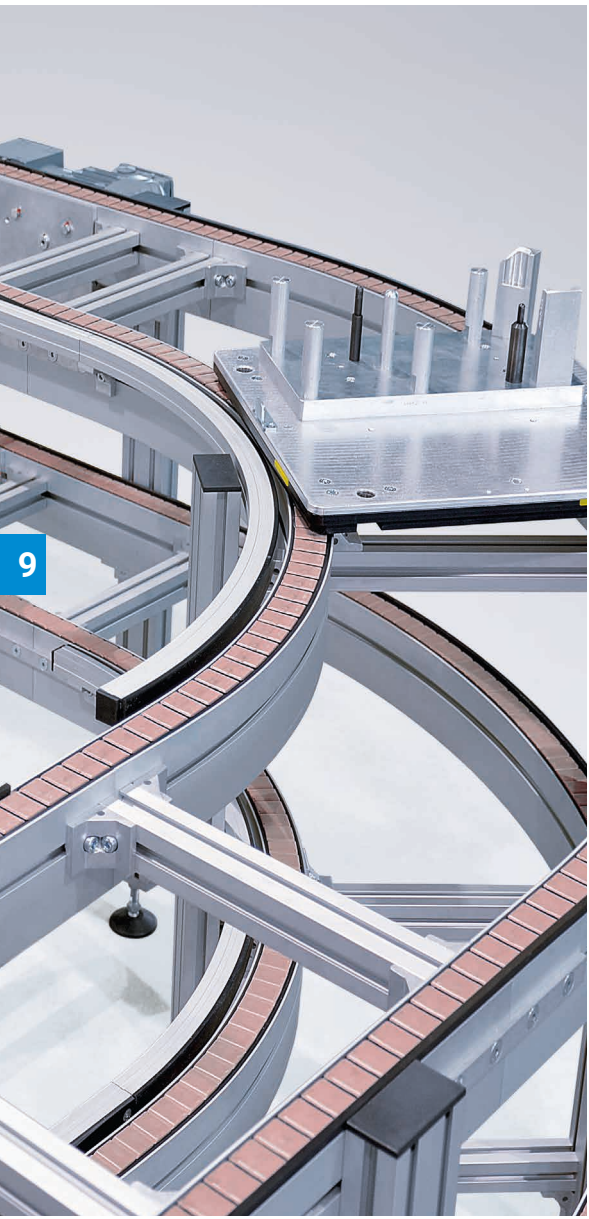


Maintenance and spare parts supply service

- Scalable availability
- Competent on-site technicians
- Use of remote diagnostics systems and preventive maintenance
- Rapid supply of spare parts with high availability



versamove System Overview



9

» For versatile use in virtually all automation applications. «

Versamove is a modular pallet transfer system that can be used in virtually all automation and material flow applications. With the three weight and size classes standard, plus and ultra, we have the right system for every application.

When selecting the drive, various conveyors are available: Timing belt conveyors enable fast cycle operation with high precision, accumulating roller chain conveyors are ideal for accumulated operation and heavier loads, while the flat top chain conveyor also allows accumulated operation and enables easy transfer using a curve.

By combining the system with function modules such as lift and transfer units, rotating units, lift and locate units, stoppers and lifts, the pallet system can be precisely configured according to customer specifications.

The Versamove *standard* is particularly versatile and is also available in a fully electric version. This version does not require compressed air and enables quieter and lower-maintenance operation.
The system is also compatible with other existing pallets on the market.

Whether it's for individual modules or complete solutions, mk always offers comprehensive service for the Versamove, including on-site control and start-up, if required.

See also: **www.mk-versamove.com**

versamove standard	versamove plus	versamove ultra
		
Total load of pallet		
up to 40 kg	up to 100 kg	up to 300 kg
Pallet sizes		
Width: 240-480 mm Length: 240-480 mm	Width: 400-800 mm Length: 400-1,000 mm	Width: 600-1,200 mm Length: 600-1,200 mm
Conveyor frame cross section		
100 x 45 mm	100 x 50 mm	135 x 60 mm
Conveyor types		
Timing belt conveyor Accumulating roller chain conveyor Flat top chain conveyors	Timing belt conveyor Chain conveyor Accumulating roller chain conveyor	Accumulating roller chain conveyor
Special features		
Fully electric version available Curved	Versatile pallet sizes	High load capacity

Properties

- ✓Up to 40 kg total weight per pallet
- ✓Pallet sizes: 240 x 240 to 480 x 480 mm
- ✓Fully electric version available

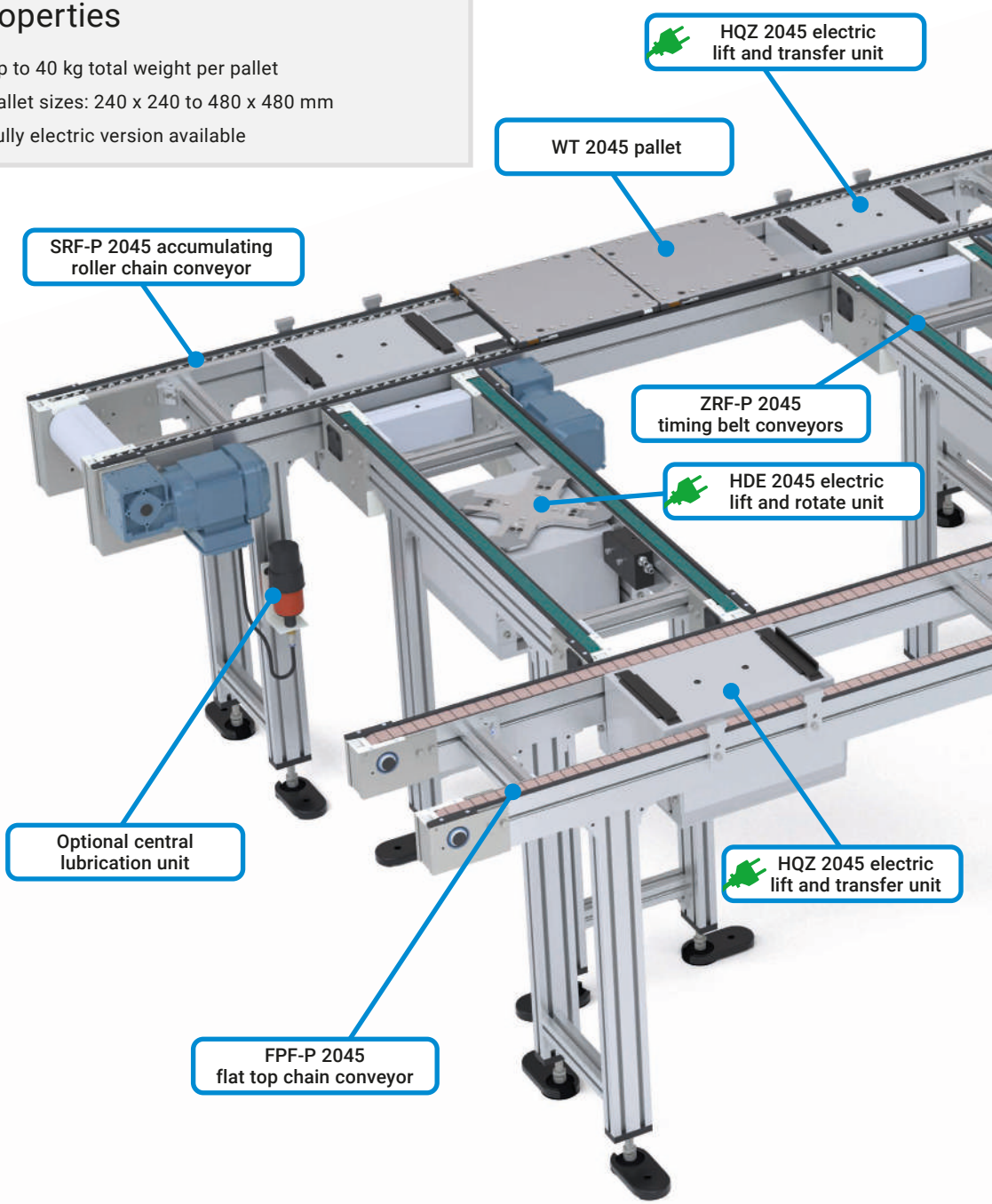
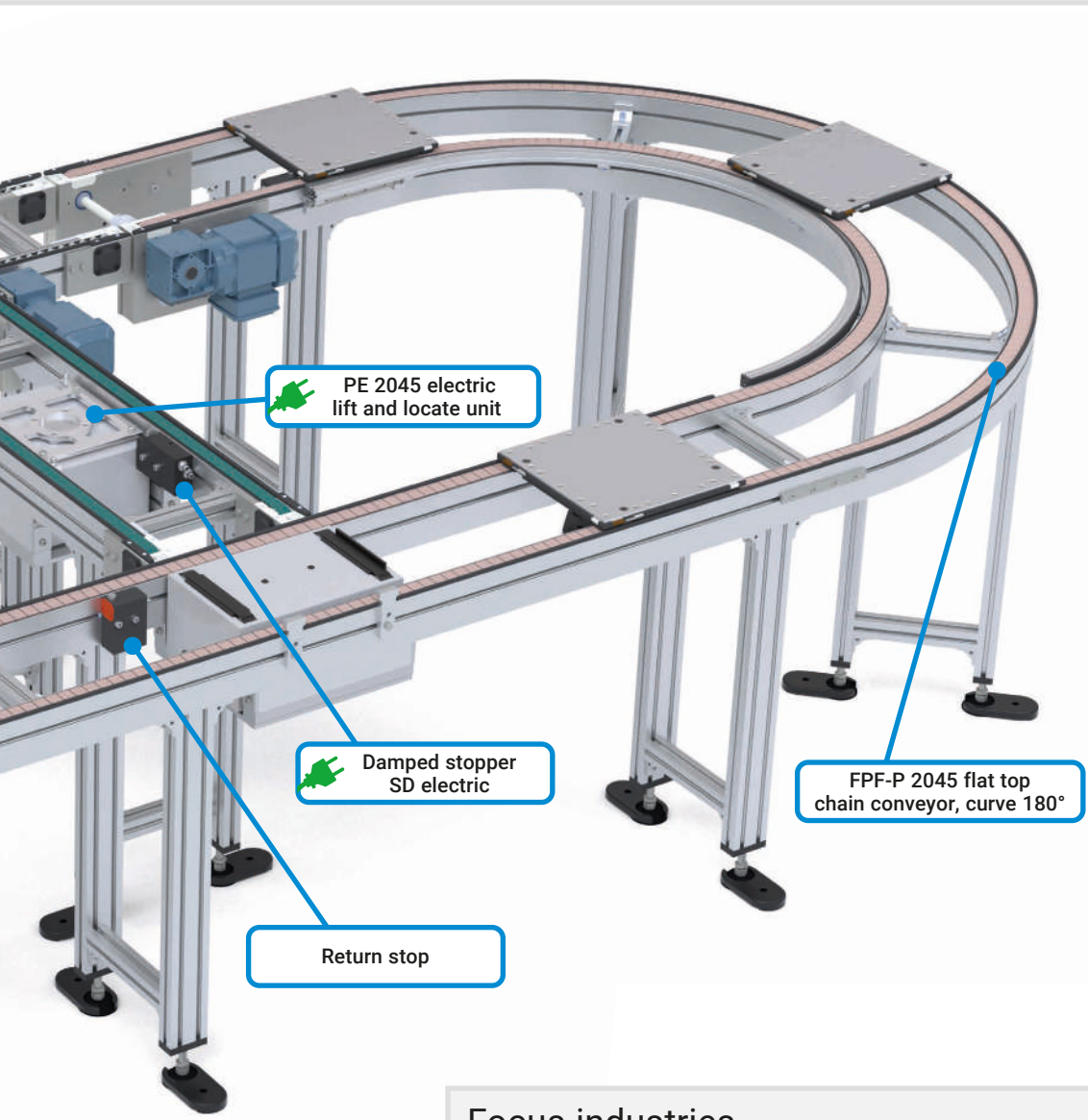
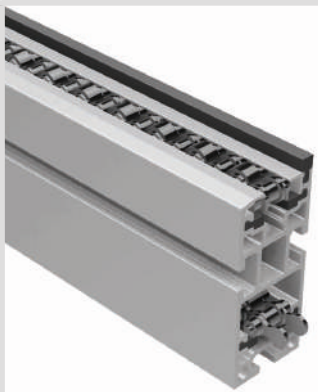
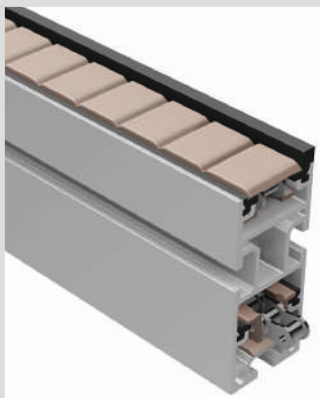


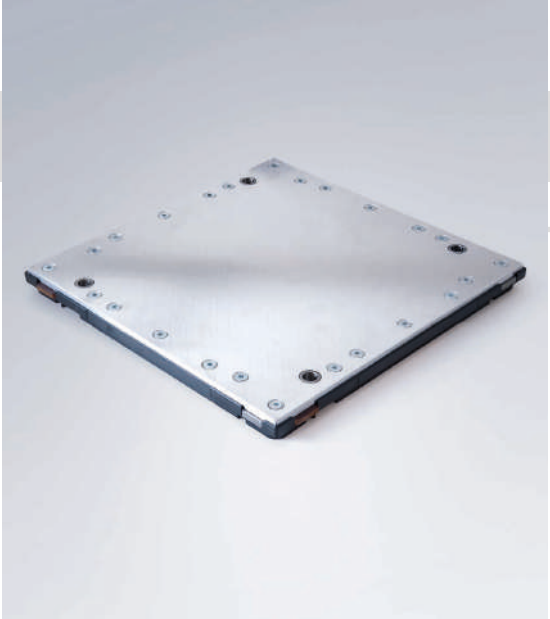
Illustration shows fully electric Versamove *standard* electric version



Focus industries

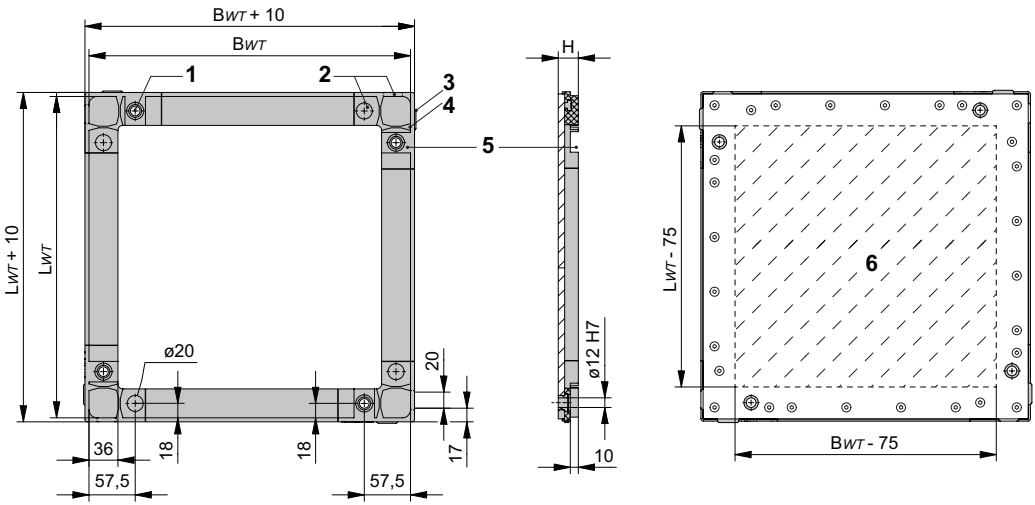
Automotive, consumer goods industry, packaging industry, electrical engineering, logistics and material flow, etc.

	Properties	Technical data
Timing belt conveyor ZRF-P 2045		→ details page 120
	■ Ideal for cycle operation ■ High speed and acceleration ■ Quieter operation than other conveyor types ■ Low-maintenance ■ Reverse operation possible ■ Optional antistatic design ■ Based on profile mk 2262	■ Length: 600-6,000 mm ■ Width: 255-655 mm ■ Total load up to 200 kg ■ Speed up to 30 m/min ■ PAR/PAZ coating
Accumulating roller chain conveyor SRF-P 2045		→ details page 140
	■ Ideal for accumulated operation ■ Optimal for heavy loads ■ Higher operating temperatures possible ■ Accumulating rollers available in steel or plastic ■ Automatic tensioning station included ■ Optional antistatic design ■ Based on profile mk 2263	■ Length: 600-6,000 mm ■ Width: 255-655 mm ■ Total load up to 500 kg ■ Speed up to 30 m/min
Flat top chain conveyors FPF-P 2045		→ details page 148
	■ Suitable for accumulated operation ■ Curved with an internal radius of 600 mm ■ 90° and 180° curves with drive ■ Automatic tensioning station included ■ Optional antistatic design ■ Based on profile mk 2261	■ Length: 500-6,000 mm ■ Width: 235-495 mm ■ Total load up to 400 kg ■ Speed up to 18 m/min



Pallets WT 2045 for Versamove *standard*

Pallets are used to transport workpieces along a production line. The workpieces are attached to the pallet in a fixed position. The pallet is constructed from a robust but lightweight aluminium support plate. This is equipped with PE wear strips, positioning sockets and integrated bumpers. Please note that the clear width of the side rail must be 1.5 mm wider than the width of the pallet to guide the pallet in the optimal way.



1 Centring bush
2 Effective area for initiator
3 Damping element (1.8 mm)
4 Guide groove
5 Separator passage
6 Free space for workpiece fixtures

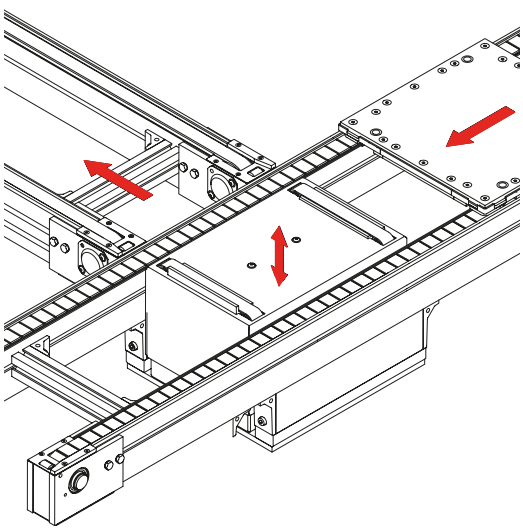
Ident. no.	Support plate [mm]	Total height H [mm]	Length L_{WT} [mm]	Width B_{WT} [mm]
B4612AE____.____	8	25	160; 200-640	160; 200-640
B4612AF____.____	10	27	160; 200-640	160; 200-640
B4612AG____.____	12	29	160; 200-640	160; 200-640

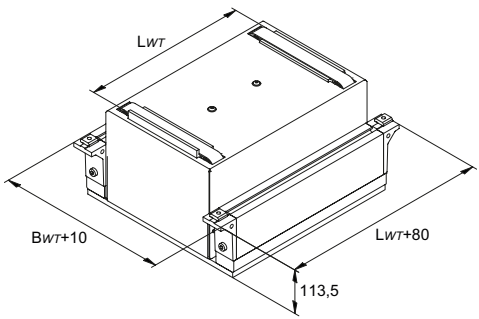
The optimum thickness of the support plate depends, among other things, on the pallet size, the load and the centre of gravity of the load and the workpiece fixture. Where customised special solutions are required, we also provide specially adapted pallets. We would be happy to advise you.



HQZ 2045 electric lift and transfer unit

The HQZ electric lift and transfer conveyor timing belt enables the efficient discharge of pallets from a longitudinal section to a transverse section, or the feeding in of pallets from a transverse section to a longitudinal section. Thanks to its low installation height, it saves space and can be integrated into a wide variety of applications. The pallet is lifted approx. 15 mm and then transferred to the cross conveyor or the pallet is taken by the cross conveyor at a height of 14 mm. An external stopper is not required. A return stop may be required for accumulating roller chain conveyors.

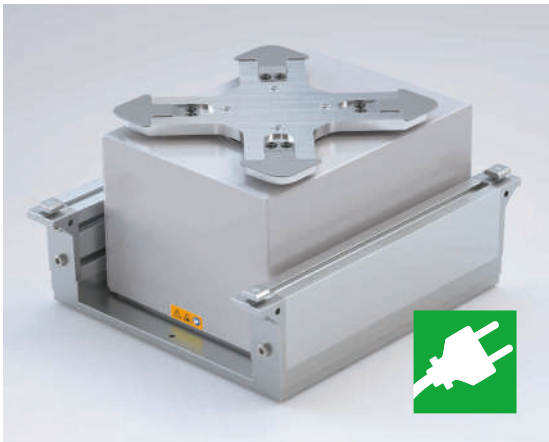




Fully electric
lift and transfer unit
HQZ 2045 electric

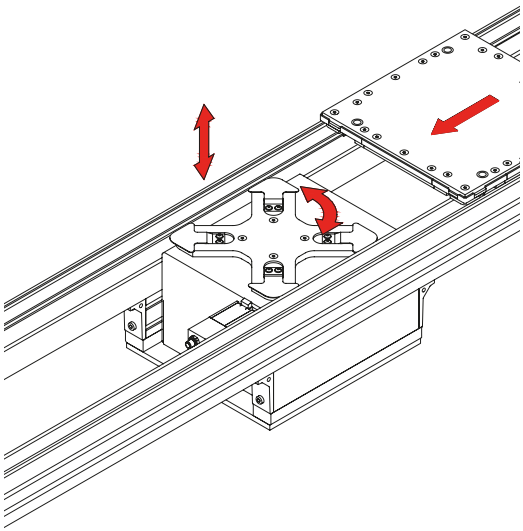
Ident. no.	Designation	Width B_{WT} [mm]	Length L_{WT} [mm]
B47.00.000	HQZ 2045 electric	320	320
B47.00.001	HQZ 2045 electric	400	400

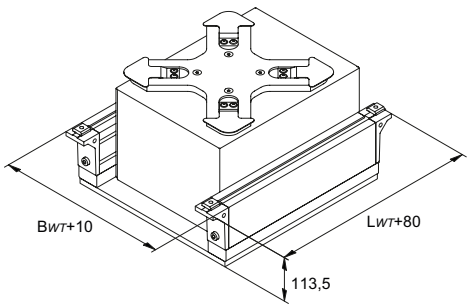
Lift and transfer for other pallet sizes are available on request.



HDE 2045 electric lift and rotate unit

The HDE electric lift and rotate unit enables the horizontal rotation of pallets. The pallets can be rotated in 90° increments. The unit exhibitsa low installation height. An external stopper is required.

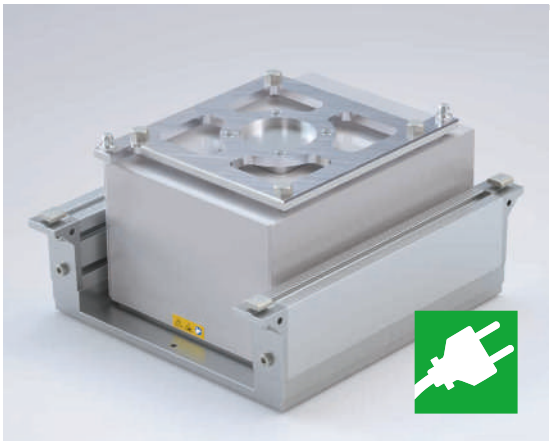




Fully electric
lift and rotate unit
HDE 2045 electric

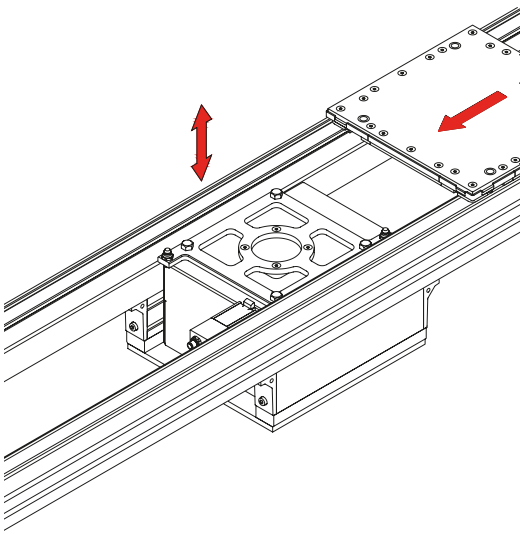
Ident. no.	Designation	Width B_{WT} [mm]	Length L_{WT} [mm]
B47.02.000	HDE 2045 electric	320	320
B47.02.001	HDE 2045 electric	400	400

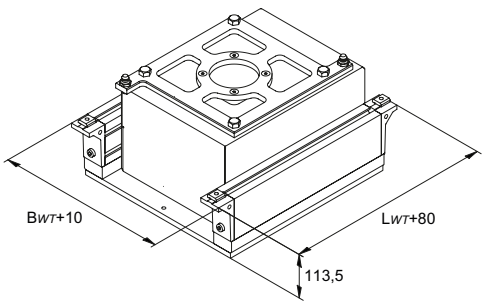
Lift and rotate for other pallet sizes are available on request.



PE 2045 electric lift and locate unit

The PE electric lift and locate unit enables the precise stopping and positioning of pallets in a processing station, even when there is a high demand for repeat accuracy. It positions the mk pallet electrically in the X, Y and Z directions using centring pins (X, Y) and inductive sensor scanning (Z) with a repeat accuracy of ± 0.2 mm. The lift of the conveying medium is approx. 5 mm. The unit exhibitsa low installation height. An external stopper is required.

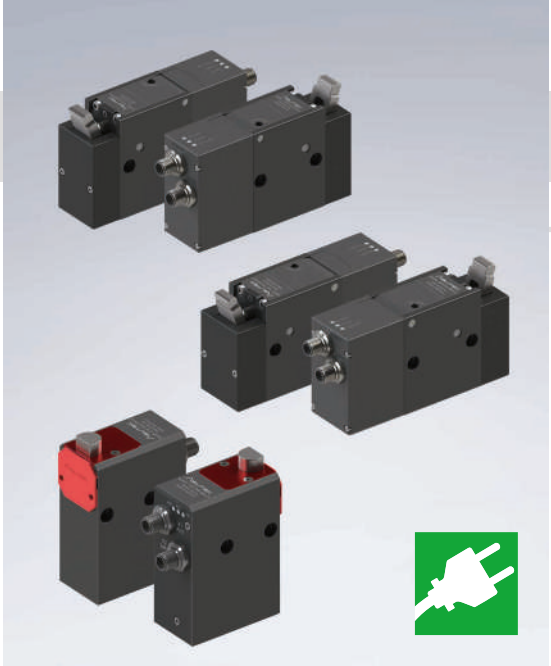




Fully electric
lift and locate unit
PE 2045 electric

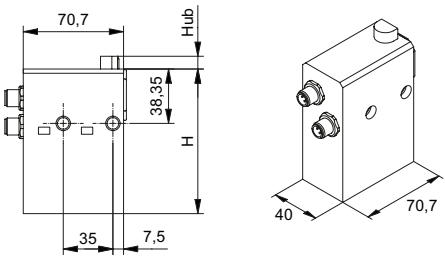
Ident. no.	Designation	Width B_{WT} [mm]	Length L_{WT} [mm]
B47.01.000	PE 2045 electric	320	320
B47.01.001	PE 2045 electric	400	400

Lift and locate for other pallet sizes are available on request.

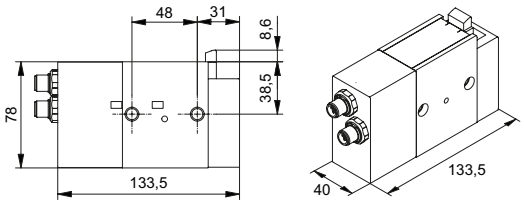


Stopper undamped SU electric/stopper damped SD electric

Stoppers are used to stop or separate the pallets. The stopper versions are selected based on the conveyor weight and conveyor speed. SD damped stoppers and SU undamped stoppers can be connected in the centre or on the sides.



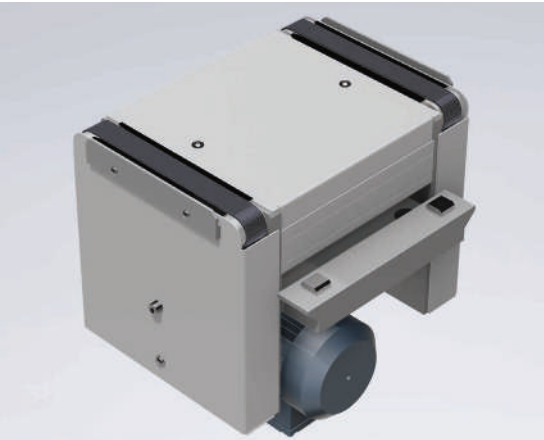
SU stopper
SU electric 150



SD stopper
SD electric 50

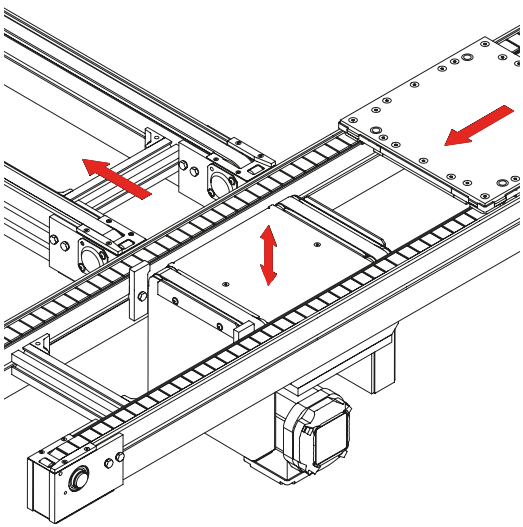
SD electric 100

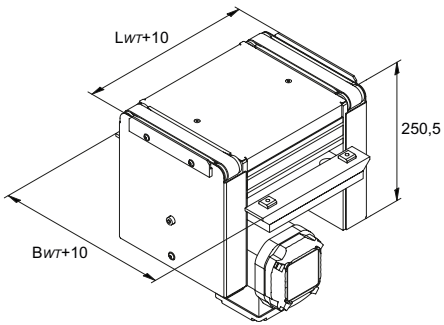
Ident. no.	Designation	Stroke [mm]	V=6 m/min [kg]	V=9 m/min [kg]	V=12 m/min [kg]	V=18 m/min [kg]
K313012151	SU electric 150	9	0-150	0-105	0-75	0-50
K313022051	SD electric 50	9	1-50	1-35	1-30	1-18
K313022101	SD electric 100	9	3-100	3-70	3-60	3-50



HQZ 2045 lift and transfer unit

The HQZ lift and transfer conveyor timing belt enables the efficient discharge of pallets from a longitudinal section to a transverse section, or the feeding in of pallets from a transverse section to a longitudinal section. Thanks to its low installation height, it saves space and can be integrated into a wide variety of applications. The pneumatic lifting movement with a stroke of 20 mm is precisely guided via linear roller bearings and guide rods, which ensures high stability and reliability. A manual tensioning station is already integrated.



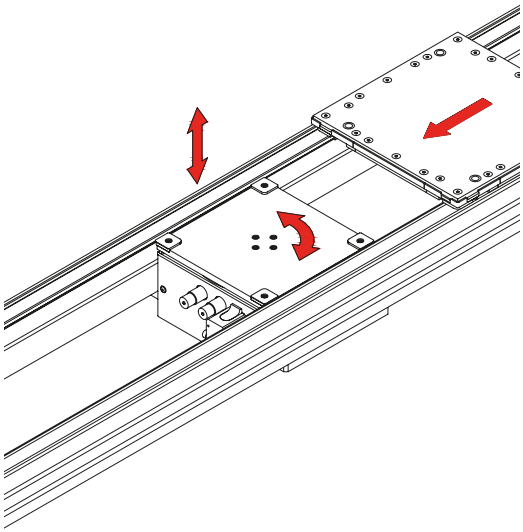


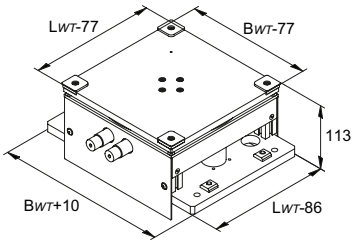
Lift and transfer unit
HQZ 2045



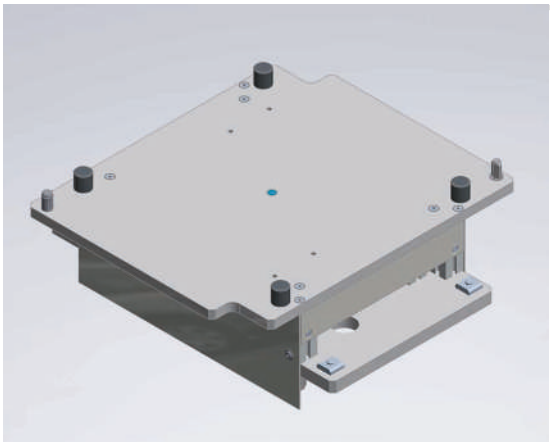
HDE 2045 lift and rotate unit

The HDE lift and rotate unit enables the horizontal rotation of pallets. The pallets can be rotated within a fixed angle between 0° and 180°. The unit is characterised by its low height and allows individual rotation speeds. Both the lifting and rotating movements are controlled pneumatically, with linear roller bearings and guide rods ensuring precise guidance. An external stopper is required.



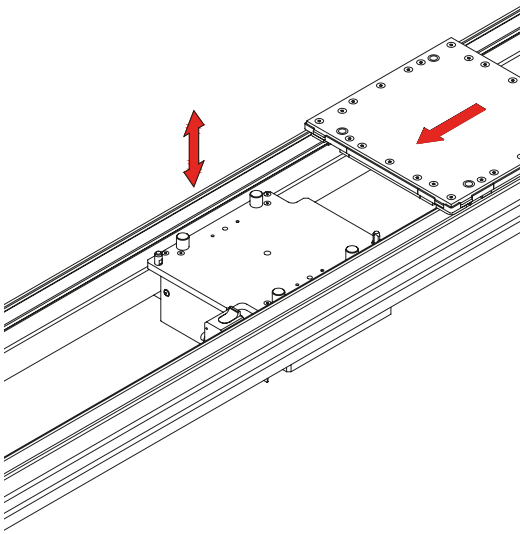


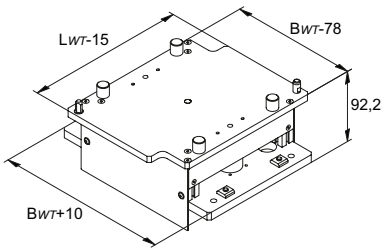
Lift and rotate unit
HDE 2045



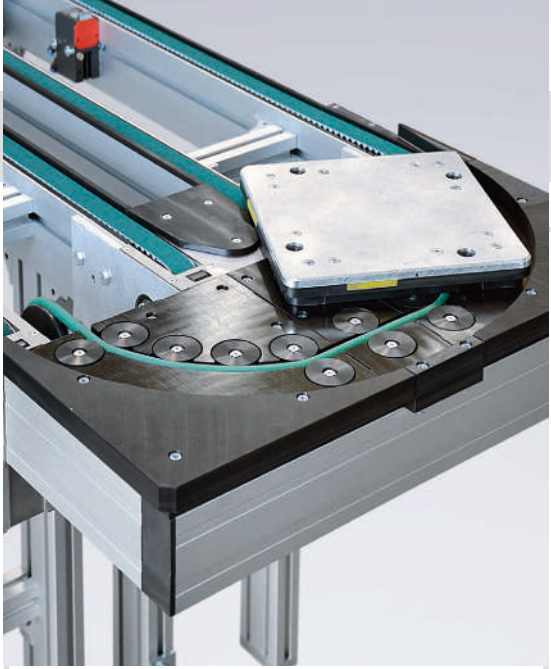
PE 2045 lift and locate unit

The PE lift and locate unit enables the precise stopping and positioning of pallets in a processing station, even when there is a high demand for repeat accuracy. It positions the pallet pneumatically in the X, Y and Z directions using positioning pins. By means of inductive position detection, the unit achieves a repeat accuracy of ± 0.2 mm with a cylinder stroke of 30 mm. An external stopper is required.



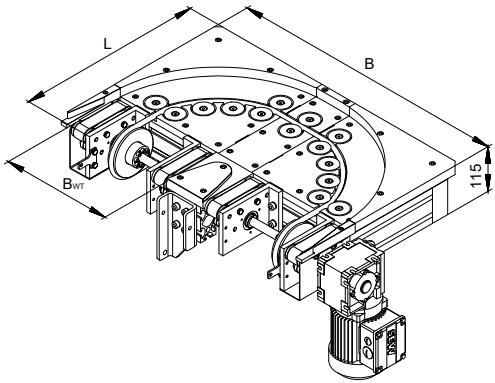


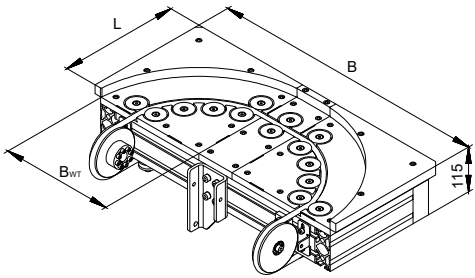
Lift and locate unit
PE 2045



Curve module round belt KER 2045

The KER* compact curve unit round belt is a space-saving module that enables turns of 90° and 180° in the smallest of spaces and is available for pallet sizes 240, 320 and 400 mm. The pallets are moved along the curve track by round belts. This allows the workpieces to maintain their orientation as they traverse the curve. The curved module can be used in place of lifting-traversing units and lifting-rotating units for transfer onto a parallel conveying path. The curved module is available with its own drive, or it can be operated through the adjoining section.





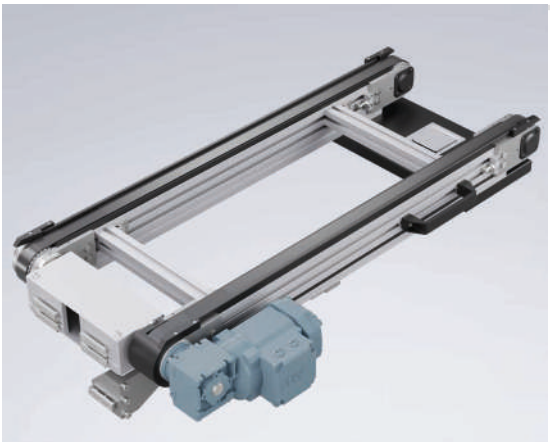
KER 2045 with drive

Width BWT	240 mm		320 mm		400 mm	
Conveyor angle	90°	180°	90°	180°	90°	180°
Length L [mm]	406		486		566	
Width B [mm]	406	625	486	785	566	945

KER 2045 without drive

Width BWT	240 mm		320 mm		400 mm	
Conveyor angle	90°	180°	90°	180°	90°	180°
Length L [mm]	276		356		436	
Width B [mm]	276	625	356	785	436	945

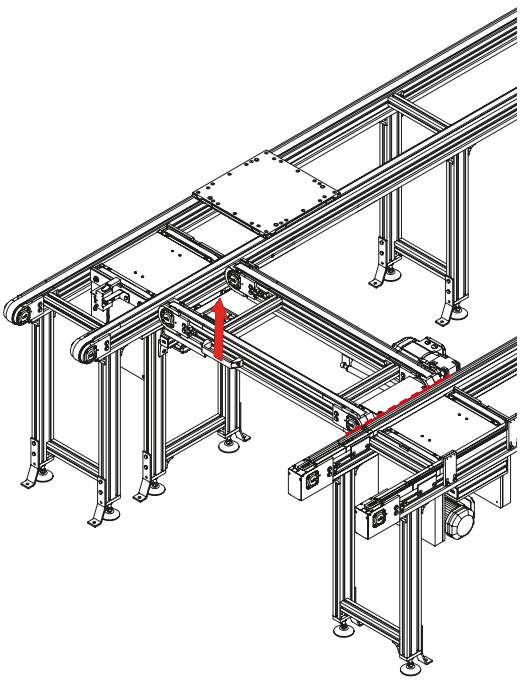
* not in stock

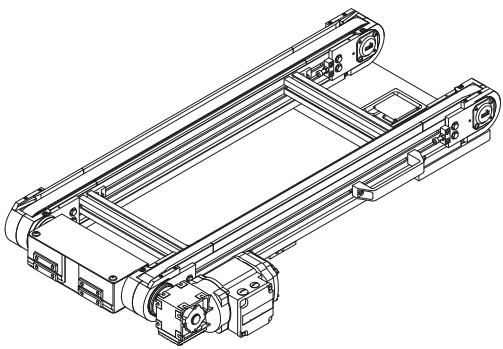


Maintenance access WTZ 2045

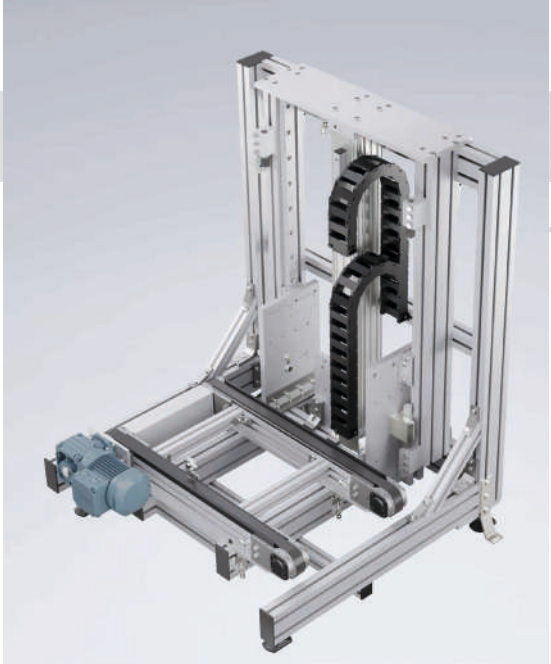
The WTZ maintenance access is a standard timing belt conveyor with AC or AF drive that can be opened out. The maintenance access is used to make the interior of the circulation system accessible and thus to be able to carry out maintenance work safely and easily. The integrated pneumatic spring allows ergonomic handling and prevents the conveyor from falling back. In the closed position, the conveyor can be secured mechanically with a catch or electrically with a solenoid latch.

Maintenance access can be integrated into the longitudinal or transverse transfer and can also be used with a chain conveyor.



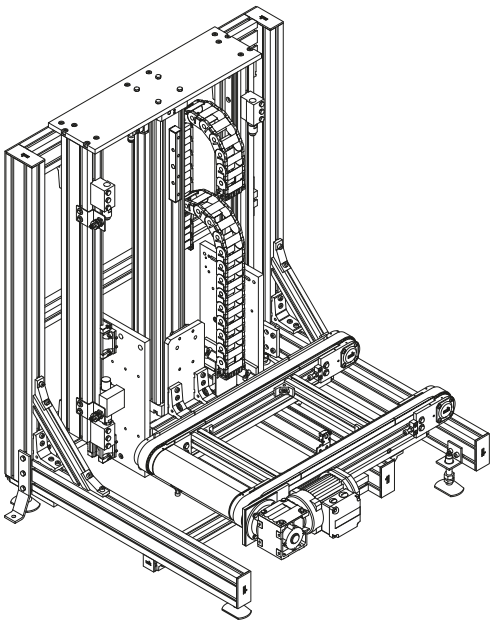


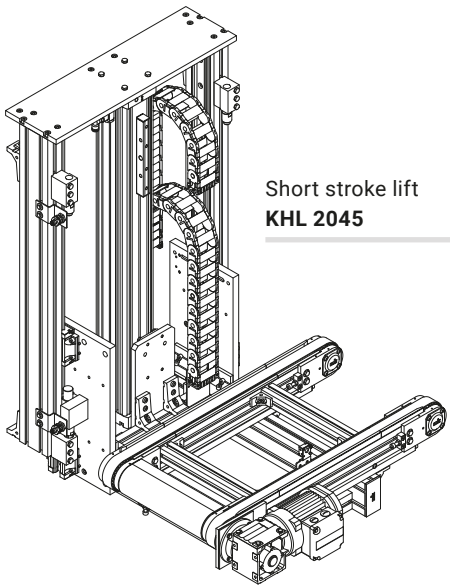
Maintenance access
WTZ 2045



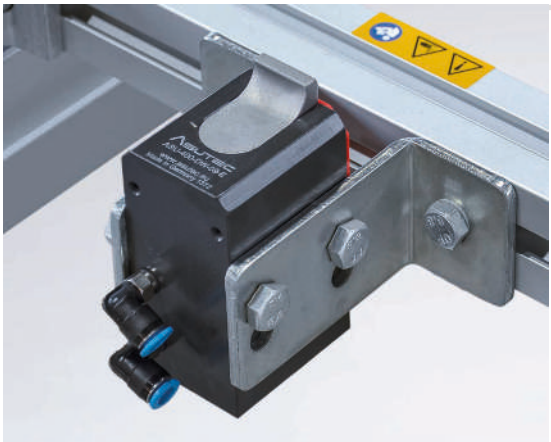
KHL 2045 short stroke lift

The KHL short-stroke lift enables precise access to two different transport heights by means of pneumatic raising and lowering. The lift speed can be continuously adjusted. The lift can be equipped with all conveyor types.





Short stroke lift
KHL 2045



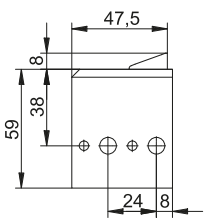
SU – stopper undamped

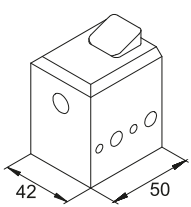
Stoppers are used to stop or separate the pallets. The stopper options are selected based on the conveyor weight and conveyor speed. Customers can choose between a variety of stroke heights based on their requirements. Damped or undamped stoppers can be connected in the centre or on the sides.

They can be requested through inductive (I) or electric (E) sensors.

Return stop

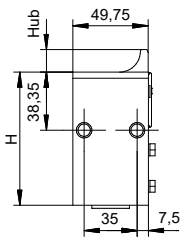
The return stop is used in combination with a stopper in transfer systems with low belt friction and prevents pallets from recoiling/rebounding while stopping. The return stop is activated through a spring.

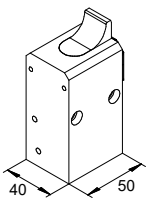




Return Stop
K503030101

Lowering stroke: 8 mm

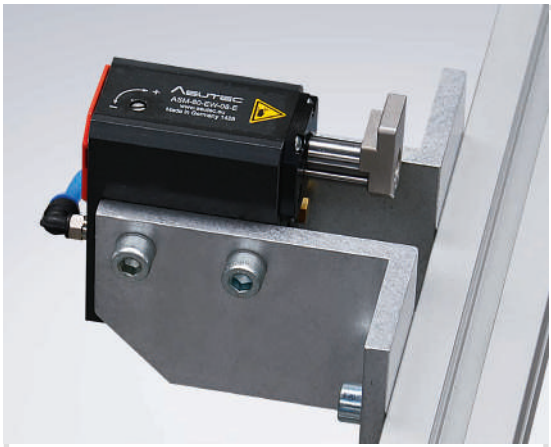




SU 400

SA=single-acting (locked in a depressurised state)

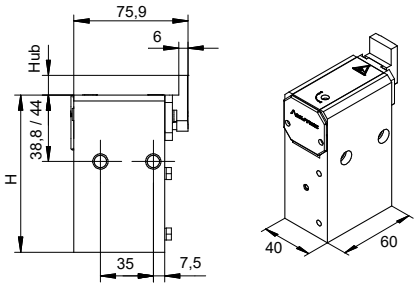
Ident. no.	Request	Stroke (mm)	V=6 m/min [kg]	V=9 m/min [kg]	V=12 m/min [kg]	V=18 m/min [kg]
K503011401	E	9	400	300	250	200
K503011405	I	9	400	300	250	200
K503011404	-	9	400	300	250	200
K503011406	E	15	400	300	250	200
K503011402	-	15	400	300	250	200
K503012401	E	9	400	300	250	200
K503012404	-	9	400	300	250	200
K503012405	I	9	400	300	250	200



SD – stopper damped

Damped stopping allows you to gently slow down the first pallet. Damping prevents the workpiece from slipping in a certain location. Electrical or inductive sensors on the stoppers are optional. A minimum mass of 3 kg is required to ensure proper functioning. Damped or undamped stoppers can be connected in the centre or on the sides.

They can be requested through inductive (I) or electric (E) sensors.



SD 60

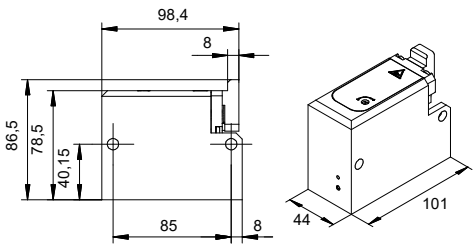
SA=single-acting (locked in a depressurised state)

Ident. no.	Request	Stroke (mm)	V=6 m/min [kg]	V=12 m/min [kg]	V=24 m/min [kg]	V=30 m/min [kg]
K503021061	E	8	3-60	3-35	3-24	3-18
K503021063	-	8	3-60	3-35	3-24	3-18
K503021064	I	8	3-60	3-35	3-24	3-18

DA=double-acting (maintains the last position reached)

Ident. no.	Request	Stroke (mm)	V=6 m/min [kg]	V=12 m/min [kg]	V=24 m/min [kg]	V=30 m/min [kg]
K503022061	E	8	3-60	3-35	3-24	3-18
K503022063	-	9	3-60	3-35	3-24	3-18
K503022064	I	10	3-60	3-35	3-24	3-18

All specifications apply for a friction coefficient of μ = 0.07
Stoppers for heavier loads available on request



SD 100

SA=single-acting (locked in a depressurised state)

Ident. no.	Request	Stroke (mm)	V=6 m/min [kg]	V=12 m/min [kg]	V=24 m/min [kg]	V=30 m/min [kg]
K503021101	-	8	3-100	3-60	3-40	3-30
K503021102	I	8	3-100	3-60	3-40	3-30
K503021103	E	8	3-100	3-60	3-40	3-30

DA=double-acting (maintains the last position reached)

Ident. no.	Request	Stroke (mm)	V=6 m/min [kg]	V=12 m/min [kg]	V=24 m/min [kg]	V=30 m/min [kg]
K503022101	-	8	3-100	3-60	3-40	3-30
K503022102	I	8	3-100	3-60	3-40	3-30

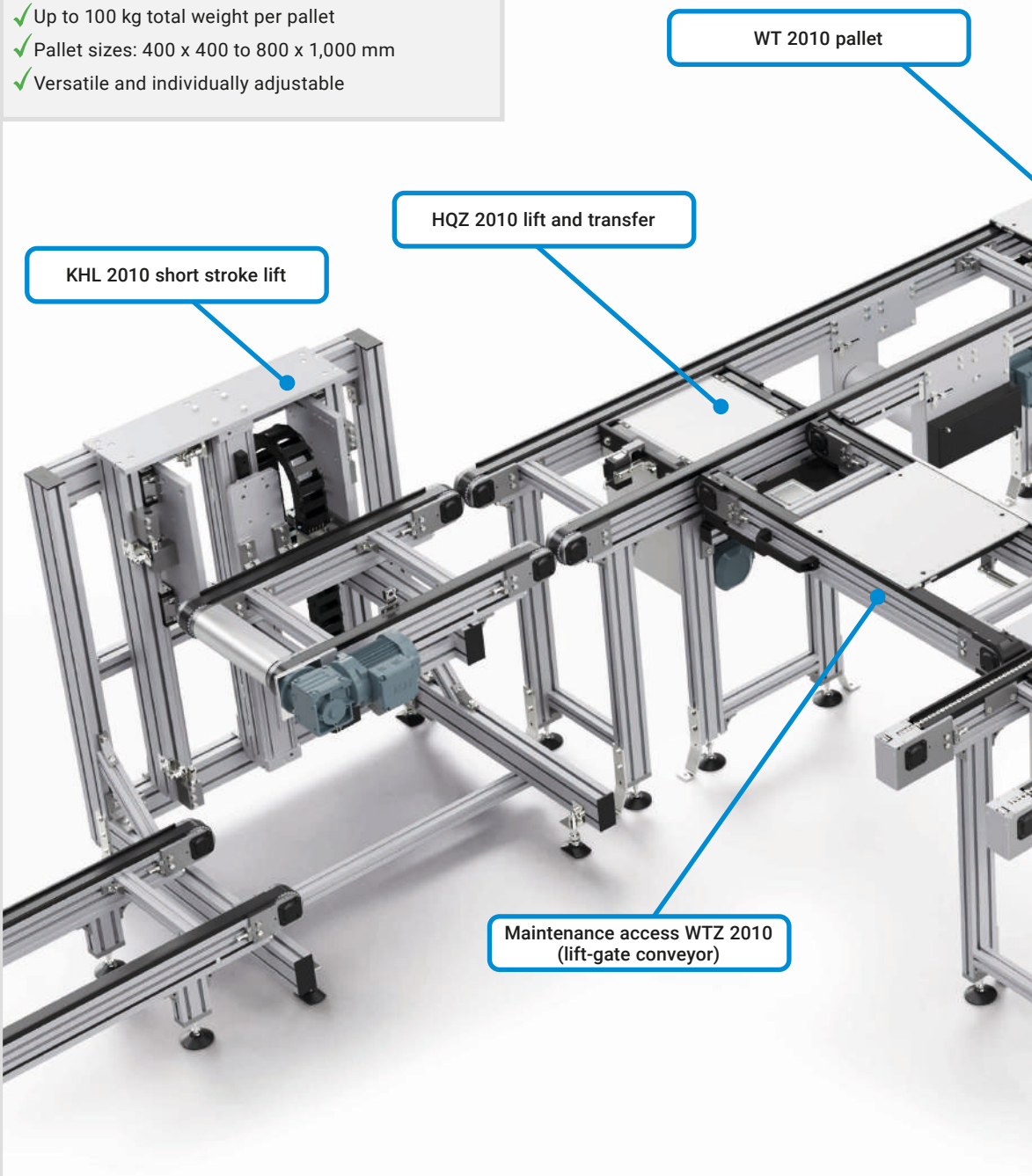
SD 250

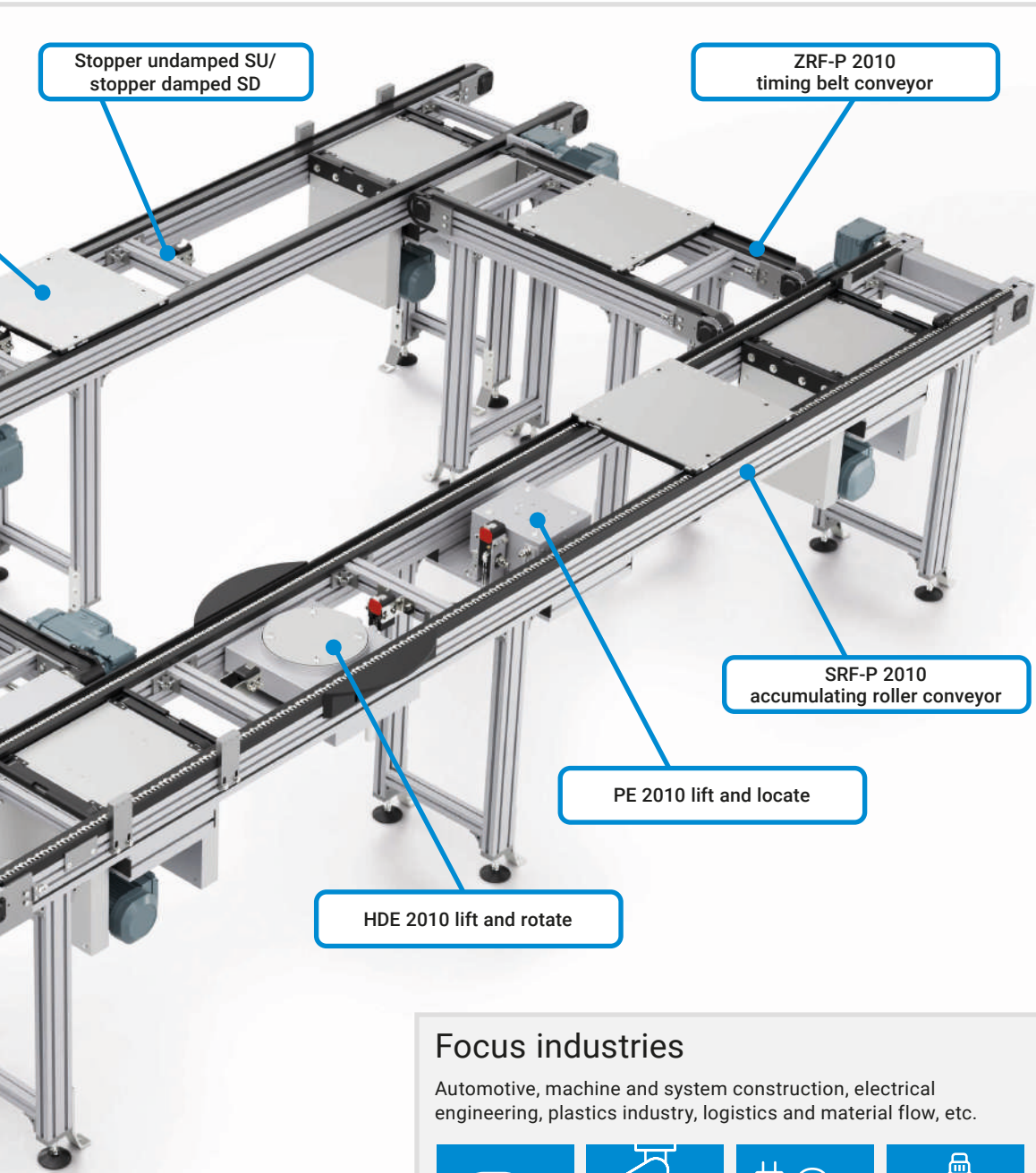
SA=single-acting (locked in a depressurised state)

Ident. no.	Request	Stroke (mm)	V=6 m/min [kg]	V=12 m/min [kg]	V=24 m/min [kg]	V=30 m/min [kg]
K503021251	-	10	5-250	5-150	5-55	5-35
K503021252	E	10	5-250	5-150	5-55	5-35

Properties

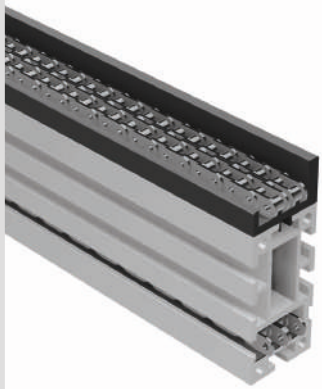
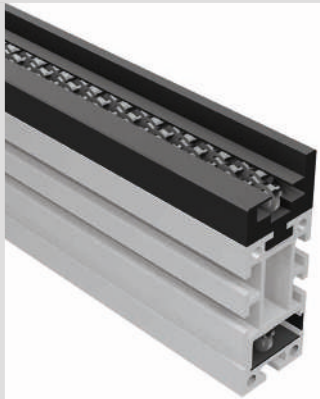
- ✓ Up to 100 kg total weight per pallet
- ✓ Pallet sizes: 400 x 400 to 800 x 1,000 mm
- ✓ Versatile and individually adjustable

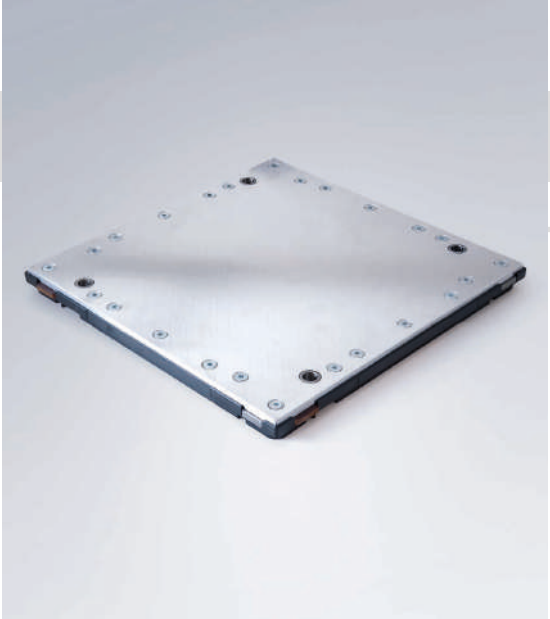




Focus industries

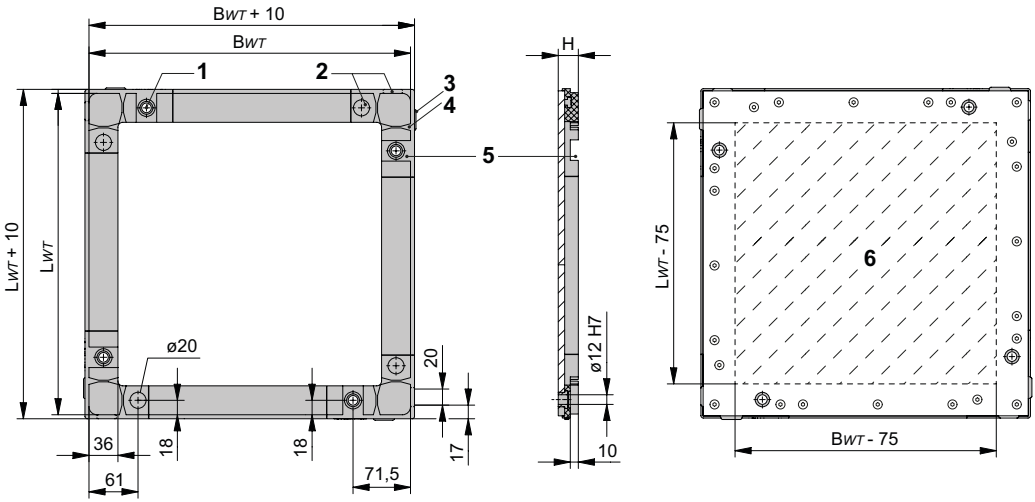
Automotive, machine and system construction, electrical engineering, plastics industry, logistics and material flow, etc.

	Properties	Technical data
Timing belt conveyor ZRF-P 2010		→ details page 128
	■ Limited suitability for accumulated operation ■ Ideal for cycling operation ■ High acceleration ■ Reverse operation possible ■ Low-maintenance ■ Optional antistatic design	■ Length: 500-10,000 mm ■ Width: 260-2,000 mm ■ Total load up to 500 kg ■ Speed up to 30 m/min ■ PAR/PAZ coating
Chain conveyor KTF-P 2010		→ details page 164
	■ Extremely robust ■ High operating temperatures ■ Also suitable for dirty operating environments ■ Reverse operation possible ■ Optional antistatic design	■ Length: 500-10,000 mm ■ Width: 260-2,000 mm ■ Total load up to 500 kg ■ Speed up to 30 m/min
Accumulating roller chain conveyor SRF-P 2010		→ details page 156
	■ Ideal for accumulated operation ■ High operating temperatures ■ Accumulating rollers available in steel and plastic ■ Optional antistatic design	■ Length: 500-10,000 mm ■ Width: 260-2,000 mm ■ Total load up to 750 kg ■ Speed up to 30 m/min



Pallets WT 2010 for Versamove *plus*

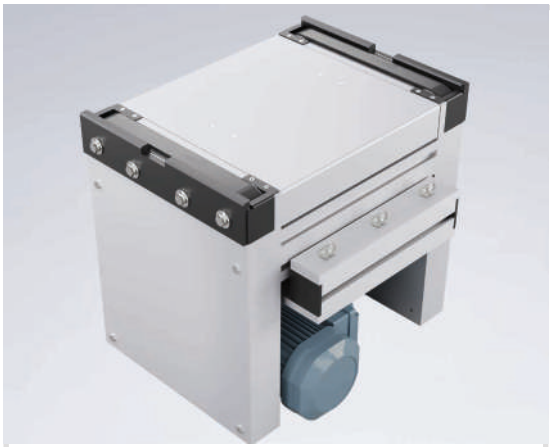
Pallets are used to transport workpieces along a production line. The workpieces are attached to the pallet in a fixed position. The pallet is constructed from a robust but lightweight aluminium support plate. This is equipped with PE wear strips, positioning sockets and integrated bumpers. Please note that the clear width of the side rail must be 1.5-2 mm wider than the width of the pallet to guide the pallet in the optimal way.



1 Centring bush
2 Effective area for initiator
3 Damping element (1.8 mm)
4 Guide groove
5 Separator passage
6 Free space for workpiece fixtures

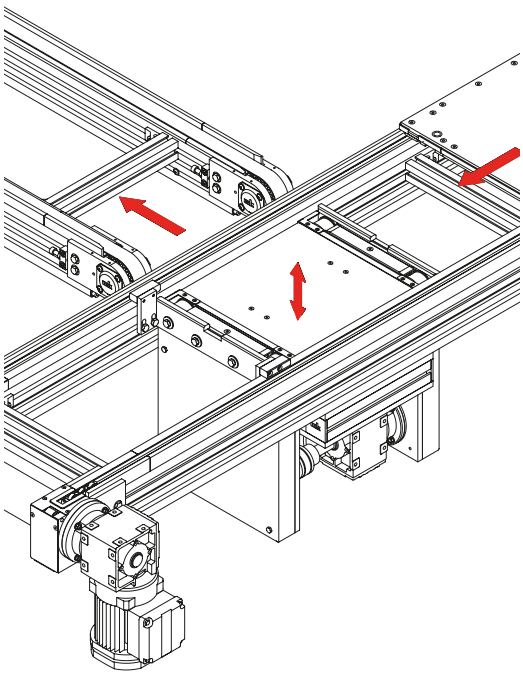
Ident. no.	Support plate [mm]	Total height H [mm]	Length L_{WT} [mm]	Width B_{WT} [mm]
B4612AH____.____	8	25	180; 260-1,000	180; 260-1,000
B4612AI____.____	10	27	180; 260-1,000	180; 260-1,000
B4612AJ____.____	12	29	180; 260-1,000	180; 260-1,000

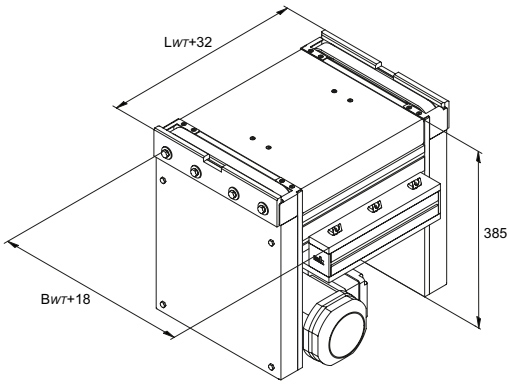
The optimum thickness of the support plate depends, among other things, on the pallet size, the load and the centre of gravity of the load and the workpiece fixture. Where customised special solutions are required, we also provide specially adapted pallets. We would be happy to advise you.



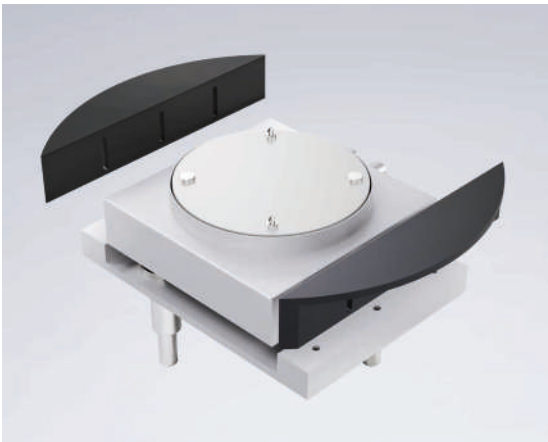
HQZ 2010 lift and transfer unit

The HQZ lift and transfer unit timing belt enables the efficient discharge of pallets from a longitudinal section to a transverse section, or the feeding in of pallets from a transverse section to a longitudinal section. Thanks to its low installation height, it saves space and can be integrated into a wide variety of applications. A manual tensioning station is already integrated.



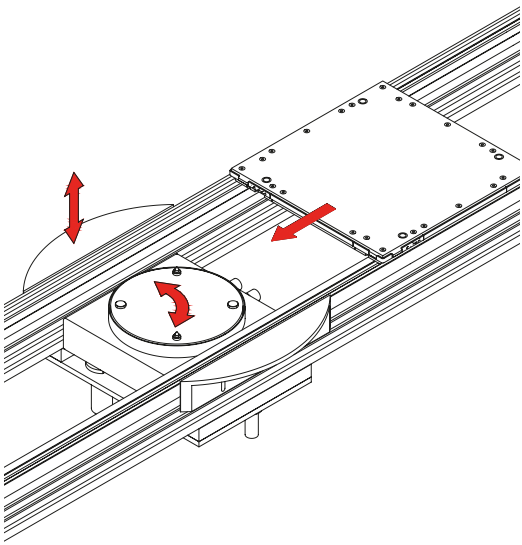


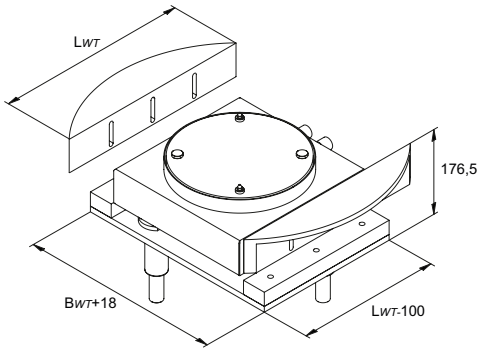
Lift and transfer unit
HQZ 2010



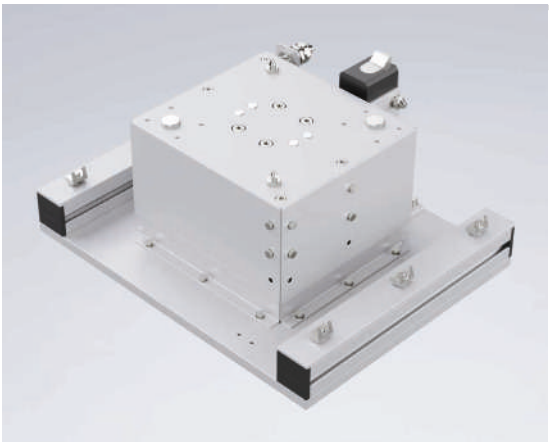
HDE 2010 lift and rotate unit

The HDE lift and rotate unit enables the horizontal rotation of pallets. The pallets can be rotated within a fixed angle between 0° and 180°. The unit is characterised by its low height and allows individual rotation speeds. Both the lifting and rotating movements are controlled pneumatically, with linear roller bearings and guide rods ensuring precise guidance. An external stopper is required.



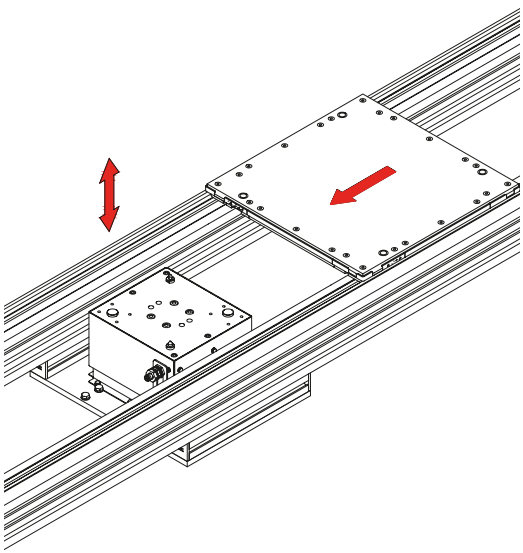


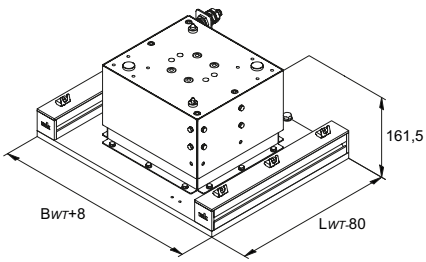
Lift and rotate unit
HDE 2010



PE 2010 lift and locate unit

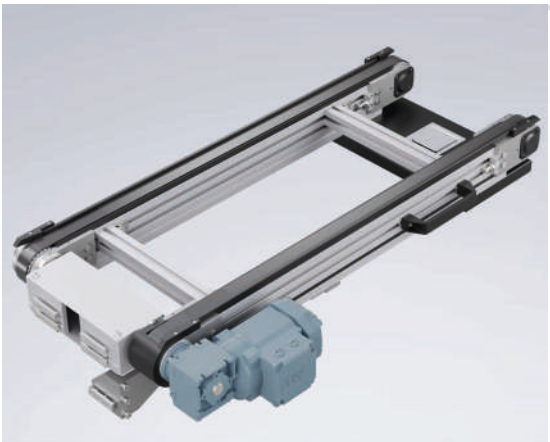
The PE lift and locate unit enables the precise stopping and locating of pallets in a processing station, even when there is a high demand for repeat accuracy. It positions the pallet pneumatically in the X, Y and Z directions using positioning pins. The unit achieves a repeat accuracy of ± 0.2 mm with a cylinder stroke of 40 mm. An external stopper is required.





Lift and locate unit
PE 2010

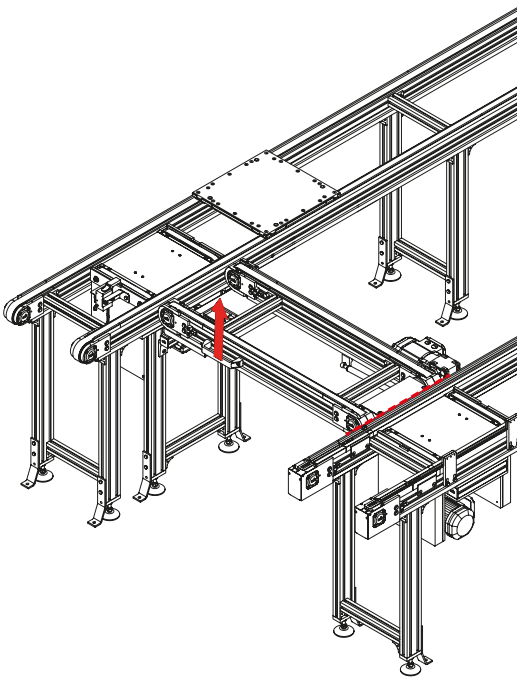
Notes

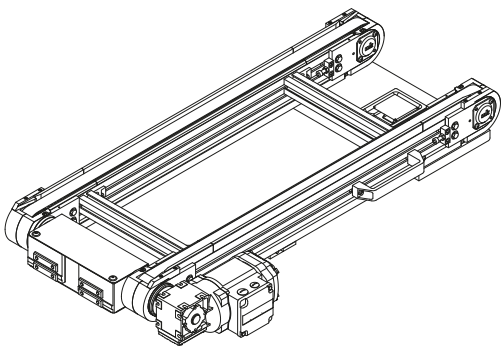


Maintenance access WTZ 2010

The WTZ* maintenance access is a standard timing belt conveyor with AC or AF drive that can be opened out. The maintenance access is used to make the interior of the circulation system accessible and thus to be able to carry out maintenance work safely and easily. The integrated pneumatic spring allows ergonomic handling and prevents the conveyor from falling back. In the closed position, the conveyor can be secured mechanically with a catch or electrically with a solenoid latch.

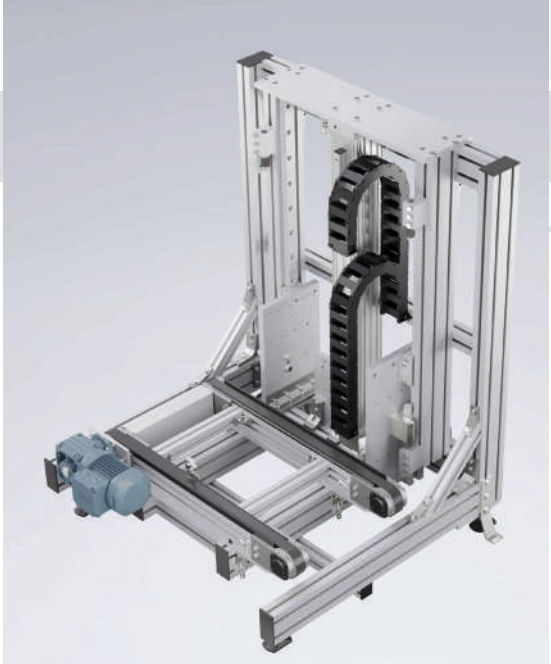
Maintenance access can be integrated into the longitudinal or transverse transfer and can also be used with a chain conveyor.





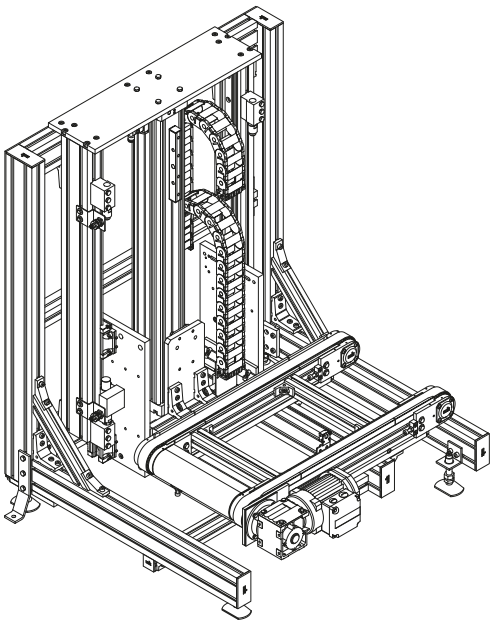
Maintenance access
WTZ 2010

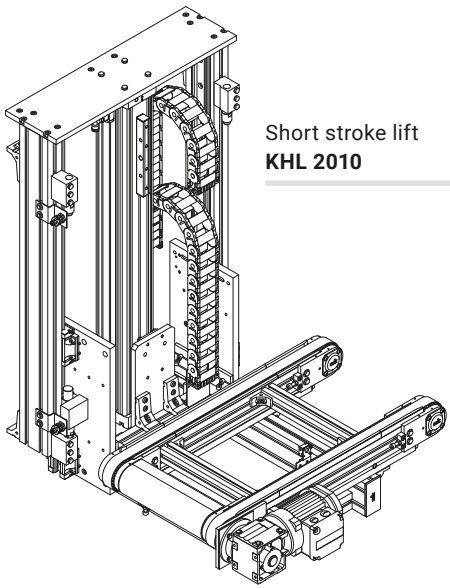
* not in stock



KHL 2010 short stroke lift

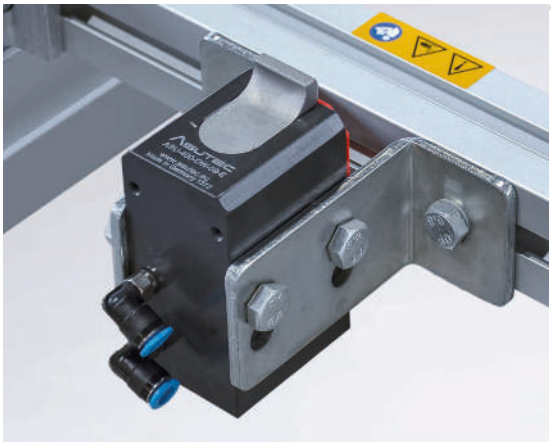
The KHL* short-stroke lift enables precise access to two different transport heights by means of pneumatic raising and lowering. The lift speed can be continuously adjusted. The lift can be equipped with all conveyor types.





Short stroke lift
KHL 2010

* not in stock



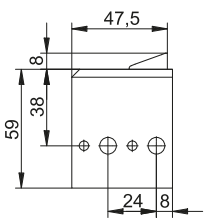
SU – stopper undamped

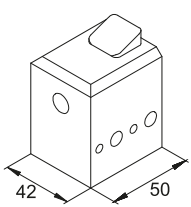
Stoppers are used to stop or separate the pallets. The stopper options are selected based on the conveyor weight and conveyor speed. Customers can choose between a variety of stroke heights based on their requirements. Damped or undamped stoppers can be connected in the centre or on the sides.

They can be requested through inductive (I) or electric (E) sensors.

Return stop

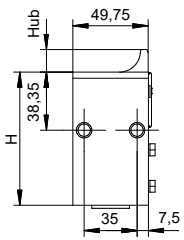
The return stop is used in combination with a stopper in transfer systems with low belt friction and prevents pallets from recoiling/rebounding while stopping. The return stop is activated through a spring.

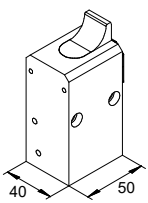




Return Stop
K503030101

Lowering stroke: 8 mm

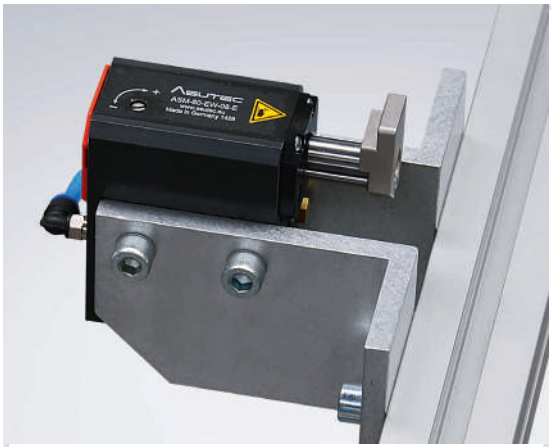




SU 400

SA=single-acting (locked in a depressurised state)

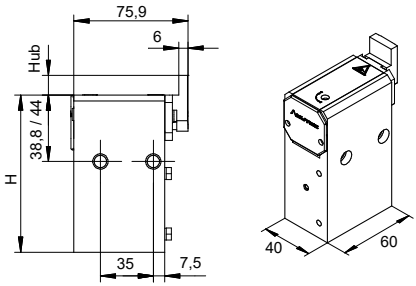
Ident. no.	Request	Stroke (mm)	V=6 m/min [kg]	V=9 m/min [kg]	V=12 m/min [kg]	V=18 m/min [kg]
K503011401	E	9	400	300	250	200
K503011405	I	9	400	300	250	200
K503011404	-	9	400	300	250	200
K503011406	E	15	400	300	250	200
K503011402	-	15	400	300	250	200
K503012401	E	9	400	300	250	200
K503012404	-	9	400	300	250	200
K503012405	I	9	400	300	250	200



SD – stopper damped

Damped stopping allows you to gently slow down the first pallet. Damping prevents the workpiece from slipping in a certain location. Electrical or inductive sensors on the stoppers are optional. A minimum mass of 3 kg is required to ensure proper functioning. Damped or undamped stoppers can be connected in the centre or on the sides.

They can be requested through inductive (I) or electric (E) sensors.



SD 60

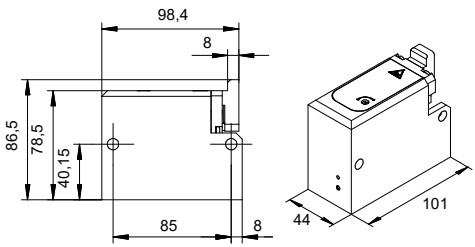
SA=single-acting (locked in a depressurised state)

Ident. no.	Request	Stroke (mm)	V=6 m/min [kg]	V=12 m/min [kg]	V=24 m/min [kg]	V=30 m/min [kg]
K503021061	E	8	3-60	3-35	3-24	3-18
K503021063	-	8	3-60	3-35	3-24	3-18
K503021064	I	8	3-60	3-35	3-24	3-18

DA=double-acting (maintains the last position reached)

K503022061	E	8	3-60	3-35	3-24	3-18
K503022063	-	9	3-60	3-35	3-24	3-18
K503022064	I	10	3-60	3-35	3-24	3-18

All specifications apply for a friction coefficient of μ = 0.07
Stoppers for heavier loads available on request



SD 100

SA=single-acting (locked in a depressurised state)

Ident. no.	Request	Stroke (mm)	V=6 m/min [kg]	V=12 m/min [kg]	V=24 m/min [kg]	V=30 m/min [kg]
K503021101	-	8	3-100	3-60	3-40	3-30
K503021102	I	8	3-100	3-60	3-40	3-30
K503021103	E	8	3-100	3-60	3-40	3-30

DA=double-acting (maintains the last position reached)

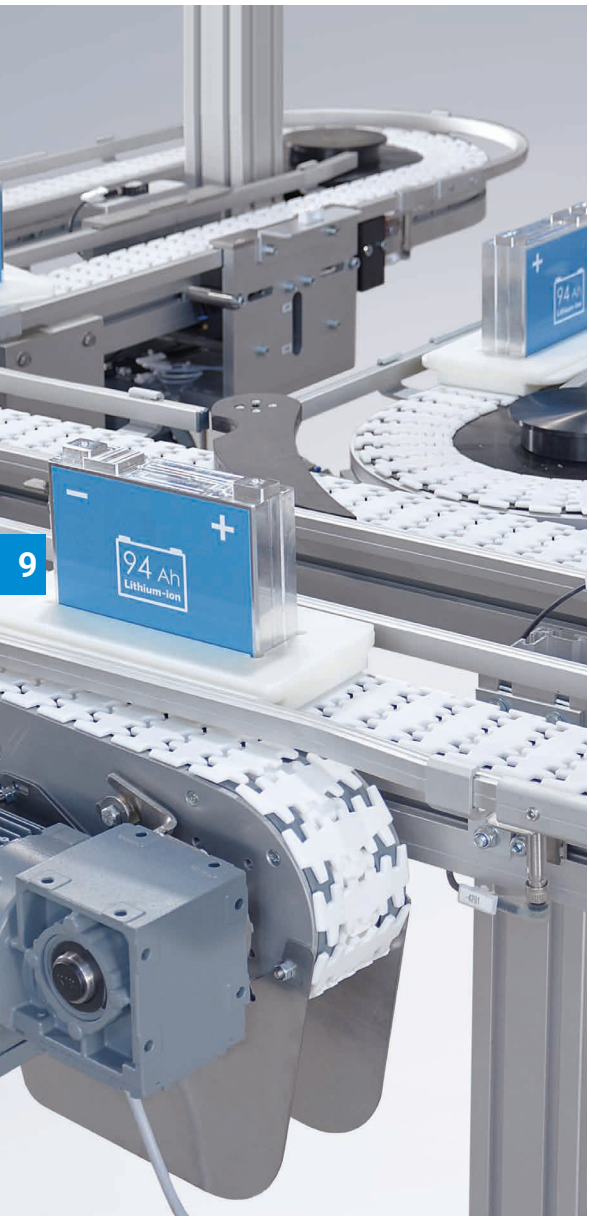
K503022101	-	8	3-100	3-60	3-40	3-30
K503022102	I	8	3-100	3-60	3-40	3-30

SD 250

SA=single-acting (locked in a depressurised state)

Ident. no.	Request	Stroke (mm)	V=6 m/min [kg]	V=12 m/min [kg]	V=24 m/min [kg]	V=30 m/min [kg]
K503021251	-	10	5-250	5-150	5-55	5-35
K503021252	E	10	5-250	5-150	5-55	5-35

versaflex Pallet system



9

» The entry-level system for flexible pallet transport. «

The Versaflex flat top chain conveyor can also be used to transport pallets to enable exact positioning of products. With positioning accuracy of ±0.2 mm, the system is suited for reproduceable and exact handling of objects.

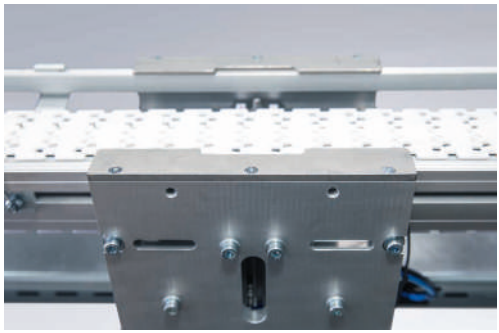
The pallets can be adapted to customer requirements and equipped with custom take ups. Side rails help to guide the pallets and position them exactly at the fixing stations. This means that the products are fixed, buffered and transported gently, securely and precisely.

The **Versaflex P08 pallet system** is 85 mm wide (chain width: 83 mm) and is designed for products weighing up to 10 kg including pallet. The pallets have a standard width of 150-250 mm.

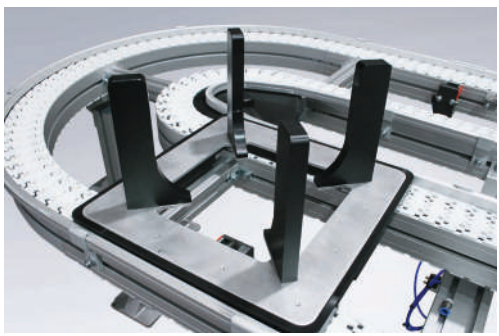
The **Versaflex P11 pallet system** has a width of 105 mm (chain width 103 mm), offers twice the chain tensile force (2,500 N) and three times the load capacity of up to 30 kg including pallet compared to the P08. The pallets are available in widths up to 300 mm.

See also **www.mk-versaflex.com**

Versaflex chapter
starting on page 182





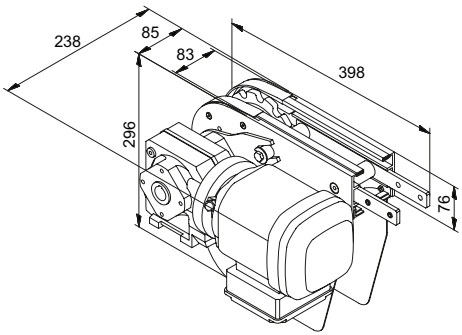




Benefits of the Versaflex pallet system

- Fast, flexible and economical project planning based on Versaflex flat top chain conveyors
- Ideal for tight spaces and complex track layouts
- Simple and precise positioning for automated processes
- Pallets with customised take ups
- Buffer function for cycle decoupling in the production process
- Pallet systems that are easy to integrate into existing systems

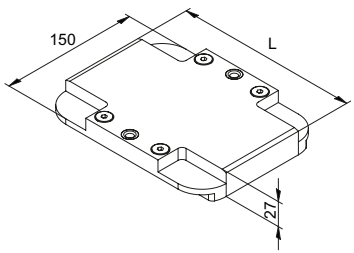
Versaflex A08 modules



The drives, lines, curves, tails and flat top chains of the A08 system are used for the Versaflex P08 pallet system.

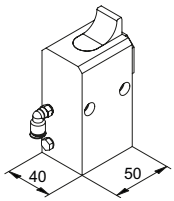
For details of Versaflex A08 modules, see page 190

P08 pallet system modules



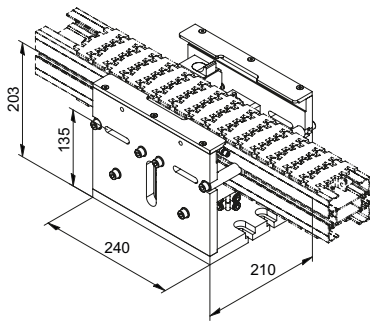
Pallets

Pallet with centring bushes and countersunk screws for position recognition. Locating holes can be made according to customer requirements. Width 150 mm, length 150, 200, 250 mm.



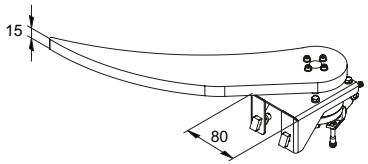
Stopper

In the depressurised state, the stopper is moved into the blocking position by a spring. Stoppers are available in single-acting and double-acting versions. Connection via ø 6 mm push-in fitting, incl. fastening accessories.



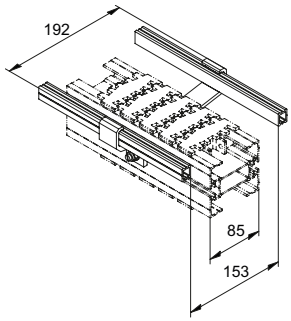
Positioning unit

Pallet positioning unit with stopper, incl. sensor holder. Positioning accuracy ±0.1 mm. Maximum theoretical vertical force at 6 bar incl. pallet: 800 N.



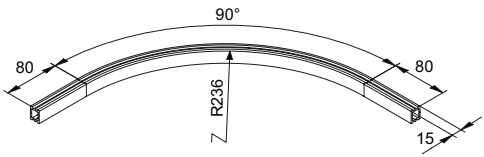
Switch

Switch with rotary actuator, pneumatic, double-acting, without sensor system, incl. fastening accessories.



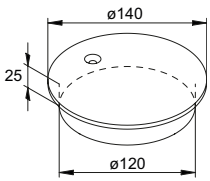
Side rail AGRM type 11

The side rail with a fixed height and a width of 153 mm consists of side rail holders and a side rail profile and is quick and simple to assemble and install.



Side rail for bend roller

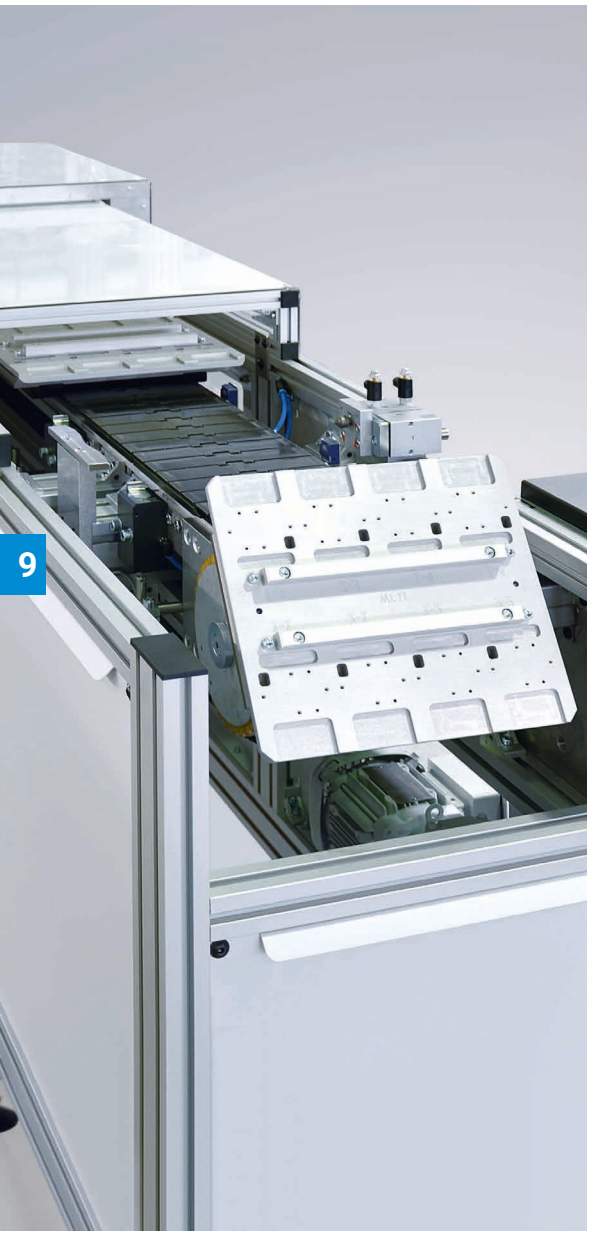
The external side rail profile for the bend roller is available in four predefined angles: 30°, 45°, 90° and 180°. Other angles available on request.



Guide disk

Guide disk as a side rail for mounting on a bend roller. Suitable for pallets with a length of 250 mm. For other pallets on request.

Accumulating Pallet Recirculation Systems SPU 2040



9

» Feeding and Buffering Workpieces in the Tightest Spaces. «

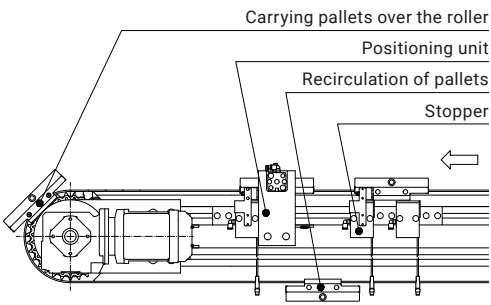
The SPU 2040 is an accumulating pallet recirculation system for cost-effective interlinking, feeding, buffering, positioning and separation of workpieces in the tightest of spaces with automatic workpiece carrier recirculation. The system's sturdiness and wide range of variants makes it suitable for virtually all automation and material flow applications.

The SPU 2040 allows for acyclic operation (i.e. independent of the infeed cycle) with automatic recirculation of the workpiece carriers. The workpieces on the workpiece carriers are transported by the flat top chain along the upper transport level. They are then available at the start of the belt to be loaded with new workpieces.

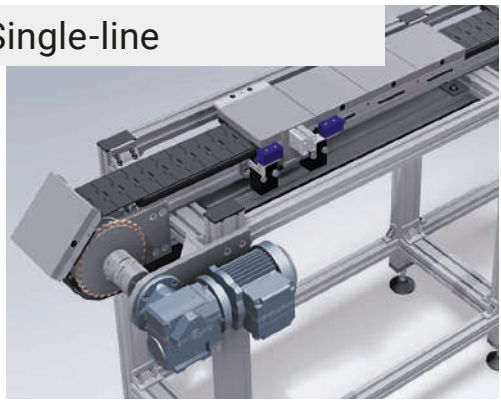
This eliminates the need for a second conveyor level or lift-and-lower units with complex control elements. It also eliminates the need to load the workpiece carriers on the belt, whether manually or automatically.

Benefits of the SPU 2040

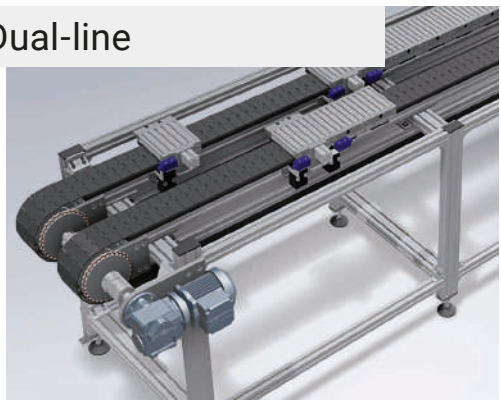
- Cost-effective and very compact interlinking of two machining stations
- Reliable and dynamic feeding, buffering, positioning and separating
- Automatic and space-saving pallet return below the conveying plane
- Robust steel chain for demanding environments
- Available in single line, double line and multiple line versions
- Low maintenance and wear



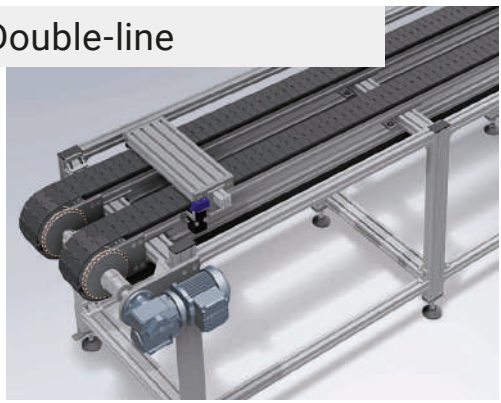
Single-line



Dual-line



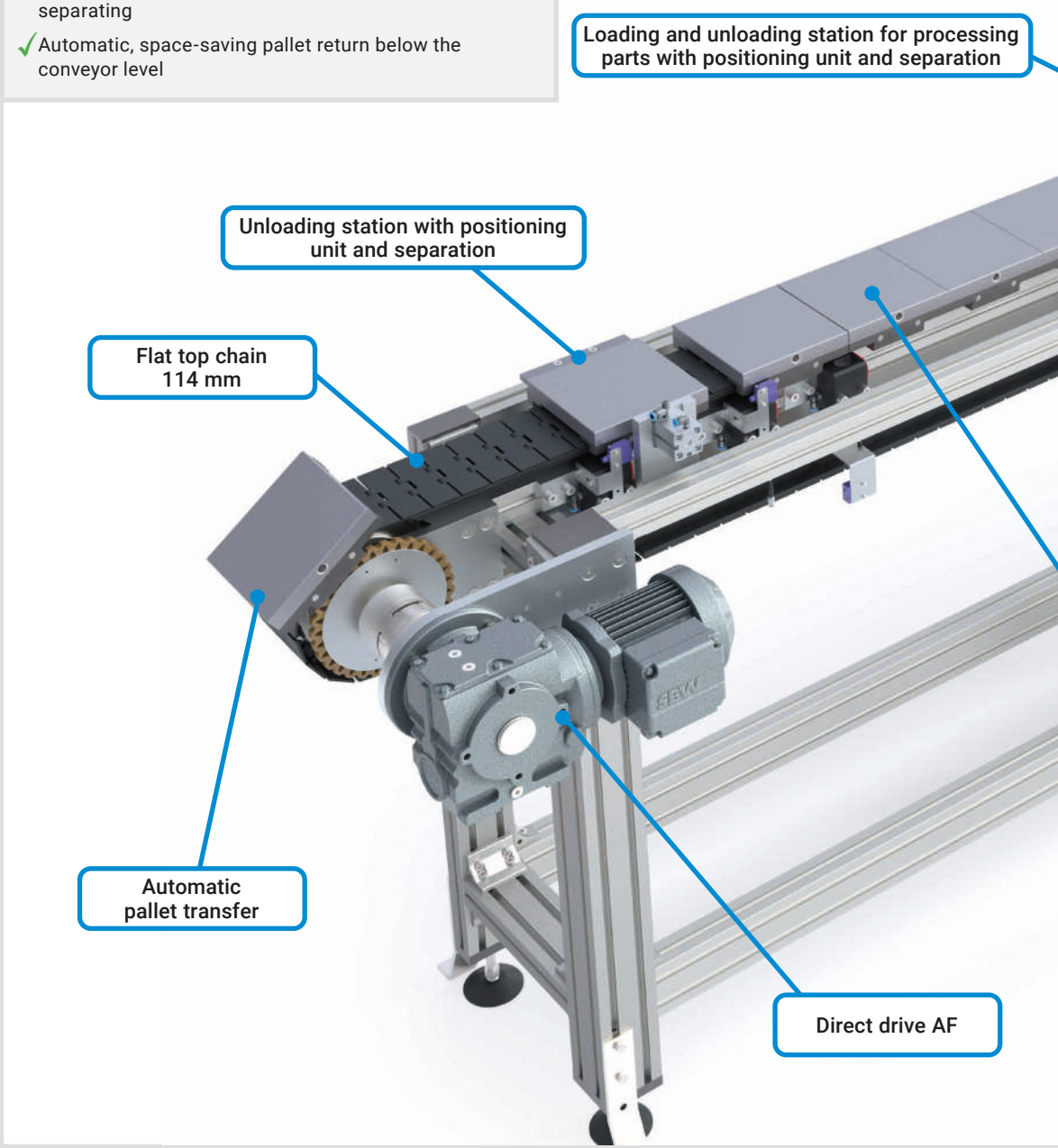
Double-line



Accumulating Pallet Recirculation Systems SPU 2040

Properties

- ✓ Cost-effective and very compact interlinking of two machining stations
- ✓ Reliable and dynamic feeding, buffering, positioning and separating
- ✓ Automatic, space-saving pallet return below the conveyor level



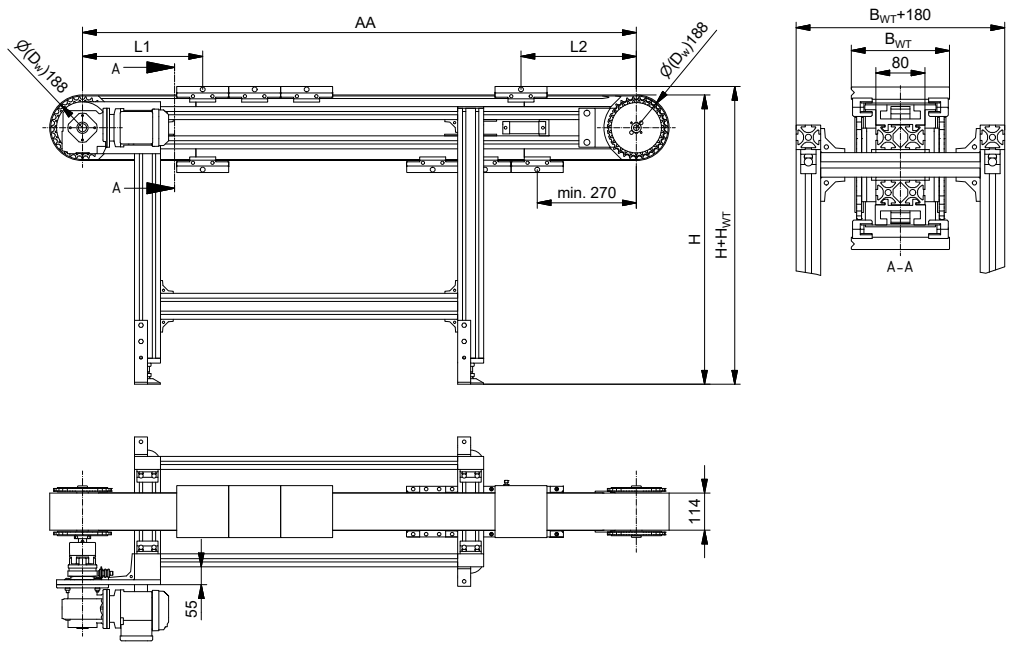


Focus industries

Automotive, machine and system construction, consumer goods, electrical engineering, etc.

SPU 2040 – Versions

Single line – 114 chain width

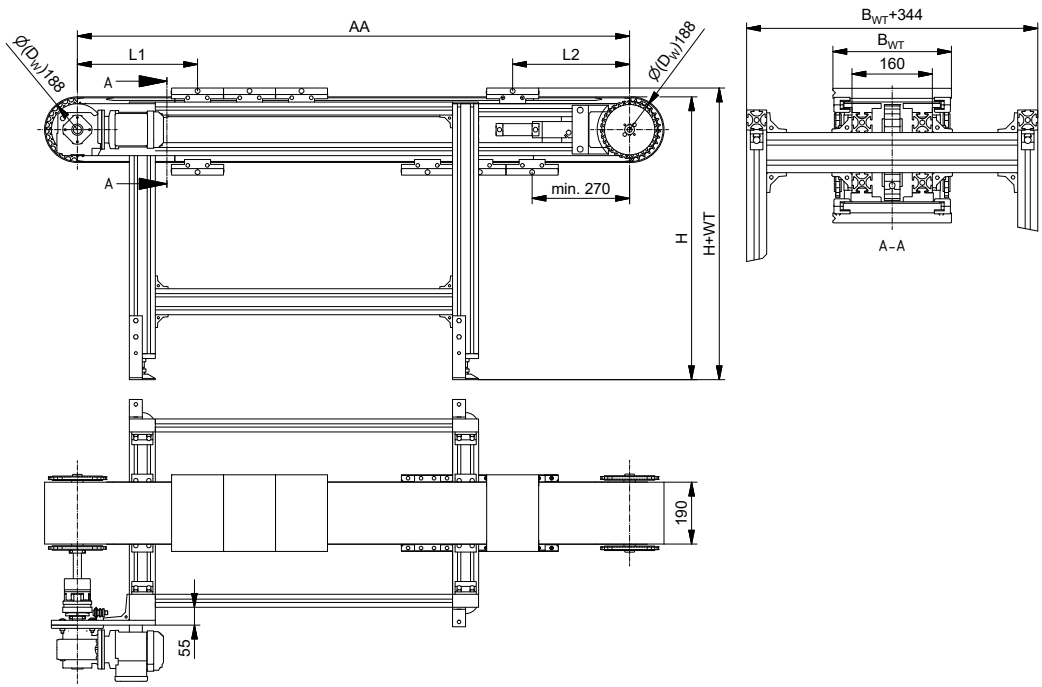


Drawing shows example AF drive

Technical data

Axis distance AA	1,700-10,000 mm
Pallet width B_{WT}	160 mm
Chain width	114 mm
Length L1 min.	AC drive: 300 mm, AF drive: 365 mm
Length L2 min.	495 mm
Conveyor height H min.	AC drive: 800 mm depending on motor orientation and motor size AF drive: 465 mm
Speed	4-15 m/min
Total load max.	300 kg, depending on the speed

Single line – 190 chain width



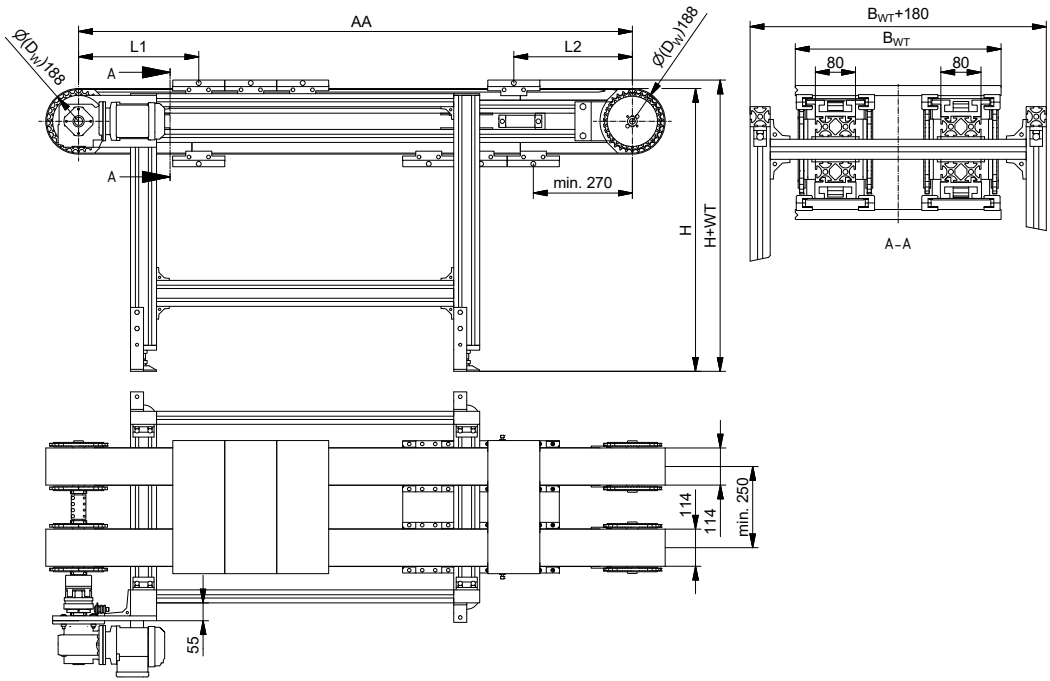
Drawing shows example AF drive

Technical data

Axis distance AA	1,700-10,000 mm
Pallet width B_{WT}	min. 236 mm, others on request
Chain width	190 mm
Length L1 min.	AC drive: 300 mm, AF drive: 365 mm
Length L2 min.	495 mm
Conveyor height H min.	AC drive: 800 mm depending on motor orientation and motor size AF drive: 465 mm
Speed	4-15 m/min
Total load max.	300 kg, depending on the speed

SPU 2040 – Versions

Dual-line or double-line



Drawing shows example double-line

Technical data

Axis distance AA	1,700-10,000 mm
Pallet width B_{WT}	Dual-line: per line 160 mm / double-line: min. 410 mm
Line spacing	min. 250 mm, max. depending on the product and pallet
Chain width	114 mm
Length L1 min.	AC drive: 300 mm, AF drive: 365 mm
Length L2 min.	495 mm
Conveyor height H min.	AC drive: 800 mm depending on motor orientation and motor size AF drive: 465 mm
Speed	4-15 m/min
Total load max.	Dual-line for independent, asynchronous operation: 600 kg (300 kg/line), depending on the speed Double-line for coupled, synchronous operation: 450 kg, depending on the speed

SPU 2040 – Drive

AF – Direct head drive



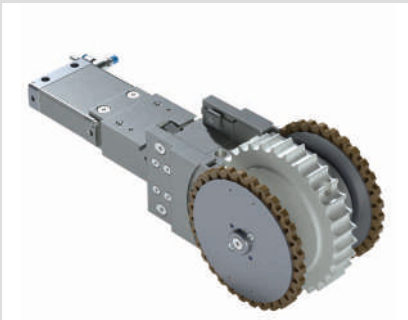
- Flange-mounted hollow shaft motor
- Conveyor speeds between 4 to 15 m/min depending on the required cycle time of the pallets
- Location: left or right of the conveyor line
- The drive sprocket wheel is connected to the motor via an adjustable safety ratchet clutch
- Vulkolan cleat pads ensure secure pallet transfer
- The motors and safety clutches are individually configured depending on the system requirements

AC – Indirect head drive

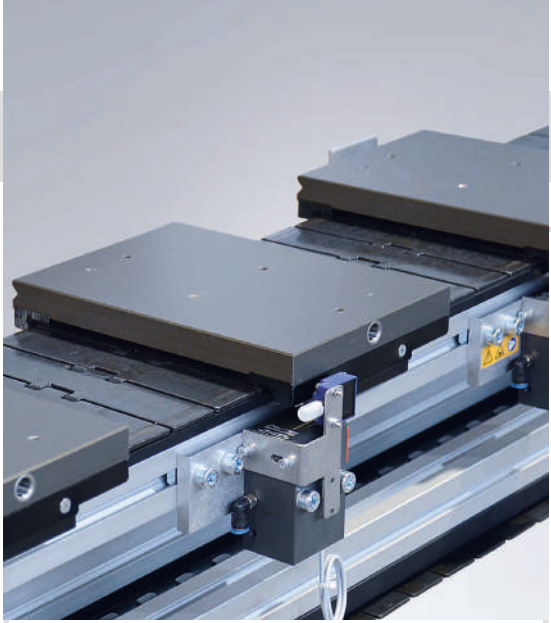


- Gearmotor with shaft journal
- Conveyor speeds between 4 to 15 m/min depending on the required cycle time of the pallets
- Location: left or right of the conveyor line
- The drive sprocket wheel is connected to the motor via an adjustable safety ratchet clutch
- Vulkolan cleat pads ensure secure pallet transfer
- The motors and safety clutches are individually configured depending on the system requirements

Tail with automatic tensioning device



- Pneumatic operation
- Tensioning device guided by linear roller bearings and guide rods
- Vulkolan cleat pads ensure secure transferring (prevents contamination of the discs by liquid or dulling media)
- 40 mm tensioning distance
- Min. 4 bar required
- Optimal tensioning pressure at 6 bar



SPU 2040

Pallet

Different versions of the pallet are available for different requirements. In double-line systems, the pallet width depends on the conveyor width. The workpiece take up must be known to determine the centre of gravity.

Technical data

- Support plates made from aluminium plates or Series 40 aluminium profiles
- Lateral positioning slot and positioning socket ensure high positioning precision
- POM wear strip

9

Single-line and dual-line conveyor

Fixture height	Tare weight* up to
up to 75 mm	12 kg
up to 100 mm	10 kg
up to 125 mm	8 kg
> 125 mm	6 kg

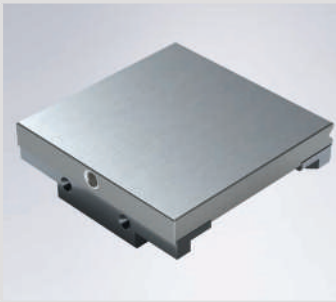
Double-line conveyor

Fixture height	Tare weight* up to
up to 75 mm	20 kg
up to 100 mm	16 kg
up to 125 mm	12 kg
> 125 mm	10 kg

*Permitted tare weight = unladen weight pallet and workpiece fixture

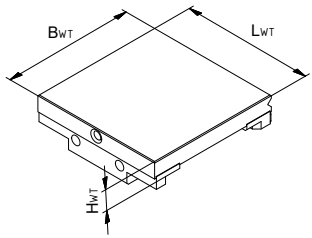
Pallet (WT) aluminium plate

for single-line and dual-line



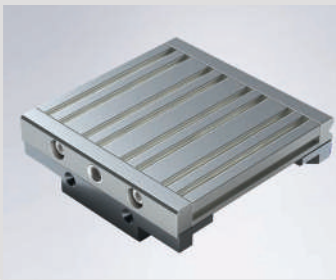
Aluminium support plate with hard plate coating.

- Chain width: 114 and 190 mm
- Width B_{WT}: 160 and 236 mm
- Length L_{WT}: 160 mm
- Height H_{WT}: 26 mm



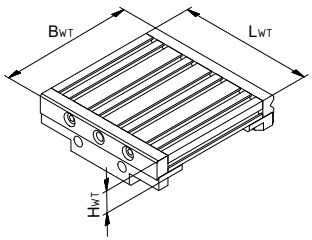
Pallet (WT) 25/40

for single-line and dual-line



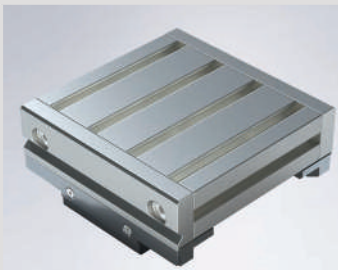
Series 25/40 aluminium support plate

- Chain width: 114 and 190 mm
- Width B_{WT}: 160 and 236 mm
- Length L_{WT}: 150 mm
- Height H_{WT}: 28 mm



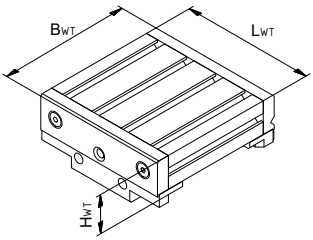
Pallet (WT) 40

for single-line and dual-line



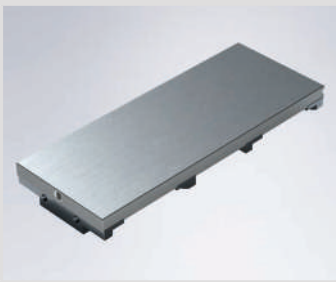
Series 40 aluminium support plate

- Chain width: 114 and 190 mm
- Width B_{WT}: 160 and 236 mm
- Length L_{WT}: 160 mm
- Height H_{WT}: 48 mm



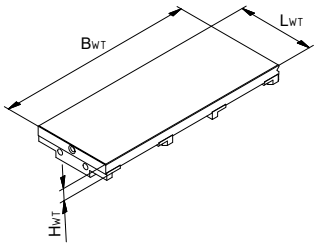
Pallet (WT) aluminium plate „Heavy Load“

for double-line



Aluminium support plate with hard plate coating

- Chain width: 114 mm
- Width B_{WT}: min. 410 mm
- Length L_{WT}: 160 mm
- Height H_{WT}: 26 mm

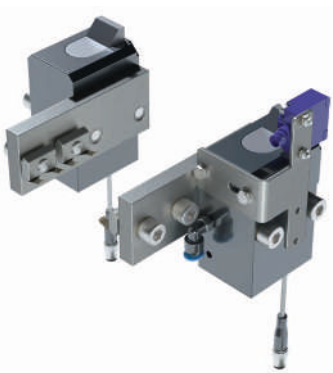


Larger pallet widths and additional pallet lengths are available upon request

SPU 2040 – electrical components

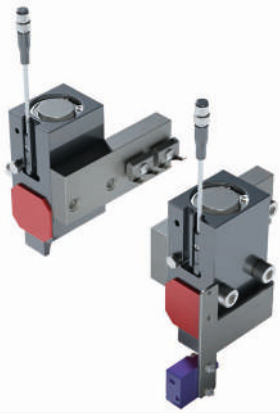
Stoppers SU 400 top

- Stroke 9 mm



Stoppers SU 400 bottom

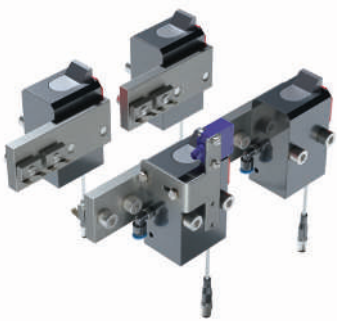
- Stroke 15 mm



- Undamped stopping
- Permitted total load at 6 bar
  up to v = 6 m/min: 100 kg
  up to v = 9 m/min: 75 kg
  up to v = 12 m/min: 60 kg
  up to v = 15 m/min: 50 kg
- Electrical cylinder detection (inductive optionally available)
- Equipment options: detection of one or both switch settings of the stopper cylinder plus detection of one or two pallets

Separator top

- Stroke 9 mm



Separator bottom

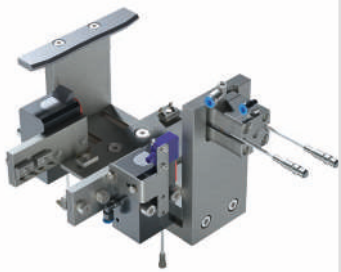
- Stroke 15 mm



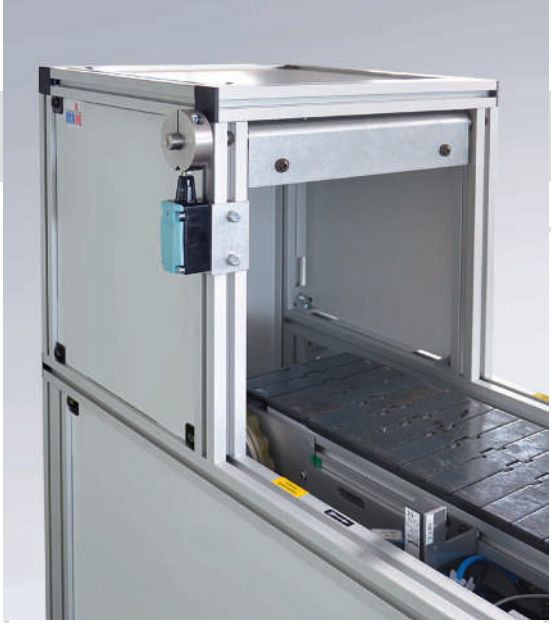
- Undamped stopping/separating
- Electrical cylinder detection (inductive optionally available)
- Equipment options: detection of one or both switch settings of the stopper cylinder plus detection of one or two pallets
- Permitted total load at 6 bar
  up to v = 6 m/min: 100 kg
  up to v = 9 m/min: 75 kg
  up to v = 12 m/min: 60 kg
  up to v = 15 m/min: 50 kg

Positioning unit with separation

- Stroke stopper 9 mm



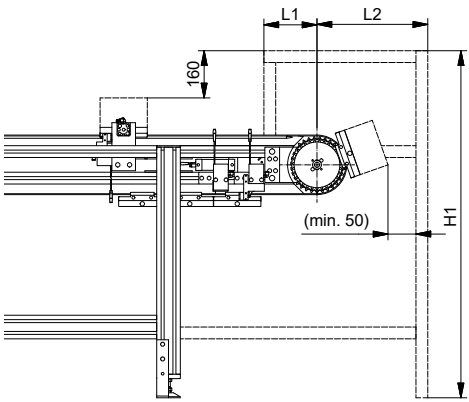
- Undamped stopping/separating
- Electrical cylinder detection (inductive optionally available)
- Equipment options: detection of one or both switch settings of the stopper cylinder
- Lifting force (pallet + fixture + product + counterpressure processing):
  - max. 140 N at 4 bar
  - max. 210 N at 6 bar
- Greater lifting force available depending on customer requirements
- Precise positioning of ±0.2 mm



Protective device guard with pendulum flap

The protective device guard at the tails minimises the risk of injury for the operator. A pendulum flap is triggered when touched and stops the entire system. A cover between the flat top chain and the frame is available on request. A protective device guard without a pendulum flap in profile design or as a sheet metal hood is also optionally available.



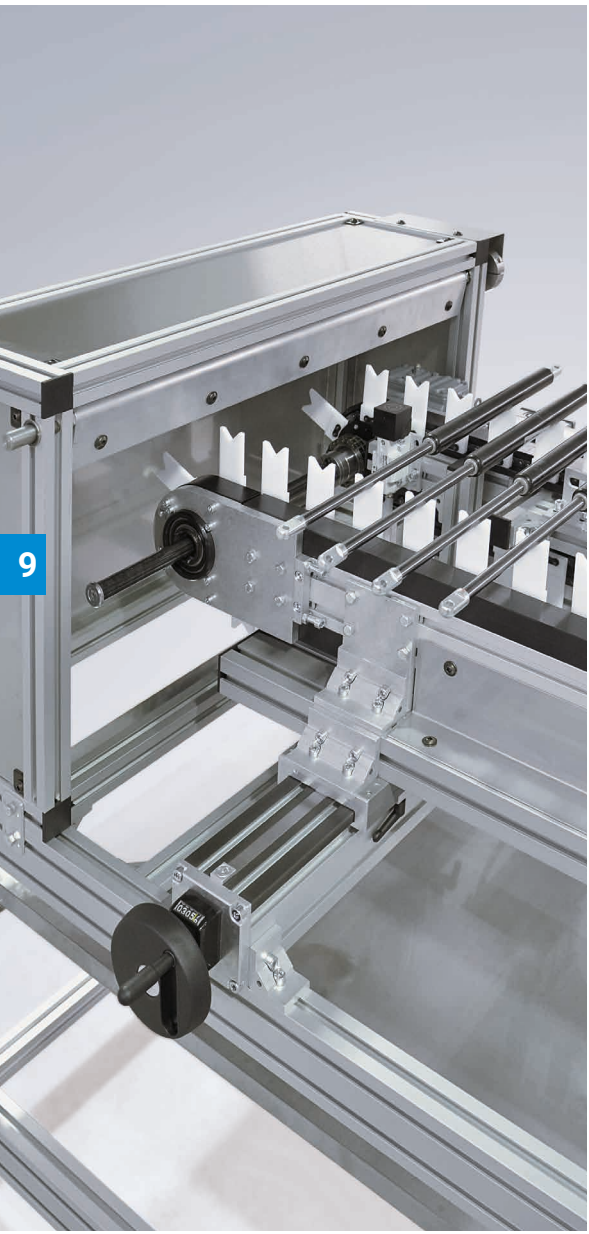


Technical data

Length L1 min.	1/2 x L_{WT} + 100 mm
Length L2	individual depending on the pallet and workpiece fixture
Height H1 min.	conveyor height H + H_{WT} + H_{WA} + 160
Width	114 chain width: B_{WT} + 180 mm / 190 chain width: B_{WT} + 344 mm

H_{WA} = workpiece fixture height

Indexing Chain Conveyor System TKU 2040



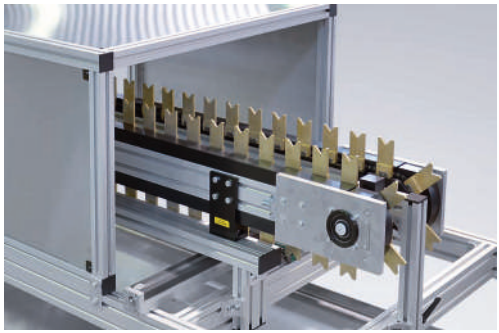
9

» Interlinking
Machining Centres. «

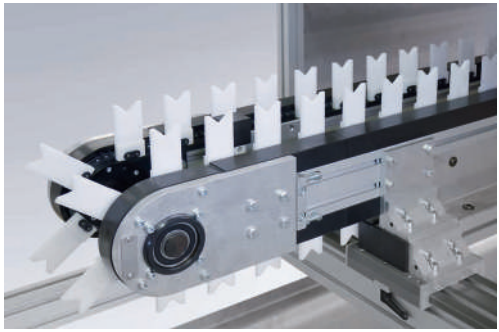
The TKU 2040 chain conveyor system is especially well suited for cycled, defined and position-oriented supply and removal as well as for interlinking machines and machining centres. The system's timing can be individually configured to a fixed cycle. The system can be used in the machine tool and plastics industries, throughout the automotive sector and in many other industries.

The TKU 2040 is based on the mk profile system and is modularly constructed, compact, flexible and extremely robust.It is constructed from a timing chain conveyor with 2 roller chains, which permits a total load of up to 700 kg.

The conveyor frame consists of two profile sections with gliding assemblies for the chain and the workpiece fixtures. It is available in designs with a predefined width or with an adjustable width. The width adjustment mechanism allows you to transfer workpieces of various sizes.









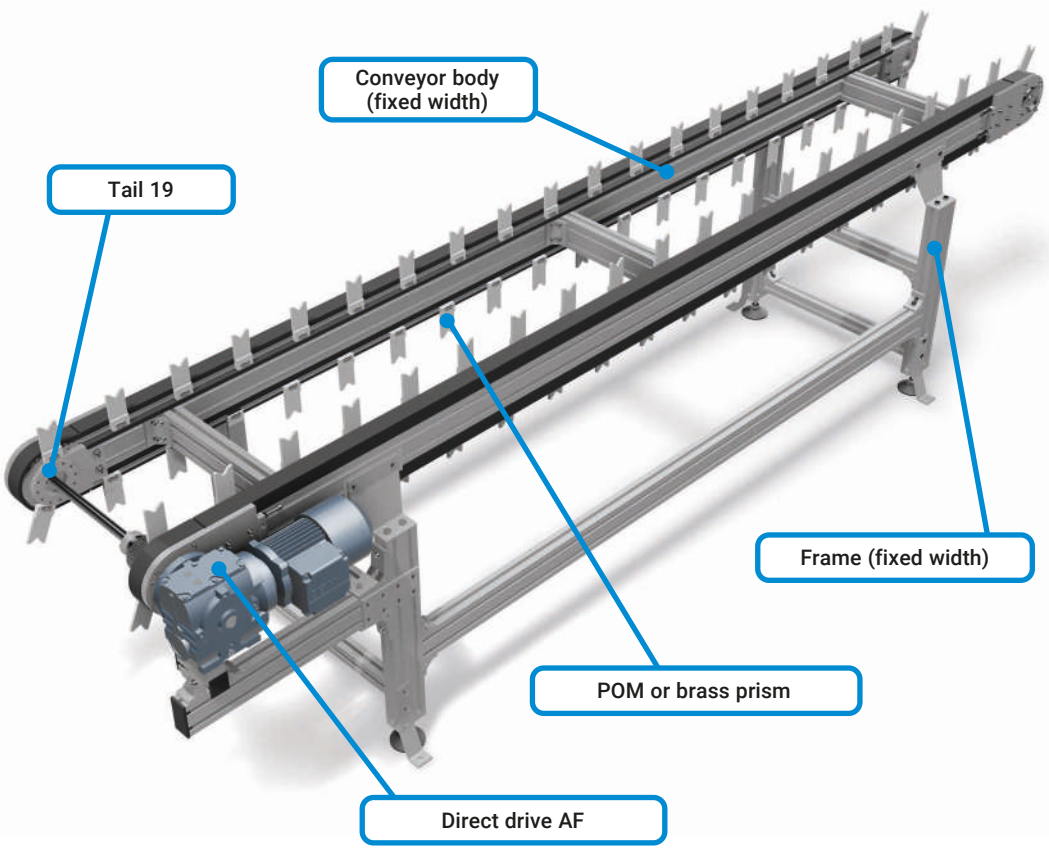
Benefits of the TKU 2040

- Ideal for synchronised feeding and interlinking tasks
- Can be fitted with pallets or prisms for round parts
- Width adjustment allows you to transfer workpieces of different sizes
- Robust design for dirty and hot environments
- Low maintenance and wear

TKU 2040 – Versions

Fixed width

This version has perpendicular traverses that give the conveyor frame high intrinsic stability. It can therefore be integrated into a lighter stand system. The torque arm in the AF drive has a take up for attachment to a lighter stand system.

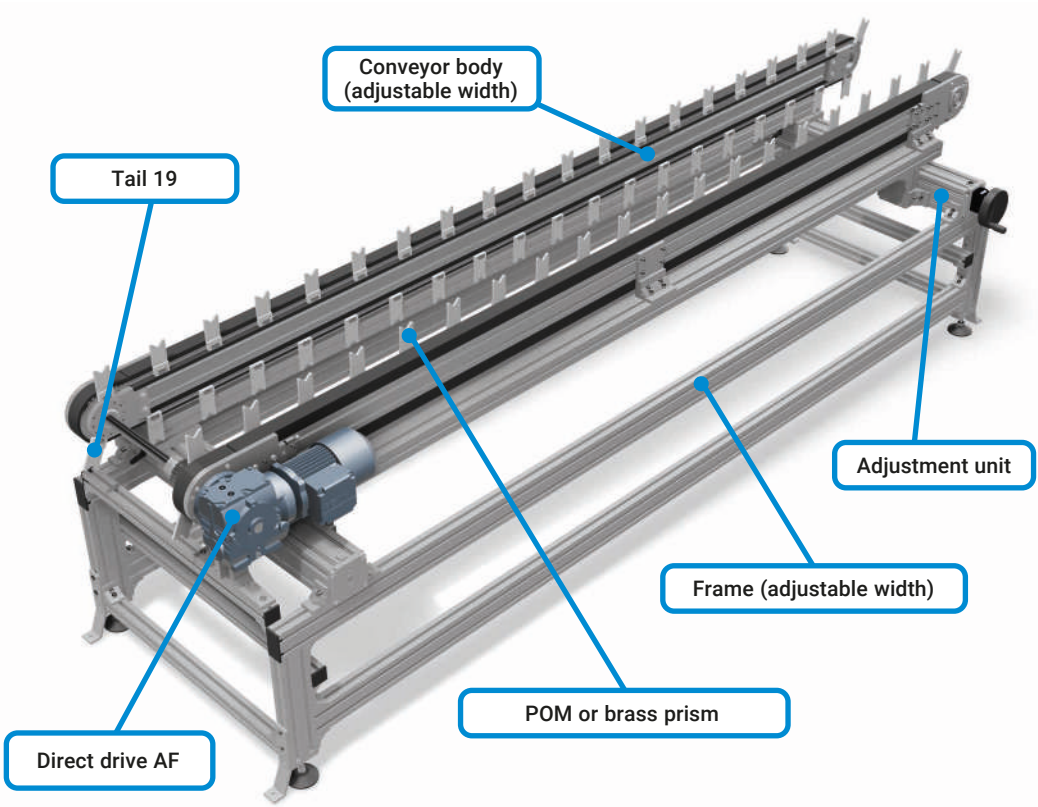


Technical data

Conveyor length L	1,000-8,000 mm (tail end to end)
Conveyor width B	195-1,500 mm (outside edge of conveyor body)
Height H	individually on request (top edge of conveyor body)
Distance between prisms	2” to 20” (50.8-508 mm) in 1” steps
Drive location	discharge end, left/right
Drive and speed	2-18 m/min depending on cycle
Load capacity	max. 20 kg/workpiece, max. 700 kg/conveyor

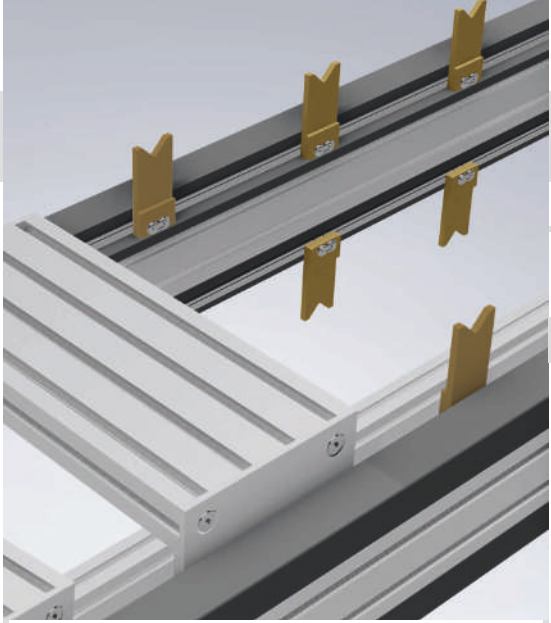
Adjustable width

This version is installed in a width adjustment mechanism designed specially for the system, which is fixed in place on a support frame. The AF drive has a shaft with a ball bearing bushing that lets you easily adjust the width.



Technical data

Conveyor length L	1,000-8,000 mm (tail end to end)
Conveyor width B	195-1,500 mm (outside edge of conveyor body)
Height H	individually on request (top edge of conveyor body)
Distance between prisms	2” to 20” (50.8-508 mm) in 1” steps
Drive location	discharge end, left/right
Drive and speed	2-18 m/min depending on cycle
Load capacity	max. 20 kg/workpiece, max. 700 kg/conveyor

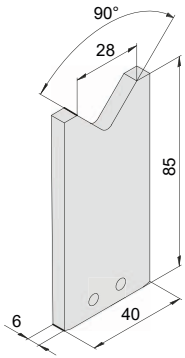


Modules

Prisms/pallets

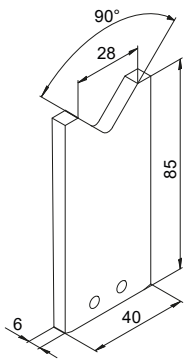
POM prism

- Ideal for round workpieces
- POM construction
- Transports workpieces without damaging them
- Permits loads up to 6 kg/workpiece



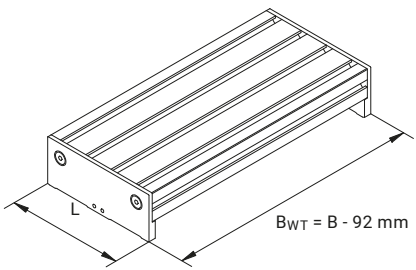
Brass prism

- Ideal for round workpieces
- Brass construction
- High strength and heat resistance
- Permits loads up to 10 kg/workpiece



Profile pallet (WT)

The profile pallet, which is constructed from profiles from the 40 series with 10 mm grooves, is available in variable widths (within the limits of the system) and supports loads of up to 20 kg. The profile pallet can be used only with fixed-width conveyors.



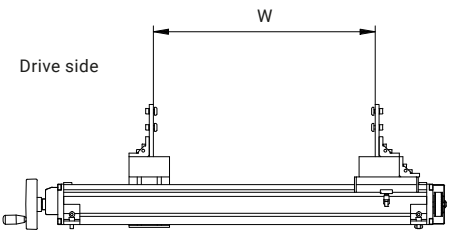
Name	Grooves	Length L (mm)
WT 80	2	80
WT 120	3	120
WT 160	4	160



Adjustment units

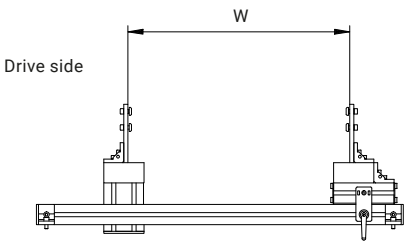
On adjustable models, adjustment units are used to change the conveyor width. This allows the conveyor to accept workpieces of different sizes. The width adjustment range depends on the limits of the system.

Semi-automatic adjustment unit



You can adjust the position of the non-driven chain by turning the handwheel, which lets you conveniently vary the distance between the chains. A digital gauge shows the displacement.

Manual adjustment unit



You can manually adjust the non-driven chain by loosening the clamping handles on both gliding assemblies, which lets you conveniently vary the distance between the chains. A dial indicator shows the displacement.

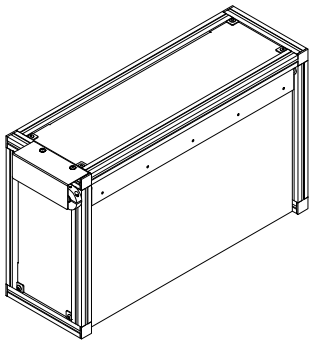


Accessories

Protective device guard

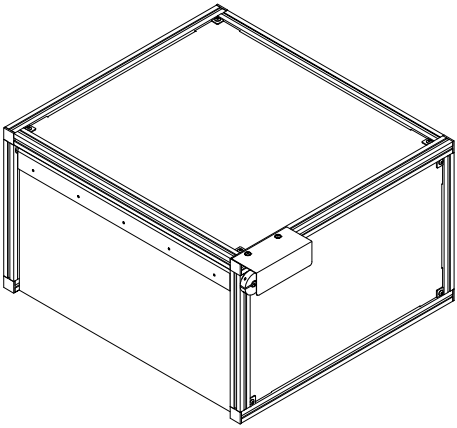
The protective device guard prevents anyone from reaching into the system during operation and reduces the risk of injury. The rotary lock is triggered when moved and stops the entire system. It is adapted to the contours of the particular product so that the product itself does not trigger the lock.

Protective device guard for drive/tail

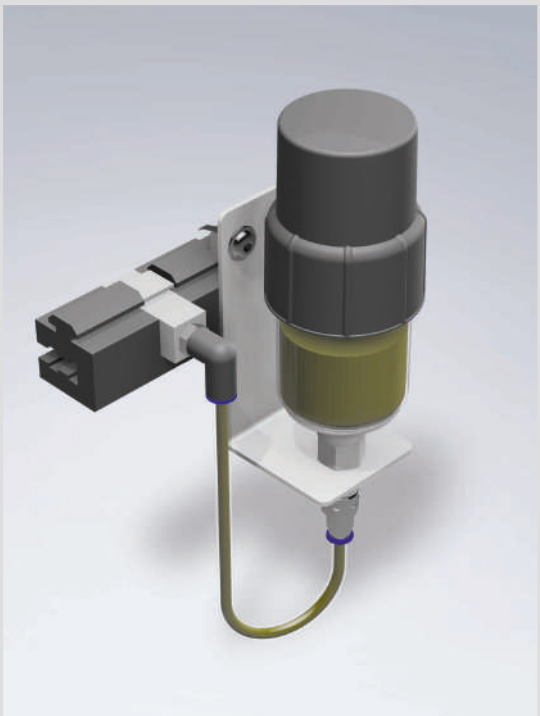


Individually designed protective device guard for the infeed and/or discharge end, adapted to the particular conveyor system, the local environmental conditions and the contours of the product to be transported.

Protective device guard for track



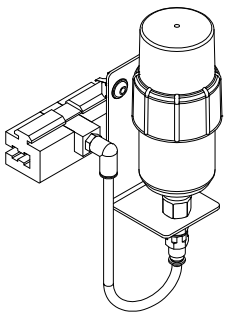
Individually designed protective device guard for the track area, adapted to the particular conveyor system, the local environmental conditions and the contours of the product to be transported.



Lubrication station

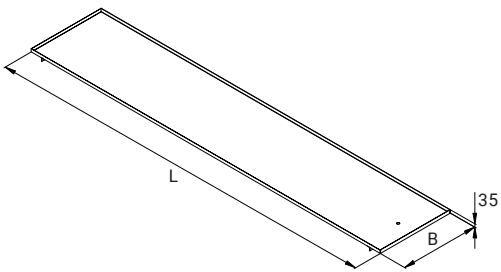
Installing the optional lubrication station means that you do not have to manually oil the chain.

It can be retrofitted into existing systems.
A decentralised design with cartridges and a battery-powered drive is also available, as is a central lubrication station that is controlled by pulses from a PLC.



Drip pan

The drip pan is made of stainless steel. It is individually designed according to the particular conveyor system, the local environmental conditions and the contours of the product to be transported. It is equipped with a drain nozzle with an R 3/4 thread that can be connected to the drain lines. Typical applications include conveying products that are lightly coated in oil.



Chapter 10 Examples from Practice



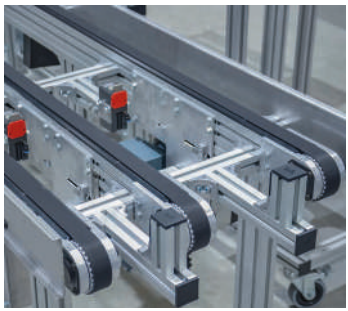
Belt Conveyors

GUF-P MINI	318
GUF-P 2000	322
GUF-P 2041	326
GUF-P 2004	330
KFG-P 2000	334
KGF-P 2040	338
KGF-P 2040.02	341



Modular Belt Conveyors

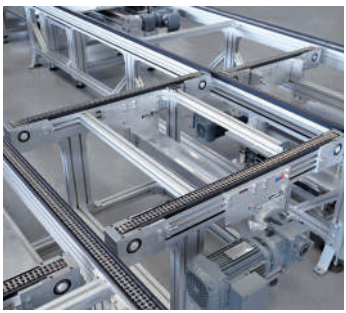
MBF-P 2040	344
KFM-P 2040	348
KMF-P 2040	352
KFM-P 2040.86	355



Timing Belt Conveyors

ZRF-P 2040	358
ZRF-P 2045	362
ZRF-P 2010	364

10



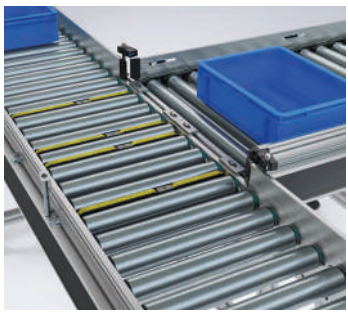
Chain Conveyors

SRF-P 2045	368
FPF-P 2045	370
SRF-P 2010	372
KTF-P 2010	374



Flat Top Chain Conveyors

Versaflex A04 ... A29	378



Roller Conveyors

RBF 2000	382
RBS-P 2065/2066	384



Pallet Systems

Versamove *standard*	386
Versamove *plus*	390
Versamove *ultra*	395
Versaflex pallet system	396
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Special Conveyors

Vacuum conveyors	408
Telescopic conveyors	412
Cleanroom conveyors	414
Magnetic conveyors	415
Stainless steel conveyors	416
Translucent conveyors	417
Metal-free conveyors	417
Scanning conveyors	417



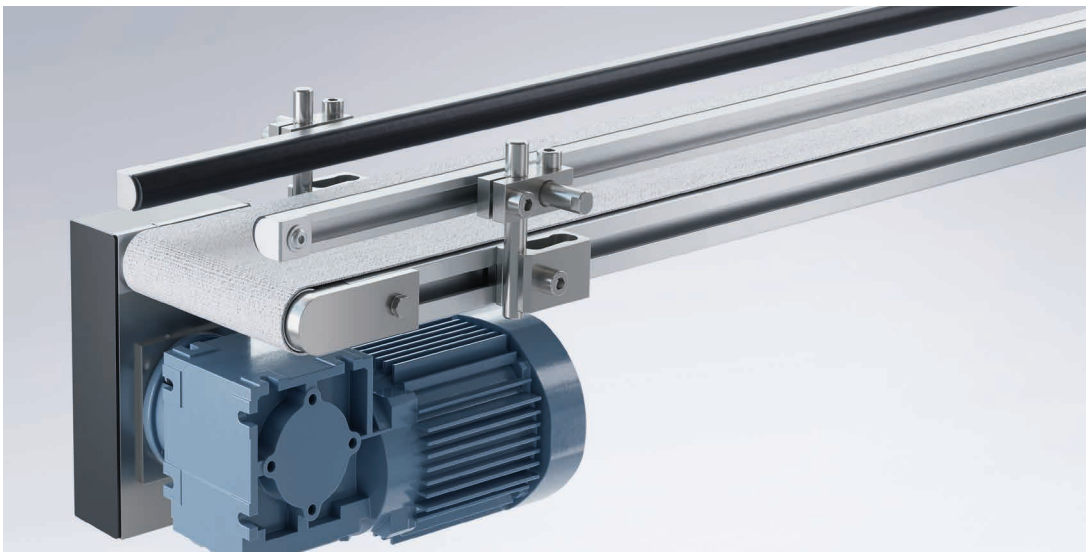
Rotary Tables

DT-P 2040	418

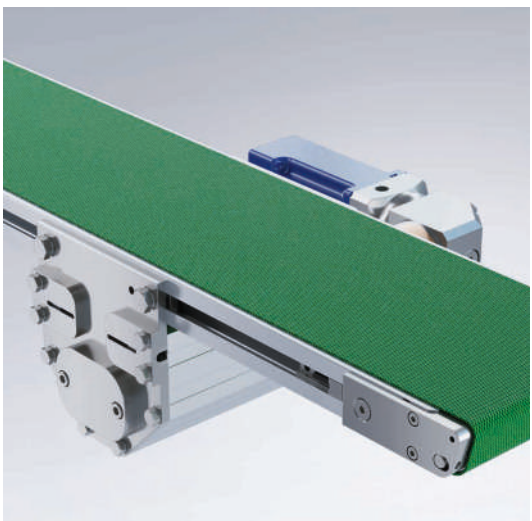
Chapter 10 – Examples from practice

In addition to catalogue standards, these examples from practice also show solutions that have been proven in the field. These solutions are created for specific tasks – from conveying, interlinking and positioning to buffering and handling. You will benefit from our design experience, our high level of vertical integration and our in-depth understanding of processes. From conception and implementation to after-sales service, we are your expert partner every step of the way. Please don't hesitate to contact us.

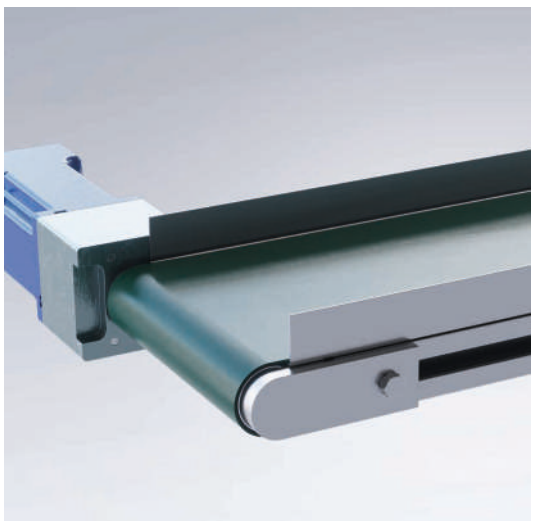
Belt Conveyor GUF-P MINI



GUF-P MINI belt conveyor with AC head drive,
tail 11 ø 33 and side rail SF01



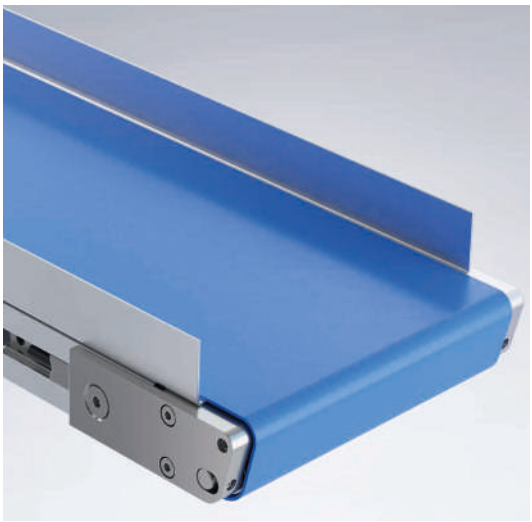
GUF-P MINI belt conveyor with BF lower belt drive
with 48 V stepper motor and planetary gear



GUF-P MINI belt conveyor with AF head drive
and 48 V compact stepper motor



GUF-P MINI belt conveyor with BC lower belt drive
and 48 V compact stepper motor with planetary gear

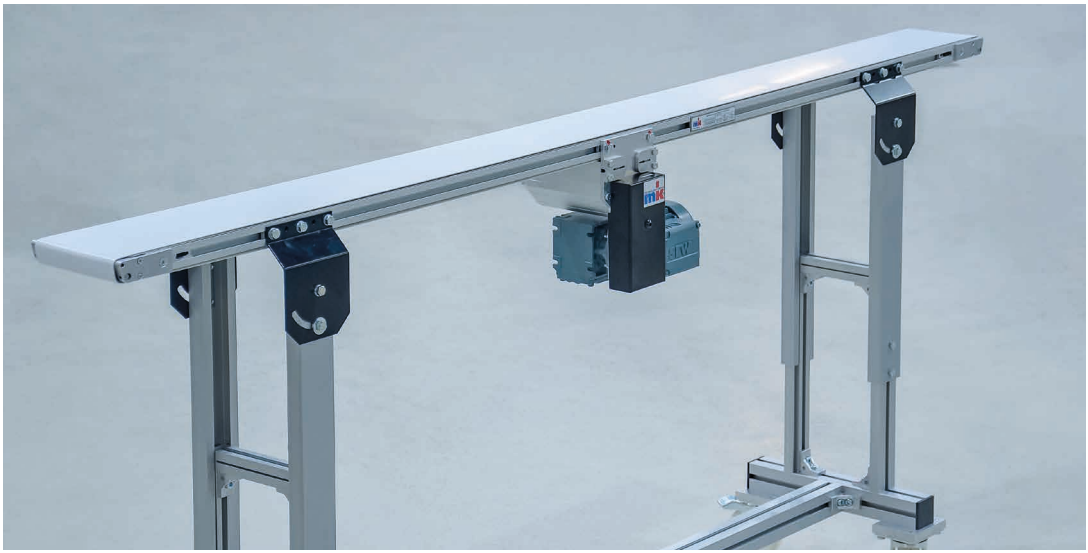


GUF-P MINI belt conveyor with tail 13,
ø 12 knife edge and side rail SF1.3



GUF-P MINI belt conveyor with BC
lower belt drive and 24 V DC motors

Belt Conveyor GUF-P MINI



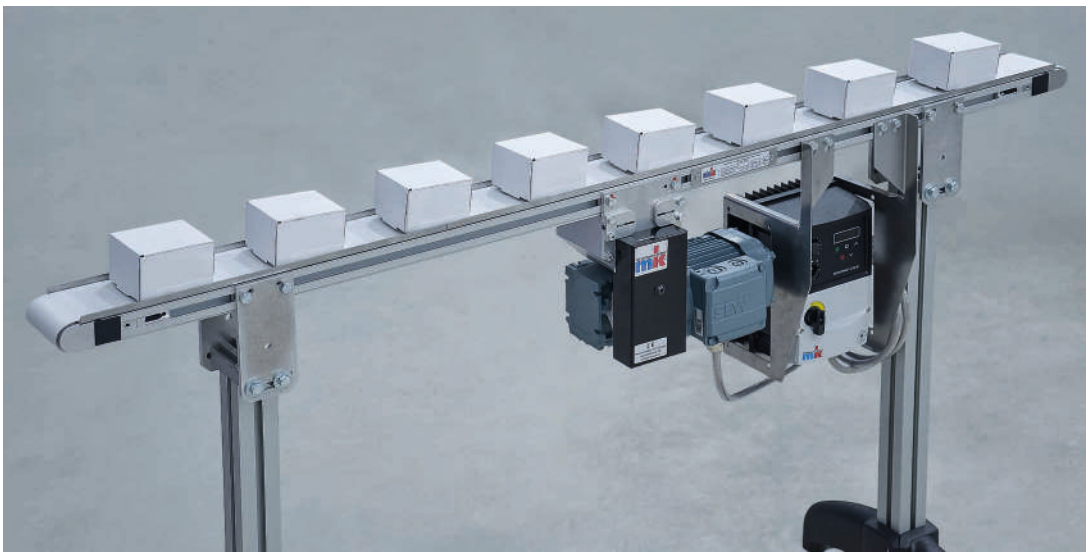
GUF-P MINI with BC centre drive and S53.11
mobile stand for lightweight loads



GUF-P MINI with AF head drive and
compact 48 V stepper motor



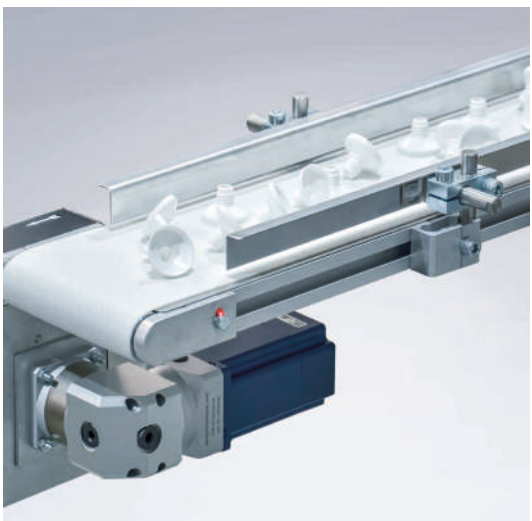
GUF-P MINI as a lift and transfer unit
in a timing belt conveyor



GUF-P MINI with BC centre drive,
frequency inverter and single stand



GUF-P MINI with SF02 type 01
side rail on one side



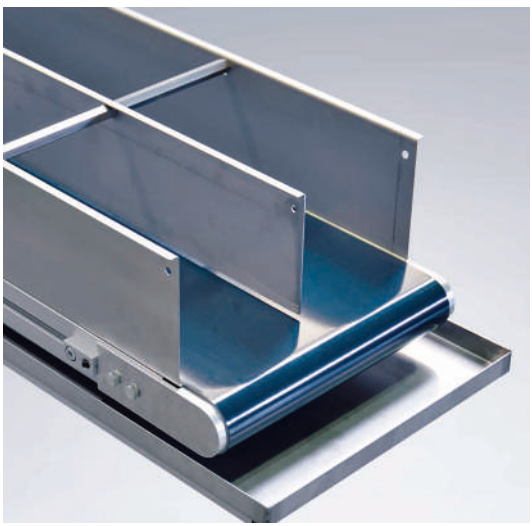
GUF-P MINI with SF01 type 01 side rail and
stepper motor with planetary gear

Belt Conveyor GUF-P 2000



GUF-P 2000 belt conveyor as a container changing system
for feeding and discharging load carriers

10



Belt conveyor GUF-P 2000 with
central lane separation and drip pan



GUF-P 2000 CA with 6 belt tracks
and compact drum motor



GUF-P 2000 belt conveyor with tail 13, with rolling knife edge



Belt conveyor GUF-P 2000 with 01 extra-long tail and with printed belt

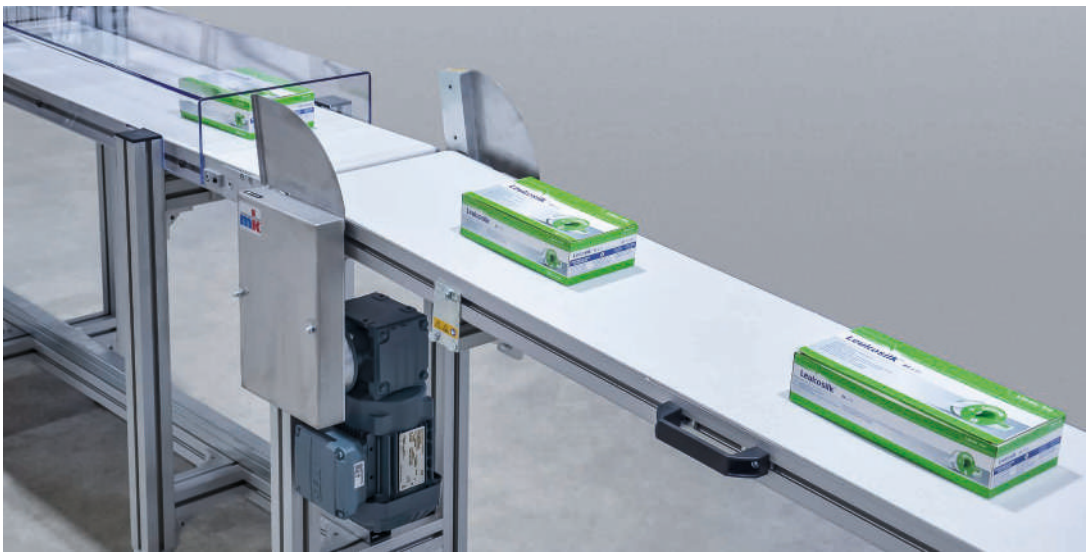


GUF-P 2000 belt conveyor with customised side rail and side rail strip



Belt conveyor GUF-P 2000 AF as inclined conveyor with cleats, special side rail and drip pan

Belt Conveyor GUF-P 2000



GUF-P 2000 with manual folding mechanism for passageway

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GUF-P 2000 with head drive AC with wire mesh belt for conveyed goods at up to 150° C



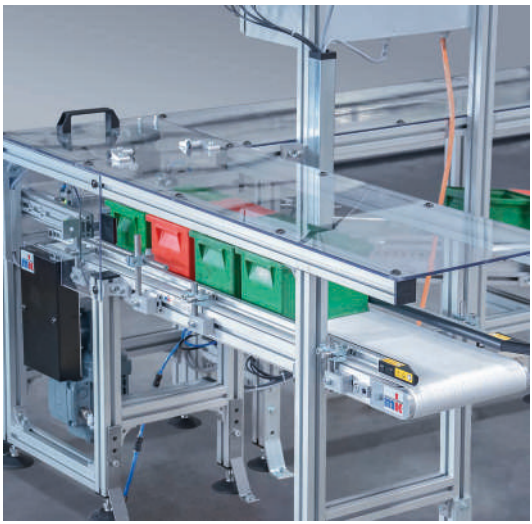
GUF-P 2000 as a conveyor belt for serial packers with a heat sealing station for producing custom shipping bags



GUF-P 2000 with mechanism for folding and setting up paper bags upstream of the filling process



GUF-P 2000 with side rail SF02 type 21 and device for turning cardboard boxes 90°

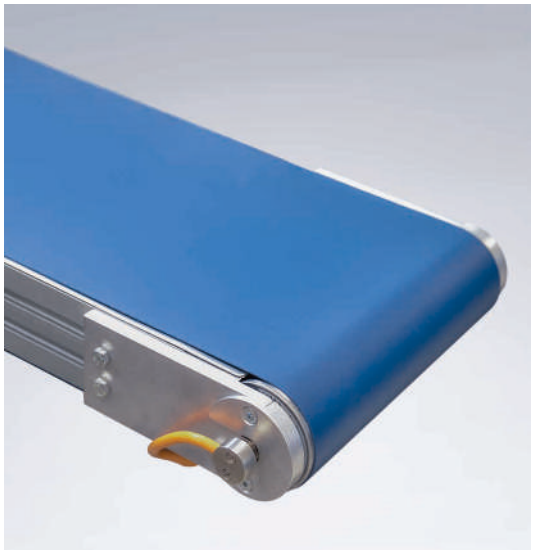


GUF-P 2000 for buffering small load carriers with Makrolon protective cover on top

Belt Conveyor GUF-P 2041



Belt conveyor GUF-P 2041 with 01 ø 85 tail



Belt conveyor GUF-P 2041 CA
with ø 81,5 drum motor

10



Belt conveyor GUF-P 2041 with centre drive,
knife edge and side rail



Belt conveyor GUF-P 2041 with knife edge
and height-adjustable stand



Two GUF-P 2041 units arranged side by side with customised stand and photoelectric sensors



Belt conveyor GUF-P 2041 as inclined conveyor with transverse cleats and side rail



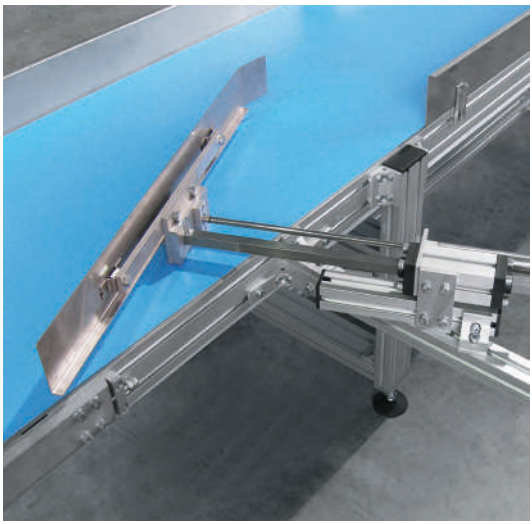
Belt conveyor GUF-P 2041 with knife edge and height-adjustable stand

Belt Conveyor GUF-P 2041



Circulation system for manually sorting laundry based on GUF-P 2041 and GUF-P 2000 conveyors with AC head drive

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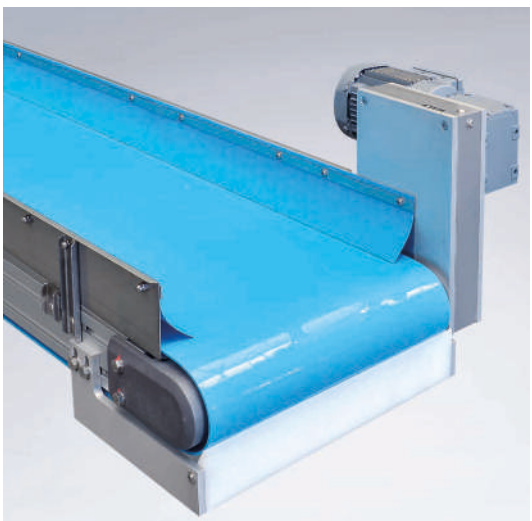
GUF-P 2041 with pneumatic diverter



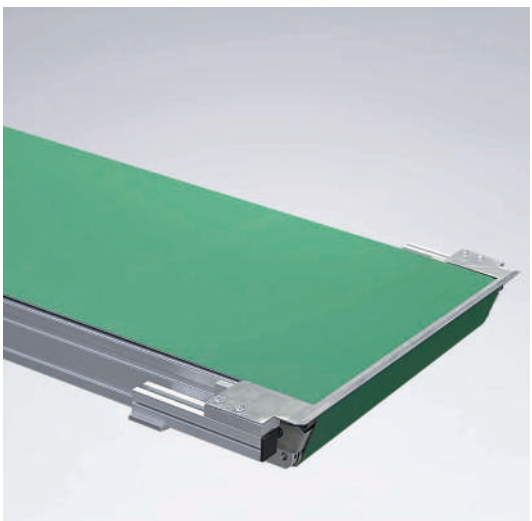
Two GUF-P 2041 units in tandem arrangement with mobile stand system for mobile dual system supply



GUF-P 2041 with lower belt drive BC; the height of the frame can be adjusted using a hydraulic pump

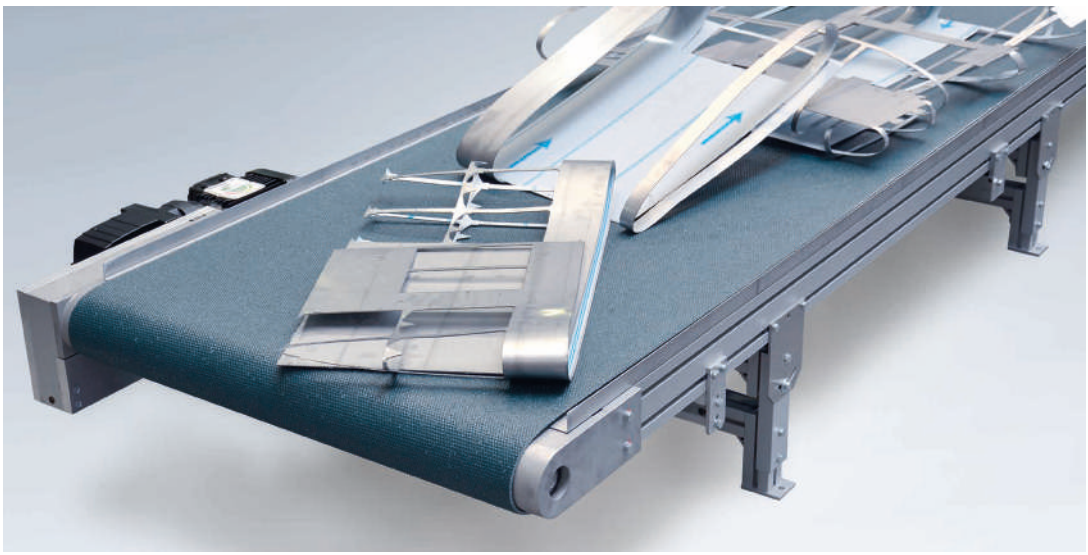


Belt conveyor GUF-P 2041 with side rail with belt flap



Belt conveyor GUF-P 2041 with tail 13 and customer-specific transfer sheet

Belt Conveyor GUF-P 2004



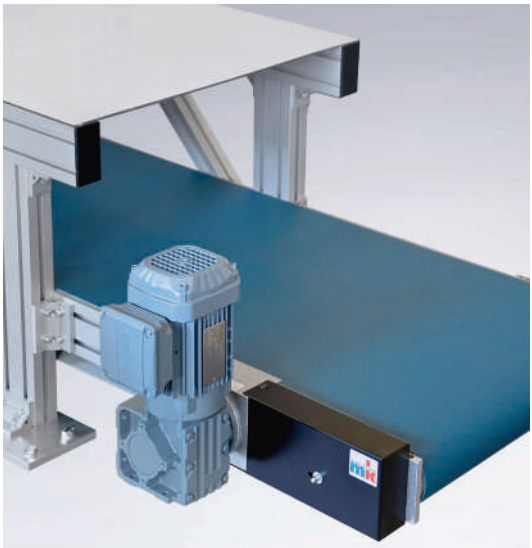
GUF-P 2004 with lateral outer AS head drive
and robust special belt for punch scrap



Belt conveyor GUF-P 2004 in
special design with rolling knife edge



Belt conveyor GUF-P 2004 with photoelectric sensor



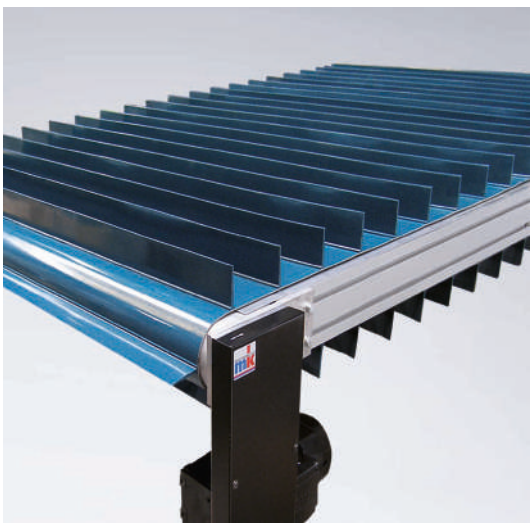
Belt conveyor GUF-P 2004 with standard head drive AS, 270° motor orientation



Belt conveyor GUF-P 2004 with printed belt



Belt conveyor GUF-P 2004 with special side rail on a frame comprised of linear units



Belt conveyor GUF-P 2004 with belt with transverse cleats

Belt Conveyor GUF-P 2004



45 metre long GUF-P 2004 as a feed line in the just-in-sequence production of car seats

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C-frame with recirculating ball bearing guides, each with 2 roller carriages for lifting or lowering the GUF-P 2004 conveyors



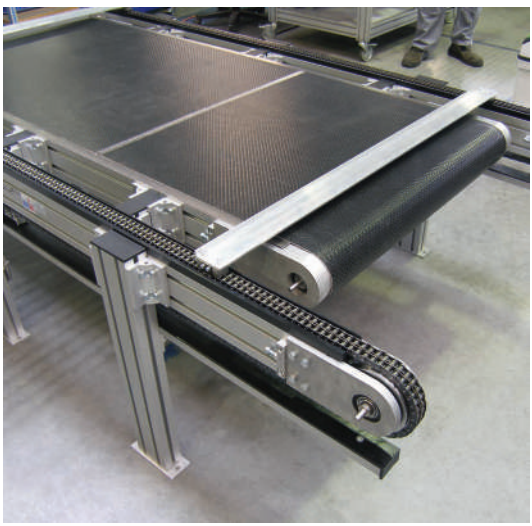
GUF-P 2004 with head drive AS fitted laterally on the outside as a two-level conveyor with drip pans on a shared base frame



GUF-P 2004 with AF head drive and S53.21 mobile stand



GUF-P 2004 with divided upper run and lower run



Belt conveyor combination of GUF-P 2004 with drum motor CA and dual line KTF-P 2004

Incline Conveyor Belt KFG-P 2000



Incline conveyor belt KFG-P 2000
with 60° incline



Incline conveyor belt KFG-P 2000
with 45° incline

10



Incline conveyor belt KFG-P 2000 with
head drive AS and side rail



Incline conveyor belt KFG-P 2000
with head drive AU and 45° incline



Incline conveyor belt KFG-P 2000 with side wall as a lateral boundary and transverse cleats



Incline conveyor belt KFG-P 2000 with customer-specific dimensions



Incline conveyor belt KFG-P 2000 with head drive AC and side rail, belt guide via longitudinal cleats K10



Incline conveyor belt KFG-P 2000 with head drive AC and 30° incline

Incline Conveyor Belt KFG-P 2000



KFG-P 2000 type K with customised base frame and protective housing in the transfer area

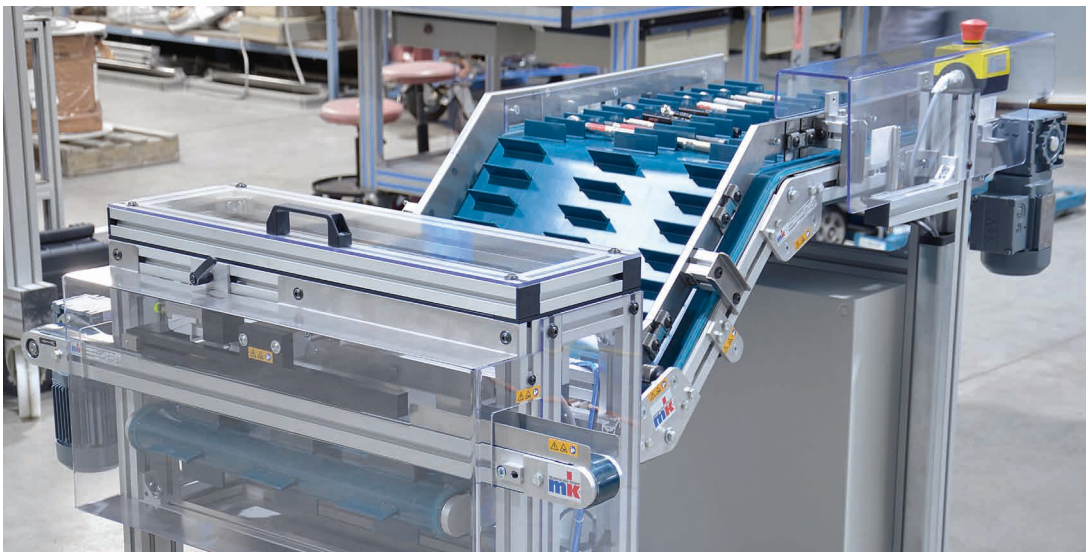
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KFG-P 2000 type L with AF head drive and 45° incline



KFG-P 2000 with white FDA-compliant wear strip as side rail



KFG-P 2000 with protected part sensor for removal and buffering in a production system



KFG-P 2000 with drip pan for oily stamped parts



Mobile KFG-P 2000, type K with side rail SF 9.1 (VA sheet steel, tilted) and transfer hopper at the beginning of the conveyor, including controller

Curved Belt Conveyor KGF-P 2040



KGF-P 2040 curved belt conveyor with frequency inverter and stand with hydraulic height adjustment



Curved belt conveyor KGF-P 2040 with centre drive BI and rolling knife edge

10



Curved belt conveyor KGF-P 2040 with internal radius R=300 mm and stand type 2



180° curved belt conveyor KGF-P 2040 with side rail on internal radius



180° curved belt conveyor KGF-P 2040
without internal radius



180° curved belt conveyor KGF-P 2040
with 300 mm internal radius

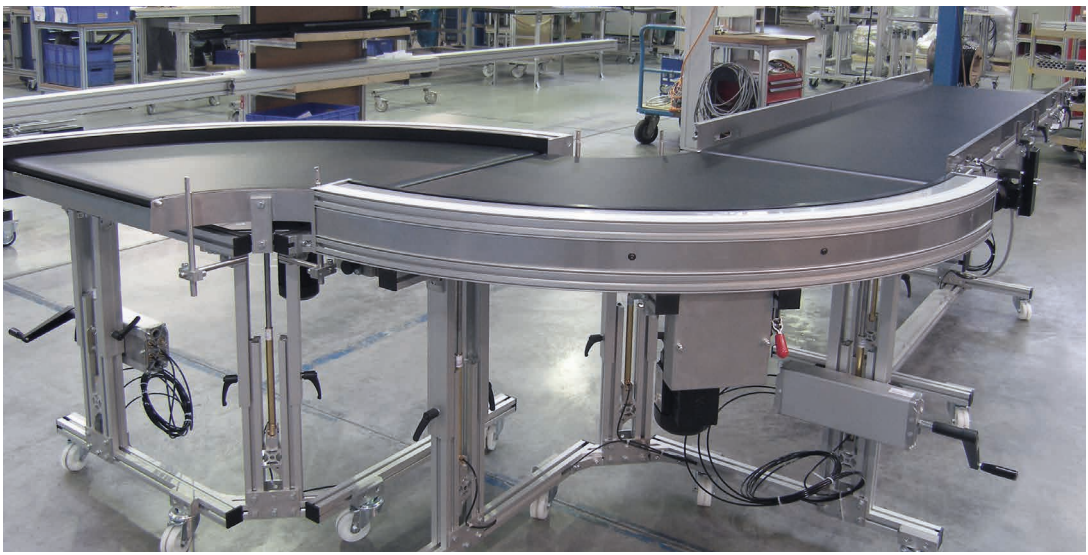


Curved belt conveyor KGF-P 2040 with rolls for
transfer to the belt conveyor without a knife edge



Curved belt conveyor KGF-P 2040
with height-adjustable, movable frame

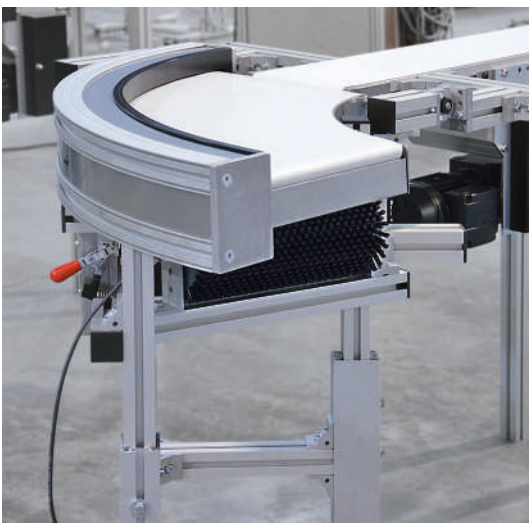
Curved Belt Conveyor KGF-P 2040



KGF-P 2040 with lower belt drive BI and hydraulic adjustment of the stand height using a hand crank

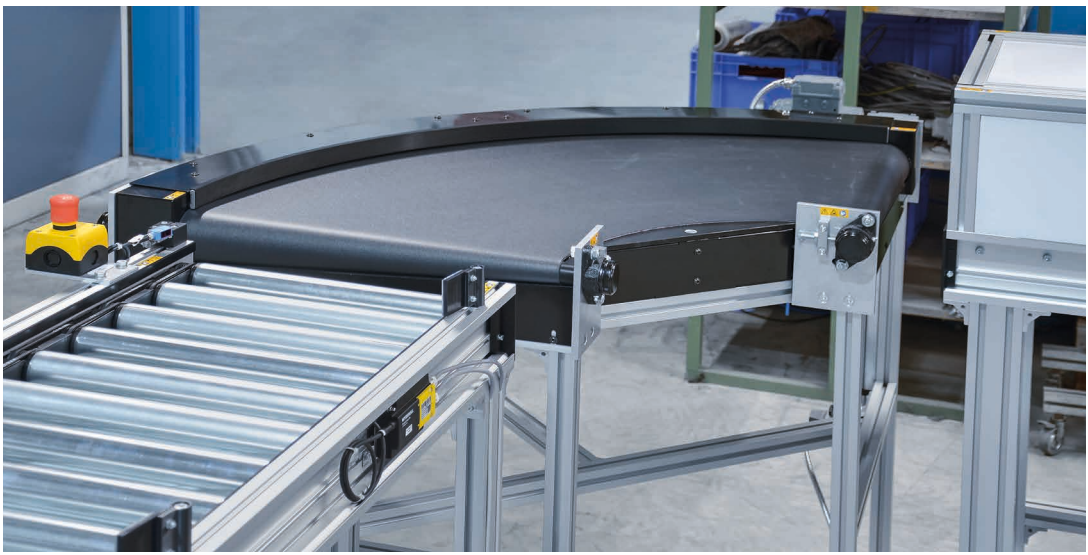


Combination of two 90° KGF-P 2040 curved belt conveyors with lower belt drive BI, reversible



KGF-P 2040 with lower belt drive BI and rotating wiper brush underneath the conveyor (return)

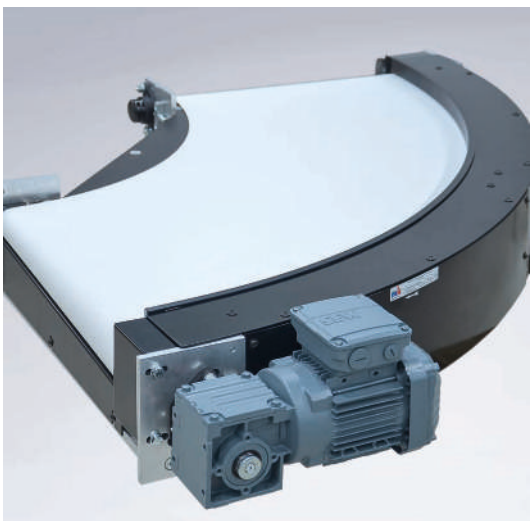
Curved Belt Conveyor KGF-P 2040.02



KGF-P 2040.02 curved belt conveyor with
outer radius 1,000 mm and usable width 400 mm



KGF-P 2040.02 curved belt conveyor with
outer radius 1,000 mm and usable width 400 mm



KGF-P 2040.02 with head drive AF with
outer radius 1,000 mm and usable width 500 mm

Curved Belt Conveyor KGF-P 2040.02



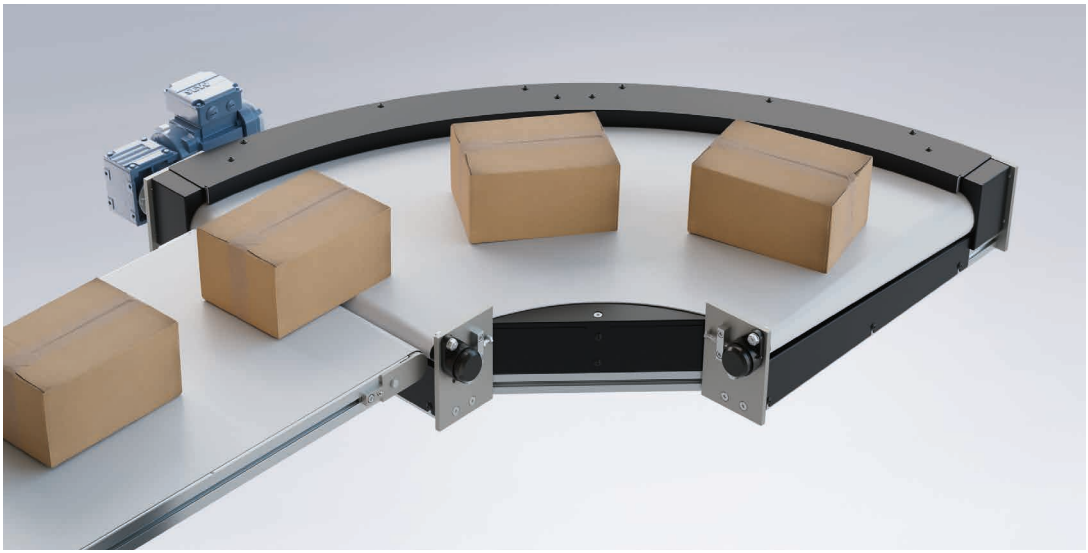
KGF-P 2040.02 curved belt conveyor with
outer radius 1,500 mm and usable width 900 mm



KGF-P 2040.02 curved belt conveyor with
outer radius 1,000 mm and usable width 300 mm



KGF-P 2040.02 curved belt conveyor
in combination with GUF-P 2000



KGF-P 2040.02 curved belt conveyor with
outer radius 1,500 mm and usable width 900 mm



KGF-P 2040.02 curved belt conveyor with
outer radius 1,000 mm and usable width 600 mm

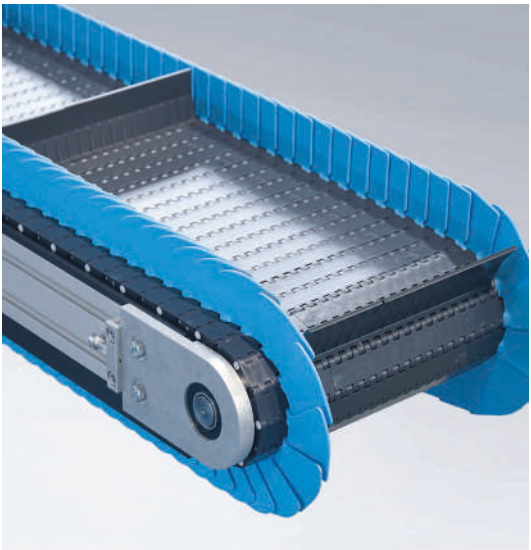


KGF-P 2040.02 curved belt conveyor with
outer radius 1,500 mm and usable width 900 mm

Modular Belt Conveyor MBF-P 2040



Modular belt conveyor MBF-P 2040
with side wall and additional side rail

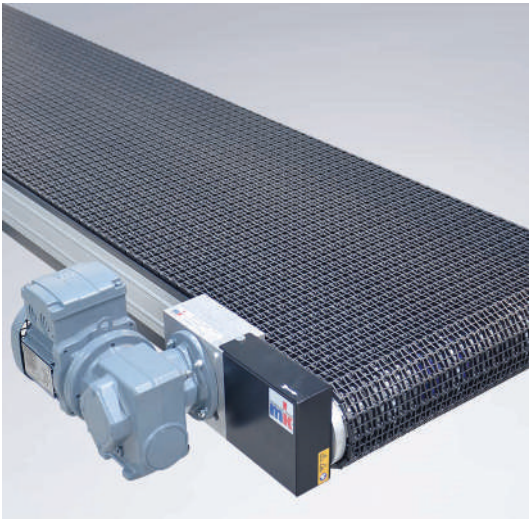


Modular belt conveyor MBF-P 2040
with moving side wall

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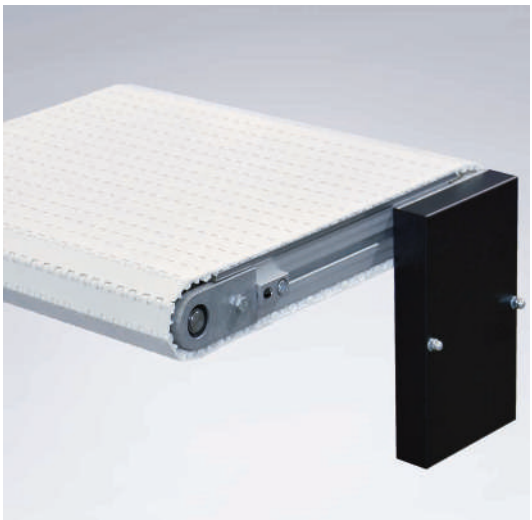
Modular belt conveyor MBF-P 2040 with end stop



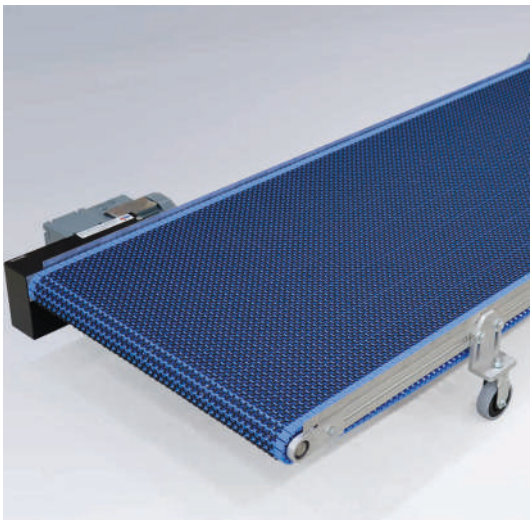
Modular belt conveyor MBF-P 2040 with
head drive AS and modular belt with grid structure
for outstanding air circulation



MBF-P 2040 with head drive AU as inclined conveyor
with collection hopper and movable support frame



Modular belt conveyor MBF-P 2040
with a particularly short design



Modular belt conveyor MBF-P 2040
with a special chain with friction lining

Modular Belt Conveyor MBF-P 2040

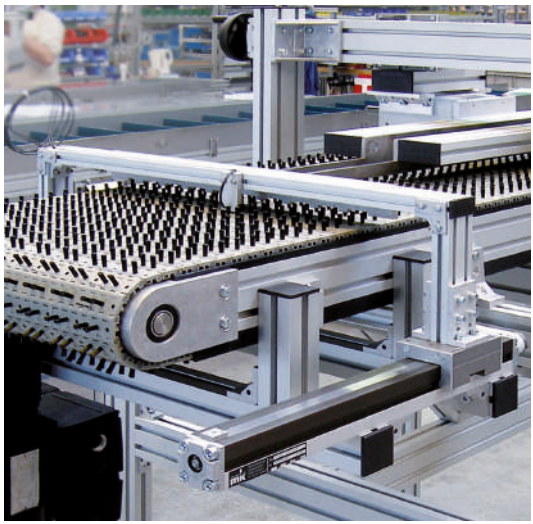


MBF-P 2040 modular belt conveyor
with pneumatic cross-pusher

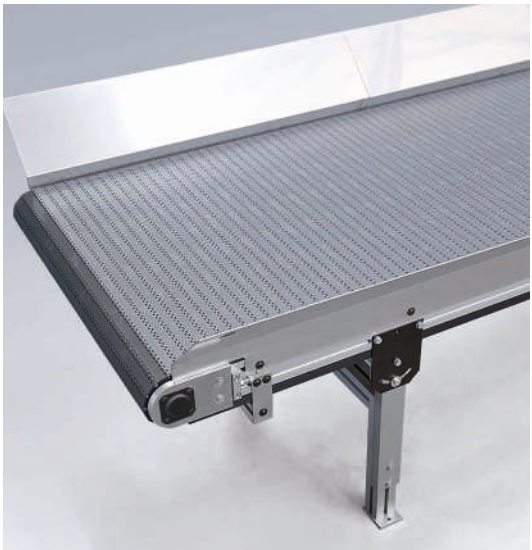
10



MBF-P 2040 interlinking with a side rail on one side and a side wall on the opposite side to support the product



Modular belt conveyor MBF-P 2040 with head drive AC and plastic bristles for gentle transport



Modular belt conveyor MBF-P 2040 with funnel-shaped side rail



42 m long MBF-P 2040 with side creep zone protection and a protective guard for just-in-sequence mounting in non-stop operation



MBF-P 2040 modular belt conveyor with chicane that guides products sideways towards the infeed of the spiral conveyor or to the diverter section



Conveying path consisting of MBF-P 2040 modular belt conveyors as a transport route for a logistics service provider

Incline Conveyor Modular Belt KFM-P 2040



Incline conveyor modular belt KFM-P 2040 type L with head drive AS and intake guide panel on the infeed



Incline conveyor modular belt KFM-P 2040 type K with movable base frame

10



Incline conveyor modular belt KFM-P 2040 type L with head drive AC and customer-specific base frame



Incline conveyor KFM-P 2040 with side rail, guide rail type 22



Incline conveyor modular belt KFM-P 2040 with protective box on the infeed end



Incline conveyor modular belt KFM-P 2040 with filling funnel and cover in the area with the upward incline



Incline conveyor modular belt KFM-P 2040 equipped with two motors for reverse operation



Incline conveyor modular belt KFM-P 2040 with protective box and drip pan

Incline Conveyor Modular Belt KFM-P 2040



Large KFM-P 2040 with side plates in a different colour to the modular belt

10



KFM-P 2040 with drip pan and separator flap



Swivelling KFM-P 2040 with fixed fulcrum, swivel casters and locking mechanism



KFM-P 2040 with protective box in front, side rail and drip pan for oily copper fittings

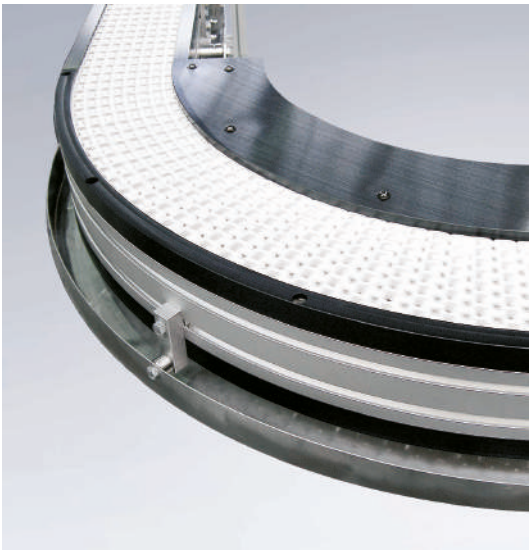


KFM-P 2040 type S incline conveyor with 30° belt incline and additional side rail

Curved Modular Belt Conveyor KMF-P 2040



Curved modular belt conveyor KMF-P 2040

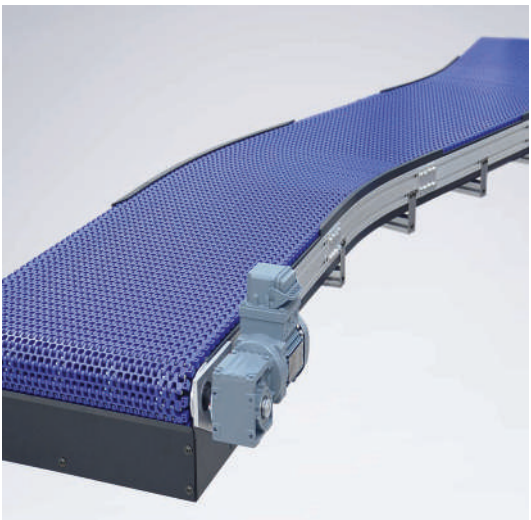


Curved modular belt conveyor KMF-P 2040
with 90° rolling curve and drip pan

10



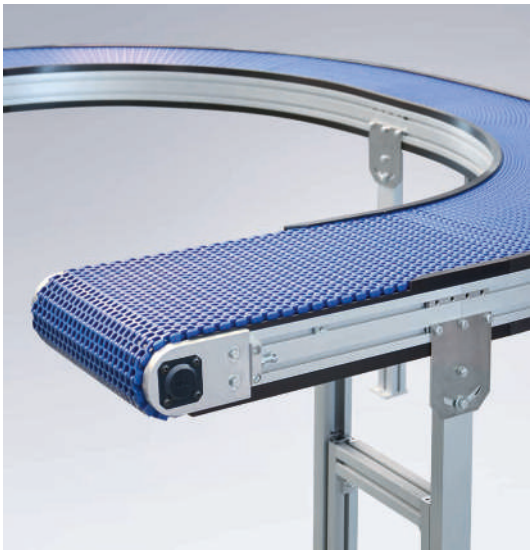
Curved modular belt conveyor KMF-P 2040
with side rail SF02 type 23



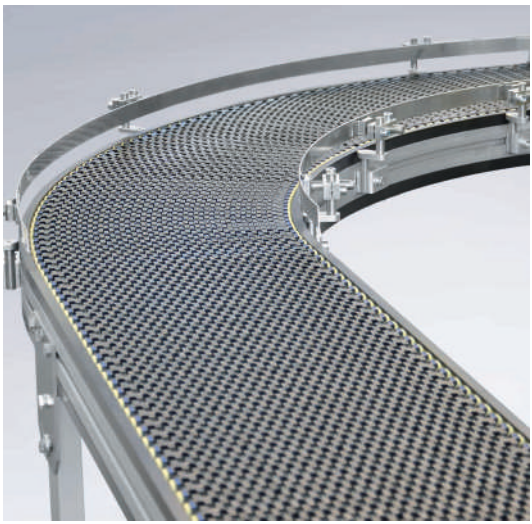
Curved modular belt conveyor KMF-P 2040 with
S-course 19° sliding curves and head drive AF



Curved modular belt conveyor
KMF-P 2040 with side rail SF2.1



Curved modular belt conveyor
KMF-P 2040 with 180° curve



Curved modular belt conveyor
KMF-P 2040 with side rail SF02



Curved modular belt conveyor
KMF-P 2040 with drip pan and movable stand

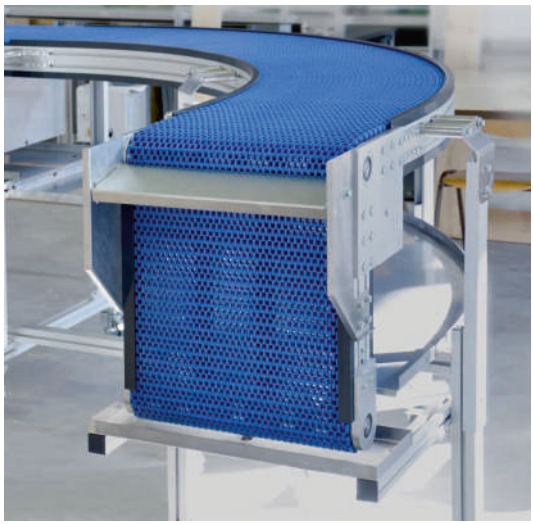
Curved Modular Belt Conveyor KMF-P 2040



KMF-P 2040 as an infeed for empty canisters



Curved KMF-P 2040 with 90° curve and adjustable side rails



KMF-P 2040 with drip pan and discharge chute for oily stamped parts

Incline Conveyor Modular Belt KFM-P 2040.86



Incline conveyor type L with KFM-P 2040.86 hinged plate belt with 30° belt incline

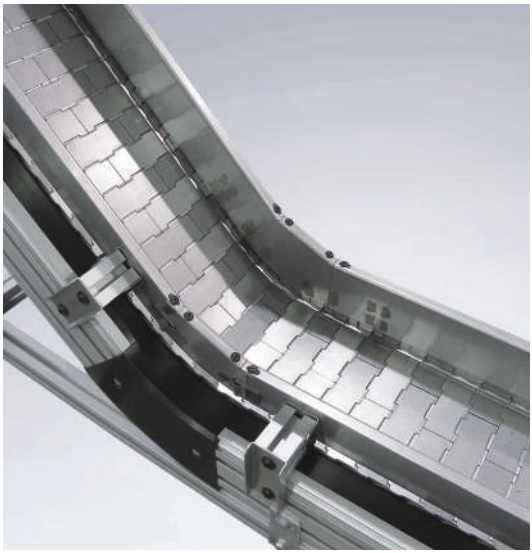


KFM-P 2040.86 with AS head drive for bridging a large height difference



KFM-P 2040.86 for hot product with resizeable supply reservoir

Incline Conveyor Modular Belt KFM-P 2040.86



Incline conveyor modular belt KFM-P 2040.86
with 45° incline and side rail SF 8.1



Incline conveyor modular belt KFM-P 2040.86
with 60° incline and side rail SF01

10



Incline conveyor modular belt
KFM-P 2040.86 with drip pan



KFM-P 2040.86 incline conveyor modular
belt with 45° incline and type A stand



Incline conveyor modular belt KFM-P 2040.86 with perforated and dimpled hinged plate belt and cams



KFM-P 2040.86 incline conveyor modular belt with 30° incline and plastic cams



Incline conveyor modular belt KFM-P 2040.86 with protective box on the infeed end



Incline conveyor modular belt KFM-P 2040.86 with head drive AC and 45° incline

Timing Belt Conveyors ZRF-P 2040

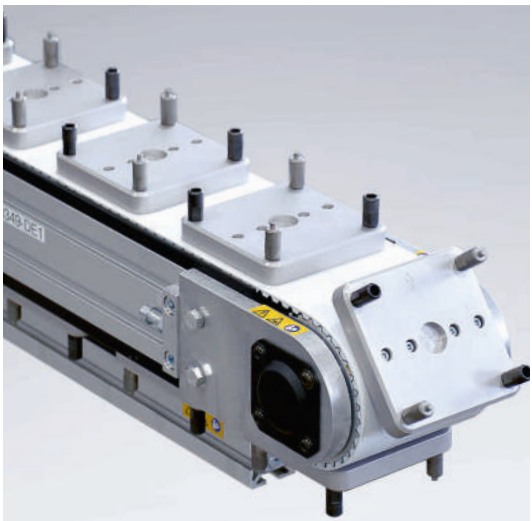


Timing belt conveyor ZRF-P 2040
with head drive AC

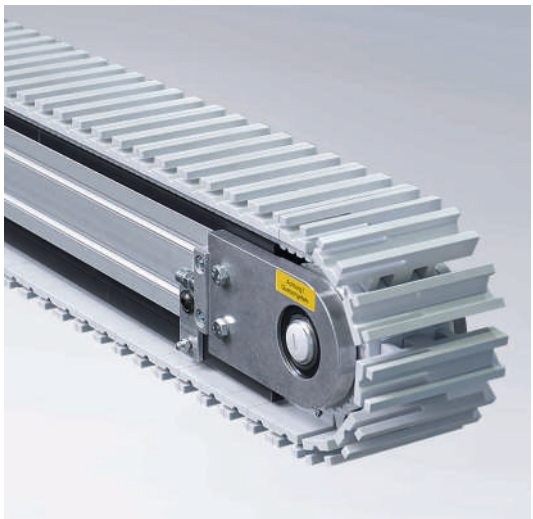


Dual-line timing belt conveyor ZRF-P 2040
with tail 13 with rolling knife edge

10



ZRF-P 2040 single-line timing belt conveyor
with screwed-on workpiece holders



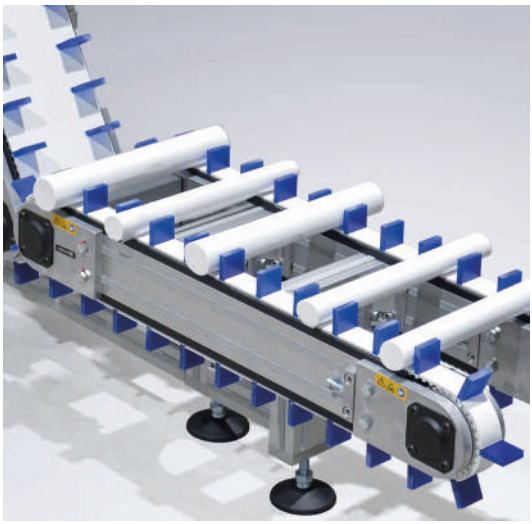
ZRF-P 2040 single-line timing belt
conveyor with mounted plastic cams



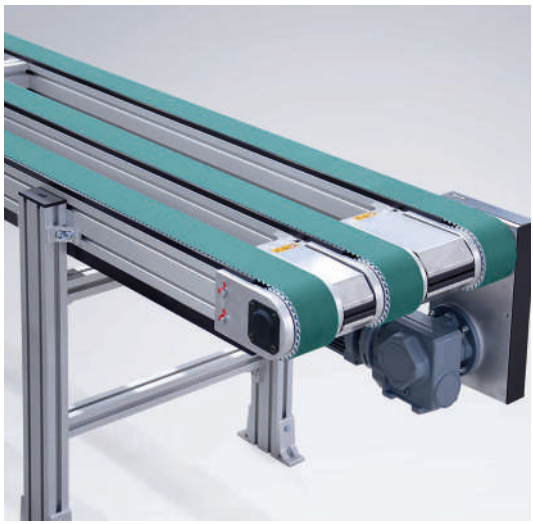
8-line ZRF-P 2040 timing belt conveyor with drive coupling of the conveyor lines via connecting shafts and couplings



Dual-line ZRF-P 2040 timing belt conveyor with screwed-on, 3D-printed product holders

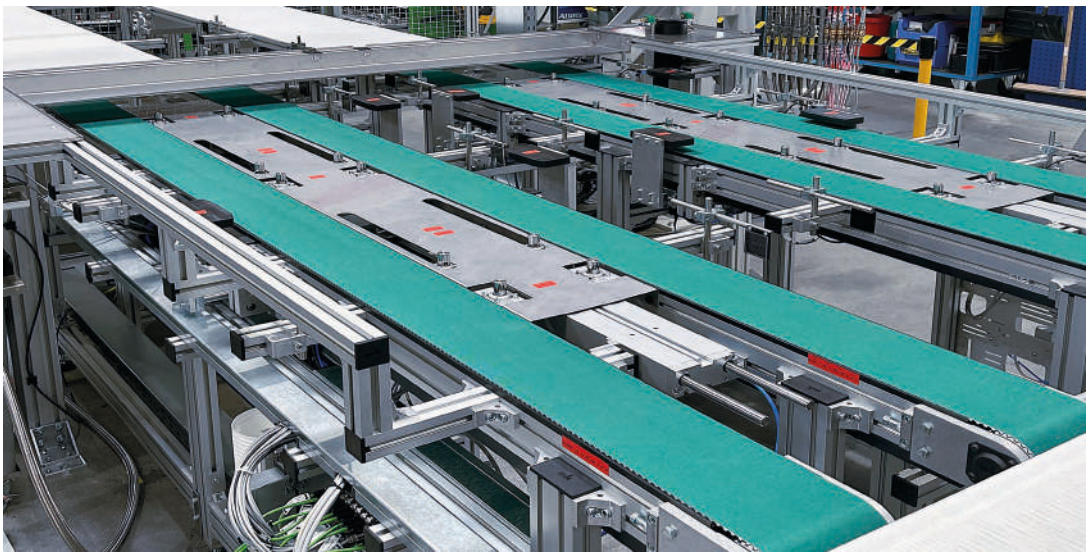


Dual-line ZRF-P 2040 timing belt conveyor with customised cams



Three-line timing belt conveyor ZRF-P 2040 with head drive AC

Timing Belt Conveyors ZRF-P 2040



Dual-line ZRF-P 2040 timing belt conveyor for reliable positioning of products with different formats

10



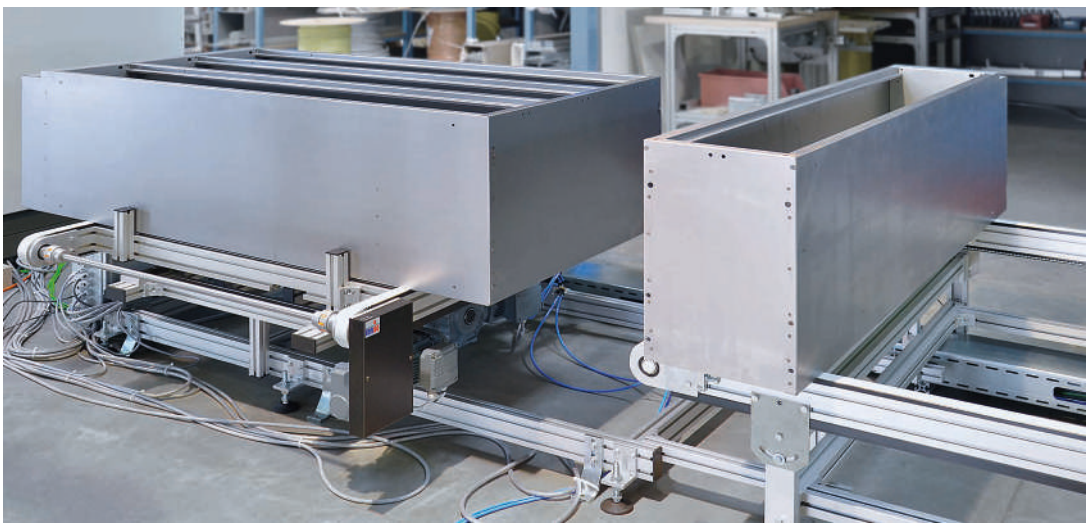
Dual-line timing belt conveyor ZRF-P 2040 with lines with 10° incline and lift at the outfeed



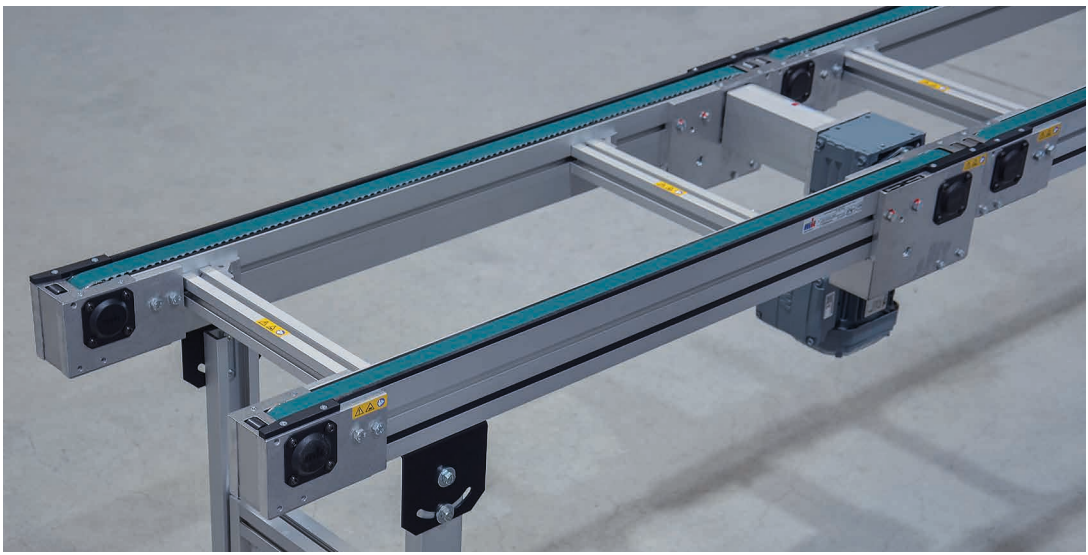
ZRF-P 2040 as channelling and separating module with lift and transfer



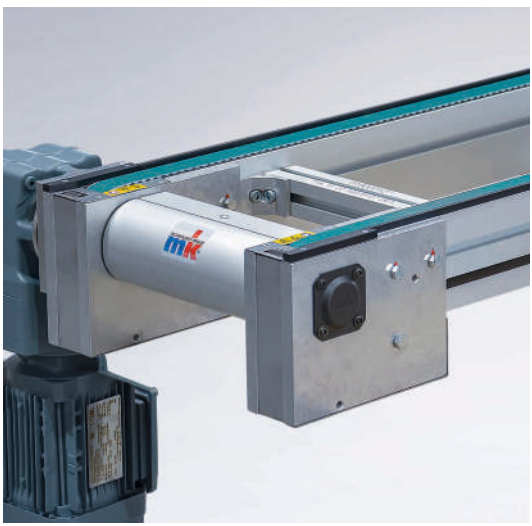
Three-line ZRF-P 2040 timing belt conveyor for stable transport of loads up to 600 kg in weight



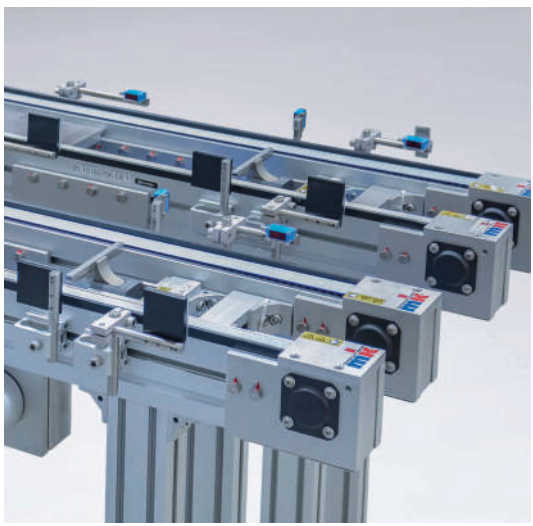
Interlink ZRF-P 2040 with lift and transfer for lockers



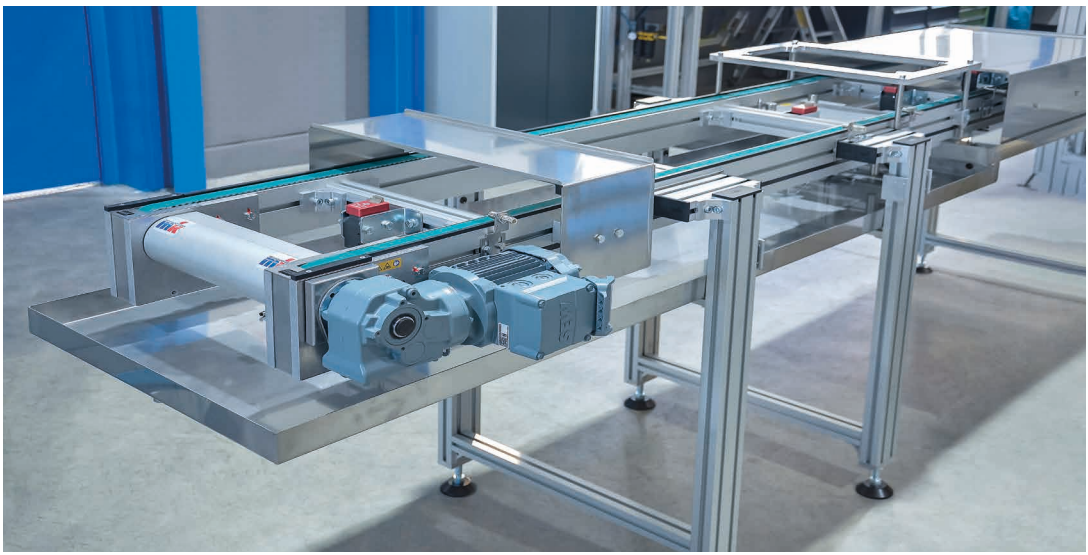
ZRF-P 2045 timing belt conveyor with head drive AF



ZRF-P 2045 timing belt conveyor with head drive AF



ZRF-P 2045 timing belt conveyor as final pick-up station for trays with position detection



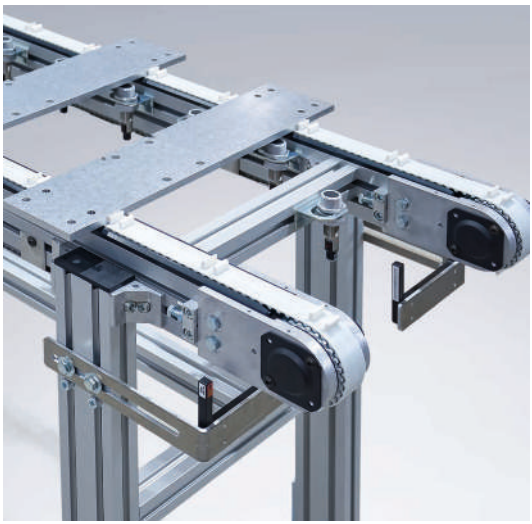
ZRF-P 2045 timing belt conveyor with PE 2045 lift and locate unit and drip pan for slightly oily products



ZRF-P 2045 timing belt conveyor with lift and transfer units as **Versamove *standard*** pallet system



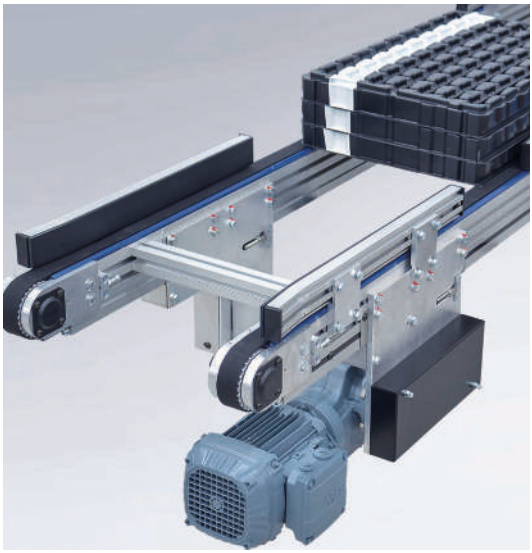
Dual-line ZRF-P 2010 timing belt conveyor as a conveying path for the pre-assembly of solar panels



ZRF-P 2010 timing belt conveyor with component check



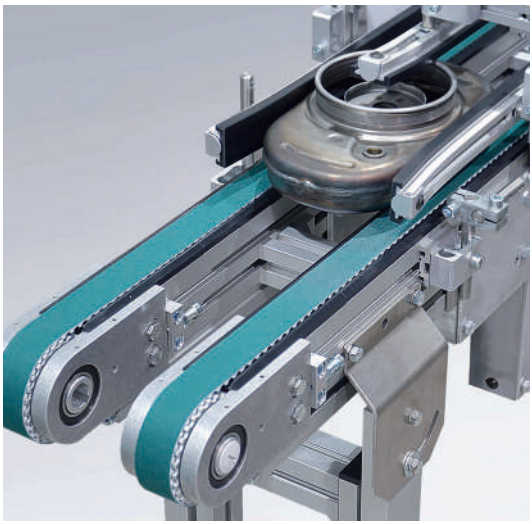
Timing belt conveyor ZRF-P 2010 in antistatic design with lift-and-transfer conveyor



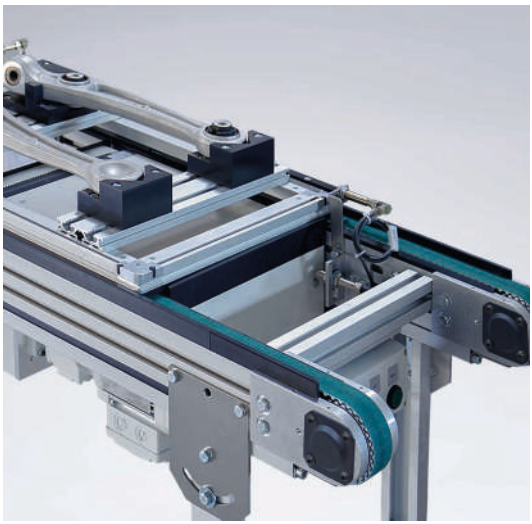
Dual-line ZRF-P 2010 timing belt conveyor with centre drive BC and partial side rail



Dual-line timing belt conveyor ZRF-P 2010 with side rail



Timing belt conveyor ZRF-P 2010 with side rail SF01



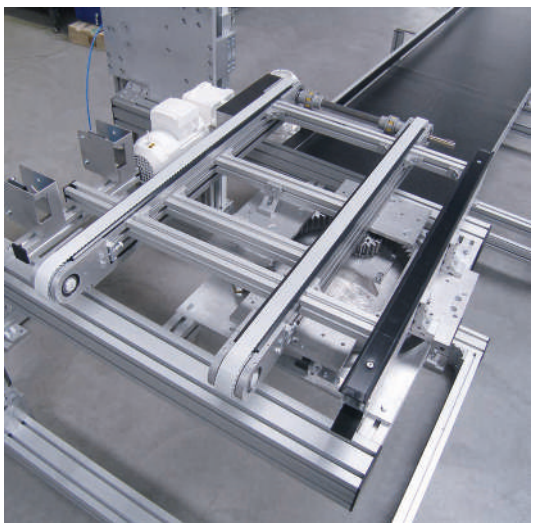
Timing belt conveyor ZRF-P 2010 with coupled lift and transfer conveyor



Interlink ZRF-P 2010 as loading and unloading station for bread roll production with stacking unit as a buffer



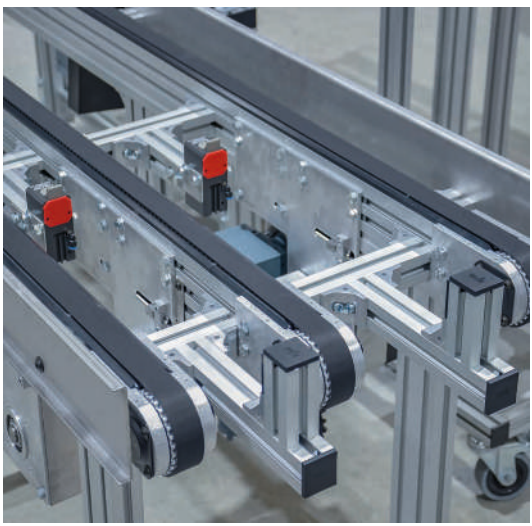
Interlink ZRF-P 2010 as discharge line for fuel tank



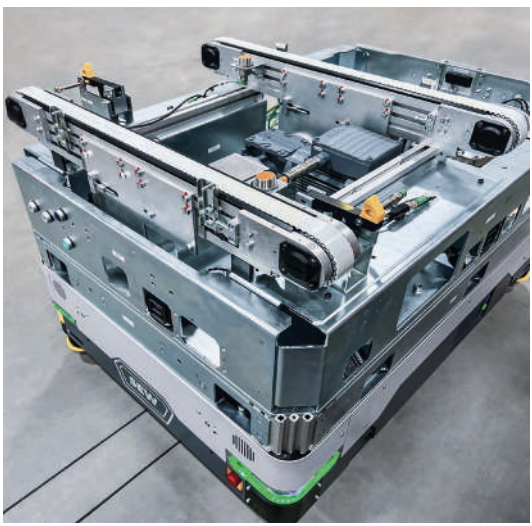
ZRF-P 2010 on rotating module with head drive AS in special paint finish



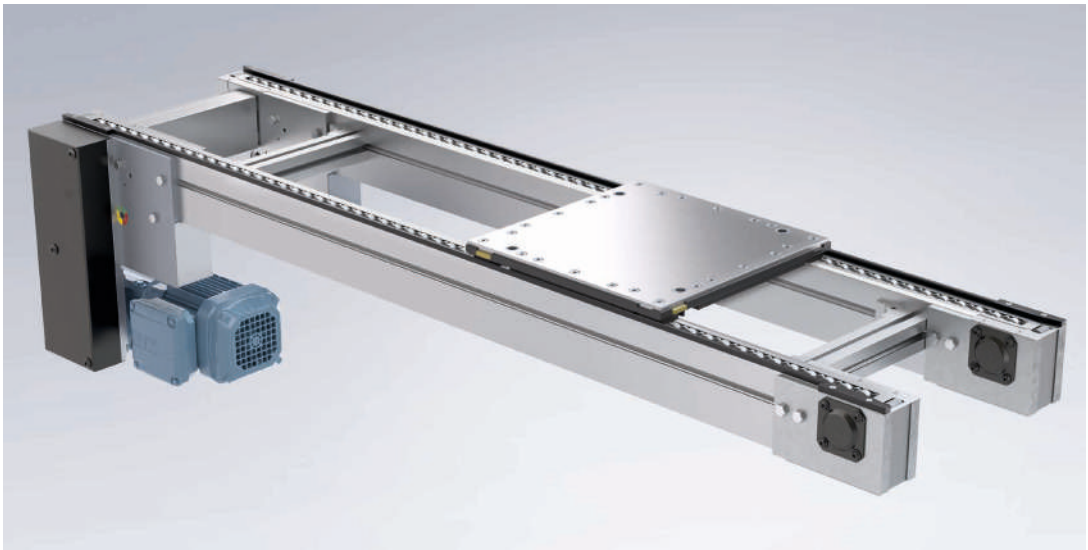
ZRF-P 2010 as **Versamove *plus*** pallet system
for the transfer of small load carriers



Three-line ZRF-P 2010 timing belt conveyor
with separating unit for small load carriers



ZRF-P 2010 timing belt conveyor
as a load handling device for AGVs



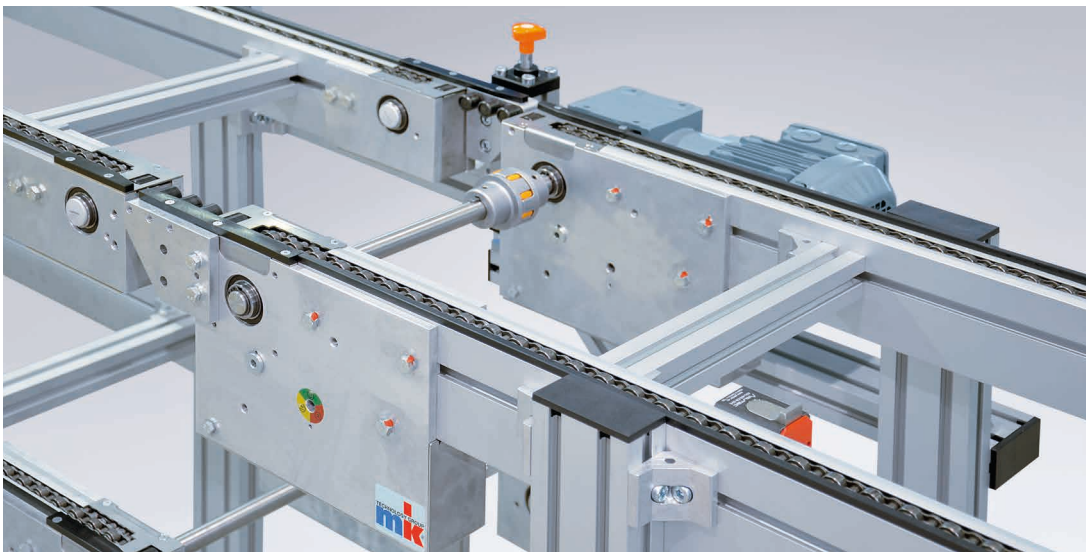
SRF-P 2045 accumulating roller chain conveyor with head drive AC and pallet from **Versamove *standard*** pallet system



SRF-P 2045 accumulating roller chain conveyor with direct head drive AF and lubrication station



SRF-P 2045 accumulating roller chain conveyor in special design as single-line conveyor



Two SRF-P 2045 accumulating roller chain conveyors with transfer segment and swivelling mechanism for passageway



SRF-P 2045 accumulating roller chain conveyor with direct head drive AF as a single-line conveyor



SRF-P 2045 standard accumulating roller chain conveyor

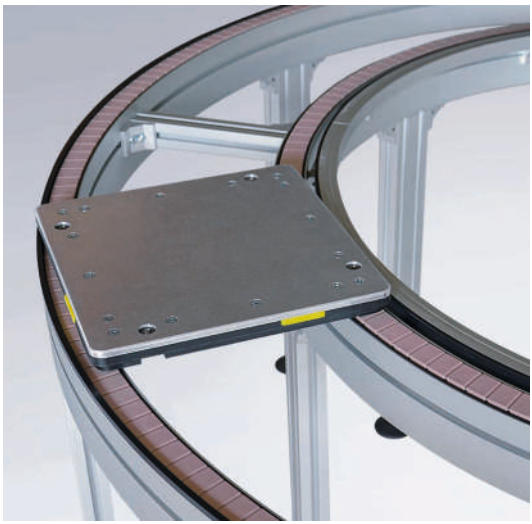
Flat Top Chain Conveyor FPF-P 2045

part of versamove



FPF-P 2045 flat top chain conveyor with AF head drive and pallet from **Versamove *standard*** pallet system

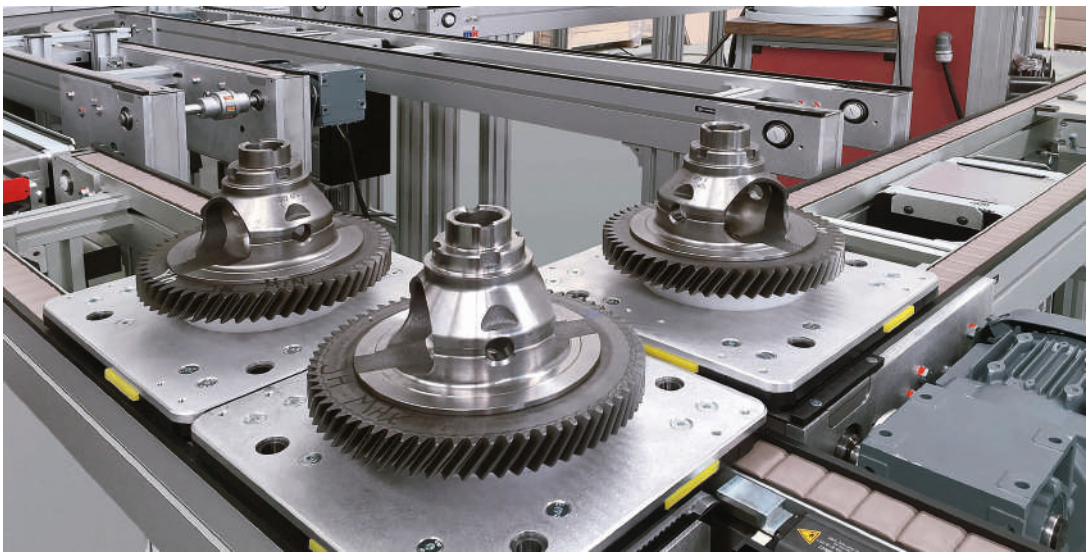
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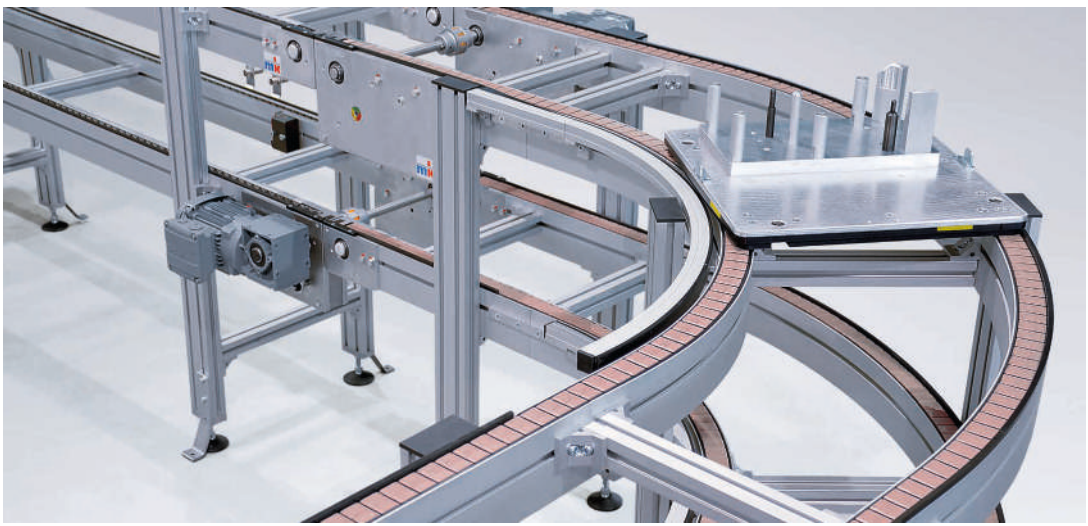
FPF-P 2045 flat top chain conveyor with 180° curve



FPF-P 2045 flat top chain conveyor with PE 2045 pneumatic lift and locate unit



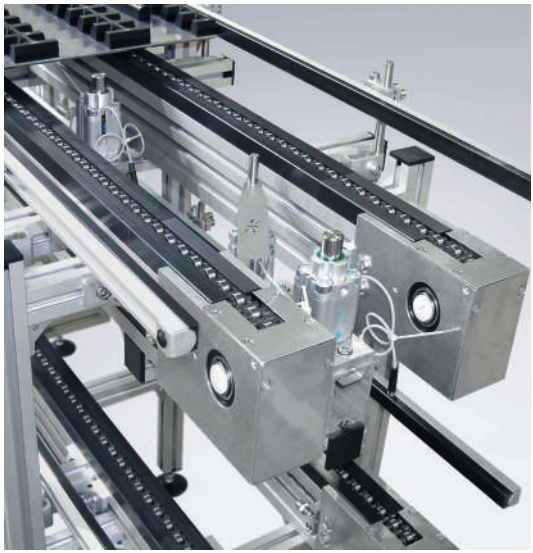
FPF-P 2045 flat top chain conveyor as part of the **Versamove *standard*** pallet system



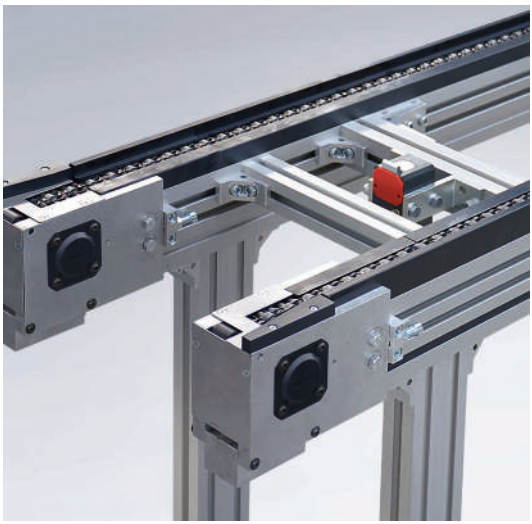
FPF-P 2045 flat top chain conveyor with 90° curve as part of the **Versamove *standard*** pallet system



SRF-P 2010 AC accumulating roller chain conveyor with AC indirect head drive



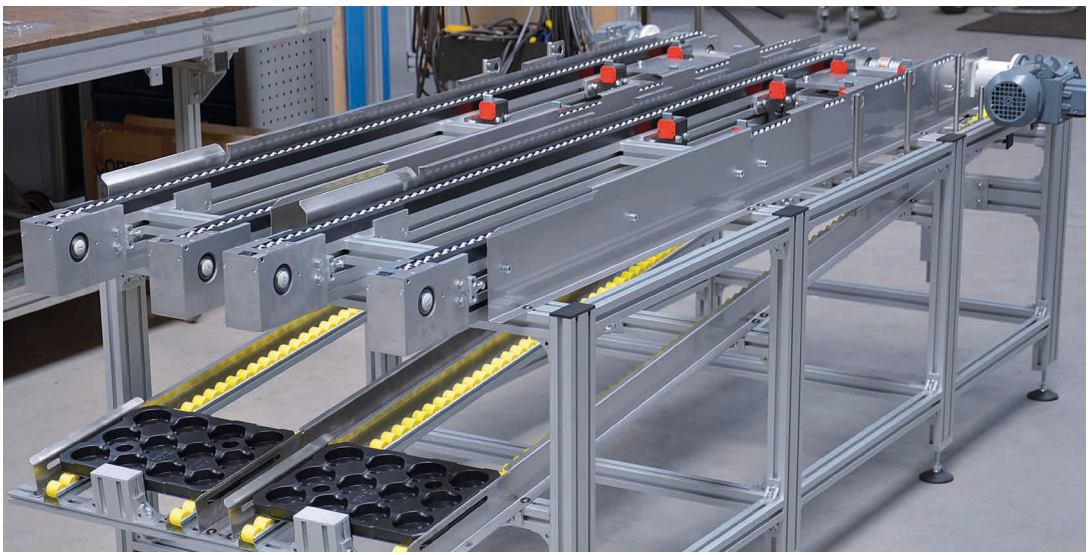
Accumulating roller chain conveyor SRF-P 2010 with electro-pneumatic positioning



Accumulating roller chain conveyor SRF-P 2010 with stopper



Accumulating roller chain conveyor SRF-P 2010 with drip pan



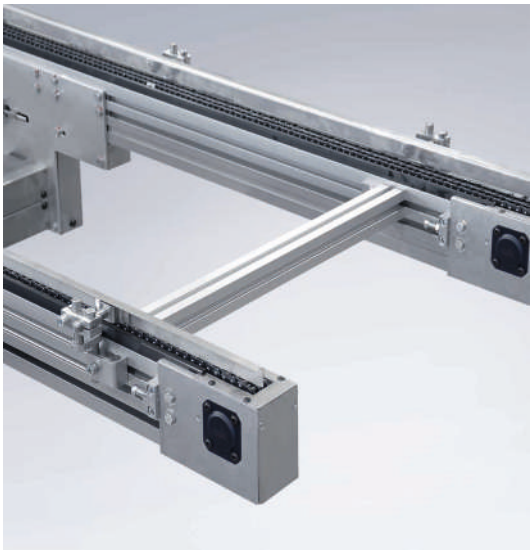
SRF-P 2010 accumulating roller chain conveyor
with tray return by means of roller strips underneath



SRF-P 2010 accumulating roller chain
conveyor as part of the **Versamove *plus***
pallet system with customised pallet



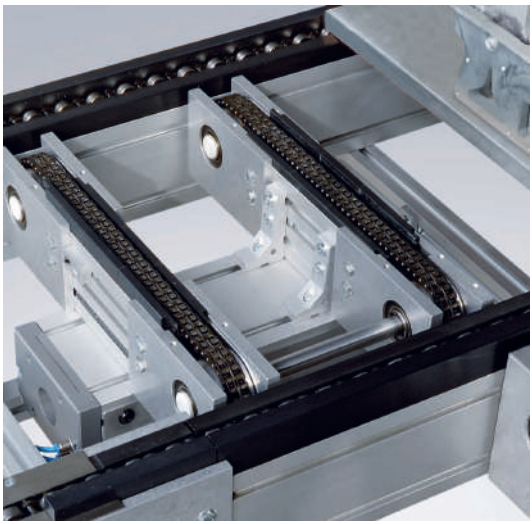
SRF-P 2010 accumulating roller chain
conveyor with automatic
tensioning device and lubrication station



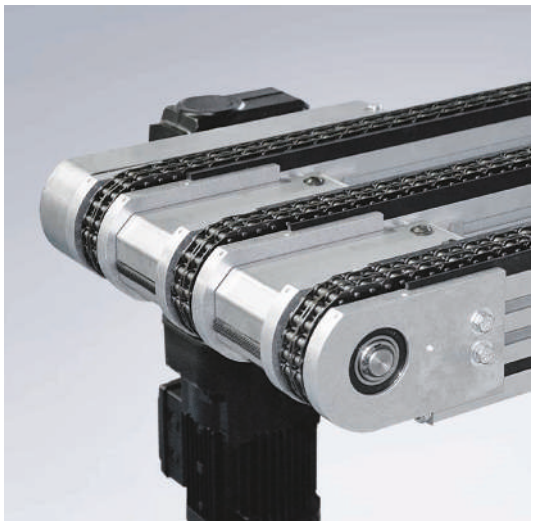
KTF-P 2010 chain conveyor with SF0.2 side rail



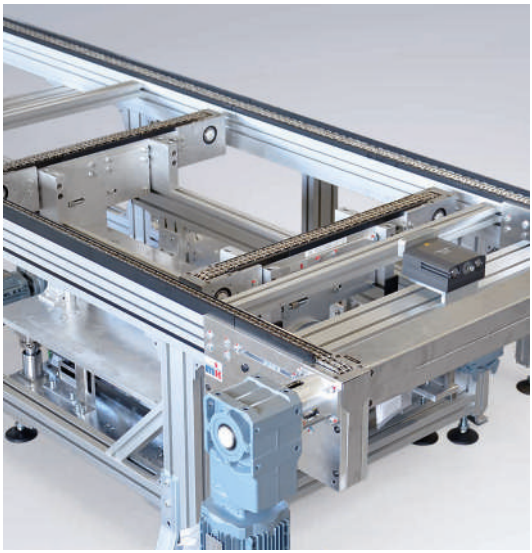
KTF-P 2010 chain conveyor with custom side rail



Chain KTF-P 2010 as lift-and-transfer unit for accumulating roller chain conveyor SRF-P 2010



Three-line chain conveyor KTF-P 2010



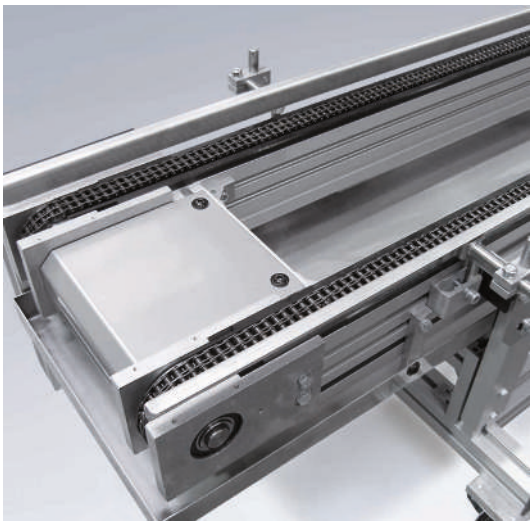
Chain conveyor KTF-P 2010 with lift-and-transfer conveyor and head drive AF with automatic clamping and lubrication station



Chain conveyor KTF-P 2010 with head drive AC



KTF-P 2010 chain conveyor with indirect head drive



Chain conveyor KTF-P 2010 with head drive AC, with drip pan and movable support frame



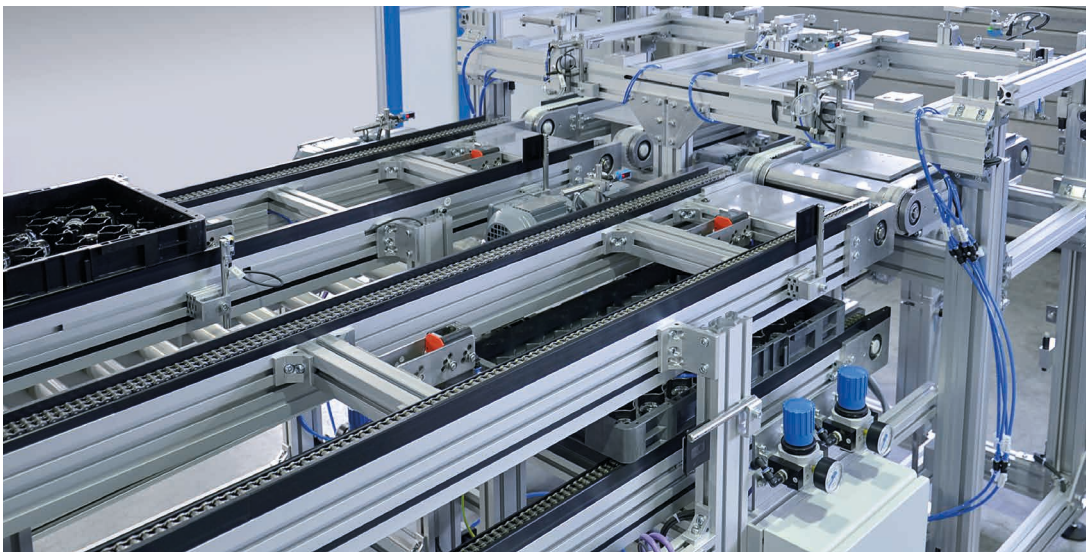
KTF-P 2010 with head drive AC with drip pan and movable support frame



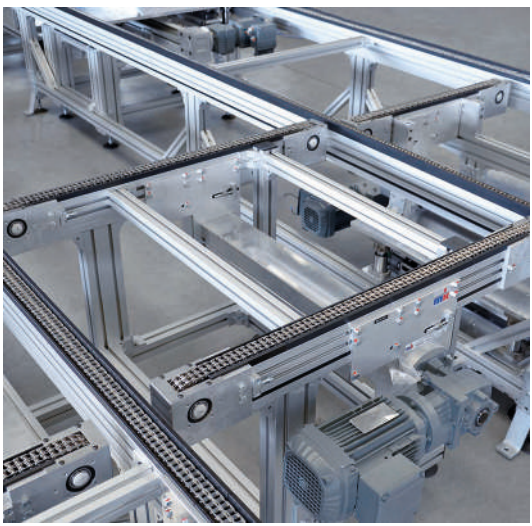
KTF-P 2010 chain conveyor as cooling section before transfer to timing belt conveyor



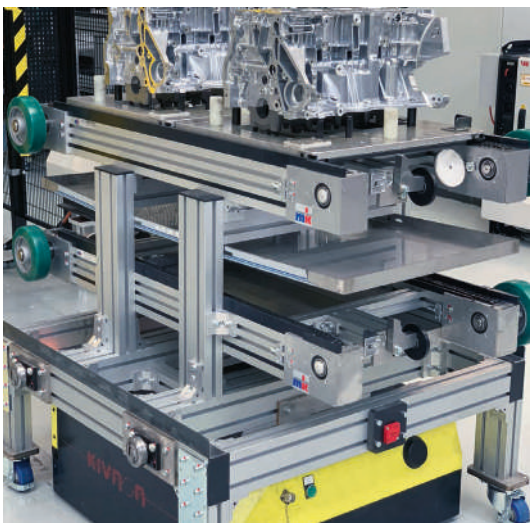
Combination of belt conveyor and chain conveyor with transverse rail for simulating a floor obstacle



KTF-P 2010 chain conveyor as infeed and outfeed conveyor for trays with lift station at the end of the belt



KTF-P 2010 chain conveyor as part of the Versamove *plus* pallet system



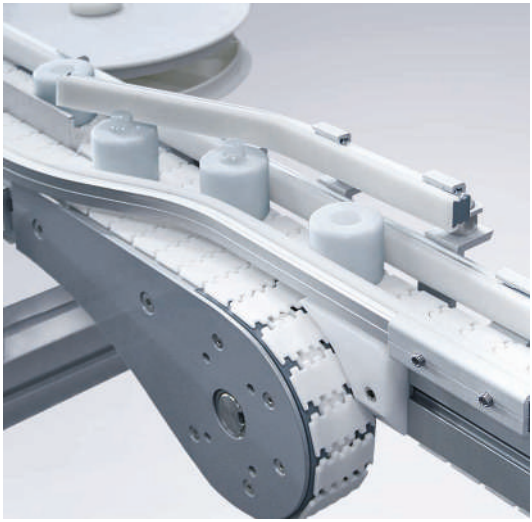
KTF-P 2010 chain conveyor as load bearing equipment for automated guided vehicles (AGVs)



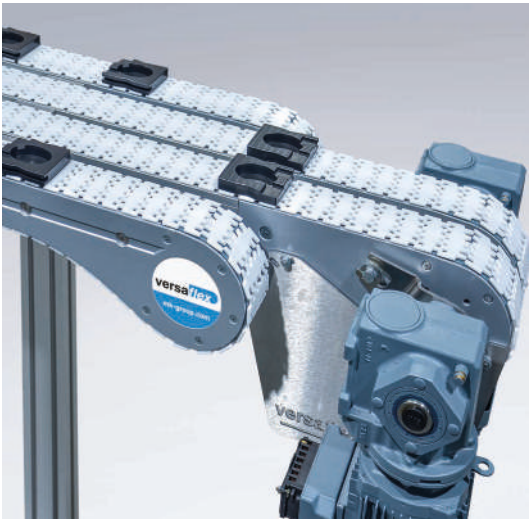
Versaflex A06 with 90° rolling curve



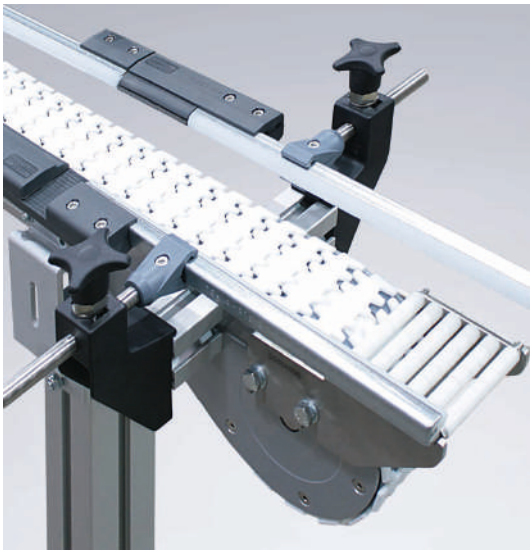
Versaflex A08 with 90° rolling curve



Versaflex A04 with switch for separation



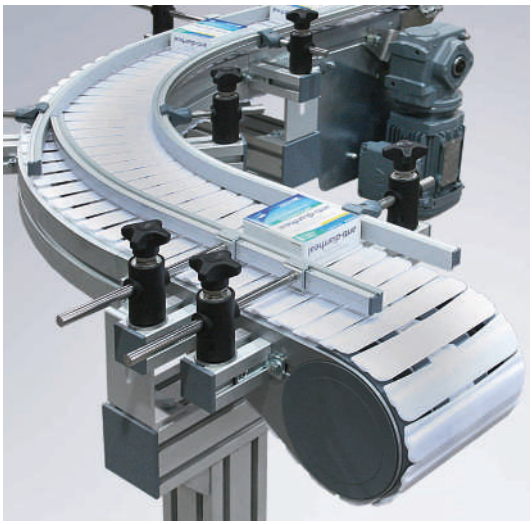
Four-line Versaflex A06 with opposing tracks



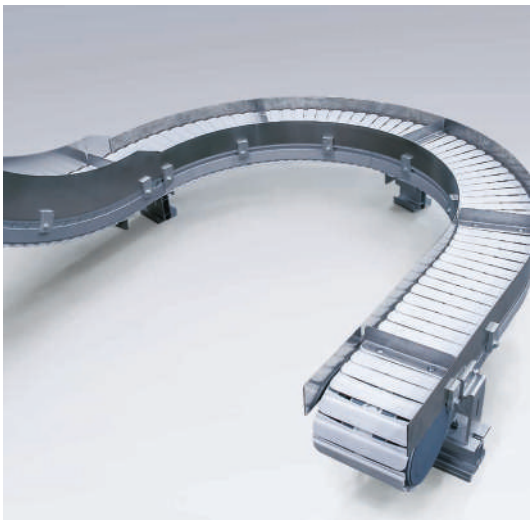
Versaflex A06 with adjustable side rail and roller bridge at the end of the tail



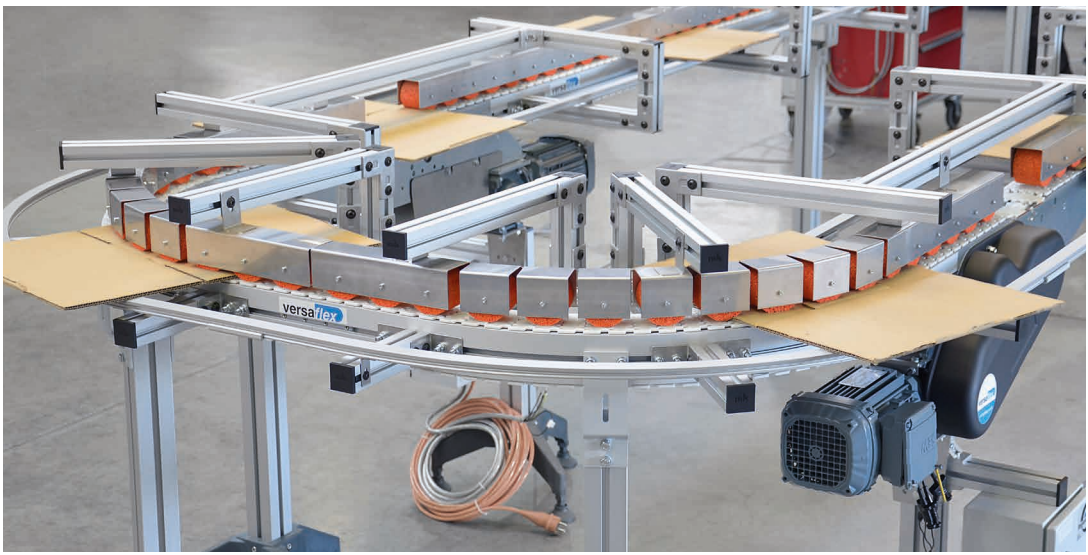
Versaflex A08 with driven transfer tail and pressure rollers for vertical transport



Versaflex A17 with width-adjustable side rail



Versaflex A17 with horizontal sliding bend and incline



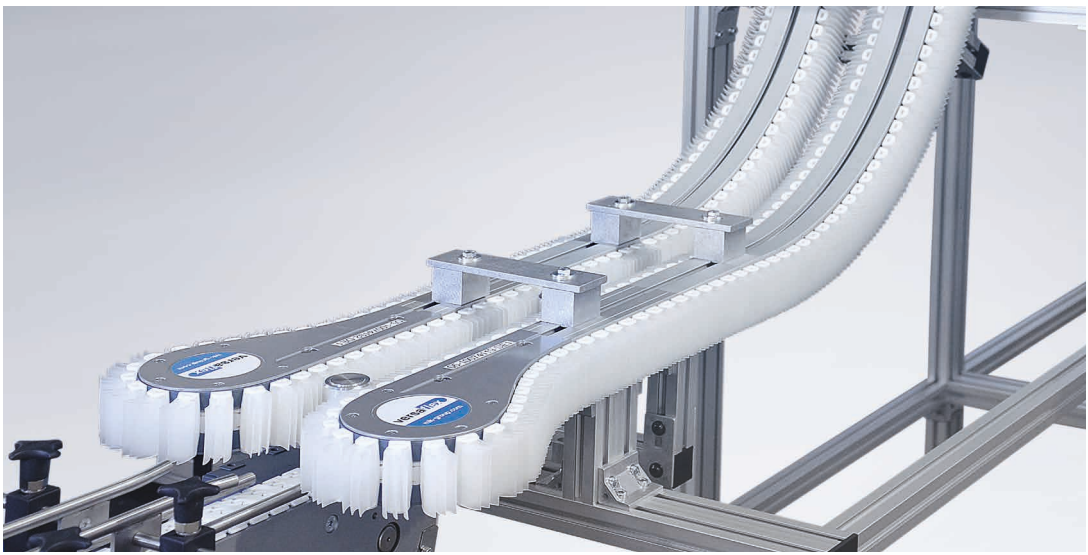
Versaflex A08 for transferring cardboard boxes
with pressure rollers for reliable transport in a stable position



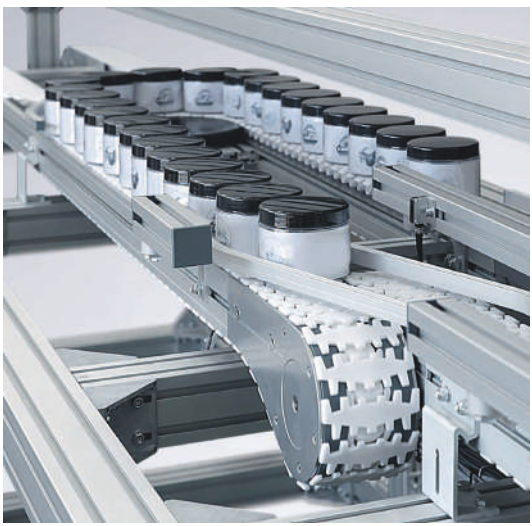
Versaflex A08 with magnetic
chain for vertical transport



Versaflex A08 as spiral conveyor



Versaflex A06 as a clamping conveyor for the inclined conveying of upright battery cells



Versaflex with adjustable side rails



Versaflex A08 with height and width-adjustable side rail

Roller Conveyor RBF 2000

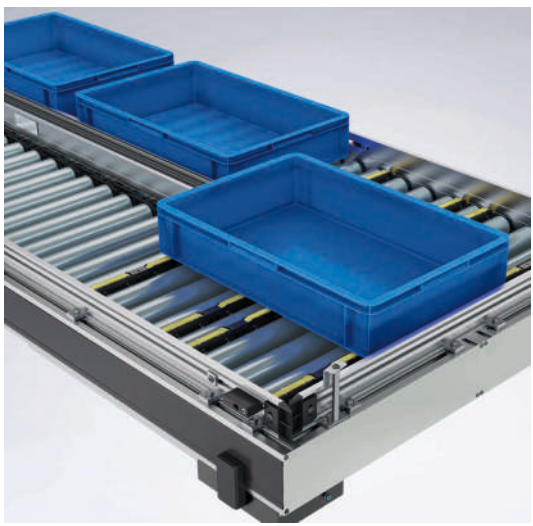


RBF 2000 roller conveyor with 45° separator via multi-transfer module

10



RBF 2000 roller conveyor for aligning the conveyed product with an edge to reduce conveyor width



Two RBF 2000 roller conveyors, each with a 90° transfer module for transfer to a parallel line



RBF 2000 roller conveyor with 90° curve



RBF 2000 roller conveyor with fixed side rail and integrated photoelectric sensor

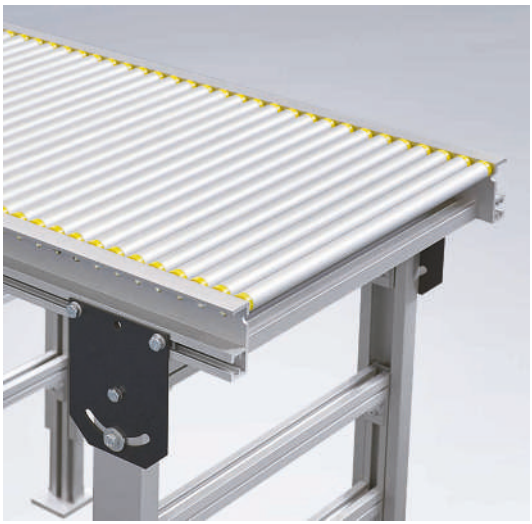


RBF 2000 roller conveyor with 90° transfer module for right-angled discharge of conveyed products

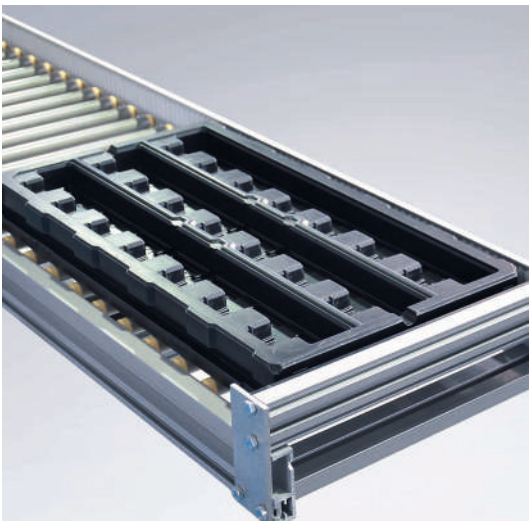
Gravity Roller Conveyor RBS-P 2065/2066



Kanban workstation with gravity roller conveyor RBS-P 2065 for feeding products



Gravity roller conveyor RBS-P 2065 with ø 20 aluminium rollers and stand 53.1



Belt discharge via the gravity roller conveyor RBS-P 2065 with end stop



Gravity roller conveyor RBS-P 2066
with 90° curve for limited space



Gravity roller conveyor RBS-P 2065
with ø 20 aluminium rollers



Gravity roller conveyor RBS-P 2065 with
fixed stop as manual emergency ejection
for stacks of cardboard boxes



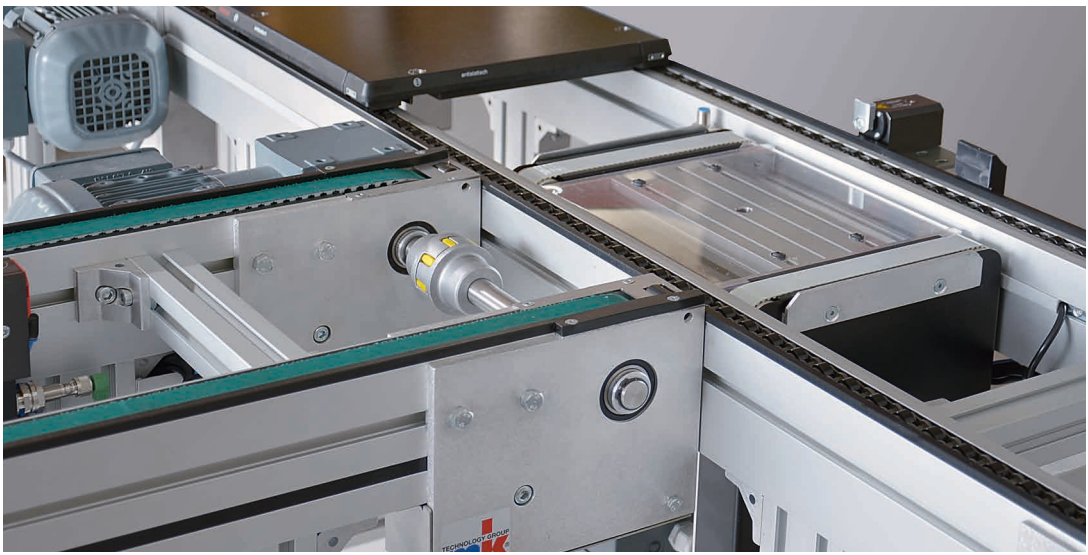
Gravity roller conveyor RBS-P 2065 as
discharge conveyor for production plant



Versamove *standard* with timing belt conveyor
ZRF-P 2045 and short stroke lift KHL 2045



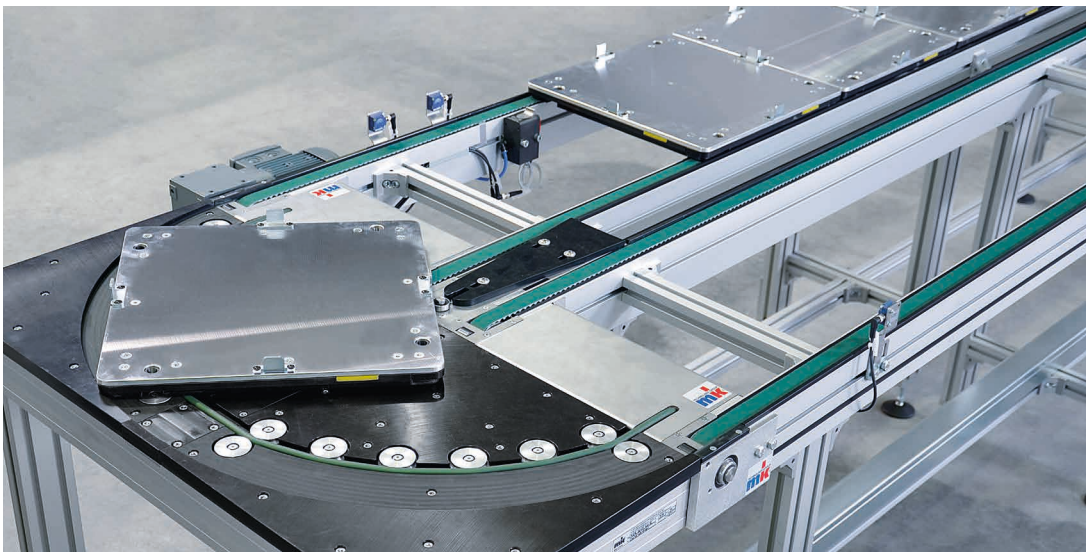
Versamove *standard* electric with electric lift and
rotate unit and electric lift and transfer unit



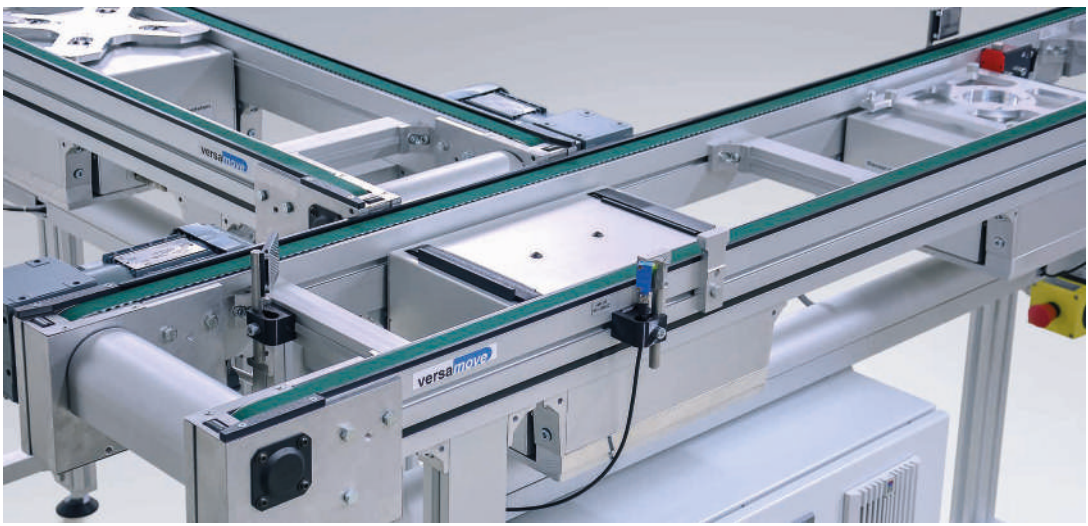
Versamove *standard* with ZRF-P 2045 timing belt conveyor, SRF-P 2045 accumulating roller chain conveyor and lift and transfer unit



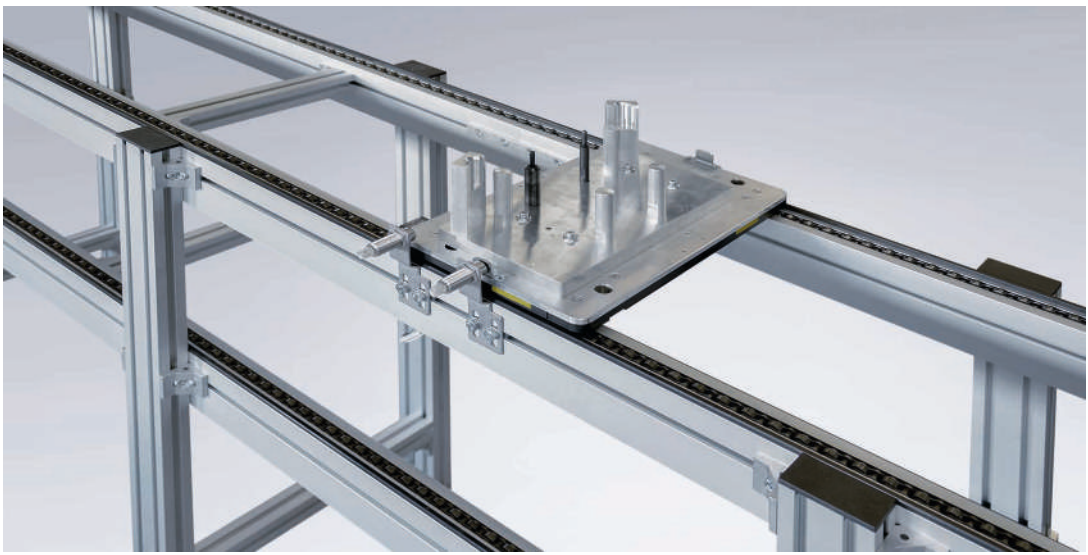
Versamove *standard* with FPF-P 2045 flat top chain conveyor and customised pallets



Versamove *standard* with curve unit KER 2045 for 180° turns in tight spaces



Versamove *standard* electric with ZRF-P 2045 timing belt conveyor and electric lift and transfer unit



Versamove *standard* with SRF-P 2045 accumulating roller chain conveyors on two levels



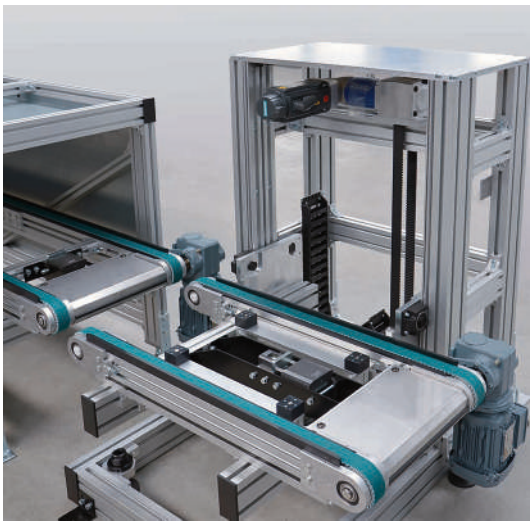
Versamove *standard* with FPF-P 2045 flat top chain conveyor with 90° curve on two levels



Versamove *standard* with SRF-P 2045 accumulating roller chain conveyor on two levels



Versamove *plus* with SRF-P 2010 accumulating roller chain conveyor and customised pallets in XL format



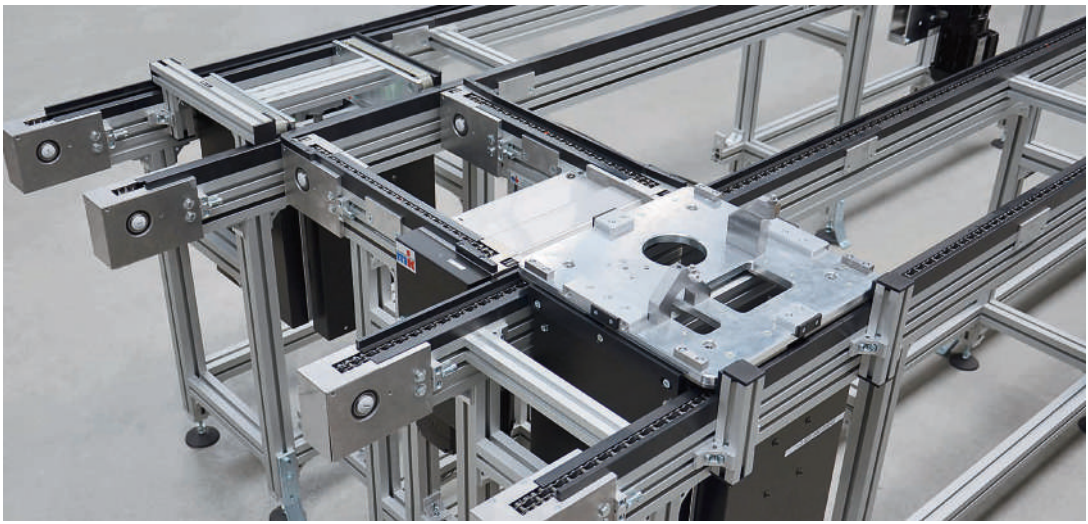
Versamove *plus* with ZRF-P 2010 timing belt conveyor as merging/separating unit for KHL 2010 short stroke lift



Versamove *plus* pallet circulation system for various transport levels with three-axis gantry



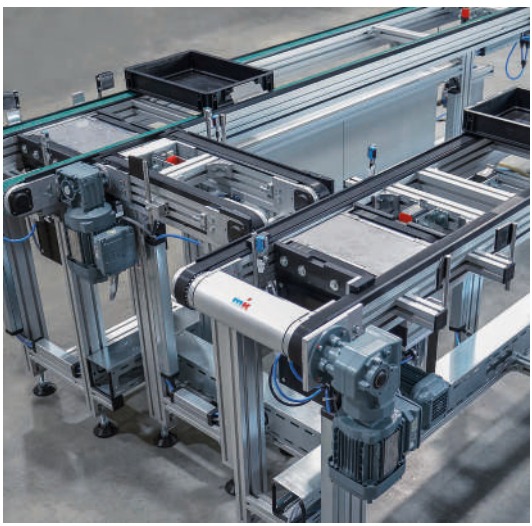
Versamove *plus* with ZRF-P 2010 timing belt conveyor
with antistatic wear strips and timing belt



Versamove *plus* pallet circulation system with SRF-P 2010
conveyors and custom pallet



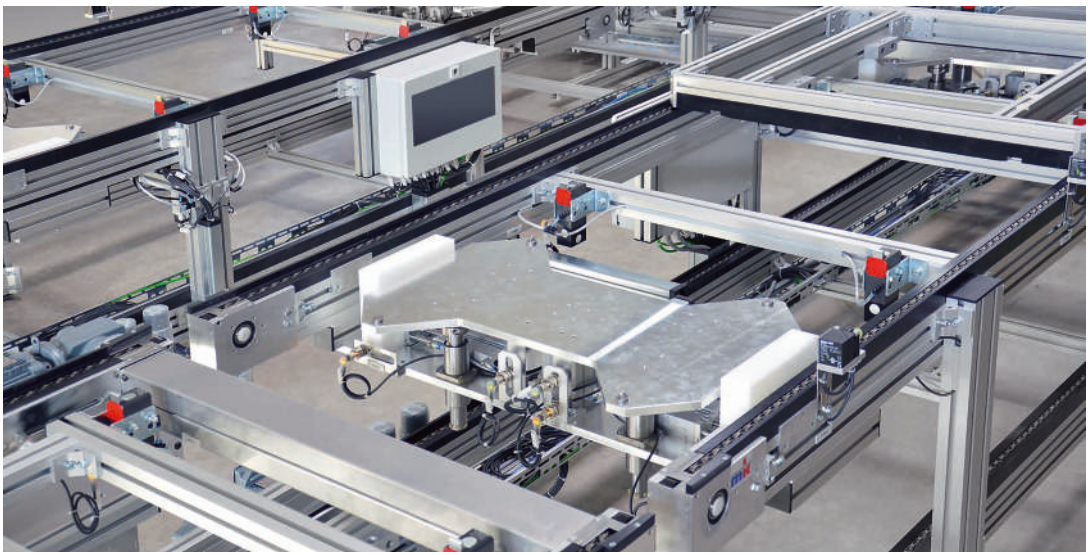
Versamove *plus* with large-format custom pallets



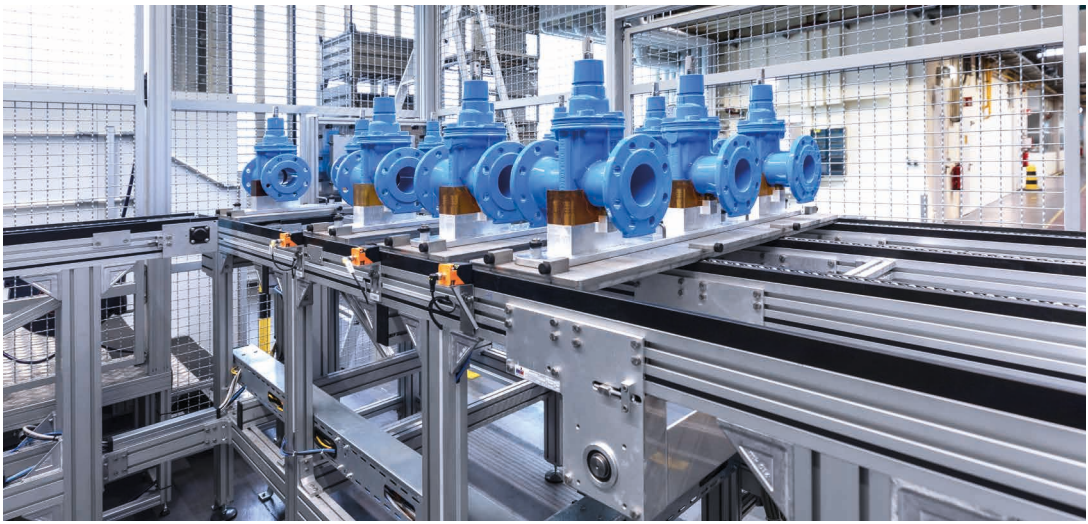
Versamove *plus* with customised pallets and lift and transfer unit



Versamove *plus*: two transport levels, conveyor type accumulating roller chain conveyor



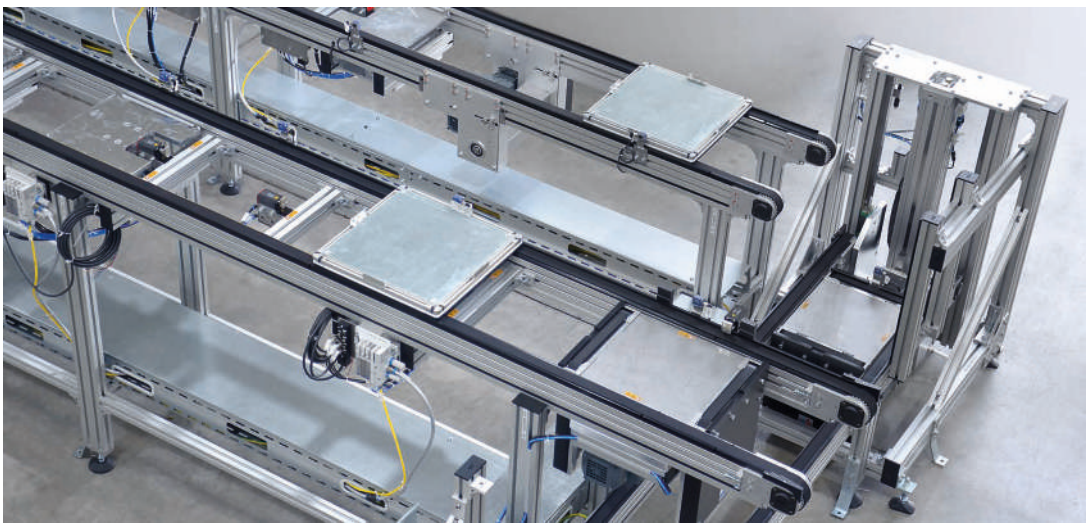
Versamove *plus* with SRF-P 2010 and customised pallet with feed on the upper level and return on the lower level



Versamove *plus* with SRF-P 2010 accumulating roller chain conveyor for assembling and buffering gate valves



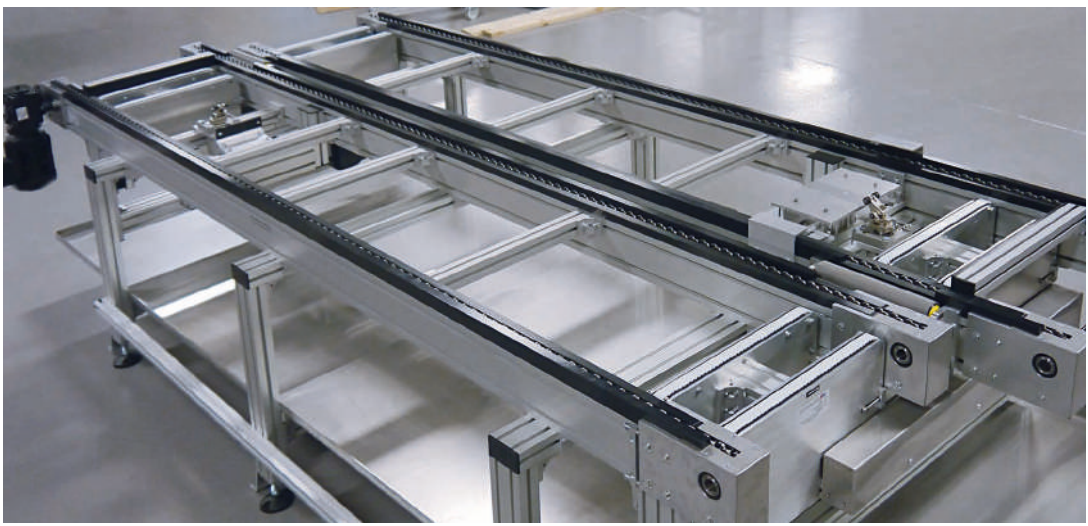
Versamove *plus* on two levels with a lift that raises the pallets from the lower return level to the upper level



Versamove *plus* with timing belt conveyors with antistatic wear strips and timing belts for individual ESD protection



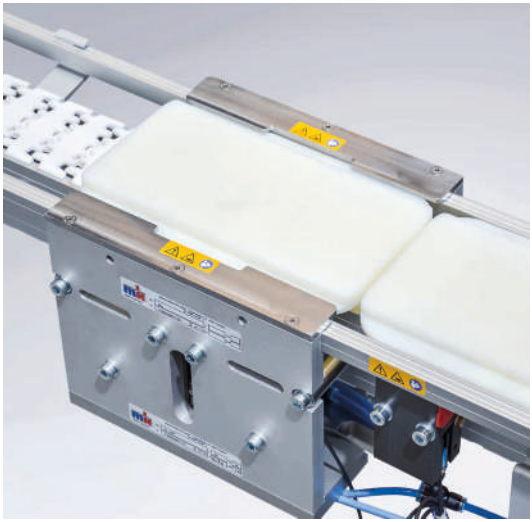
Versamove *ultra* with accumulating roller chain conveyor
with special wear strips for heavier loads



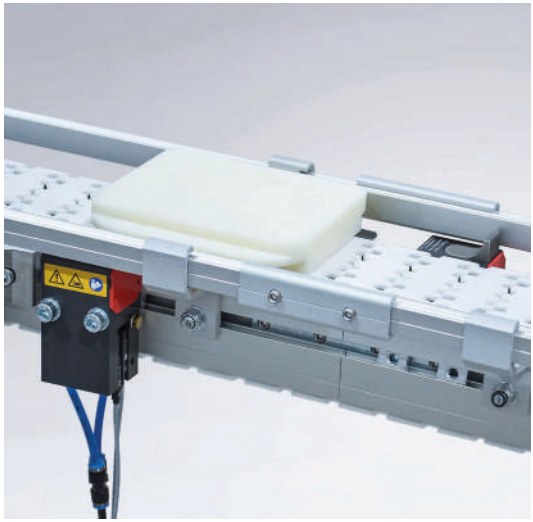
Versamove *ultra*: Customer-specific parallel
circulation system with pallet transfers



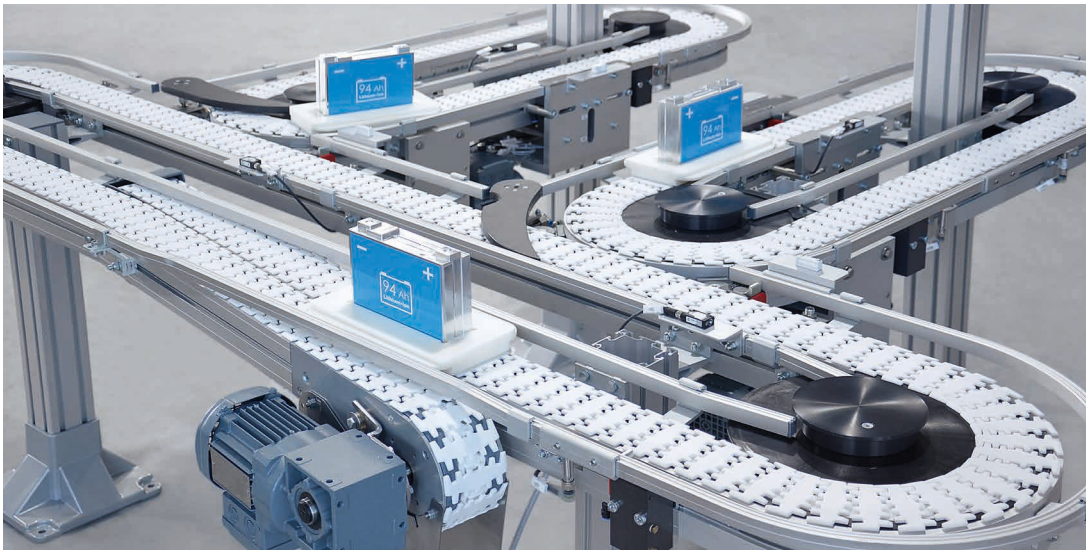
Versaflex P08 pallet system with switch to parallel track for discharging



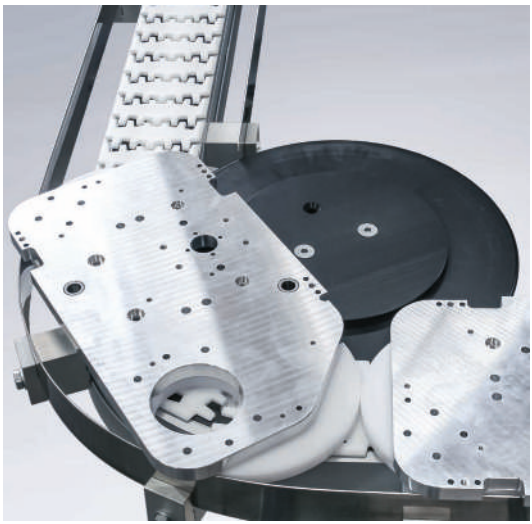
Versaflex P08 pallet system with standard lift and locate unit



Versaflex P08 pallet system with standard pallet and stop position



Versaflex P08 pallet system with curves, switches and positioning units



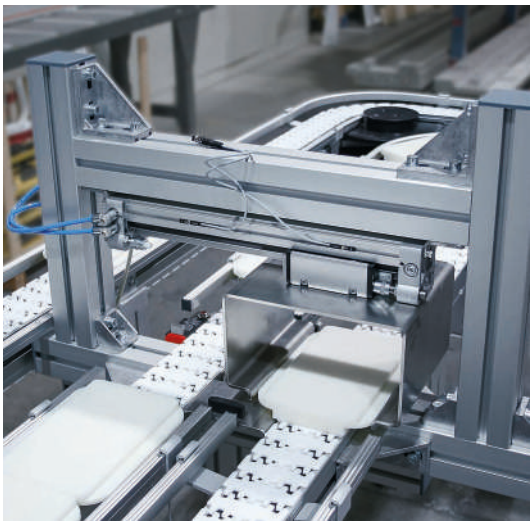
Versaflex P08 pallet system with wheel bend and customised pallets



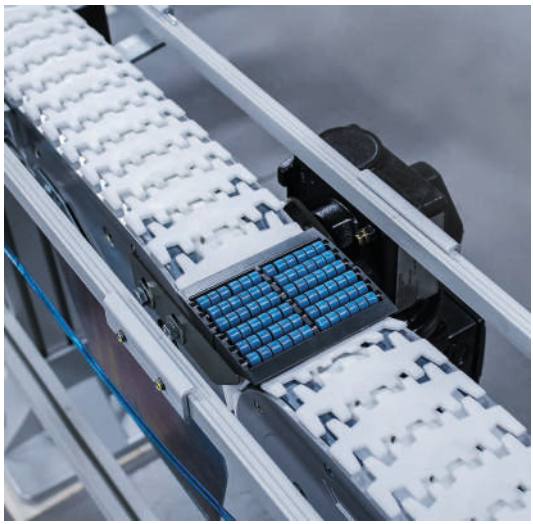
Versaflex P08 pallet system with customised side rail and pallets



Versaflex P08 pallet system with separator



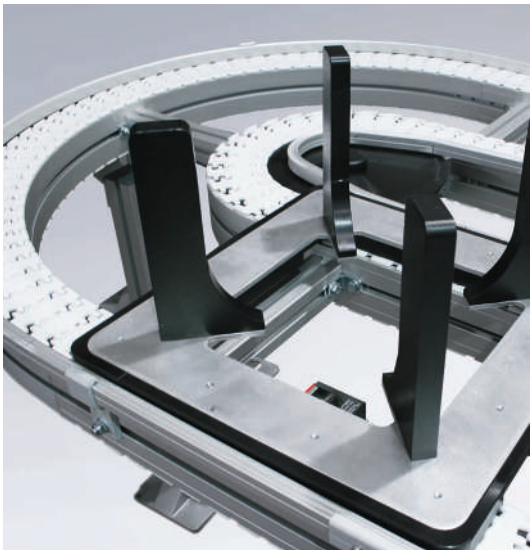
Versaflex P08 pallet system
with customer-specific sleeve joint



Versaflex P08 pallet system with roller bridge



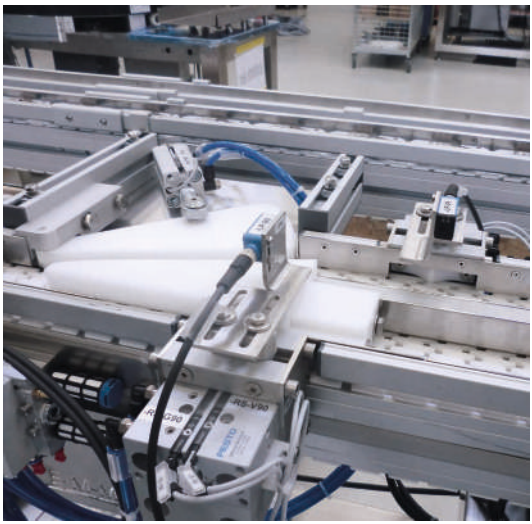
Versaflex P11 pallet system
with customised pallet



Versaflex P08 pallet system as
double-line with sliding 180° curve

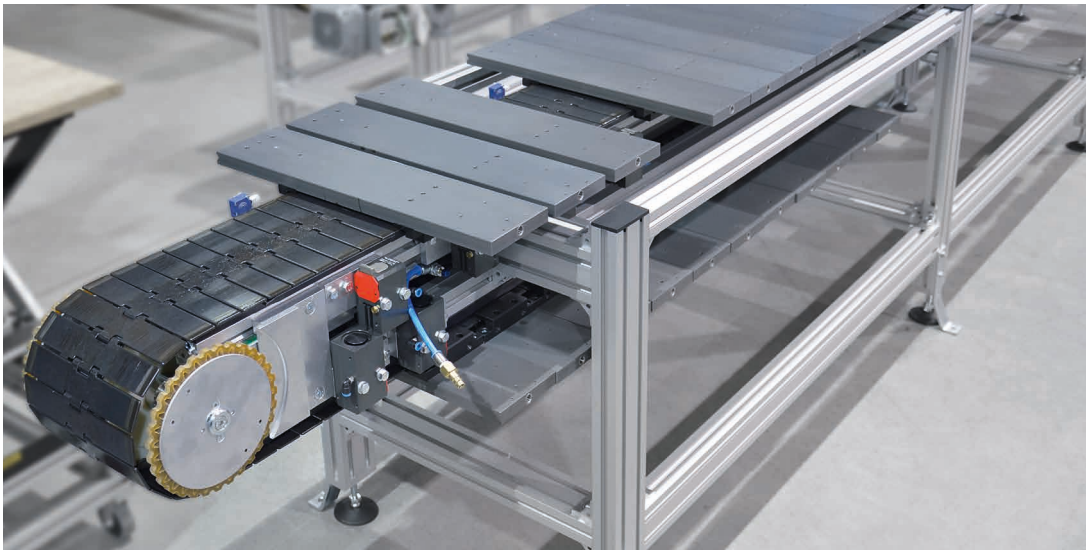


Versaflex P08 pallet system
with lift and locate units

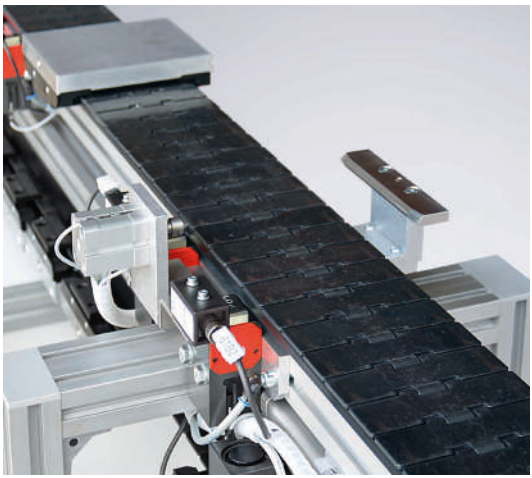


Versaflex pallet system with customised separation

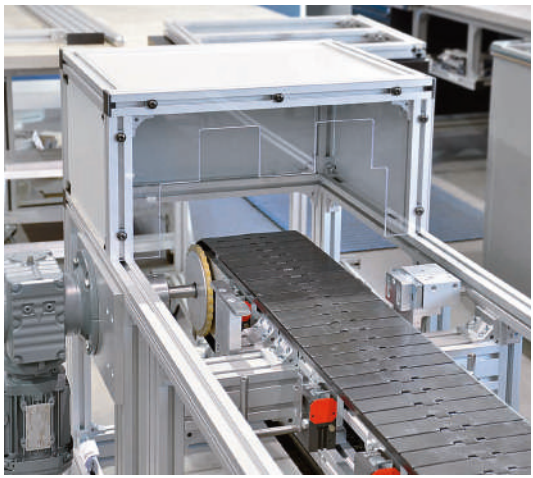
Accumulating Pallet Recirculation Systems SPU 2040



SPU 2040, single line, 190 chain width with wide pallet, pallet aluminium plate and separation



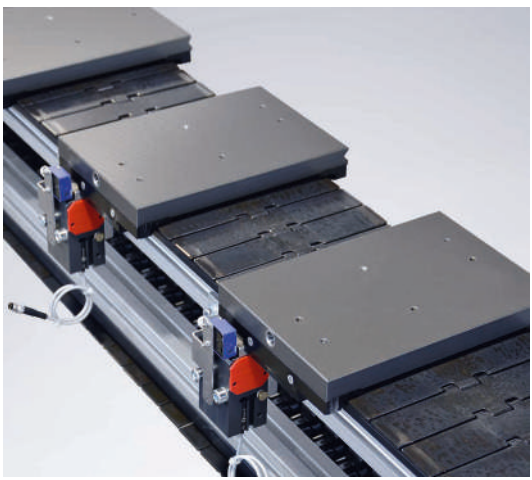
SPU 2040, single line, 114 chain width with positioning unit



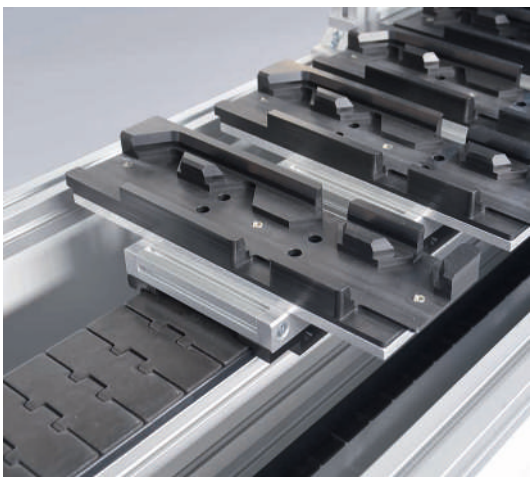
SPU 2040, single line with protective device guard with pendulum flap



SPU 2040, dual-line, 114 chain width with positioning unit



SPU 2040, single line, 190 chain width with pallet, pallet aluminium plate and SU 400 top stopper



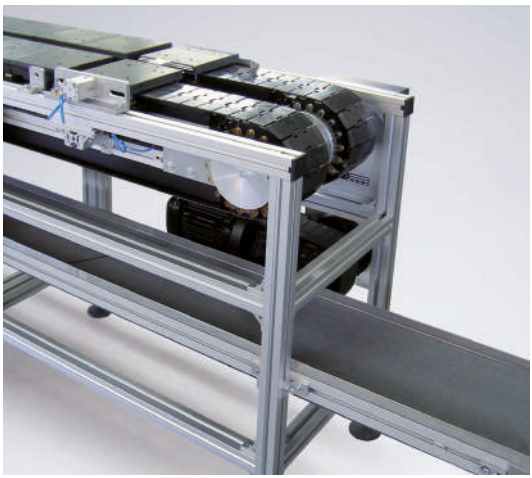
SPU 2040, single line with 25/40 pallet and customer-specific workpiece fixture

Accumulating Pallet Recirculation Systems SPU 2040



Double-line SPU 2040 with strip connection of the pallets for unloading by robot

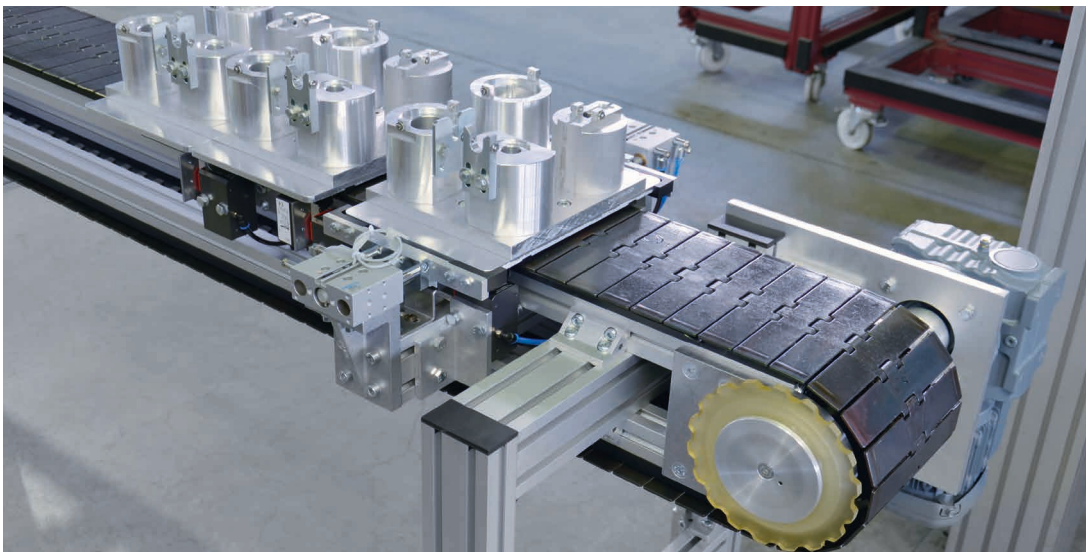
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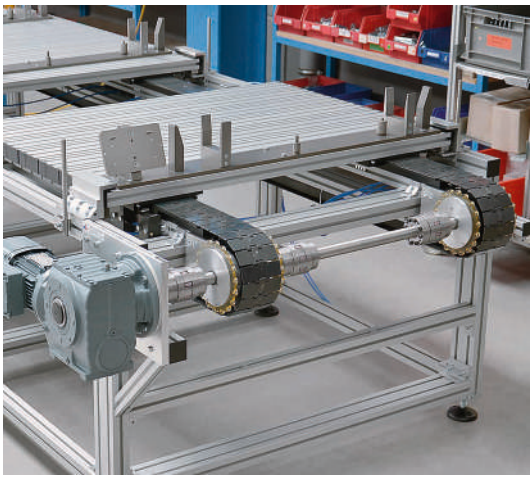
Dual-line SPU 2040 in combination with belt conveyor for discharge of unacceptable parts



SPU double-line as an infeed conveyor for dishwasher housings



SPU with separator function for loading
by hand and removal by robot



SPU double-line 114 system
with custom pallet



Single-line SPU with custom pallet holder

Indexing Chain Conveyor System TKU 2040

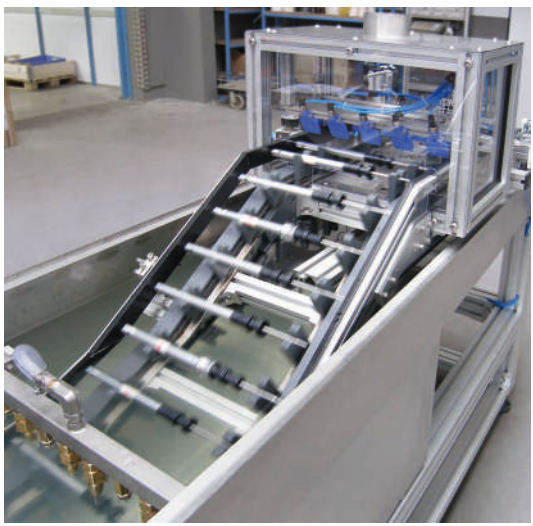


TKU as dual-line system with
custom profile pallets and holders

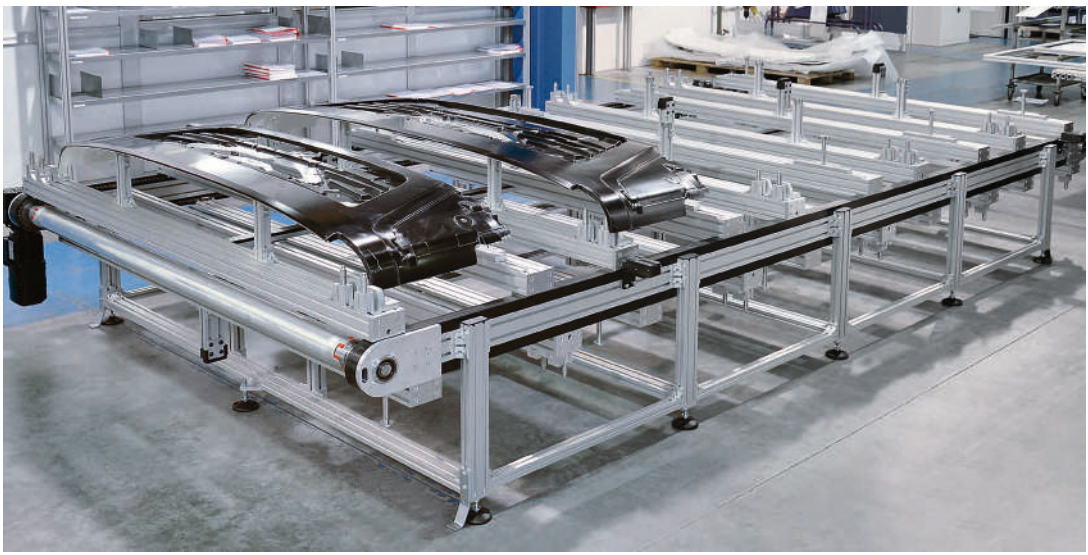
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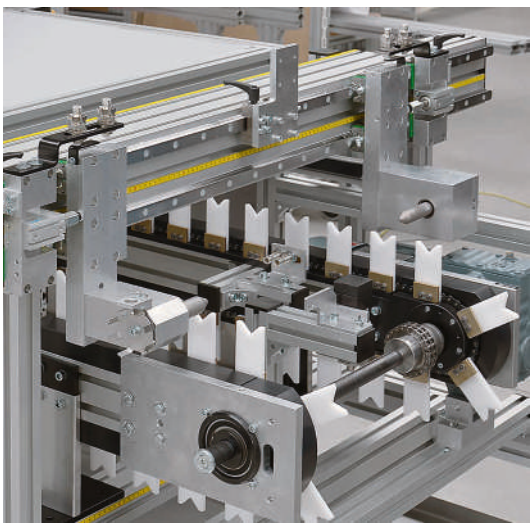
TKU 2040 with special adjusting unit for
adjusting the distance between the conveyor chains



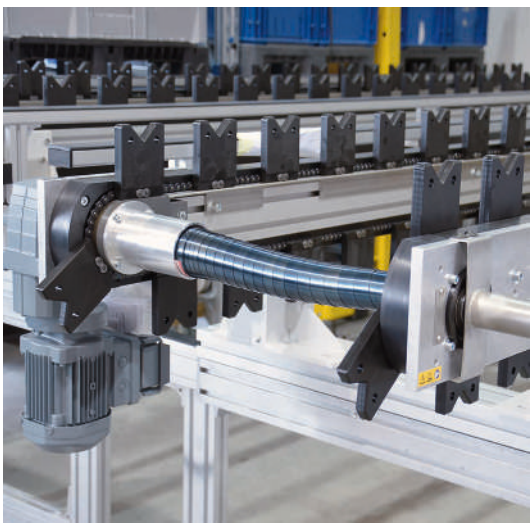
TKU 2040 with 20° inclination and transport
of workpieces through a cleansing bath



TKU 2040 indexing chain conveyor system with custom workpiece holder and centring system for the automotive industry



TKU 2040 for transporting camshafts with positioning sensors



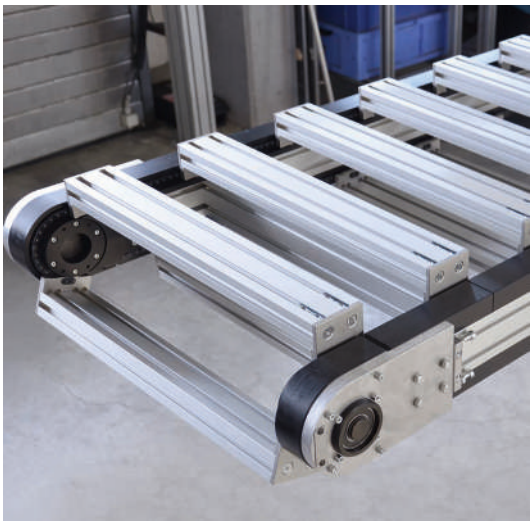
TKU 2040 for transporting camshafts with a spiralled cover as a protective guard on the connecting shaft

Indexing Chain Conveyor System TKU 2040

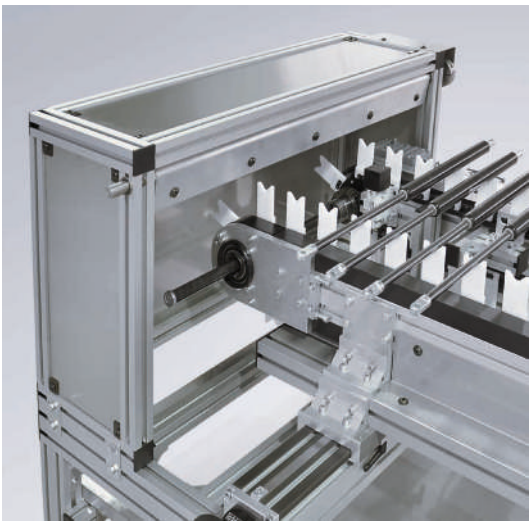


TKU 2040 with width adjustment and adjustable side rails
for quick adaptation to changing workpiece sizes

10



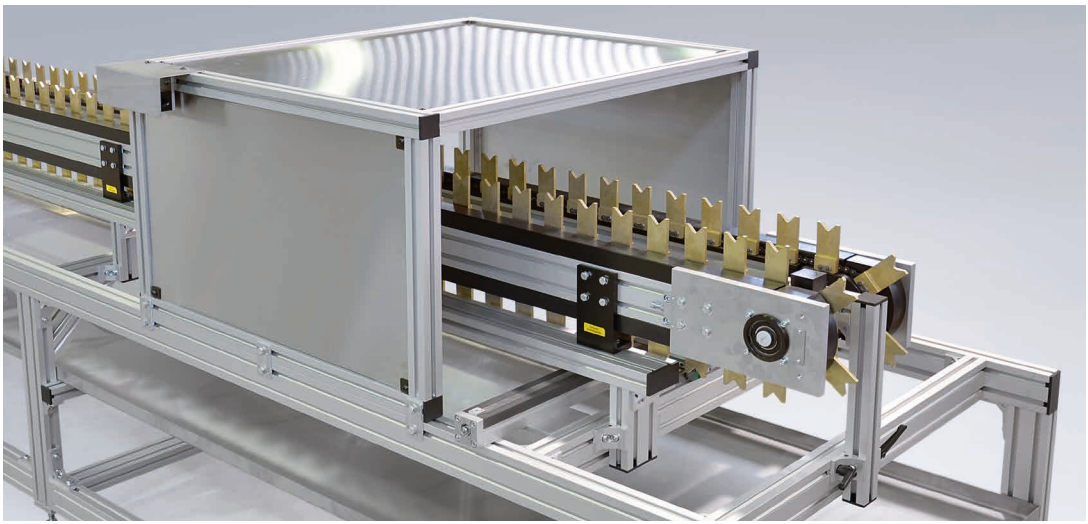
TKU 2040 with standard
pallet made of profiles



TKU 2040 with manual width adjustment
and protective device guard on the tail

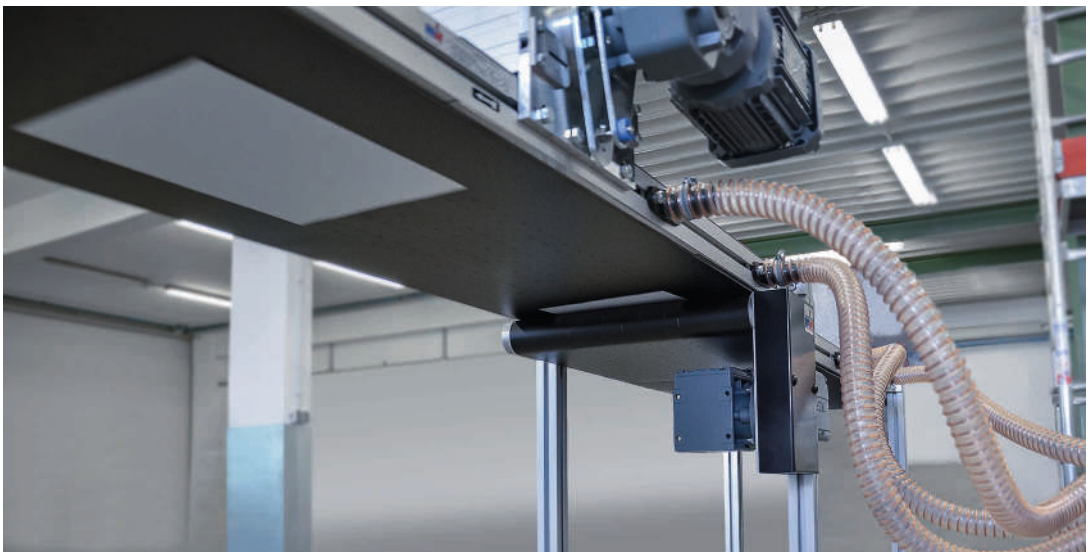


TKU 2040 in special design for upright and tilt-proof transport through an X-ray cell



TKU 2040 indexing chain conveyor system as an unmachined parts conveyor with brass prisms

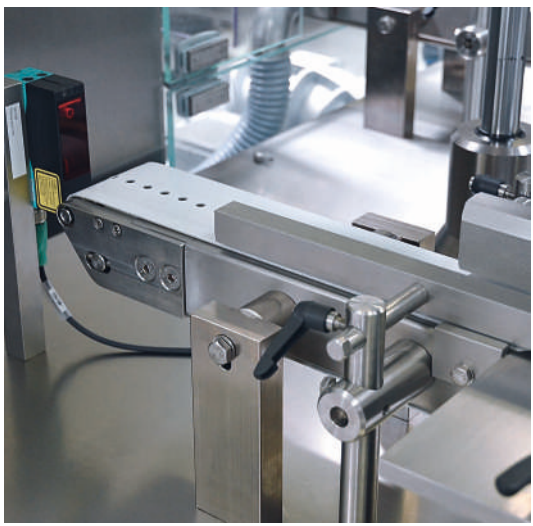
Special Conveyors with Vacuum Function



Two GUF-P 2000 belt conveyors with vacuum function for transporting foils



GUF-P 2041 with a special design as a vacuum conveyor for offset pressure plates



INOX vacuum belt conveyor with custom side rail



GUF-P 2000 vacuum belt conveyor
for packing bagged goods at high speed

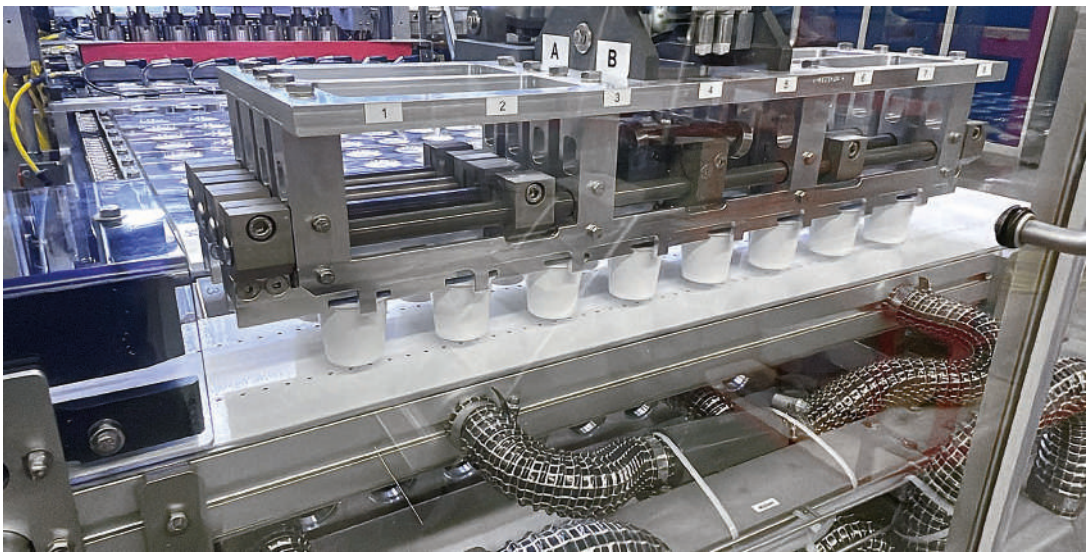


ZRF-P 2040 vacuum timing belt conveyor
with ESD anti-slip surface coating



GUF-P 2000 vacuum belt conveyor
with rolling knife edge and 90° suction nozzle

Special Conveyors with Vacuum Function

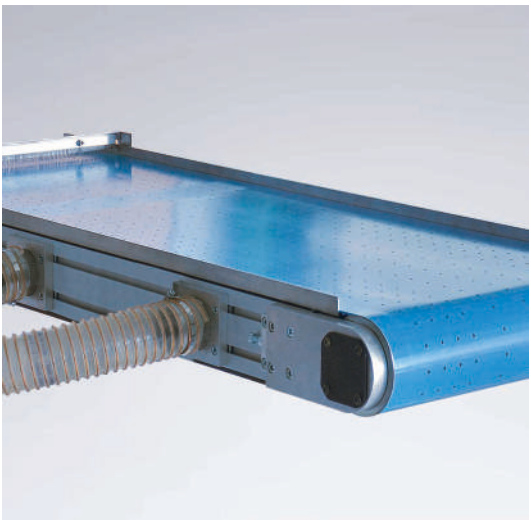


GUF-P 2000 AC vacuum belt conveyor in the packaging industry, cycles at high accelerations without containers slipping or tipping over

10



GUF-P 2041 with head drive AC and 90 watt fans in the conveyor frame, reglomat mounted on top of the conveyor frame



GUF-P 2004 in special design as vacuum conveyor



ZRF-P 2000 vacuum timing belt conveyor for the suspended transport of adhesive films



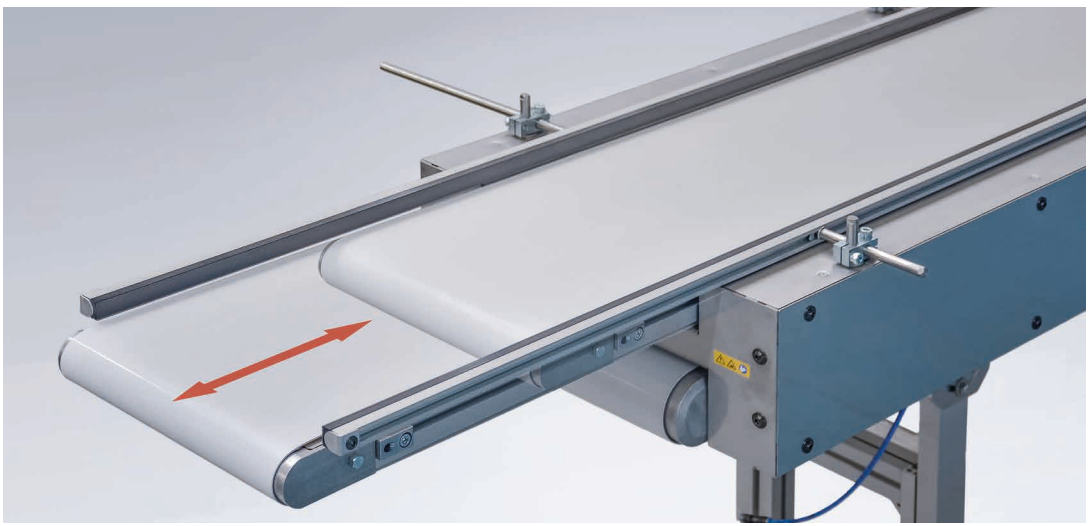
GUF-P 2041 BC vacuum belt conveyor with 3 chambers in transverse direction for batches of paper envelopes of different widths



GUF-P 2000 AC vacuum belt conveyor with narrow suction zone



GUF-P 2000 can be moved on track roller assembly, with manual swivelling belt infeed



Telescopic belt conveyor with adjustable SF02 side rails



GUF-P 2041 as telescopic belt conveyor through manual adjustment with handwheel on movable stand



Telescopic belt conveyor integrated into a frame according to customer specifications



Telescopic GUF-P 2000, infeed can be extended using recirculating ball bearing guide



GUF-P 2000 belt conveyor as a cleanroom conveyor for stringent technical cleanliness requirements



GUF-P 2000 belt conveyor as a cleanroom conveyor with tail 01



GUF-P 2000 belt conveyor with smooth-surface motor, designed to minimise wear and optimised for easy cleaning



GUF-P 2000 belt conveyor as a magnetic conveyor belt for the suspended transport of magnetisable parts



GUF-P 2000 belt conveyor with magnetic tail area



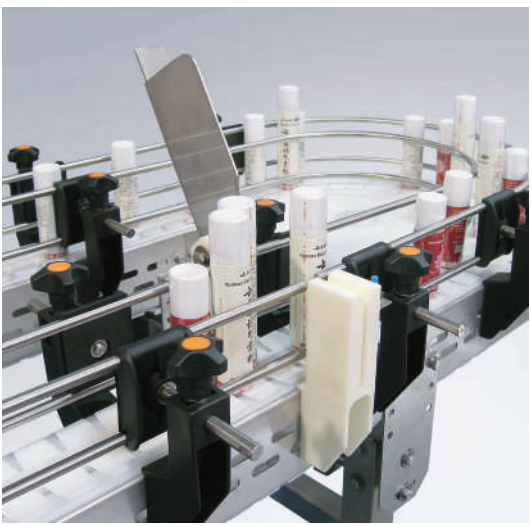
GUF-P 2004 belt conveyor with magnetic driving roll for separating magnetic sheet metal scrap



Combination of INOX belt conveyor and angled belt conveyor for transport of praline balls with granulate

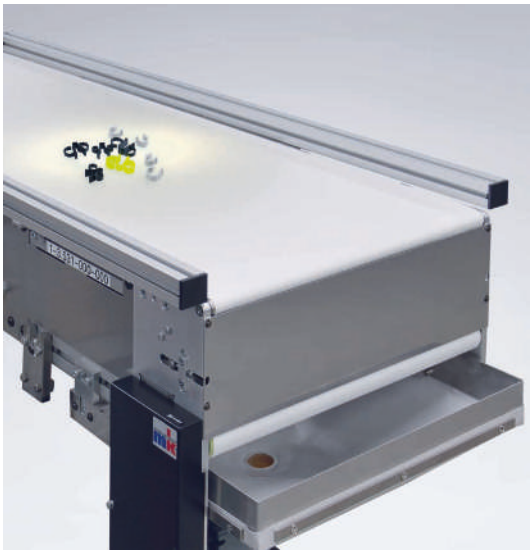


INOX belt conveyor with rolling blade edge for the transfer/handling of small transport goods



Interlink with INOX flat top chain conveyor with rolling 180° curve

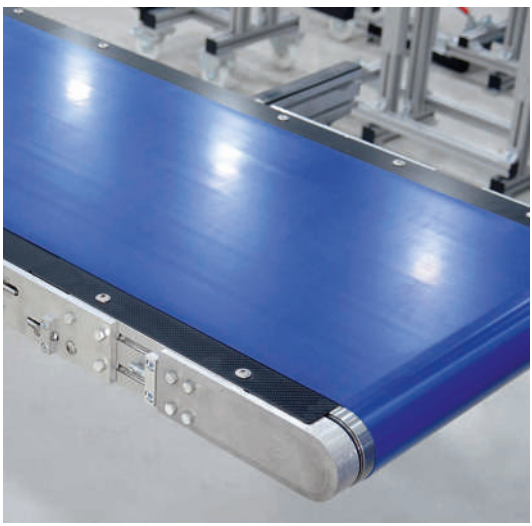
Other Special Conveyors



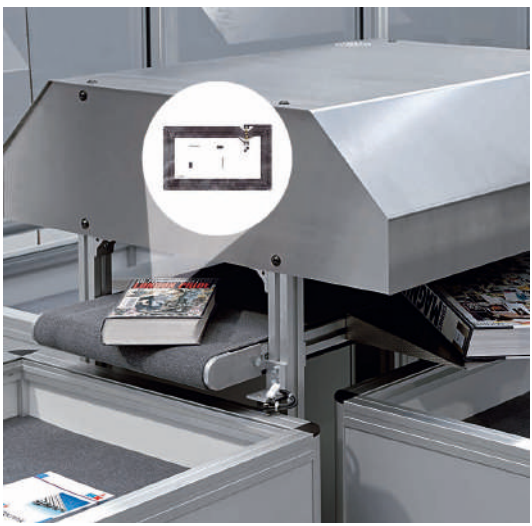
GUF-P 2000 belt conveyor as customised version with back light unit and drip pan



GUF-P 2041 as translucent conveyor with translucent conveyor belt for visual inspection of workpieces



GUF-P 2041 in customer-specific design with carbon plate instead of slide bed



GUF-P 2000 belt conveyor with integrated RFID system for reading and writing data

Rotary Tables DT-P 2040

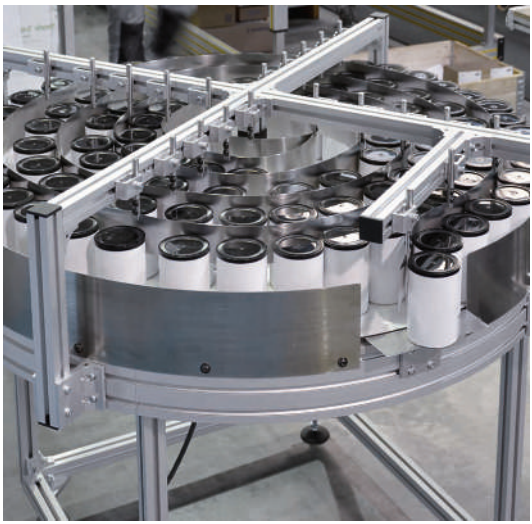


DT-P 2040 rotary table with 2 m diameter and GUF-P 2000 belt conveyor as discharge belt

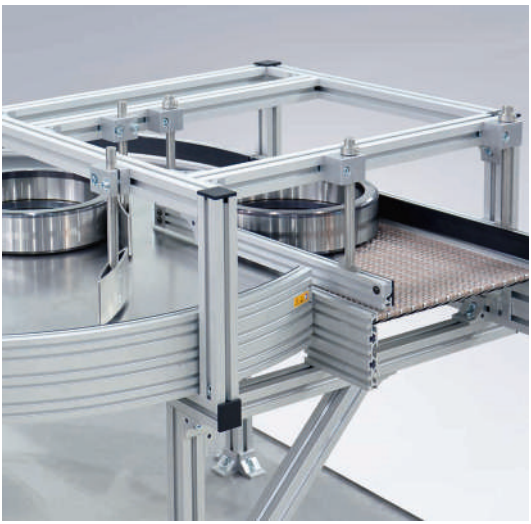


DT-P 2040 rotary table with milled special plastic sliding plate and feed via a roller bridge

10



Rotary table DT-P 2040 with separation and positioning using surrounding side panels



DT-P 2040 rotary table with discharge via roller bridge



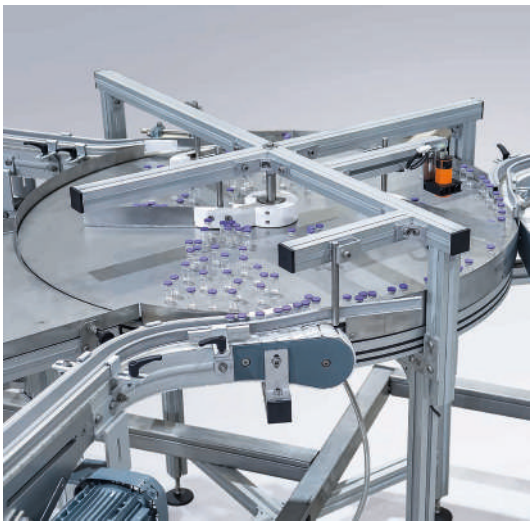
Lightweight and cost-efficient
DT-P 2040 mobile rotary table



Rotary table DT-P 2040 with
side rail, similar to SF01



Rotary table DT-P 2040 with part separation
using manually adjustable direction guide



DT-P 2040 rotary table as buffer
for fragile glass vials

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