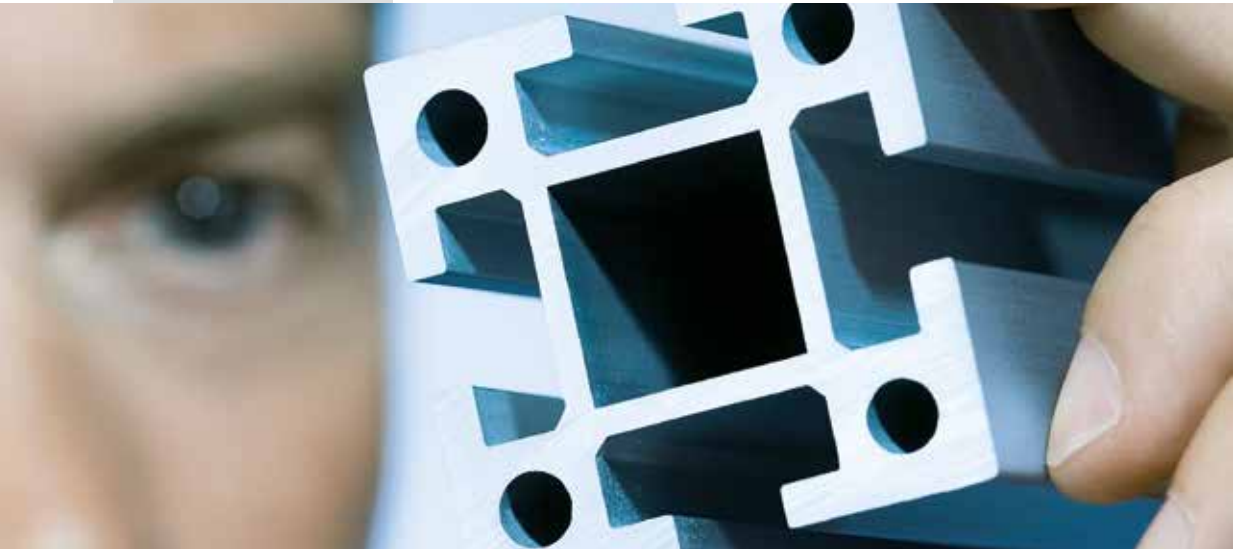




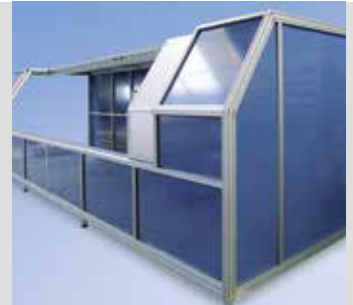
mk Conveyor Technology

Introducing mk



*"We live our passion for technology –
it has shaped us for over 40 years"*

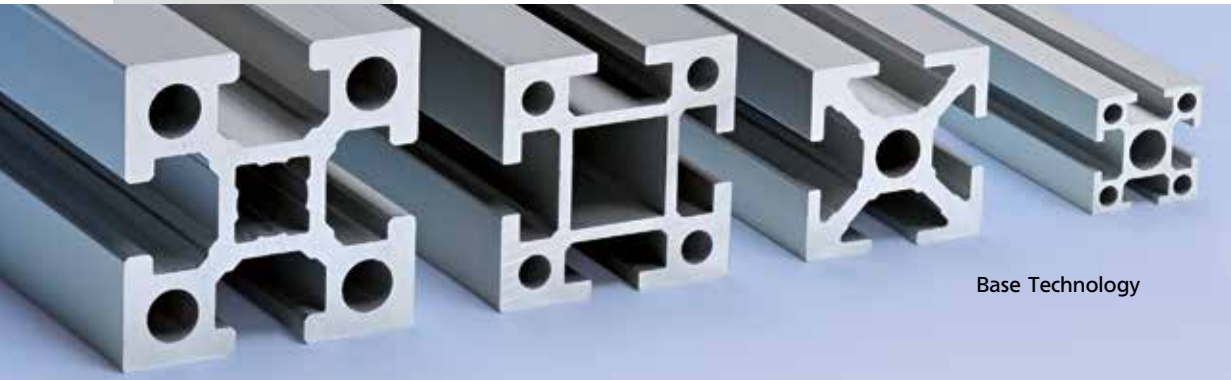
Maschinenbau Kitz GmbH, was found in 1966 and is head-quartered in Troisdorf, near Bonn, Germany and operates internationally together with its subsidiaries and sales partners as the "mk Technology Group". mk is the leading supplier of mechanical components and modules for aluminum profiles, conveyor and linear technology, as well



as factory equipment. mk works side by side with their customers from the project planning and design phase all the way through order and build, factory testing and maintenance of the conveyor system. The mk modular system is based around our aluminum profile system, which offers more than 250 different cross sections, as well as an extensive collect of

components and a comprehensive assembly approach. The resulting benefits are considerable cost savings during the installation as well as a high degree of flexibility for future modifications. Our target industries include the machine builders and integrators; as well as the automotive, electrical, packaging, pharmaceutical, and food industries.

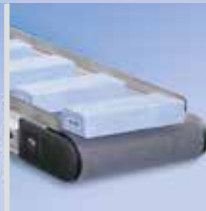
One construction kit – many options



Base Technology



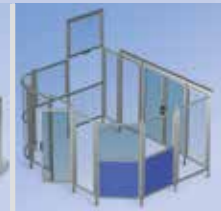
Profile Technology



Conveyor Technology



Linear Motion



Factory Equipment

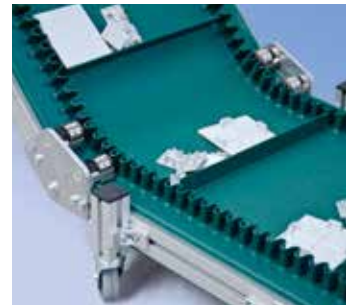
Advantages of the mk modular system

- mk is your single source for profile and components, conveyor and linear technology as well as factory equipment. Many components and profiles are interchangeable between the platforms.
- It offers basic mechanical functions for modern factory
- With over 250 profiles, mk is able to reduce the need for special designs, resulting in a reduction of cost and lead-time
- High quality materials, solid connection technology and high quality accessories guarantee high load capabilities and long service life
- Versatile and flexible system extensions and modifications are possible with durable reusable components and modules
- Assemblies are provided fully assembled and tested, resulting in shorter set-up times for the customer, while guaranteeing optimum performance
- mk is constantly innovating new products and optimizing existing products



Advantages of mk Conveyor Technology

- 20 standard conveyor systems provide for optimum conveyance of all types of goods in nearly every factory environment
- Highly reliable conveyors made with high-quality materials and proven designs and technology
- Spare parts available fast – worldwide
- Cost savings and short delivery times due to the standard modular construction
- Custom conveyor designs and configurations
- Compatible and flexible integration with all other mk products including mk profile technology, linear motion and factory equipment
- Experienced and supportive mk sales engineers
- Online pricing and CAD models with the mk QuickDesigner



Conveyor Technology

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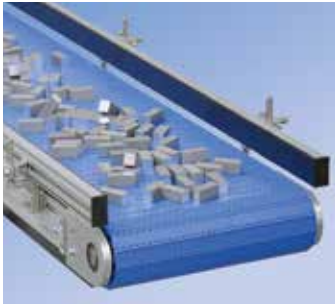
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Configuring a Conveyor

Selecting a conveyor type

Factors that influence the selection of the conveyor

The most suitable conveyor for your application and environment depend on the following factors.

The product(s) to be conveyed

- Weight of each individual product
- Total weight on the conveyor
- Shape of the surface in contact with the conveyor
- Size of the product
- Temperature
- If the product is impact sensitive
- Dry vs. wet
- If sharp edges are present
- If any chemicals, are present
- Other product specific characteristics

Environmental conditions

- Ambient temperature
- Dust or debris in the air
- Explosive environment
- Clean room conditions
- Food processing or handling facility
- Humidity

The transport path

- Straight-line vs. curved transport
- Transport on one level vs. different height levels
- Discharge quantity and speed
- Defined vs. undefined orientation/transfer/handling of the product

The operating mode

- Continuous operation vs. accumulated operation
- Cycle operation, on/off operation
- Stopping/positioning
- Reversing operation

Quote and order requirements

In order to ensure that the best possible conveyor for your particular application is quoted and sold we do require that all of the above information be reviewed and shared with mk prior to quoting.

The following information will be supplied in the quotation.

	GUF-P 2000 AC /.... /...
■ System designation	
■ Drive version	
■ Conveyor length L [mm]	
■ Conveyor width B [mm]	
■ Products to be conveyed with specification of weight and dimensions	
■ Conveyor load (total load, section load)	
■ Drive location with motor orientation	
■ Operating mode (accumulated operation, cycle operation, reversing operation)	
■ Tail (infeed side and discharge side)	
■ Belt type and possibly cleats/sidewalls	
■ Max. speed	
■ Speed mode (constant or variable)	
■ Reglomat (if variable is desired)	
■ Stand version, incl. working height	
■ Side rail type	
■ Possible accessories	

Quotes, and CAD models, can also be obtained through our online conveyor configurator, www.quickdesigner.com. You can also contact our sales representatives for assistance in quoting.

Envirenmental conditions

For all conveyor configurations we assume that the conveyor will operate in standard indoor setting. This means at room temperature (RT), in a clean environment, and without elevated humidity levels.

Generally a temperature range from +10°C and +60°C is acceptable. In special cases; such as a long conveyor with a temperature above 50°C, the length of elongation of the individual conveyor components should be taken into account. Temperatures below -20°C are possible upon request. Ambient temperatures, over 80°C, are only tolerable for short periods of time. Ambient temperatures, above 150°C are only possible with an all aluminum based frame, and only after testing. However, product temperatures up to 200°C are possible when using steel chains.

We are happy to assist you with clean room and sterile room applications; and for hygienic and pharmaceutical directives. We are also able to assist you in harsh environmental conditions, as well as ATEX and painting areas.

Continuous operation/accumulated operation

In continuous operation, the conveyor and the product run without interruption. The product is conveyed off the conveyor and continues on. In accumulating applications the conveyor continues to run under the accumulated, or non-moving, product. Note that the motor power for an accumulated operation is approximately twice as high as a continuous operation (see diagram on page 12).

On/off operation

The conveyor is turned on and off as needed. This is typical for part discharge or manual removal. We always recommend on/off operation, for less wear; if it can be foreseen that no action will occur for longer than 30 seconds; especially in clean rooms. If the conveyor is switched off more than four times a minute, this is considered a cycle operation.

Indexing (cycle) operation

As a rule, indexing or cycle operation is a specified cycle that is repeated. In most cases, for more than 30 cycles per minute a servo drive is required. Rates of more than 60 cycles per minute are available upon request; however this requires a detailed review of the application. It is important during the motor configuration to review the time required for product travel and the required acceleration. During acceleration, pay attention to the static friction of the product on the conveyor, see page 12 for additional information.

Positioning operation

During positioning operation, the product is usually positioned within pinpoint precision in controller machining processes, so that it can be picked off; for example. For positioning operation, the specification of the accuracy desired is important. Repeatability means that the product is repeatedly moved to the same position under the same conditions. Positioning accuracy is the absolute accuracy even with changing loads.

Positioning accuracy in the range of ± 10 mm is possible with simple devices, such as a nest or a stop. As a rule, a range of ± 5 mm requires the use of a positively driven conveyor and a control with a sensor. For a range of ± 1 mm a linear module is recommended. This accuracy, even traverse to the travel direction, require precise guidance of the belt and fixturing the product to the belt.

Configuring a Conveyor

Selecting a conveyor type

Belt Conveyors

→ page 18

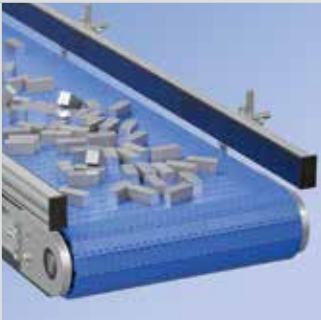


- Transportation of piece goods without particular requirements in regards to their location and position
- Closed belt surface for any product geometry desired
- Select from a variable spectrum of width and length variables
- Belt runs quiet even at high speeds
- Large selection of belts, suitable for the goods to be transported and the task, e.g. accumulation capability, food grade, anti-static, etc.
- Lateral cleats and sidewalls available

Widths [mm]	Lengths [mm]	Total load [kg]	Speed to [m/min]	Dual-strand	Bend	Curves
50-2000	300-20000	usually to 200	to 80	yes	yes	yes

Modular Belt Conveyors

→ page 112



- Transport of piece goods without particular requirements in regards on their location and position and for any product geometry
- Positively driven, so there is no slip, and consequently they are well-suited for wet areas; permeable chains are available
- Various robust chain materials, e.g. for higher temperatures, chemical-resistant or food grade are available
- Stable chain run, regardless of the length-width ratio
- Conveyed goods can be pushed off transversely
- Easy disassembly because the chain can be opened. Thus individual chain modules can be interchanged and combined

Widths [mm]	Lengths [mm]	Total load [kg]	Speed to [m/min]	Dual-strand	Bend	Curves
200-1000	400-10000	usually to 250	to 30	-	yes	-

Timing Belt Conveyors

→ page 138



- Ideal for indexing operation, of pallets or laterally stable goods
- Highest-precision positioning is possible, thanks to positively driven belts
- Selection of different timing belts with backings and coatings are available
- High speeds and acceleration can be achieved with quiet and clean operation
- Suitable pallets, transverse transfers, stops, positioning and rotating units, as well as control components are available

Widths [mm]	Lengths [mm]	Total load [kg]	Speed to [m/min]	Dual-strand	Bend	Curves
40-2000	500-6000	usually to 250	to 60	yes	-	-

Chain Conveyors

→ page 168



- Ideally suited as dual-strand and multi-strand systems for pallet transport with high loads, also in accumulated operation
- Different chains and wear strips allow for optimal placement of the workpiece or pallet.
- Suitable for dirty and oily environments
- Robust and temperature-resistant
- Suitable pallets, transverse transfers, stops, positioning and rotating units, as well as control components are available

Widths [mm]	Lengths [mm]	Total load [kg]	Speed to [m/min]	Dual-strand	Bend	Curves
200-2000	500-10000	usually to 1000	to 30	yes	-	-

Flat Top Chain Conveyor

→ page 212



- Typical applications are the transporting of bottles, cans, or small cardboard boxes
- Complex three-dimensional section runs without separating points and transitions implemented with one conveyor
- Thanks to the positive drive, there is no slip, and consequently they are well-suited for wet areas.
- Various chains (also, stainless steel) depending on the application, e.g. for use in the food industry, are available

Widths [mm]	Lengths [mm]	Total load [kg]	Speed to [m/min]	Dual-strand	Bend	Curves
100/130	600-15000	usually to 150	to 40	-	yes	yes

Roller Conveyor

→ page 228



- Thanks to the ball-bearing supported rollers, even heavy loads are possible at low drive power.
- Application areas are transport of piece goods, such as solid boxes or pallets with a stable, level base surface
- Different drive concepts (gravity, tangential chain drive or motorized roller) are available depending on the application
- Friction rollers enable accumulated operation
- Through segmentation different speeds or start/stop functions can be implemented on a conveyor section.
- Robust, attractive price, and easy to extend

Widths [mm]	Lengths [mm]	Total load [kg]	Speed to [m/min]	Dual-strand	Bend	Curves
150-1,050	200-10000	usually to 400	to 70	-	-	yes

Configuring a Conveyor

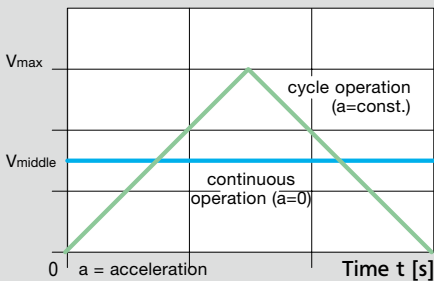
Drive selection

Speed – continuous operation to cycle operation

On one hand, the diagrams show the necessity of a higher maximum speed for cycle operation relative to continuous operation, on the other hand, they show a sample workflow of a cycle operation with soft start-up and standstill for a different action, e.g. for processing of the product.

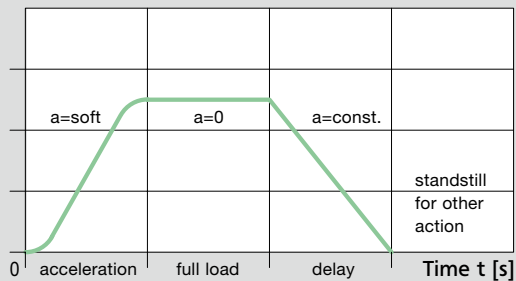
Continuous operation to cycle operation

Speed v [m/s]



Sample cycle operation

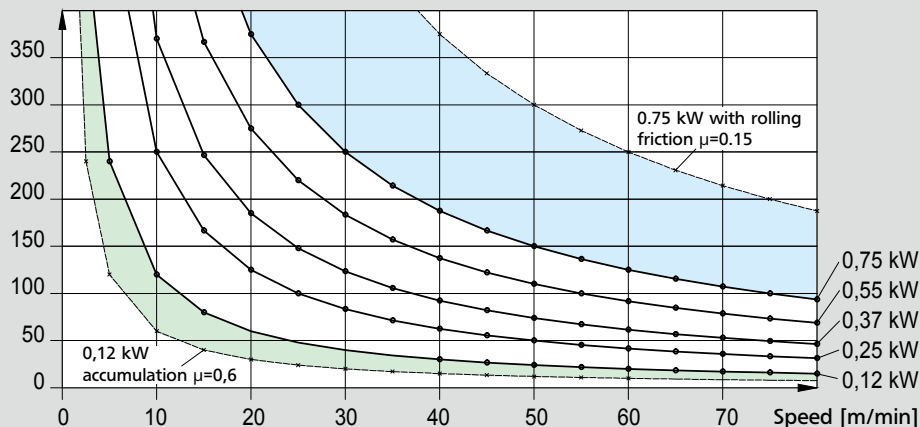
Speed v [m/s]



Motor selection based on load and speed

Based on the diagram the required motor power can be determined depending on the total load (product to be conveyed + conveyor medium) and the speed. The values contained correspond to a slide friction of $\mu=0.3$, as it is present for belt conveyors between belt and sheet metal.

Total load m [kg]



Sample influence on the permissible total load and speed if the coefficient of friction from a belt conveyor ($\mu=0.3$) to a roller conveyor ($\mu=0.15$) is reduced by half.

Sample influence on the permissible total load and speed if the coefficient of friction at continuous operation ($\mu=0.3$) to accumulated operation ($\mu=0.6$) is doubled.

Drive location

The **head drive** is positioned at the discharge end of the conveyor and pulls the transport medium (e.g. belt). This is the most typical, safest, and lowest-cost drive location. With certain restriction, you can also use a head drive on the infeed end of the conveyor, as a rear drive (pushing). However, this requires sufficient pre-tension to prevent buckling of the transport medium.

Center drives, also known as “under belt drives” or “mid mount drives” are designed so that the drive is fully below the top of the belt. These are typically used in reversing applications (reversible conveyor direction), as the transportation medium is always pulled and thus the issues of a pushing drive is avoided. Because the drive design includes a tension roller, a fixed installation length can be achieved. The two tension rollers are a reason why this drive is also called an “omega drive”. Additionally it is possible to use knife edge transfers on both the infeed and discharge ends of the conveyor.

Inner drives with a drum motor; are ideal for narrow install conditions and clean environments because there are minimal external interferences and there are virtually no particle emissions.

Drive type

For **indirect drives**; which is the predominate drive type offered, drive transmissions occurs via chain or timing belt. Different gear ratios enable more precise speed outputs and can compensate for misalignment.

With a **direct drive** the motor is directly connect to the drive shaft of the conveyor and thus offers lower maintenance and a more compact alternative to an indirect drive.

Motor selection

mk offers a variety of stock motors from well-known manufacturers. The gearmotors consist of three-phase induction motors or direct-current motors, combined with Spiroplan gear units, worm gears and spur gears; which are class II IP54. Different motors, as well as UL and CSA approved or multi-range motors are also available. Visit www.mk-group.com to find a motor selection tool; which will help determine the optimum motor for your application.

Speeds

The maximum conveyor speed depends on the selection of the motor, the load capacity, mode of operation and other influencing factors. The speed specifications are rated values and can deviate through RPM tolerance in the motor (up to $\pm 10\%$). For indirect drives; via chain or timing belt, the tolerance has tendency to shift in the positive range. Therefore on these drive the actual speed can be 20% higher than the rated speed. A higher speed also occurs when the device is operated in a facility with 60 Hz, such as the USA. In a precisely defined speed is required, this can be ensured with an mk Regolmat.

Speed control

With the mk Reglomat, the speed of the conveyor, with three-phase current, can be regulated in the range of 1:7 (10-70 Hz) starting from the rated speed at 50 Hz. For inner drives (drum motors) the control range is 1:3 (20-60 Hz); and for direct-current in the range of 1:6 (0.25-1.5 A or 0.5-3 A).

Configuring a Conveyor

Drive selection

A – Head drives



AA

Head drive without motor

This drive version has an output shaft which can be connected to a conveyor with motor for parallel operation.



AC

Head drive, standard

This drive version offers a variety of mounting possibilities of motors, gear units and sprockets.



AF

Head drive, direct

A compact and low-maintenance drive version with a motor that is mounted directly on the drive shaft.



AD

AG

Head drive, compact

A drive version with a small footprint, and ability to mount to small gearmotors, with DC or three-phase to it.



AM

Head drive, offset

The motor is positioned away from the discharge of the conveyor, via a series of sprockets and chains.



AS

Head drive, outside compact

A drive version ideal for small spaces and when the area above or below the conveyor needs to be clear.



AU

Head drive, outside

Thanks to a motor that is mounted laterally from the outside, the space below and above the conveyor remains free of interference contours.

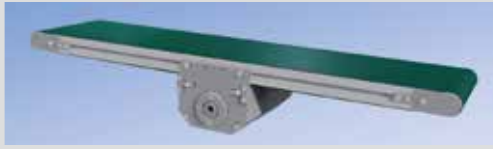


AQ

Head drive, dual-strand

A head drive specifically for dual-strand conveyors with more free space downward between the conveyor strands.

B – Center drives



BA

Center drive, without motor

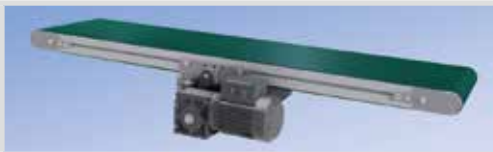
A drive unit mounted below the conveyor; enables connection on a conveyor with motor for parallel operation.



BC

Center drive, standard

Allows the possibility of reversing operation and selection of knife edges, on the infeed side, as well as the discharge side.



BF

Center drive, direct

A compact and low-maintenance drive version with a motor that is mounted directly on the drive shaft.

C – Inner drives



CA

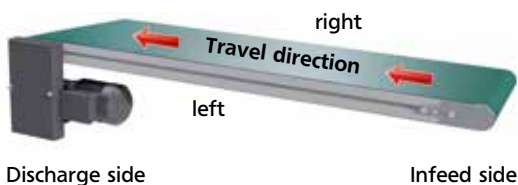
Drum motor

Maintenance-free and compact drive version without exterior interference contour with a motorized roller as drive roller.

Drive versions here shown exemplary on the belt conveyor

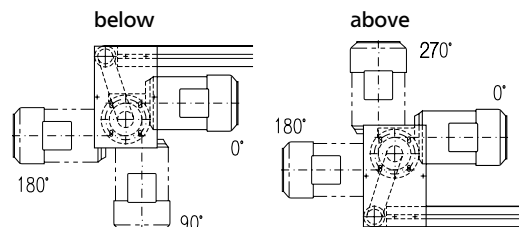
Drive location

The "Drive Location" describes how and where the drive, including the motor, should be installed. The example below shows the drive mounted on the left discharge.



Motor orientation

The motor orientation can be mounted at 0°, 90°, 180° and 270° as shown in the illustration. If there is no requirement from the customer, the drive location – discharge side/left/below with motor orientation 0° is delivered.



Configuring a Conveyor

mk QuickDesigner – our online configurator



Your conveyor at the touch of a button

With our online configurator, "mk QuickDesigner", you can quickly. Easily and specifically create your individual mk conveyor*. There is no software to install.

Simply enter www.quickdesigner.com and click "Start", that's it.

All information entered will be immediately checked for feasibility, so that the optimal conveyor is always provided to you. All entry fields have an info button, with detailed information; to make the mk QuickDesigner as easy and convenient as possible for you to use.

When your conveyor configuration is complete you will have the option of generating a CAD model and if desired a quote as well. In the "My Account" tab, the configurations you create and their associated models and quotes can be looked up at any time, and they can be edited.

When an order is placed, we have all relevant data in our system; which accelerates the order process and thus accelerates delivery. Even if you require a special solution, we design it based off the standard model you created; this provides a cost savings to you.

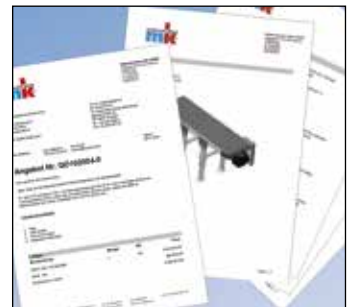


*Conveyor systems, as of 2014: GUF-P Mini, GUF-P 2000, GUF-P 2041.
Other systems to follow.



mk QuickDesigner

- Fast, easy, and specific
- Always available, anywhere (24/7)
- Can be used in mobile applications
- Live view during the configuration
- CAD model and quote
- Save configurations and edit later
- Detailed help
- German/English



CAD Model

CAD Model
+ Quotation



Belt Conveyors

Contents belt conveyors



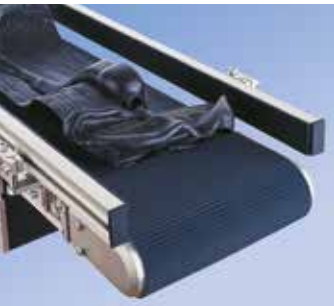
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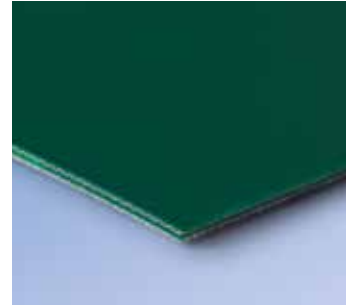
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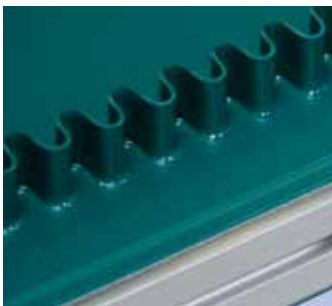
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Belt Conveyors

Selecting the conveyor system

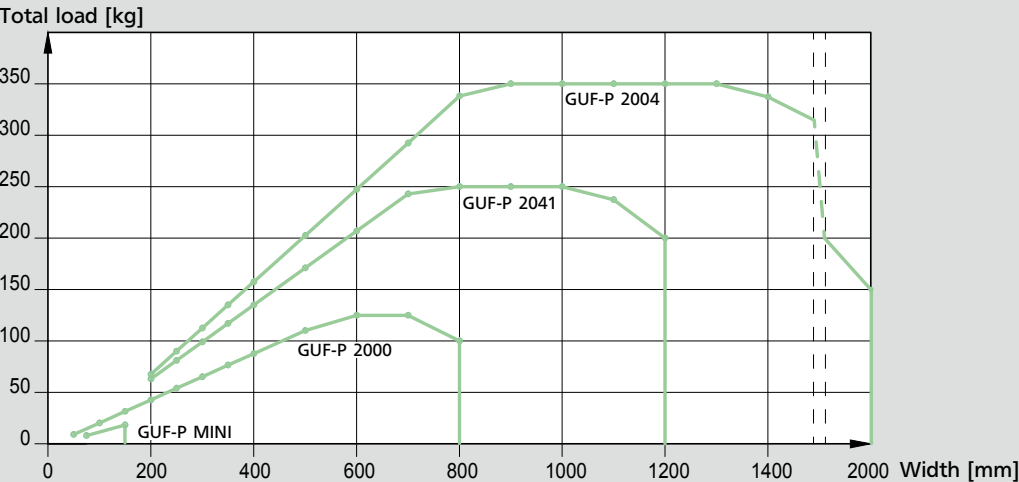
Dimensions – technical information

Conveyor system	Conveyor width [mm]	Conveyor length [mm]	Total load* usually to [kg]	Speed to [m/min]	Tail ø [mm]	Reversing operation	Accumulated operation	Cycle operation
Belt conveyors								
GUF-P MINI	75/100/150	360-5000	25	50	22/32	•	•	•
GUF-P 2000	50-800	380-10000	75	80	10/12/19/52	•	•	•
GUF-P 2041	200-1200	540-10000	150	60	22/85	•	•	•
GUF-P 2004	200-2000	720-20000	200	60	105		•	•
Incline belt conveyors								
KFG-P 2000	300-700	1400-4000	40	15	52			•
Curved belt conveyors								
KGF-P 2040	300-600	90°/180°	30	30	19	•		
Dual belt conveyors								
DGF-P 2001	100-250	300-2000	15	15	25		•	•

*Maximum load that is transported by the respective system with a usual configuration and for a usual application. The permissible load depends on the width, roller diameter, belt type, and pre-tension, as well as load distribution, operating mode, and environmental influences.

System selection based on load and conveyor width

Based on the diagram the permissible total load can be determined depending on the conveyor width per conveyor system. The values contained apply for the max. tail diameter per system and a belt with a strength K1% of 5-8 N/mm.



Conveyor width

The conveyor width is the width of the conveyor frame; from outside edge to outside edge without tail and drive components. The belt is narrower than the width of the conveyor (between 10 and 50 mm, depending on the system); this is so that the belt self tracks as it runs.

Conveyor length

The conveyor length is a nominal dimension, defined from the tip to tip of the conveyor ends in a tension-free state. The actual conveyor length is longer and is derived by considering the following aspects (all specifications are for an ambient temperature of 20°C):

- Tensioned length of the belt is approximately 0.3% of the belt length
- Belt length tolerance is up to 0.8% of the overall belt length
- Belt thickness adds to the overall length by 1 to 5 mm, per conveyor end
- Rollers protrude past the conveyor ends by 1 to 3.5 mm per end

If a conveyor with a precisely defined install length is required, this can be achieved via a center drive conveyor.

Length-width ratio

To ensure safe and stable belt operation, the conveyor length to width ratio must not fall outside the specified range (1:1 to 50:1).

The ideal length to width ratio; without additional measures; is between 2:1 and 20:1. Meaning the belt is twice as long as it is wide, and up to 20 times as long as wide.

Typically length to width ratios of 1.5:1 to 2:1 are possible without restrictions, however this should be reviewed and tested. Lengths between 1:1 and 1.5:1 can only be achieved with additional design details and certain restrictions.

For longer conveyors, between 20:1 and 50:1, only transversely rigid belts should be used. At these lengths lateral forces on the belt are not permitted. Examples of lateral forces on the belt include: product being discharged off the side of the conveyor, product transfer and alignment via side rails as well as asymmetrical load distribution.

Speeds

The maximum conveyor speed depends on the selection of the motor, load capacity, mode of operation and other influencing factor.

With an indirect chain drive at the drive roll (ø 50 mm) a speed up to 80 m/min is possible. The use of a timing belt for power transmission is recommended at speed above 30m/min; and is standard for 60 m/min and above, as well as indexing operations. Narrow conveyor rollers are balanced for speeds up to 60 m/min; at 100 m/min they are dynamically balanced.

For high speeds it is ideal to use larger drive rollers, for example 80 m/min as a GUF-P 2000 as a BC with an ø 88 mm drive roller.

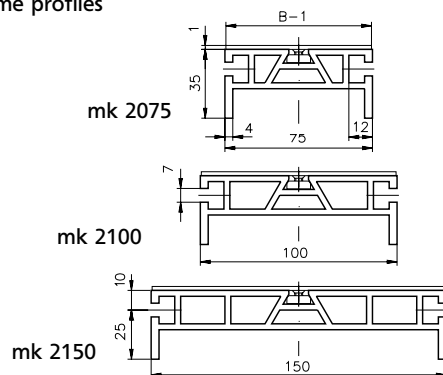
Speed control

Via mk Reglomat, the speed of the conveyor with a three-phase current can be regulated between 1:7 (10 to 70 Hz), with a starting speed rated at 50 Hz. For internal drive drum motors (drive version CA) the controller range is 1:3 (20 to 60 Hz). For direct-current the range is 1:6 (0.25 to 1.5A or 0.5 to 3A).

Belt Conveyors GUF-P MINI



Conveyor frame profiles





The minimal frame height, as well as the lower walls of the GUF-P MINI allow for direct placement of the conveyor on a machine bed. It is ideal for the direct discharge of light and small products, for example, out of an injection molding-machine. The small pulley diameters prevent large gaps at the product transfer. The profile

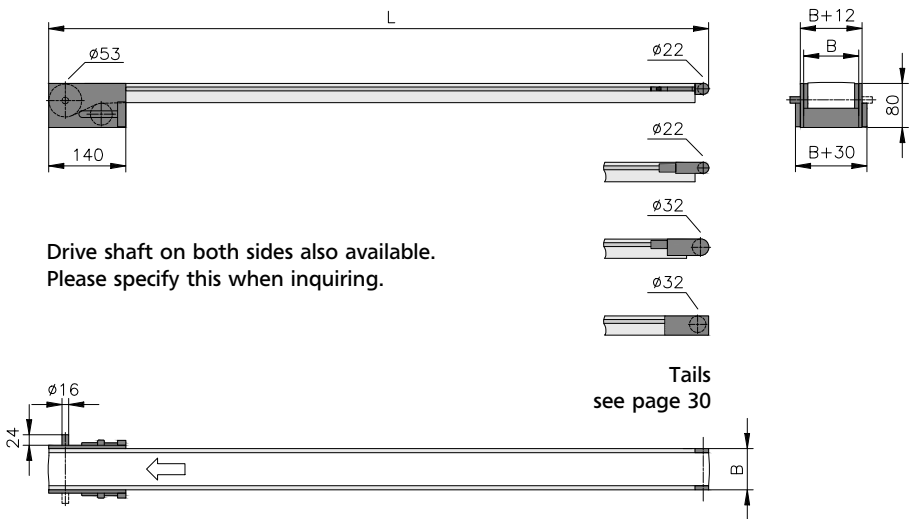
design ensures a torsion-resistant structure with good load-bearing properties; note that the values for total load, speeds, etc. are directly related and thus can vary. The drive roll of the various drive versions can be rubberized depending on application, so that motor torque can be optimally transmitted. Crowned drive rolls

and/or idler rolls simplify belt adjustment and tracking of the belt on the conveyor frame. A stainless steel slider bed is mounted under the running surface of the belt to achieve sustainable wear resistance. The design of the conveyor frame profile allows the return of the belt within the conveyor frame.

GUF-P MINI AA

Belt conveyor with head drive without motor

B20.75.009



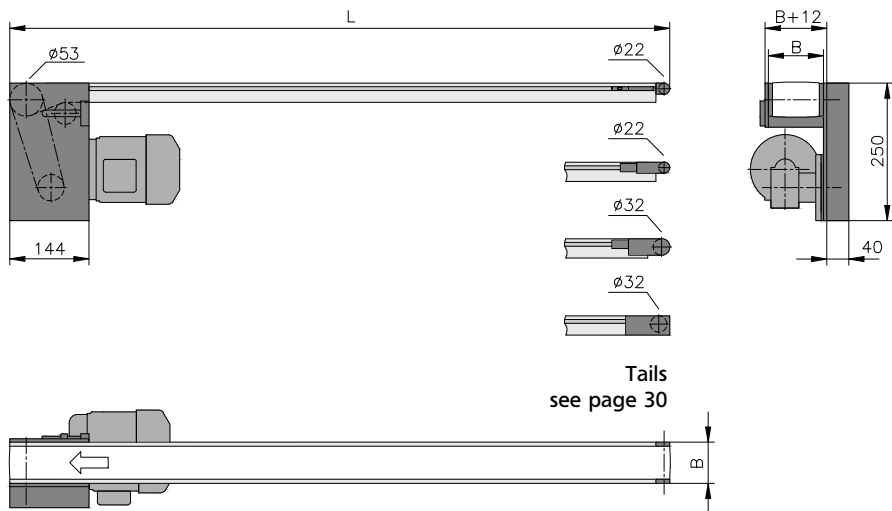
Drive version AA is often used where multiple-lanes are to be slave driven, either parallel or in-line, with a single drive motor. The compact frame is ideal for integration of this conveyor into new or existing equipment. Additional features include a \varnothing 53 mm crowned drive roll, separate belt tension roller, easy belt tracking at the tail end, sealed ball bearings and a stainless steel slider bed fastened to an aluminum T-slot designed frame. The use of cleated belts is not possible with this drive version. The \varnothing 16 mm output shaft has a usable length of 19 mm and includes a 5 x 5 x 16 mm shaft key (DIN 6885).

Dimensions – technical information		Notes
Conveyor length L	between 360-5000 mm	any increment possible
Conveyor width B	75 mm, 100 mm and 150 mm	
Belt width	B-15 mm	belts see from page 84
Drive and speed	to 60 m/min (200 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 25 kg (55 lbs) section load to 10 kg (22 lbs)/m	see chart on page 20

GUF-P MINI AC

Belt conveyor with head drive, standard

B20.75.001



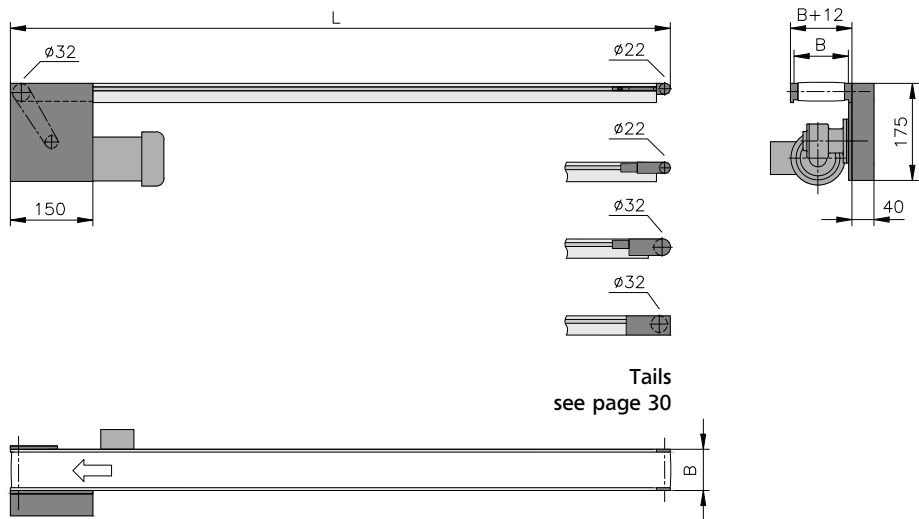
The compact frame is ideal for integrating this conveyor into new or existing equipment. Additional features include a \varnothing 53 mm crowned drive roll, separate belt tension roller, easy belt tracking at the tail end, sealed ball bearings and a stainless steel slider bed fastened to an aluminum T-slot designed frame. The use of cleated belts is not possible with this drive version.

	Dimensions – technical information	Notes
Conveyor length L	between 360-5000 mm	any increment possible
Conveyor width B	75 mm, 100 mm and 150 mm	
Belt width	B-15 mm	belts see from page 84
Drive location	discharge side left/right below	infeed side on request
Drive and speed	to 60 m/min (200 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 25 kg (55 lbs) section load to 10 kg (22 lbs)/m	see chart on page 20

GUF-P MINI AD

Belt conveyor with head drive, compact

B20.75.033



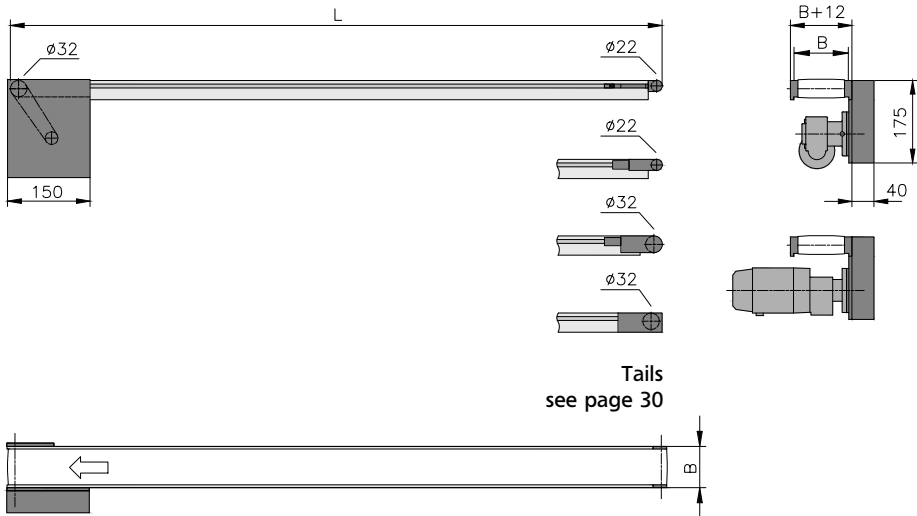
The compact frame is ideal for integrating this conveyor into new or existing equipment. The $\varnothing 32$ mm drive roll allows for the use of cleated belts. Compared to drive version AC, this version is significantly more compact.

	Dimensions – technical information	Notes
Conveyor length L	between 370-5000 mm	any increment possible
Conveyor width B	75 mm, 100 mm and 150 mm	
Belt width	B-15 mm	belts see from page 84
Drive location	discharge side left/right below	infeed side on request
Drive and speed	to 15 m/min (50 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 15 kg (33 lbs) section load to 10 kg (22 lbs)/m	see chart on page 20

GUF-P MINI AG

Belt conveyor with head drive, compact

B20.75.004



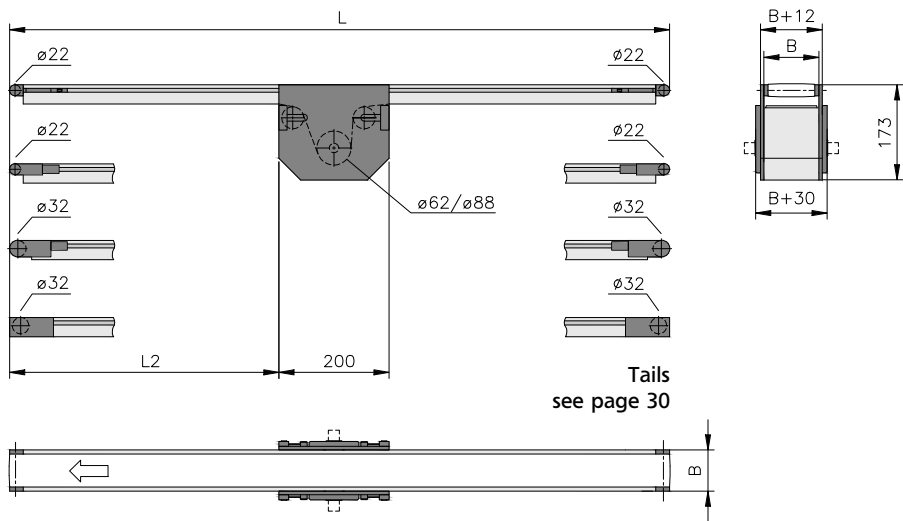
mk offers a variety of motor options for drive version AG, which are sized and selected for each application's individual speed and load requirements. The compact frame is ideal for integrating this conveyor into new or existing equipment. Additional features include a $\varnothing 32$ mm crowned drive roll, easy belt tensioning and tracking at the tail end, sealed ball bearings and a stainless steel slider bed fastened to an aluminum T-slot designed frame. The $\varnothing 32$ mm drive roll allows for the use of cleated belts. Compared to drive version AC, this version is significantly more compact.

Dimensions – technical information		Notes
Conveyor length L	between 370-5000 mm	any increment possible
Conveyor width B	75 mm, 100 mm and 150 mm	
Belt width	B-15 mm	belts see from page 84
Drive location	discharge side left/right below	infeed side on request
Drive and speed	to 15 m/min (50 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 15 kg (33 lbs) section load to 10 kg (22 lbs)/m	see chart on page 20

GUF-P MINI BA

Belt conveyor with center drive without motor

B20.75.030



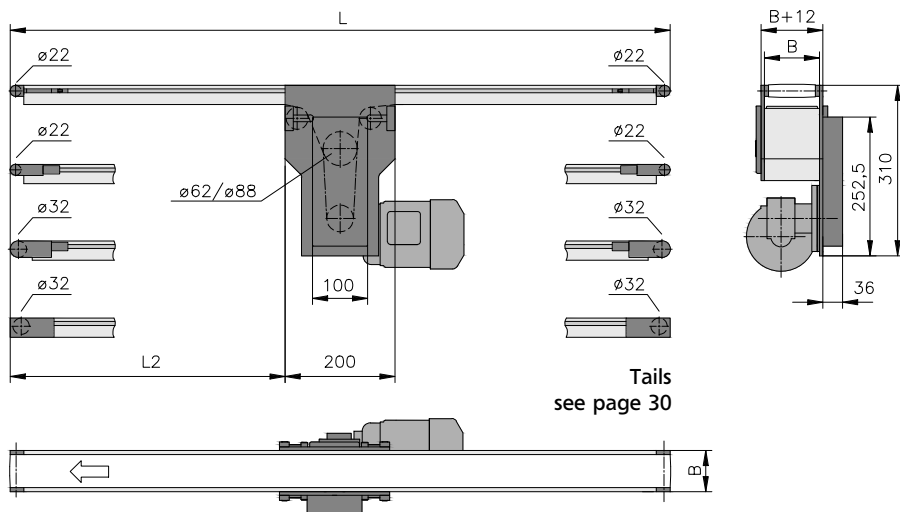
Drive version BA is used primarily when driving multiple conveyors in parallel using one drive motor. This conveyor is used as the slave, or driven, lane. The compact design, and the ability to move the drive location anywhere along the conveyor frame, simplifies the integration of this conveyor into new or existing equipment. The travel direction is reversible. Use of cleated belts is not possible with this drive version. The crowned drive roll features a ø 20 mm hollow shaft with a shaft key according to DIN 6885.

	Dimensions – technical information	Notes
Conveyor length L	between 550-5000 mm	any increment possible
Conveyor width B	75 mm, 100 mm and 150 mm	
Belt width	B-15 mm	belts see from page 84
Drive and speed	to 60 m/min (200 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 25 kg (55 lbs) section load to 10 kg (22 lbs)/m	see chart on page 20

GUF-P MINI BC

Belt conveyor with center drive, standard

B20.75.005

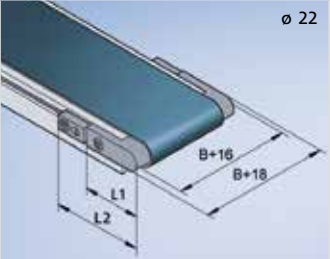
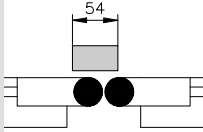


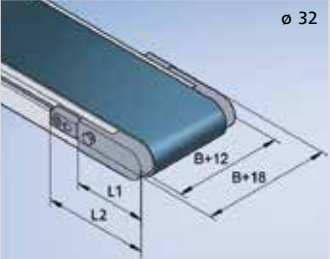
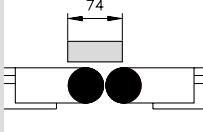
mk offers a variety of motor options for drive version BC, which are sized and selected for each application's individual speed and load requirements. The compact design, and the ability to move the drive location anywhere along the conveyor frame, simplifies the integration of this conveyor into new or existing equipment. The travel direction is reversible. Use of cleated belts is not possible with this drive version.

	Dimensions – technical information	Notes
Conveyor length L	between 550-5000 mm	any increment possible
Conveyor width B	75 mm, 100 mm and 150 mm	
Belt width	B-15 mm	belts see from page 84
Drive location	left/right below	
Drive and speed	to 60 m/min (200 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 25 kg (55 lbs) section load to 10 kg (22 lbs)/m	see chart on page 20

GUF-P MINI

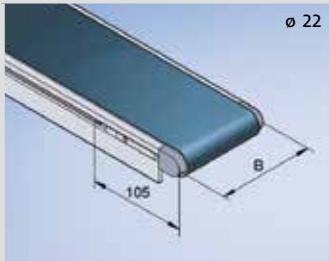
Tails

Tail 01					Ident-no. B80.01.006
		<ul style="list-style-type: none">■ ø 22 mm crowned roll■ Sealed bearings■ Belt tension and tracking on the side using alignment blocks■ Minimum part size for transfer 54 mm■ Note min. pulley diameter when selecting belt			
Conveyor lengths L	Conveyor width B	L1	L2	Material roll holder	
≤ 2.000 mm	≤ 150 mm	60 mm	90 mm	aluminum	
> 2.000 mm	≤ 150 mm	100 mm	130 mm	aluminum	

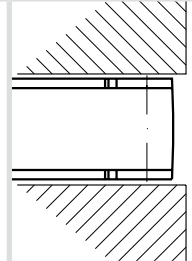
Tail 03					Ident-no. B80.01.001
		<ul style="list-style-type: none">■ ø 32 mm crowned roll■ Sealed bearings■ Belt tension and tracking on the side using alignment blocks■ Minimum part size for transfer 74 mm■ Note min. pulley diameter when selecting belt■ Optionally tail ø 32 laterally flush is possible			
Conveyor lengths L	Conveyor width B	L1	L2	Material roll holder	
≤ 2.000 mm	≤ 150 mm	75 mm	105 mm	aluminum	
> 2.000 mm	≤ 150 mm	115 mm	145 mm	aluminum	

Tail 11

Ident-no. B80.01.007



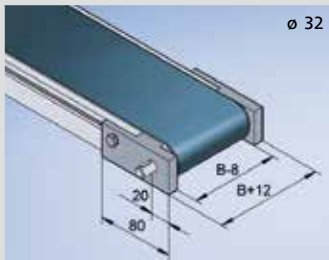
- ø 22 mm crowned roll
- Sealed bearings
- Belt tension and tracking on the side using alignment blocks (approx. 25 mm free space per side is required)
- Minimum part size for transfer 54 mm
- Note min. pulley diameter when selecting belt
- Head pieces flush



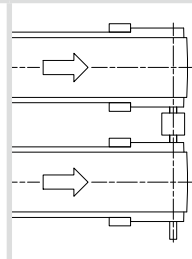
Conveyor lengths L	Conveyor width B	L1	L2	Material roll holder
≤ 5.000 mm	≤ 150 mm	105 mm	-	aluminum

Tail 19

Ident-no. B80.01.004



- ø 32 mm crowned roll
- Sealed bearings
- ø 10 mm x 15 mm long shaft, 3x3x12 mm shaft key (DIN 6885)
- Coupling of two lanes using one drive (specify right, left or both sides)
- Minimum part length for transfer 74 mm
- Note min. pulley diameter when selecting belt
- Projecting head piece (conveyor length L+5 mm)



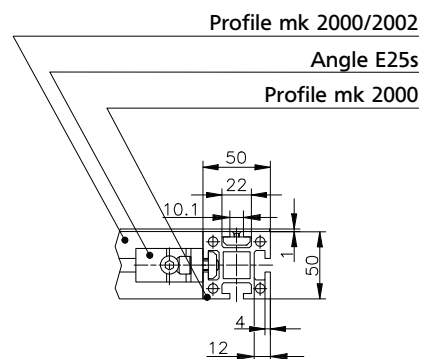
Conveyor lengths L	Conveyor width B	L1	L2	Material roll holder
≤ 2.000 mm	≤ 150 mm	80 mm	-	aluminum

Belt Conveyors

GUF-P 2000



Conveyor frame cross-section





GUF-P 2000 conveyors are designed and manufactured using our very rigid structural profile system mk 2000, and assembled using standard components. Through this standardization we are able to offer an extremely versatile belt conveyor with a wide variety of drive and tail options. A large selection of belt types complement the compact frame height of 50 mm and

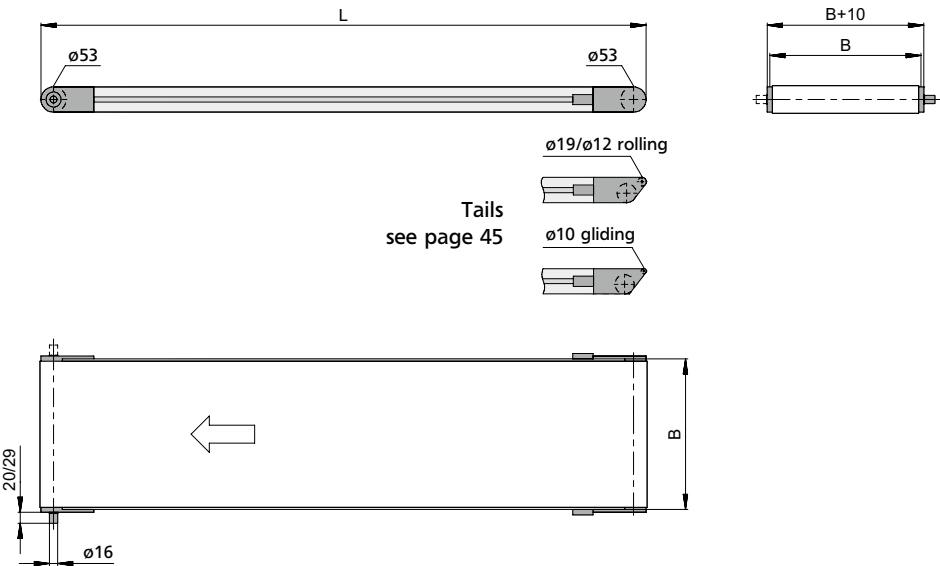
the ø 53 mm drive roll, which is available with either steel or rubberized versions depending on the application. All mk belt conveyor systems feature crowned rolls which significantly simplify belt adjustment. T-slots (10 mm opening) run the length of the conveyor frame, they can be used for integration into existing equipment as well as for mounting of standard or

customer-specific stands, side rails and other accessories. Additional details include a stainless steel slider bed mounted to the conveyor frame which reduces the wear on the belt, and sealed ball bearings for overall conveyor life and performance. In addition to the large selection of side rails and stands; stops, diverters, electrical brackets and V-guided belts are also available.

GUF-P 2000 AA

Belt conveyor with head drive without motor

B20.00.009



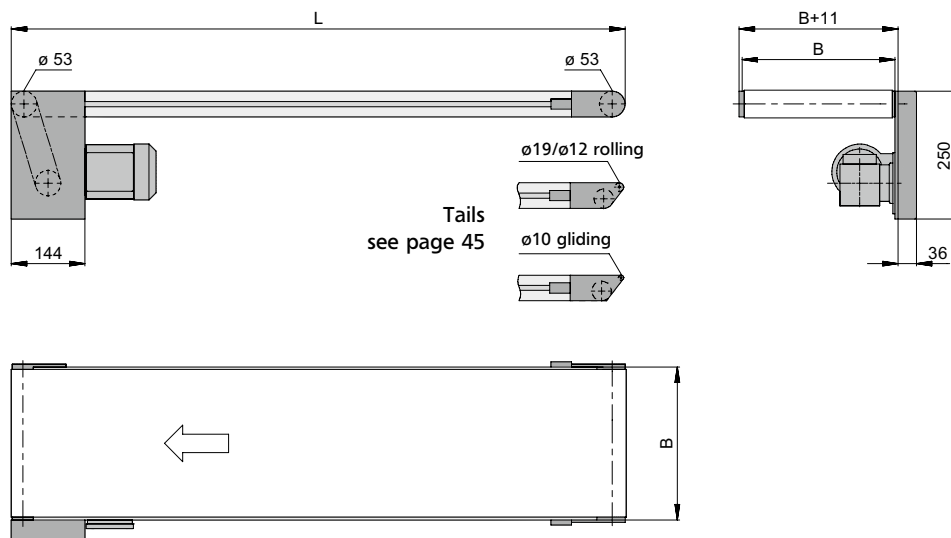
Drive version AA is often used when multiple lanes are to be slave driven, either parallel or in-line, with a single drive motor. The series 50 frame is ideal most general purpose conveying applications. Additional features include a ø 53 mm crowned drive roll, easy belt tracking at the tail end, sealed ball bearings and a stainless steel slider bed fastened to an aluminum T-slot profile frame. Cleated belts may be used with this drive version. The ø 16 mm output shaft has a usable length of 20 mm for chain drive or 29 mm for timing belt drive. Both feature a shaft key according to DIN 6885.

Dimensions – technical information		Notes
Conveyor length L	between 380 – 10000 mm	any increment possible
Conveyor width B	50, 75, 100, 150, 200, 250, 300, 400, 500, 600, 700, 800 mm	others on request
Belt width	B-10 mm	belts see from page 84
Drive and speed	to 80 m/min (260 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 75 kg (165 lbs) section load to 25 kg (55 lbs)/m	see chart on page 20

GUF-P 2000 AC

Belt conveyor with head drive, standard

B20.00.002



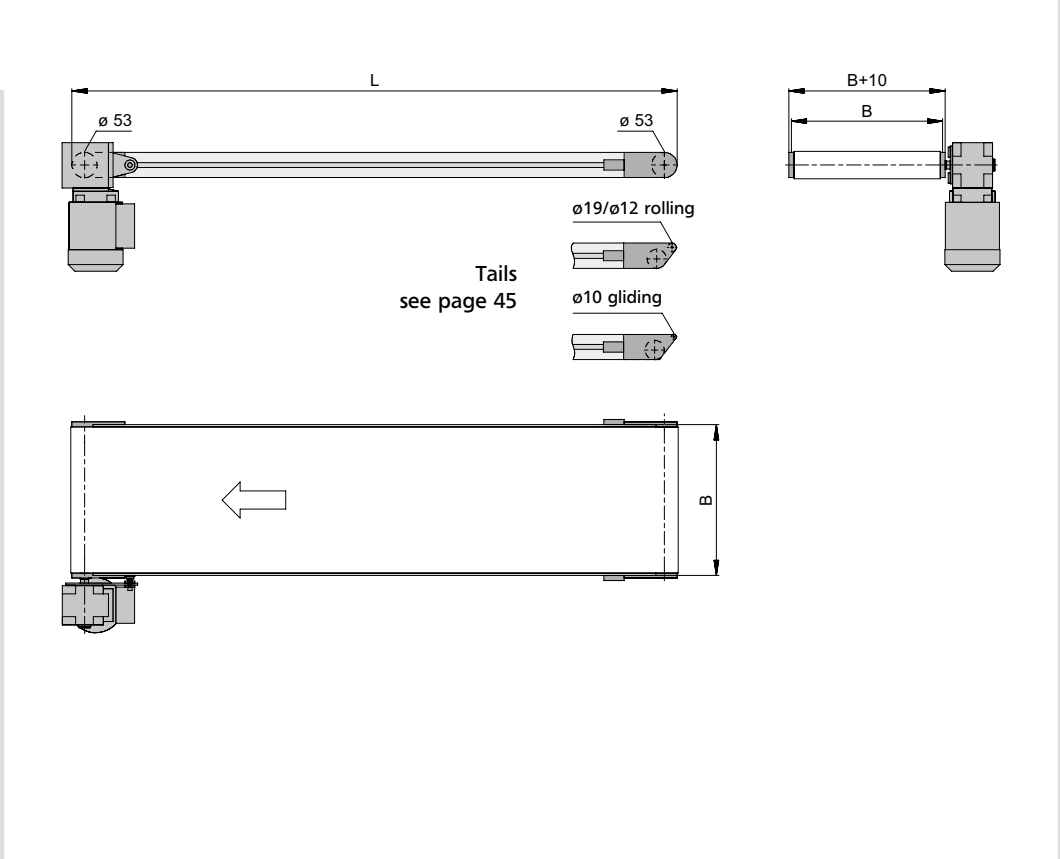
The series 50 frame is ideal for most general purpose conveying applications. Additional features include a $\varnothing 53$ mm crowned drive roll, easy belt tracking at the tail end, sealed ball bearings and a stainless steel slider bed fastened to an aluminum T-slot profile frame. Cleated belts may be used with this drive version.

	Dimensions – technical information	Notes
Conveyor length L	between 410 – 10000 mm	any increment possible
Conveyor width B	50, 75, 100, 150, 200, 250, 300, 400, 500, 600, 700, 800 mm	others on request
Belt width	B-10 mm	belts see from page 84
Drive location	discharge side left/right below/above	infeed side on request
Drive and speed	to 80 m/min (260 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 75 kg (165 lbs) section load to 25 kg (55 lbs)/m	see chart on page 20

GUF-P 2000 AF

Belt conveyor with head drive, direct

B20.00.011



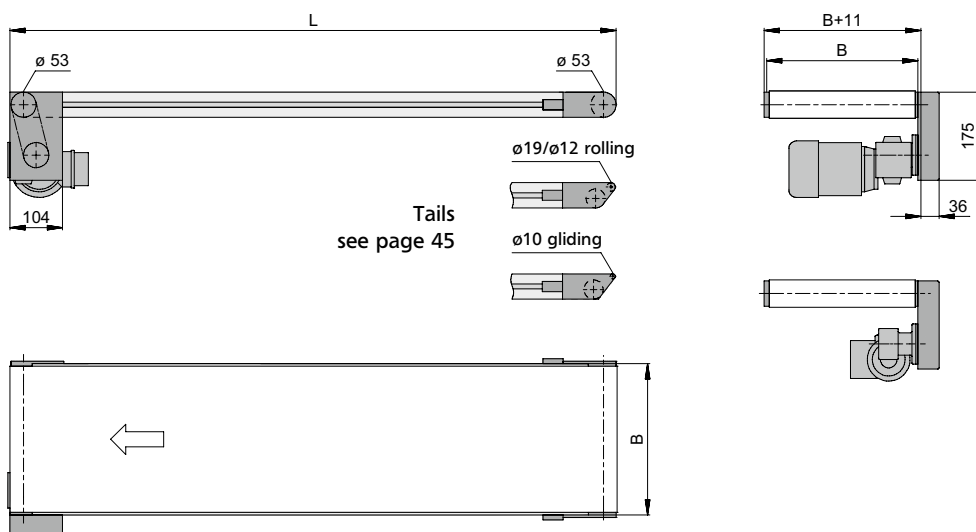
By placing the motor directly onto the drive shaft, this drive version minimizes not only the space required at the drive but also the number of moving parts and maintenance requirements.

Dimensions – technical information		Notes
Conveyor length L	between 410-10000 mm	any increment possible
Conveyor width B	50, 75, 100, 150, 200, 250, 300, 400, 500, 600, 700, 800 mm	others on request
Belt width	B-10 mm	belts see from page 84
Drive location	discharge side left/right	infeed side on request
Drive and speed	2.8; 3.7; 4.5; 5.5; 6.7; 7.9; 8.9; 11.2; 13.2 and 15.2 m/min	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 30 kg (65 lbs) section load to 25 kg (55 lbs)/m	see chart on page 20

GUF-P 2000 AG

Belt conveyor with head drive, compact

B20.00.005



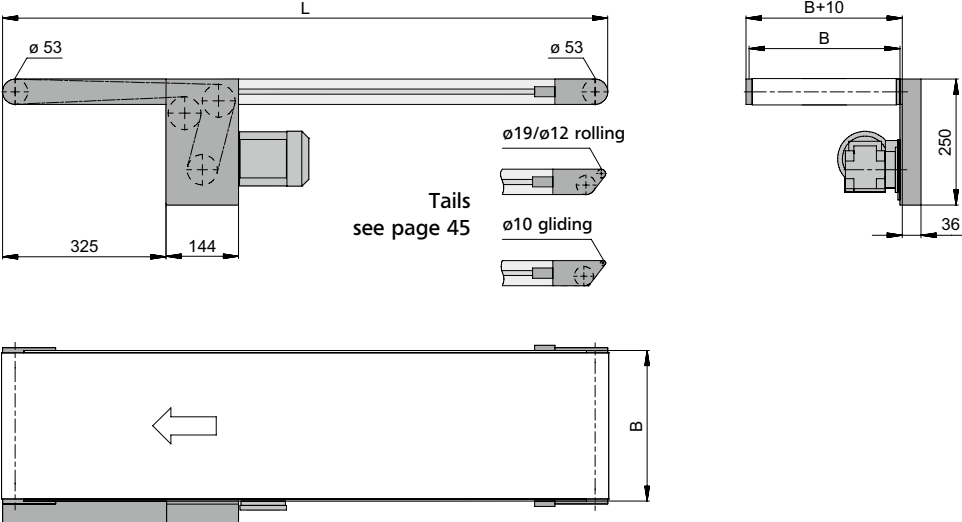
Drive version AG differs from version AC due to the use of small geared motors. The series 50 frame is ideal for most general purpose conveying applications. Additional features include a \varnothing 53 mm crowned drive roll, easy belt tracking at the tail end, sealed ball bearings and a stainless steel slider bed fastened to an aluminum T-slot profile frame. Drive version AG is also dimensionally more compact than version AC due to the use of parallel shaft gearmotors.

	Dimensions – technical information	Notes
Conveyor length L	between 380-6000 mm	any increment possible
Conveyor width B	50, 75, 100, 150, 200, 250, 300, 400, 500, 600, 700, 800 mm	others on request
Belt width	B-10 mm	belts see from page 84
Drive location	discharge side left/right below/above	infeed side on request
Drive and speed	to v=15 m/min (50 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 30 kg AC / 15 kg DC section load to 25 kg (55 lbs)/m	see chart on page 20

GUF-P 2000 AM

Belt conveyor with head drive, offset

B20.00.003



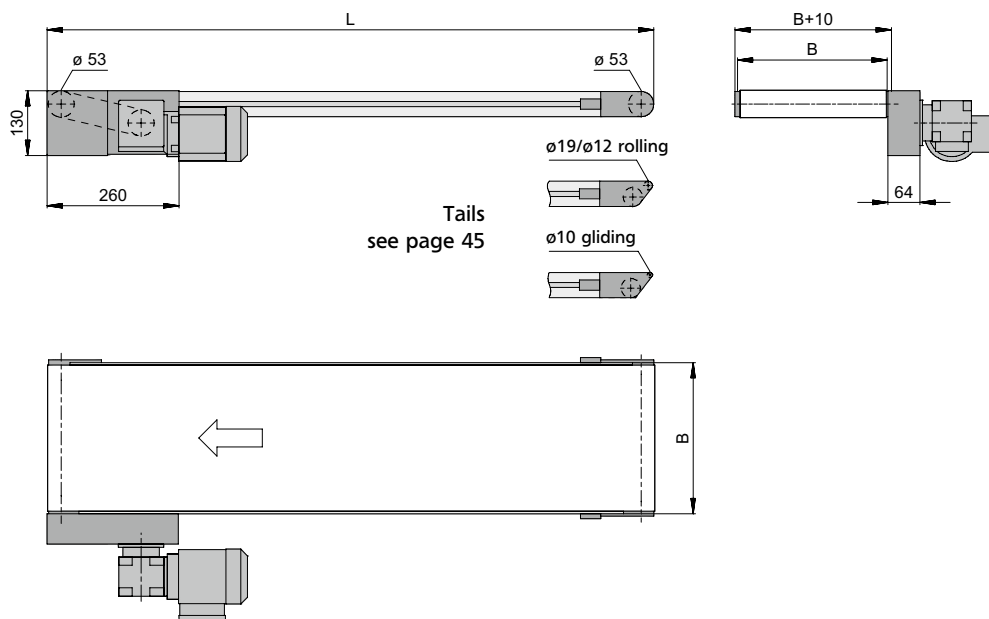
This conveyor is ideal for feeding parts into or out of equipment. Additional features for the drive version AM include a $\varnothing 53$ mm crowned drive roll, easy belt tracking at the tail end, sealed ball bearings and a stainless steel slider bed fastened to an aluminum T-slot profile frame. Cleated belts may be used with this drive version.

Dimensions – technical information		Notes
Conveyor length L	between 750-10000 mm	any increment possible
Conveyor width B	50, 75, 100, 150, 200, 250, 300, 400, 500, 600, 700, 800 mm	others on request
Belt width	B-10 mm	belts see from page 84
Drive location	discharge side left/right below	infeed side on request
Drive and speed	to 80 m/min (260 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 75 kg (165 lbs) section load to 25 kg (55 lbs)/m	see chart on page 20

GUF-P 2000 AS

Belt conveyor with head drive, outside

B20.00.008



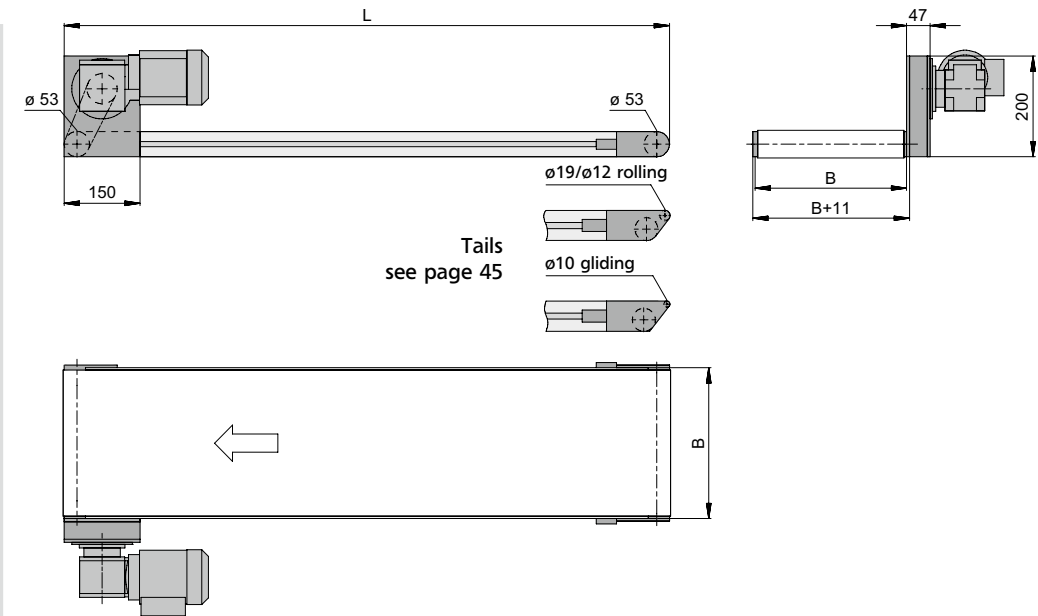
The overall height of the conveyor with drive version AS is held to an absolute minimum. Additional features include a $\varnothing 53$ mm crowned drive roll, easy belt tracking at the tail end, sealed ball bearings and a stainless steel slider bed fastened to an aluminum T-slot profile frame. Cleated belts may be used with this drive version.

	Dimensions – technical information	Notes
Conveyor length L	between 550-10000 mm	any increment possible
Conveyor width B	50, 75, 100, 150, 200, 250, 300, 400, 500, 600, 700, 800 mm	others on request
Belt width	B-10 mm	belts see from page 84
Drive location	discharge side left/right	infeed side on request
Drive and speed	to 80 m/min (260 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 75 kg (165 lbs) section load to 25 kg (55 lbs)/m	see chart on page 20

GUF-P 2000 AU

Belt conveyor with head drive, outside

B20.00.020



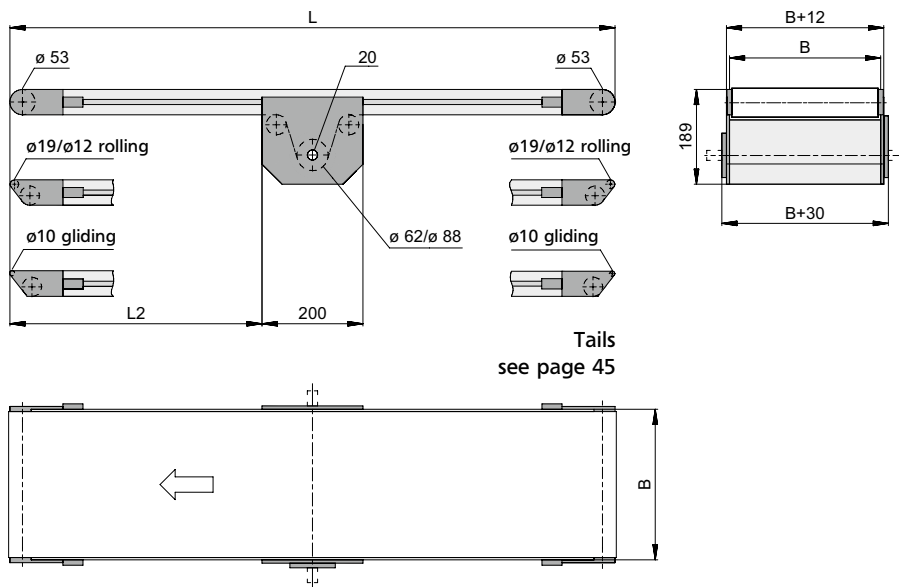
Drive version AU features motor placement outside of the conveyor frame. This is often used in applications where the underside of the conveyor frame must be as unobstructed as possible, or where the motor must remain clean. The conveyor can be placed very close to equipment and transport of tall objects is no problem. Additional features include a $\varnothing 53$ mm crowned drive roll, easy belt tracking at the tail end, sealed ball bearings and a stainless steel slider bed fastened to an aluminum T-slot profile frame. Cleated belts may be used with this drive version.

Dimensions – technical information		Notes
Conveyor length L	between 430-10000 mm	any increment possible
Conveyor width B	50, 75, 100, 150, 200, 250, 300, 400, 500, 600, 700, 800 mm	others on request
Belt width	B-10 mm	belts see from page 84
Drive location	discharge side left/right below/above	infeed side on request
Drive and speed	to 80 m/min (260 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 75 kg (165 lbs) section load to 25 kg (55 lbs)/m	see chart on page 20

GUF-P 2000 BA

Belt conveyor with center drive without motor

B20.00.001



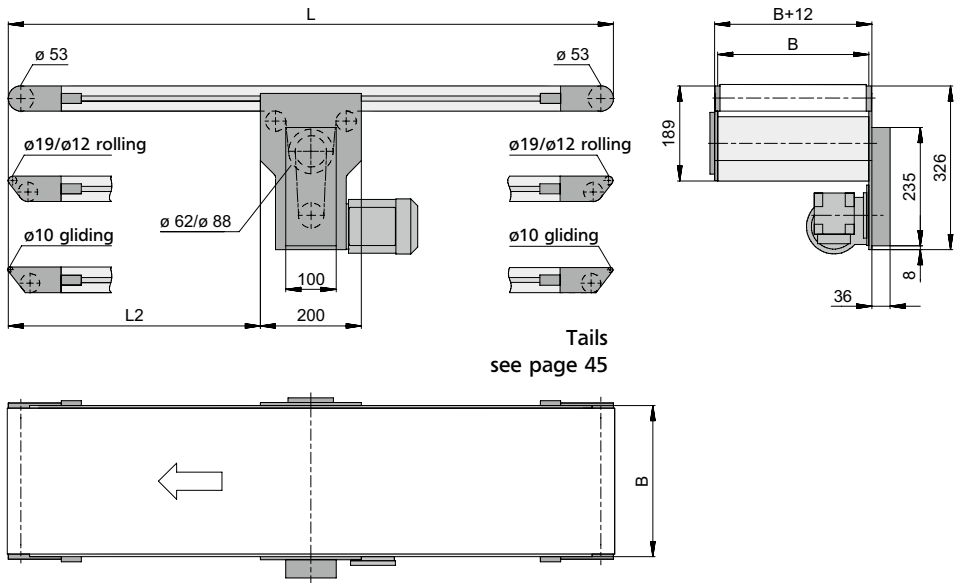
Drive version BA is used primarily when slave driving multiple conveyor lanes, in parallel; using one drive motor is required. The compact design, and the ability to move the drive location anywhere along the conveyor frame, simplifies the integration of this conveyor into new or existing equipment. The travel direction is reversible. The use of knife edges, both on the infeed side, as well as the discharge side is possible. The use of cleated belts is not possible with this drive version. The drive roll features a $\varnothing 20$ mm hollow shaft with 6 mm keyway (DIN 6885).

	Dimensions – technical information	Notes
Conveyor length L	between 700-10000 mm	any increment possible
Conveyor width B	50, 75, 100, 150, 200, 250, 300, 400, 500, 600, 700, 800 mm	others on request
Belt width	B-10 mm	belts see from page 84
Drive and speed	to 80 m/min (260 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 75 kg (165 lbs) section load to 25 kg (55 lbs)/m	see chart on page 20

GUF-P 2000 BC

Belt conveyor with center drive, standard

B20.00.004



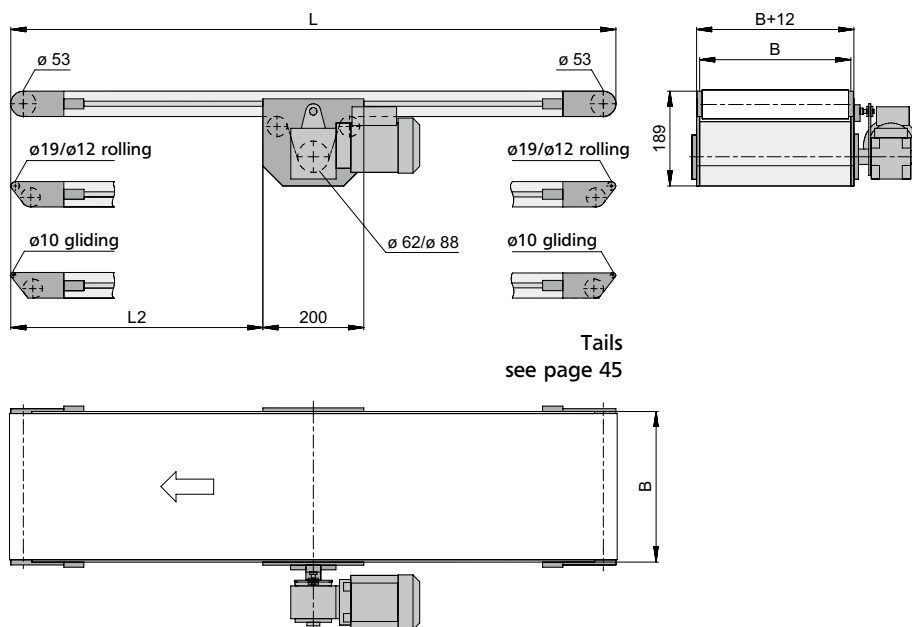
The compact conveyor frame, and the ability to move the drive (Version BC) location anywhere along the conveyor frame, simplifies the integration of this conveyor into new or existing equipment. The travel direction is reversible. The use of knife edges, both on the infeed side, as well as the discharge side is possible. The use of cleated belts is not possible with this drive version.

Dimensions – technical information		Notes
Conveyor length L	between 700-10000 mm	any increment possible
Conveyor width B	50, 75, 100, 150, 200, 250, 300, 400, 500, 600, 700, 800 mm	others on request
Belt width	B-10 mm	belts see from page 84
Drive location	left/right below	
Drive and speed	to 80 m/min (260 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 75 kg (165 lbs) section load to 25 kg (55 lbs)/m	see chart on page 20

GUF-P 2000 BF

Belt conveyor with center drive, direct

B20.00.012

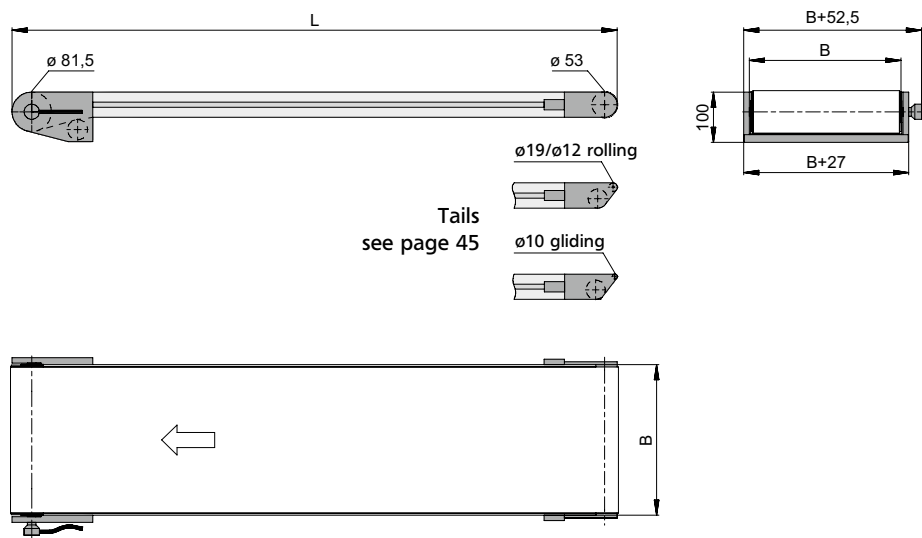


Thanks to the motor mounted directly onto the drive shaft, for this drive version BF, the spatial requirements and maintenance are reduced to a minimum. The compact design, and the ability to move the drive location anywhere along the conveyor frame, simplifies the integration of this conveyor into new or existing equipment. The travel direction is reversible. The use of knife edges, both on the infeed side, as well as the discharge side is possible. The use of cleated belts is not possible with this drive version.

	Dimensions – technical information	Notes
Conveyor length L	between 700-10000 mm	any increment possible
Conveyor width B	50, 75, 100, 150, 200, 250, 300, 400, 500, 600, 700, 800 mm	others on request
Belt width	B-10 mm	belts see from page 84
Drive location	left/right below	
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	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 75 kg (165 lbs) section load to 25 kg (55 lbs)/m	see chart on page 20

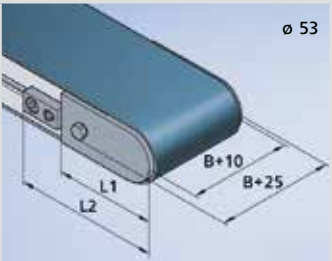
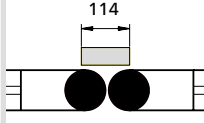
GUF-P 2000 CA

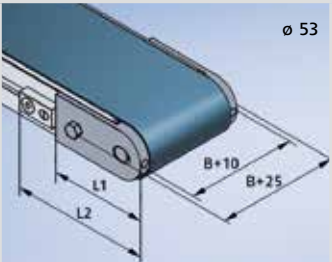
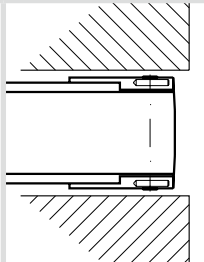
Belt conveyor with drum motor

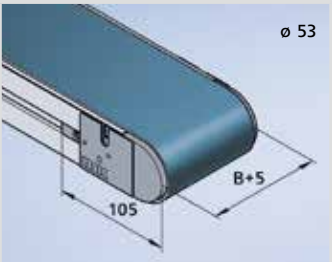
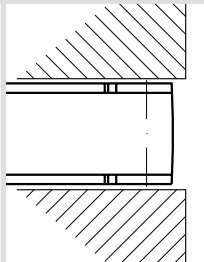


The drive version CA with drum motor is the most compact drive version available for system GUF-P 2000. By integrating the motor within the drive roll itself, there is no mechanical interference. The integration of this conveyor into equipment is therefore relatively simple. The use of cleated belts is not possible with this drive version.

Dimensions – technical information		Notes
Conveyor length L	between 440-10000 mm	any increment possible
Conveyor width B	200, 250, 300, 350, 400, 500, 600, 700 and 800 mm	others on request
Belt width	B-10 mm	belts see from page 84
Drive location	discharge side left/right	
Drive and speed	to 60 m/min (200 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 55 kg (121 lbs) section load to 25 kg (55 lbs)/m	see chart on page 20

Tail 01		Ident-no. B80.00.001		
		<ul style="list-style-type: none"> ■ \varnothing 53 mm crowned roll ■ Sealed bearings ■ Belt tension and tracking on the side using alignment blocks ■ Minimum part size for transfer 114 mm 		
				
Conveyor lengths L	Conveyor width B	L1	L2	Material roll holder
$\leq 2,900$ mm	≤ 300 mm	105 mm	145 mm	plastic
$\leq 2,900$ mm	> 300 mm	105 mm	145 mm	aluminum
$> 2,900$ mm	≤ 800 mm	155 mm	195 mm	aluminum

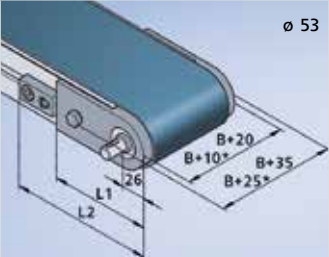
Tail 09		Ident-no. B80.00.005		
		<ul style="list-style-type: none"> ■ \varnothing 53 mm crowned roll ■ Sealed bearings ■ Belt tension using roll holders ■ Belt tracking using set screws (from end) ■ Compact tail ■ Minimum part size for transfer 114 mm 		
				
Conveyor lengths L	Conveyor width B	L1	L2	Material roll holder
$\leq 3,000$ mm	≤ 800 mm	105 mm	-	aluminum

Tail 11		Ident-no. B80.00.007		
		<ul style="list-style-type: none"> ■ \varnothing 53 mm crowned roll ■ Sealed bearings ■ Belt tension and tracking on the side using roll holders (approx. 35 mm free space per side is required) ■ Roll holders flush ■ Compact tail ■ Minimum part size for transfer 114 mm 		
				
Conveyor lengths L	Conveyor width B	L1	L2	Material roll holder
$\leq 3,000$ mm	≤ 800 mm	105 mm	-	aluminum

GUF-P 2000

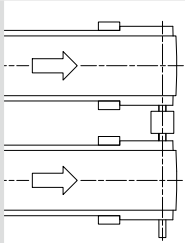
Tails

Tail 19



Ident-no. B80.00.006

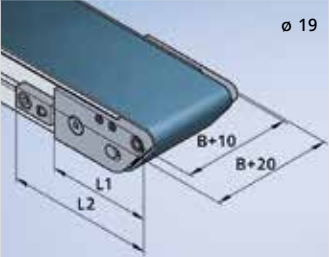
- \varnothing 53 mm crowned roll
- Sealed bearings
- \varnothing 16 mm output shaft 20 mm long for chain drives or 30 mm long for timing belt drives. Both include a 5 x 5 x 16 mm shaft key (DIN 6885)
- Coupling of two lanes using one drive
- Output shaft left, right or both sides possible



Conveyor lengths L	Conveyor width B	L1	L2	Material roll holder
$\leq 2,900$ mm	≤ 300 mm	105 mm	145 mm	plastic
$\leq 2,900$ mm	> 300 mm	105 mm	145 mm	aluminum
$> 2,900$ mm	≤ 800 mm	155 mm	195 mm	aluminum

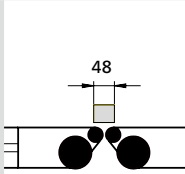
*does not apply for the drive side

Tail 13



Ident-no. B80.00.008

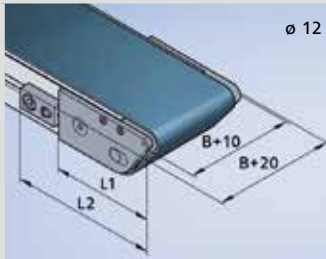
- Rolling nosebar
- Roll \varnothing 19 mm, sealed bearings
- Belt tension using alignment blocks
- Tracking using alignment blocks
- Minimum part size for transfer 48 mm
- Note min. pulley diameter when selecting belt



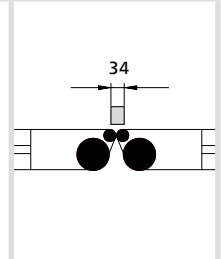
Conveyor lengths L	Conveyor width B	L1	L2	Material roll holder
$\leq 3,000$ mm	≤ 800 mm	105 mm	145 mm	aluminum
$> 3,000$ mm	≤ 800 mm	155 mm	195 mm	aluminum

Tail 10

Ident-no. B80.00.014



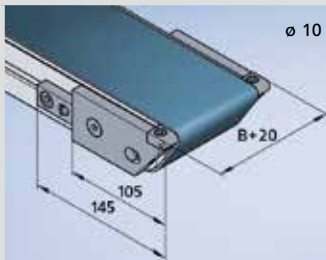
- Rolling nosebar
- Roll ø 12 mm, sealed bearings
- Belt tension using alignment blocks
- Tracking using idler roller (from end)
- Minimum part size for transfer 34 mm
- Note min. pulley diameter when selecting belt
- Max. belt speed 30 m/min (100 ft/min)
- Max. load capacity of 5 kg per 50 mm conveyor width



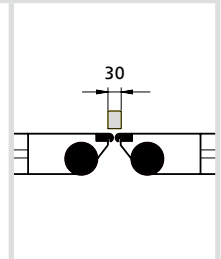
Conveyor lengths L	Conveyor width B	L1	L2	Material roll holder
≤ 3,000 mm	≤ 300 mm	105 mm	145 mm	aluminum
> 3,000 mm	≤ 300 mm	155 mm	195 mm	aluminum

Tail 17

Ident-no. B80.00.002



- Fixed nosebar
- Belt tension using alignment blocks
- Tracking using idler roller (from end)
- Minimum part size for transfer 30 mm
- Note min. pulley diameter when selecting belt
- Max. belt speed 10 m/min (33 ft/min)
- Requires rubberized drive roller



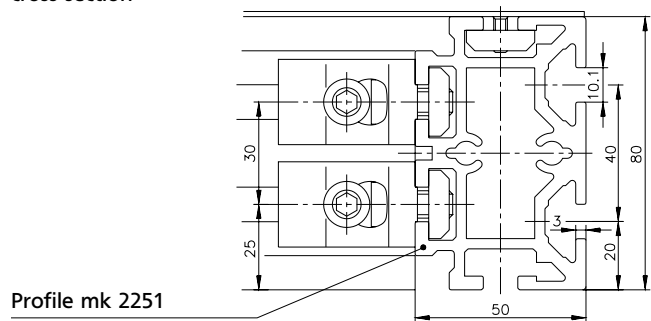
Conveyor lengths L	Conveyor width B	L1	L2	Material roll holder
≤ 3,000 mm	≤ 300 mm	105 mm	145 mm	aluminum

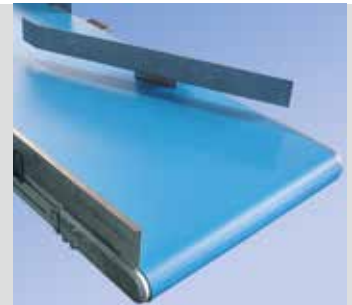
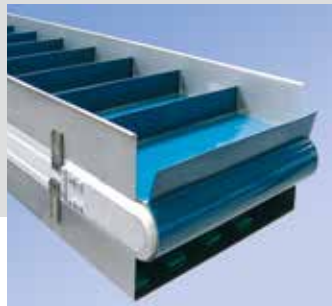
Belt Conveyors

GUF-P 2041



Conveyor frame
cross-section





The use of our rigid structural Profile mk 2251 (50 x 80 mm) to manufacture the conveyor frame allows System GUF-P 2041 conveyors to accommodate higher loads. The components use in the drive and tail assemblies are also specifically designed to handle these loads. The standard \varnothing 85 mm drive roll for this system

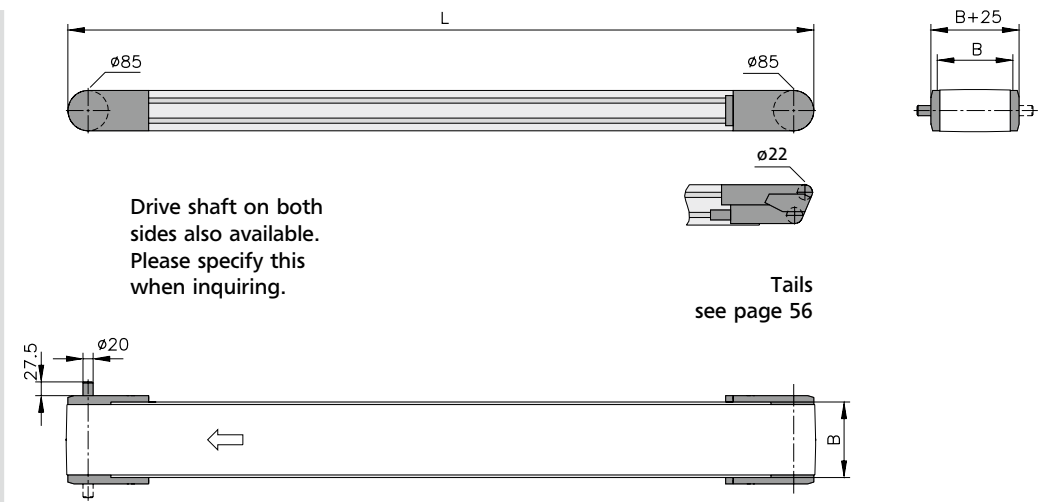
further ensures that all available motor power is transferred to the belt. An additional advantage of this system is an almost unlimited selection of belt types, including cleats and sidewalls. Each side of the conveyor frame features two profile system T-slots (10 mm opening) for integration into existing equipment,

or for the attachment of stands, side rails and other accessories. Additional noteworthy details include the use of galvanized slider bed for reduced belt friction, sealed ball bearings and crowned rolls for simple belt adjustment and alignment.

GUF-P 2041 AA

Belt conveyor with head drive without motor

B20.40.009



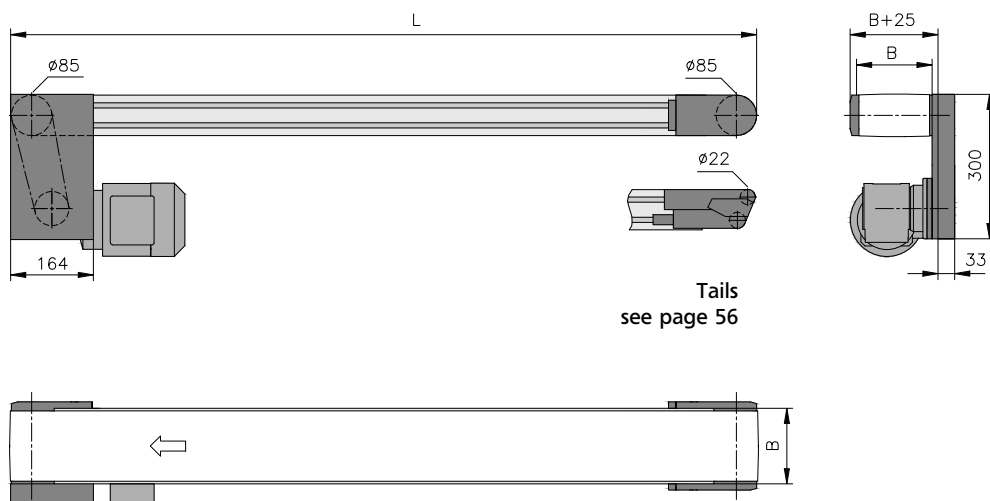
Drive version AA is often used where multiple lanes are to be slave driven, either parallel or in-line, with a single drive motor. The compact frame is ideal for integrating this conveyor into new or existing equipment. Additional features include an $\varnothing 85$ mm crowned drive roll, easy belt tracking at the tail end, sealed ball bearings and a galvanized steel slider bed fastened to an aluminum T-slot profile frame. Cleated belts may be used with this drive version. The $\varnothing 20$ mm output shaft has a usable length of 27.5 mm and includes a 6 x 6 x 22 mm shaft key (DIN 6885).

Dimensions – technical information		Notes
Conveyor length L	between 540-10000 mm	any increment possible
Conveyor width B	200 to 1200 mm (in 100 mm increments)	others on request
Belt width	B-15 mm	belts see from page 84
Drive and speed	to 60 m/min (200 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 150 kg (330 lbs) section load to 50 kg (110 lbs)/m	see chart on page 20

GUF-P 2041 AC

Belt conveyor with head drive, standard

B20.40.001



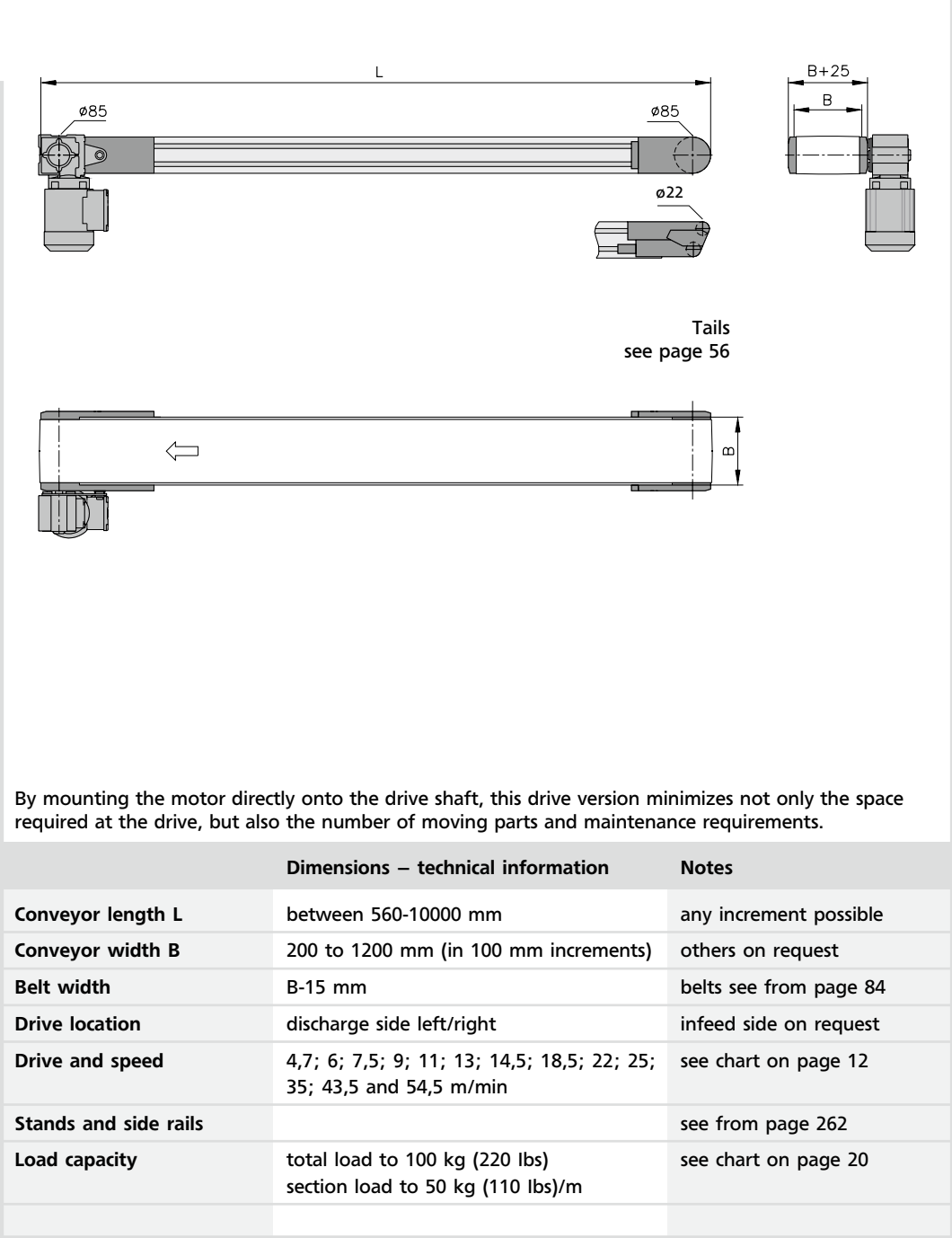
The compact frame is ideal for integrating this conveyor into new or existing equipment. Additional features include an $\varnothing 85$ mm crowned drive roll, easy belt tracking at the tail end, sealed ball bearings and a galvanized steel slider bed fastened to an aluminum T-slot profile frame. Cleated belts may be used with this drive version.

	Dimensions – technical information	Notes
Conveyor length L	between 540-10000 mm	any increment possible
Conveyor width B	200 to 1200 mm (in 100 mm increments)	others on request
Belt width	B-15 mm	belts see from page 84
Drive location	discharge side left/right below/above	infeed side on request
Drive and speed	to 60 m/min (200 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 150 kg (330 lbs) section load to 50 kg (110 lbs)/m	see chart on page 20

GUF-P 2041 AF

Belt conveyor with head drive, direct

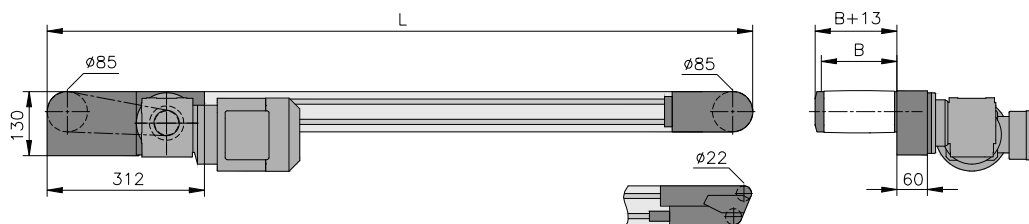
B20.40.008



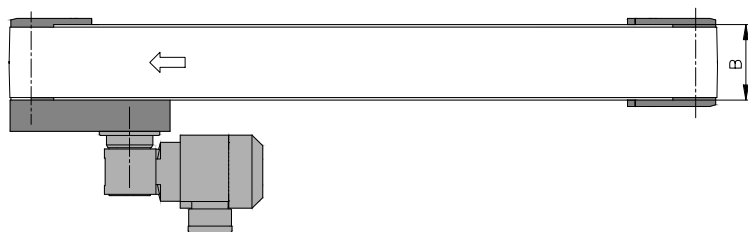
GUF-P 2041 AS

Belt conveyor with head drive, outside

B20.40.003



Tails
see page 56



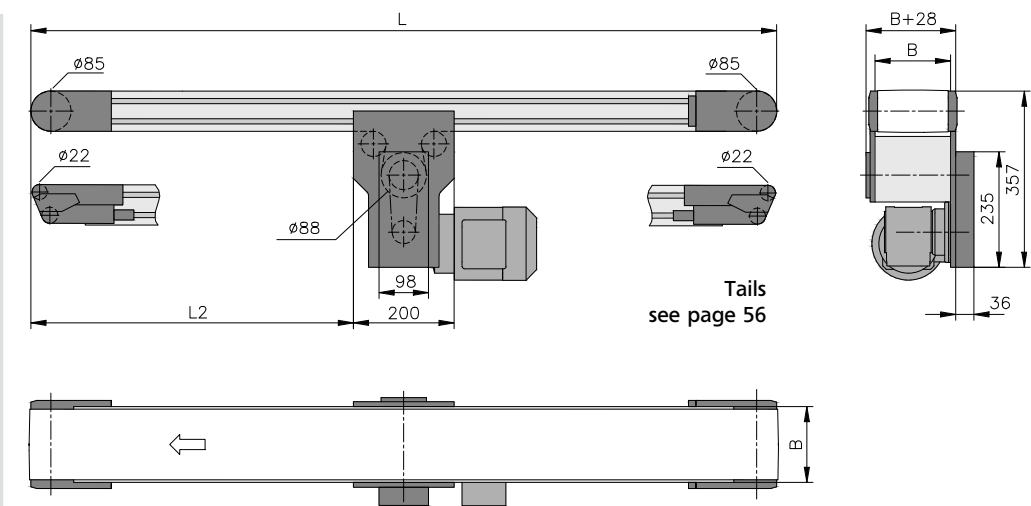
The conveyor can be placed very close to equipment. Additional features include an $\varnothing 85$ mm crowned drive roll, easy belt tracking at the tail end, sealed ball bearings and a galvanized steel slider bed fastened to an aluminum T-slot profile frame. Cleated belts may be used with this drive version.

	Dimensions – technical information	Notes
Conveyor length L	between 700-10000 mm	any increment possible
Conveyor width B	200 to 1200 mm (in 100 mm increments)	others on request
Belt width	B-15 mm	belts see from page 84
Drive location	discharge side left/right	infeed side on request
Drive and speed	to 60 m/min (200 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 150 kg (330 lbs) section load to 50 kg (110 lbs)/m	see chart on page 20

GUF-P 2041 BC

Belt conveyor with center drive, standard

B20.40.004



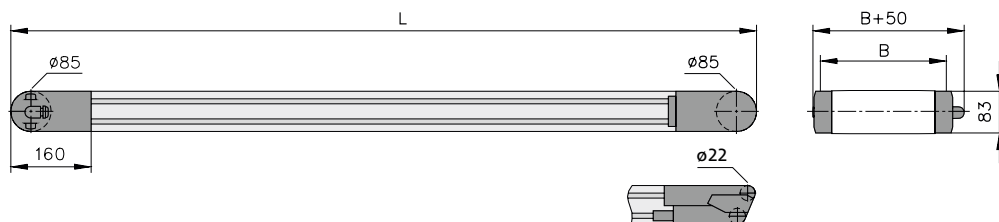
The compact conveyor frame structure, and the ability to move the drive location anywhere along the conveyor frame, simplifies the integration of this conveyor into new or existing equipment. The travel direction is reversible. It is possible to use knife edges, both on the infeed side, and the discharge side. Use of cleated belts is not possible with this drive version.

Dimensions – technical information		Notes
Conveyor length L	between 800-10000 mm	any increment possible
Conveyor width B	200 to 1200 mm (in 100 mm increments)	others on request
Belt width	B-15 mm	belts see from page 84
Drive location	left/right below	
Drive and speed	to 60 m/min (200 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 150 kg (330 lbs) section load to 50 kg (110 lbs)/m	see chart on page 20

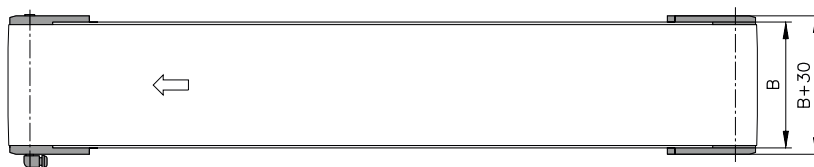
GUF-P 2041 CA

Belt conveyor with drum motor

B20.40.005



Tails
see page 56

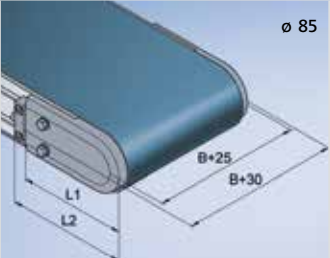
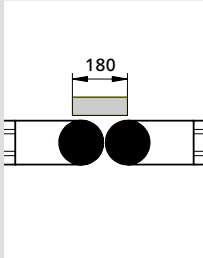


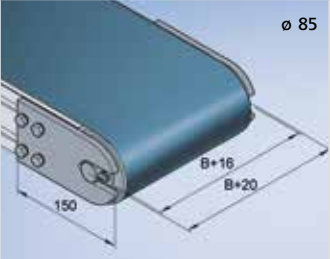
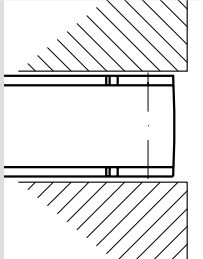
The drive version CA has a drum motor and is the most compact drive version available for system GUF-P 2041. By integrating the motor within the drive roll itself, there is no mechanical interference. The integration of this conveyor into equipment is therefore relatively simple.

	Dimensions – technical information	Notes
Conveyor length L	between 540-3000 mm	any increment possible
Conveyor width B	200, 250, 300, 350, 400, 500, 600, 700, 800, 900 and 1000 mm	others on request
Belt width	B-15 mm	belts see from page 84
Drive location	discharge side left/right	
Drive and speed	to 60 m/min (200 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 55 kg (121 lbs) section load to 50 kg (110 lbs)/m	see chart on page 20

GUF-P 2041

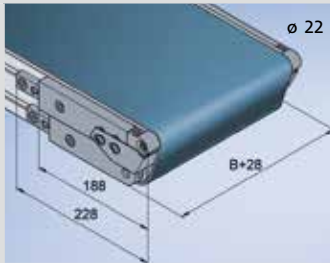
Tails

Tail 01		Ident-no. B80.07.001		
		<ul style="list-style-type: none">■ \varnothing 85 mm crowned roll■ Sealed bearings■ Belt tension and tracking on the side using alignment blocks■ Minimum part size for transfer 180 mm		
Conveyor lengths L	Conveyor width B	L1	L2	Material roll holder
$\leq 3,000$ mm	≤ 1.200 mm	160 mm	175 mm	aluminum
$> 3,000$ mm	≤ 1.200 mm	250 mm	265 mm	aluminum

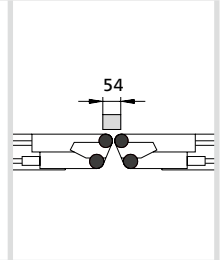
Tail 02		Ident-no. B80.07.009		
		<ul style="list-style-type: none">■ \varnothing 85 mm cylindrical roll■ Sealed bearings■ Belt tension and tracking using tension shafts from the front■ Minimum part size for transfer 180 mm■ Not suitable for side loading		
Conveyor lengths L	Conveyor width B	L1	L2	Material roll holder
≤ 3.000 mm	≤ 1.200 mm	150 mm	-	aluminum

Tail 13

Ident-no. B80.07.006



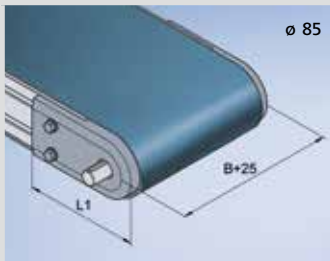
- Drum \varnothing 22 mm
- Sealed bearings
- Belt tension on the side using alignment blocks
- Tracking using alignment blocks
- Minimum part size for transfer 54 mm
- Note min. pulley diameter when selecting belt



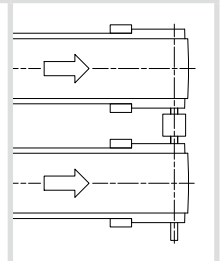
Conveyor lengths L	Conveyor width B	L1	L2	Material roll holder
≤ 10.000 mm	≤ 1.000 mm	188 mm	228 mm	aluminum

Tail 19

Ident-no. B80.07.002



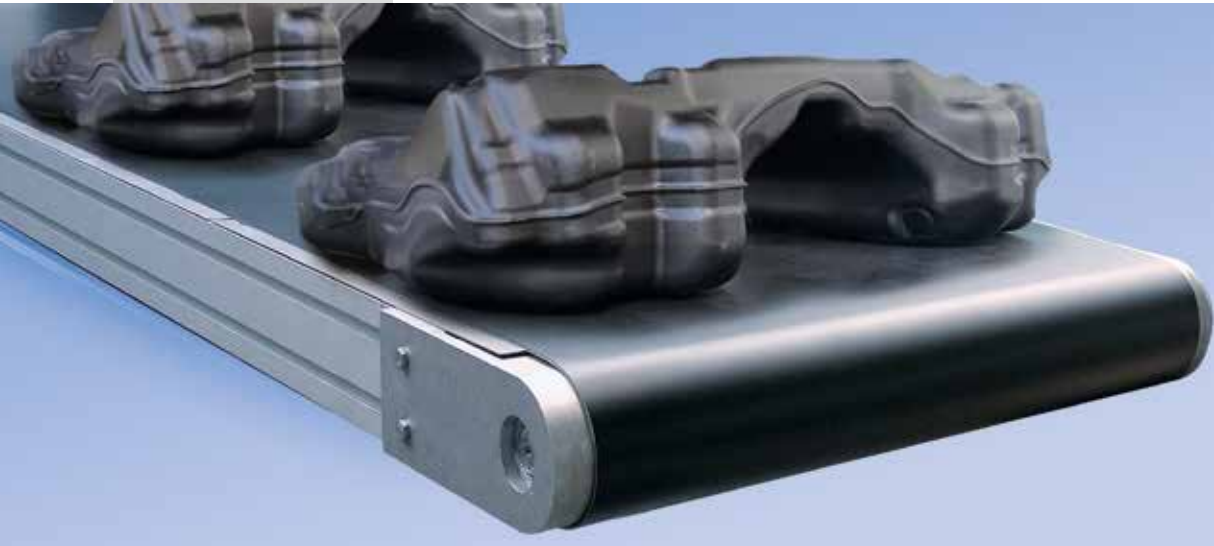
- \varnothing 85 mm crowned roll
- Sealed bearings
- \varnothing 20 x 27.5 mm long shaft, 6x6x22 mm shaft key (DIN 6885)
- Coupling of two lanes using one drive
- Additional output shaft (specify right, left or both sides)



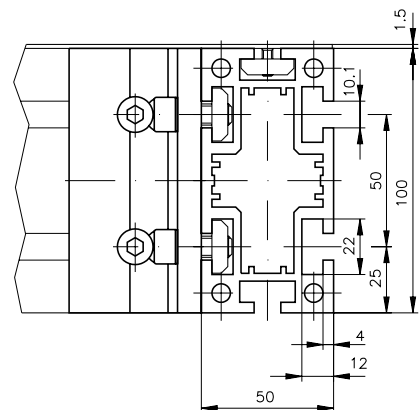
Conveyor lengths L	Conveyor width B	L1	L2	Material roll holder
$\leq 3,000$ mm	≤ 1.200 mm	160 mm	-	aluminum
$> 3,000$ mm	≤ 1.200 mm	250 mm	-	aluminum

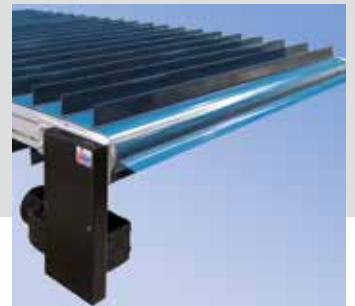
Belt Conveyors

GUF-P 2004



Conveyor frame
cross-section





Besides the standard features of all mk Belt Conveyor Systems including crowned rolls for simple belt adjustment and low friction slider beds, System GUF-P 2004 is noted for its extremely heavy frame manufactured using our structural Profile mk 2004. With

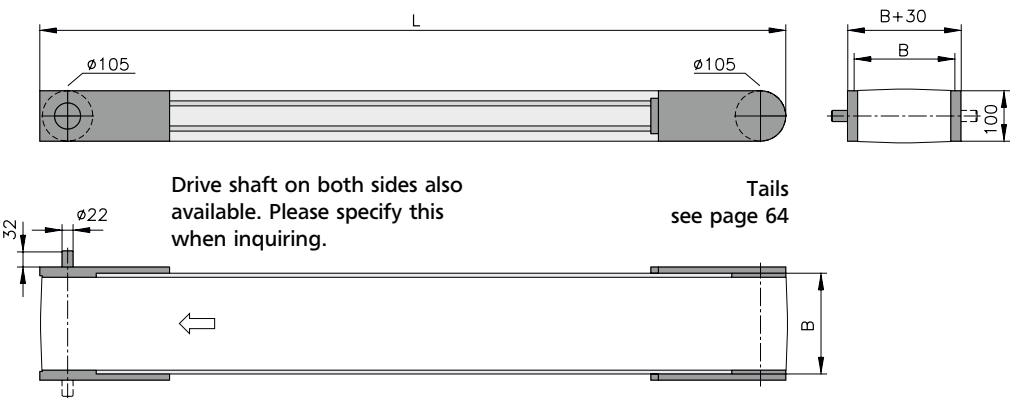
total load capacities up to 200 kg (440 lbs) and frame dimensions of up to 2,000 mm wide by 20 meters long, this conveyor is ideally suited for transporting large and bulky goods. The \varnothing 105 mm drive roll, which is available in either steel or rubberized, de-

pending on load; completes this conveyor. This is the largest belt conveyor we offer. In addition to the high load carrying capacity, this conveyor system is further enhanced by the large selection of standard accessories including side rails and heavy-duty stands.

GUF-P 2004 AA

Belt conveyor with head drive without motor

B20.14.009



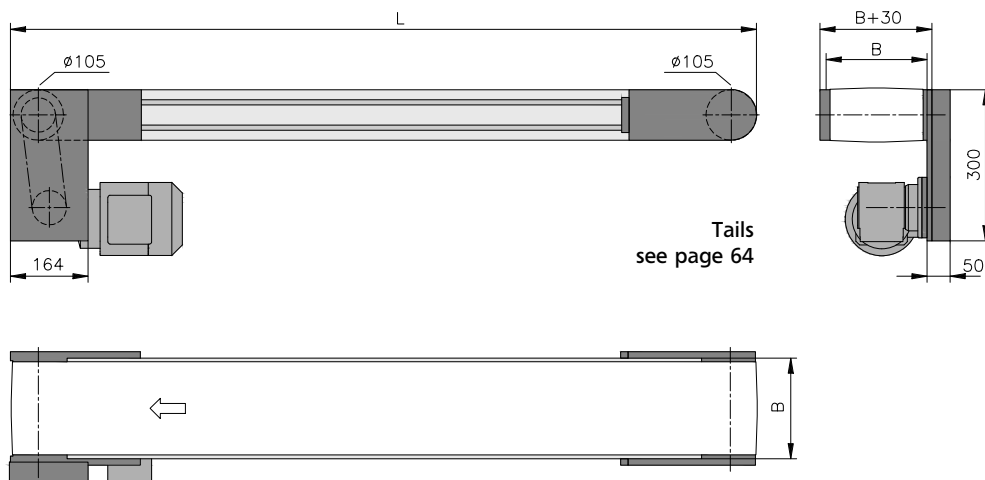
Drive version AA is often used where multiple lanes are to be slave driven, either parallel or in-line, with a single drive motor. The rigid frame is ideal for integrating this conveyor into new or existing equipment. Additional features include a $\varnothing 105$ mm crowned drive roll, easy belt tracking at the tail end, sealed ball bearings and a galvanized steel slider bed fastened to an aluminum T-slot profile frame. Cleated belts may be used with this drive version. The $\varnothing 22$ mm x 32 mm long output shaft includes a 6 x 6 x 32 mm shaft key (DIN 6885).

	Dimensions – technical information	Notes
Conveyor length L	between 720-20000 mm	any increment possible
Conveyor width B	200-2000 mm (in 100 mm increments)	others on request
Belt width	B-50 mm	belts see from page 84
Drive and speed	to 60 m/min (200 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 200 kg (440 lbs) section load to 75 kg (165 lbs)/m	see chart on page 20

GUF-P 2004 AC

Belt conveyor with head drive, standard

B20.14.001



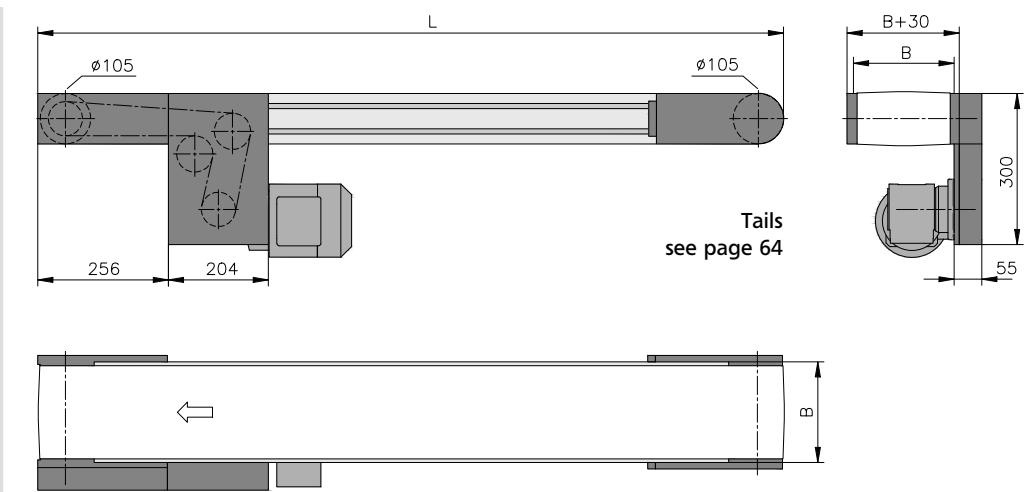
The compact frame is ideal for integrating this conveyor into new or existing equipment. Additional features include a $\phi 105$ mm crowned drive roll, easy belt tracking at the tail end, sealed ball bearings and a galvanized steel slider bed fastened to an aluminum T-slot profile frame. Cleated belts may be used with this drive version.

Dimensions – technical information		Notes
Conveyor length L	between 720-20000 mm	any increment possible
Conveyor width B	200-2000 mm (in 100 mm increments)	others on request
Belt width	B-50 mm	belts see from page 84
Drive location	discharge side left/right below/above	infeed side on request
Drive and speed	to 60 m/min (200 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 200 kg (440 lbs) section load to 75 kg (165 lbs)/m	see chart on page 20

GUF-P 2004 AM

Belt conveyor with head drive, offset

B20.14.003



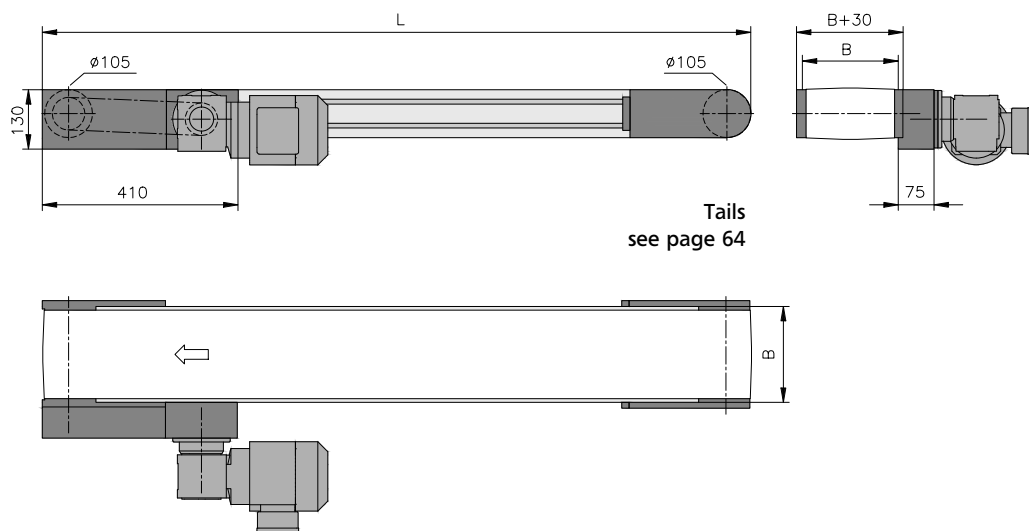
This conveyor is ideal for feeding parts into or out of equipment. Features include a $\varnothing 105$ mm crowned drive roll, easy belt tracking at the tail end, sealed ball bearings and a galvanized steel slider bed fastened to an aluminum T-slot profile frame. Cleated belts may be used with this drive version.

Dimensions – technical information		Notes
Conveyor length L	between 920-20000 mm	any increment possible
Conveyor width B	200-2000 mm (in 100 mm increments)	others on request
Belt width	B-50 mm	belts see from page 84
Drive location	discharge side left/right below	infeed side on request
Drive and speed	to 60 m/min (200 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 200 kg (440 lbs) section load to 75 kg (165 lbs)/m	see chart on page 20

GUF-P 2004 AS

Belt conveyor with head drive, outside

B20.14.002



This conveyor model can be placed very close to equipment. Features include a $\varnothing 105$ mm crowned drive roll, easy belt tracking at the tail end, sealed ball bearings and a galvanized steel slider bed fastened to an aluminum T-slot designed frame. Cleated belts may be used with this drive version.

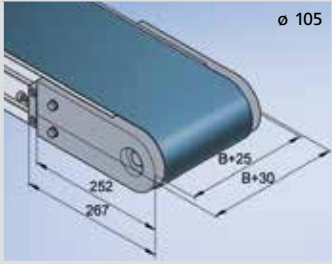
Dimensions – technical information		Notes
Conveyor length L	between 870-20000 mm	any increment possible
Conveyor width B	200-2000 mm (in 100 mm increments)	others on request
Belt width	B-50 mm	belts see from page 84
Drive location	discharge side left/right	infeed side on request
Drive and speed	to 60 m/min (200 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 200 kg (440 lbs) section load to 75 kg (165 lbs)/m	see chart on page 20

GUF-P 2004

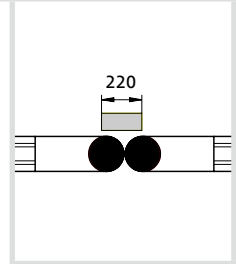
Tails

Tail 01

Ident-no. B80.02.004

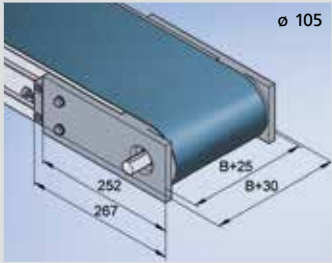


- \varnothing 105 mm crowned roll
- Sealed bearings
- Belt tension and tracking on the side using alignment blocks
- Minimum part size for transfer 220 mm

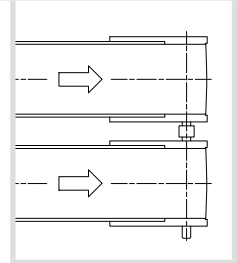


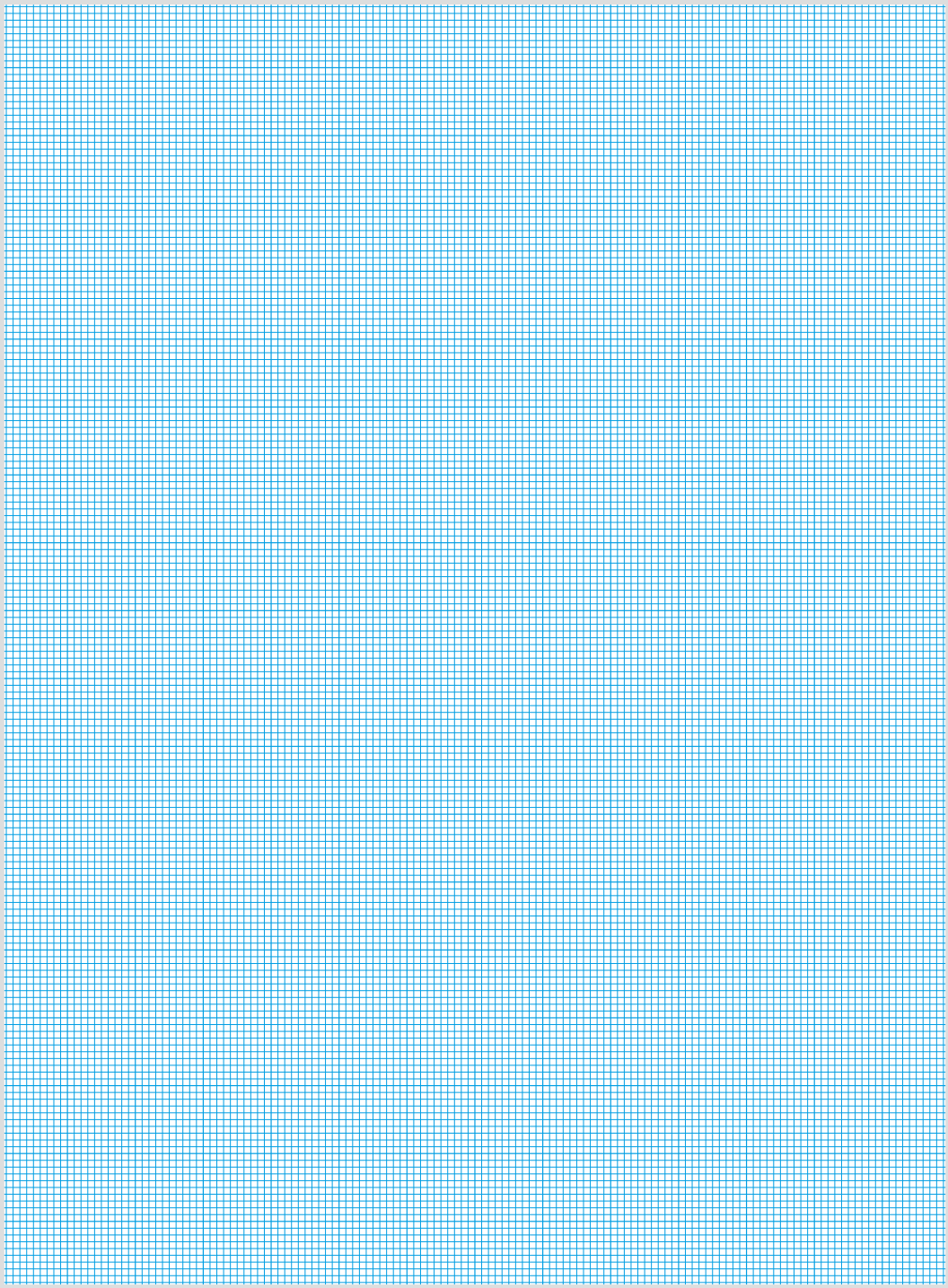
Tail 09

Ident-no. B80.02.005

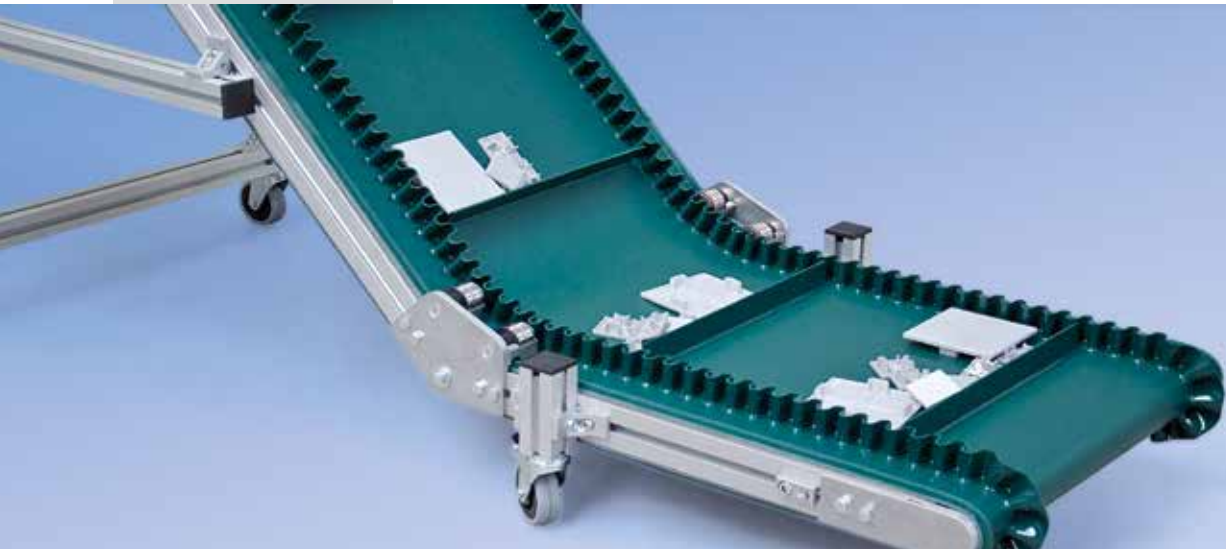


- \varnothing 105 mm crowned roll
- Sealed bearings
- Belt tension and tracking on the side using alignment blocks
- \varnothing 22 x 32 mm long output shaft, 6 x 6 x 32 mm shaft key (DIN 6885)
- Coupling of two lanes using one drive
- Output shaft left, right or both sides possible
- Projecting head piece (conveyor length L+5 mm)

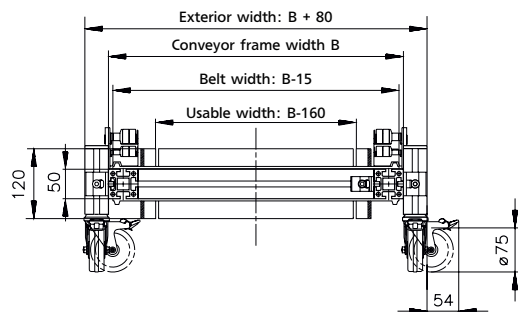




Incline Belt Conveyors KFG-P 2000



Conveyor frame cross-section





With its' compact design using our structural aluminum Profile mk 2000, Conveyor System KFG-P 2000 is ideally suited for continuous duty applications in a multiple shift environment. Used primarily for the transport of small parts, the belt is guided through the incline by

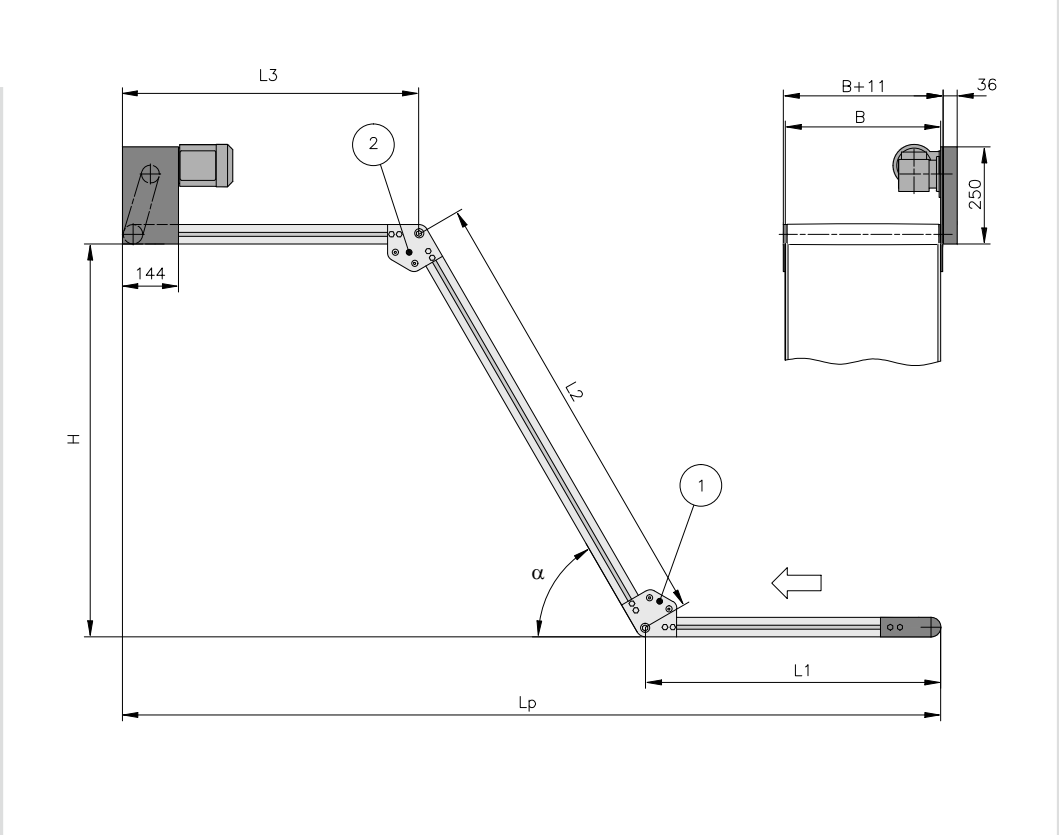
welded-on V-guides. As with all mk conveyors, belt alignment is easy with our standard crowned rollers. Additional features include a stainless steel slider bed mounted to the conveyor frame, which reduces wear on the belt; and the use of sealed ball bearings for overall conveyor

life and performance. With all the inherent benefits of modular construction of our mk Profile Technology System, this conveyor can be readily integrated into new or existing equipment, or be used as a free-standing conveyor for bulk handling and loading applications.

KFG-P 2000 AC

Incline belt conveyor with head drive, standard

B20.00.010



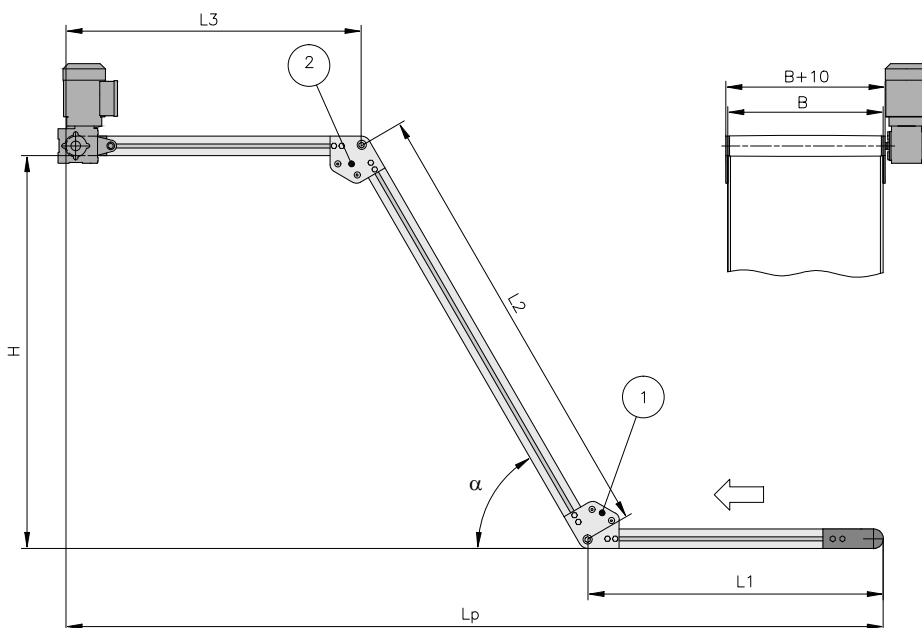
The \varnothing 53 mm drive roll provides good belt wrap and efficient motor power transmission; and the compact construction simplifies the integration of this conveyor into existing equipment.

Dimensions – technical information		Notes
Conveyor length L (L1+L2+L3)	variable to approx. 4000 mm L1/L3 min. = 400, L2 min. = 600	any increment possible
Conveyor width B	300 to 700 mm (in 100 mm increments)	others on request
Drive location	discharge side left/right below/above	
Drive and speed	to 15 m/min (50 ft/min)	others on request
Stands and side rails		see page 74
Load capacity	total load to 40 kg (88 lbs) section load to 25 kg (55 lbs)/m, 5 kg/field	higher on request
Bends α	30, 45 and 60°	others on request
Product	height to 55 mm, length to 300 mm	others on request

KFG-P 2000 AF

Incline belt conveyor with head drive, direct

B20.00.010



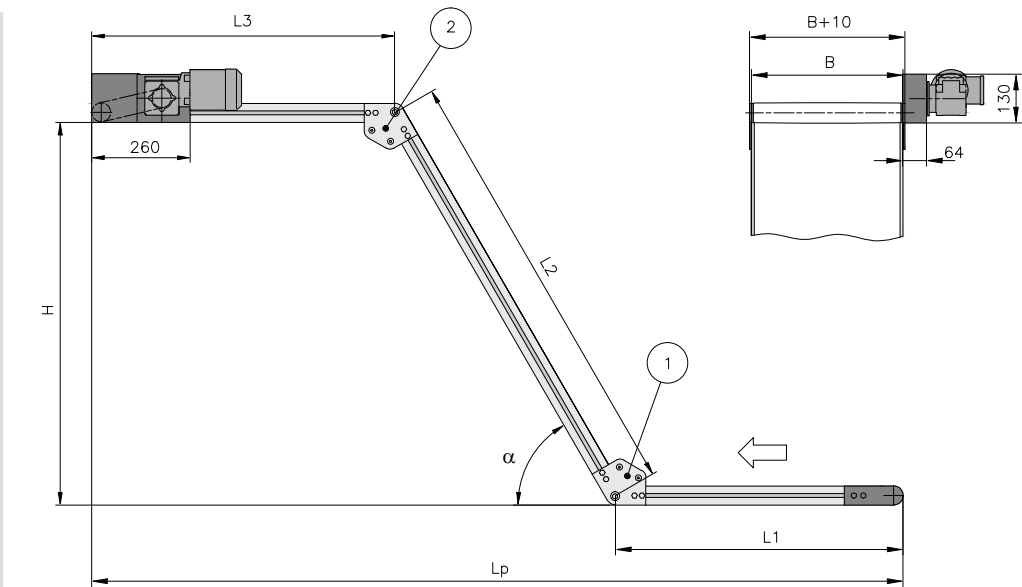
By mounting the motor directly onto the drive shaft, this drive version minimizes not only the space required at the drive but also the number of moving parts and maintenance requirements.

	Dimensions – technical information	Notes
Conveyor length L (L1+L2+L3)	variable to approx. 4000 mm L1/L3 min. = 400, L2 min. = 600	any increment possible
Conveyor width B	300 to 700 mm (in 100 mm increments)	others on request
Drive location	discharge side left/right	
Drive and speed	2,8; 5,5; 11,2; 15,2 m/min	others on request
Stands and side rails		see page 74
Load capacity	total load to 40 kg (88 lbs) section load to 25 kg (55 lbs)/m, 5 kg/field	higher on request
Bends α	30, 45 and 60°	others on request
Product	height to 55 mm, length to 300 mm	others on request

KFG-P 2000 AS

Incline belt conveyor with head drive, outside

B20.00.010



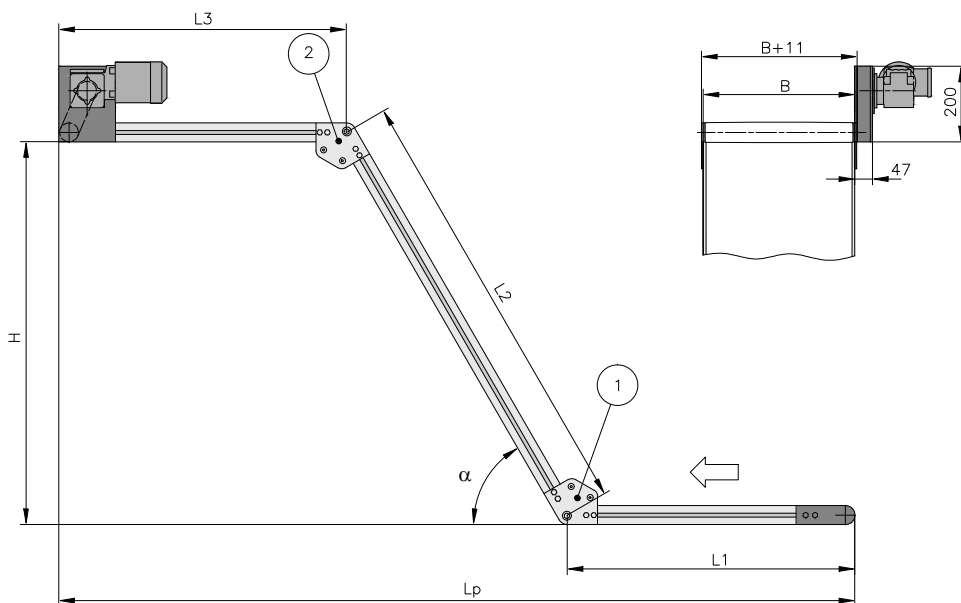
The ø 53 mm drive roll provides good belt wrap and efficient motor power transmission, and the compact construction simplifies the integration of the conveyor into existing equipment.

Dimensions – technical information		Notes
Conveyor length L (L1+L2+L3)	variable to approx. 4000 mm L1/L3 min. = 400, L2 min. = 600	any increment possible
Conveyor width B	300 to 700 mm (in 100 mm increments)	others on request
Drive location	discharge side left/right	
Drive and speed	to 15 m/min (50 ft/min)	others on request
Stands and side rails		see page 74
Load capacity	total load to 40 kg (88 lbs) section load to 25 kg (55 lbs)/m, 5 kg/field	higher on request
Bends α	30, 45 and 60°	others on request
Product	height to 55 mm, length to 300 mm	others on request

KFG-P 2000 AU

Incline belt conveyor with head drive, outside

B20.00.010



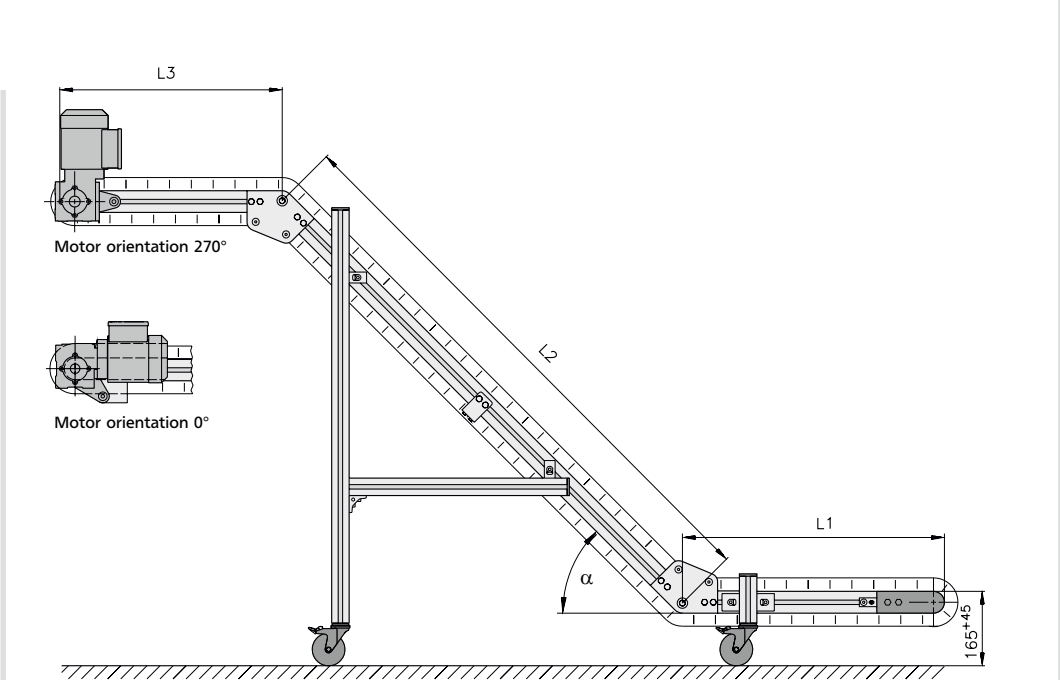
The $\varnothing 53$ mm drive roll provides good belt wrap and efficient motor power transmission, and the compact construction simplifies the integration of this conveyor into existing equipment.

	Dimensions – technical information	Notes
Conveyor length L (L1+L2+L3)	variable to approx. 4000 mm L1/L3 min. = 400, L2 min. = 600	any increment possible
Conveyor width B	300 to 700 mm (in 100 mm increments)	others on request
Drive location	discharge side left/right below/above	
Drive and speed	to 15 m/min (50 ft/min)	others on request
Stands and side rails		see page 74
Load capacity	total load to 40 kg (88 lbs) section load to 25 kg (55 lbs)/m, 5 kg/field	higher on request
Bends α	30, 45 and 60°	others on request
Product	height to 55 mm, length to 300 mm	others on request

KFG-P 2000 ECO

Incline conveyor with fixed variants, fast availability

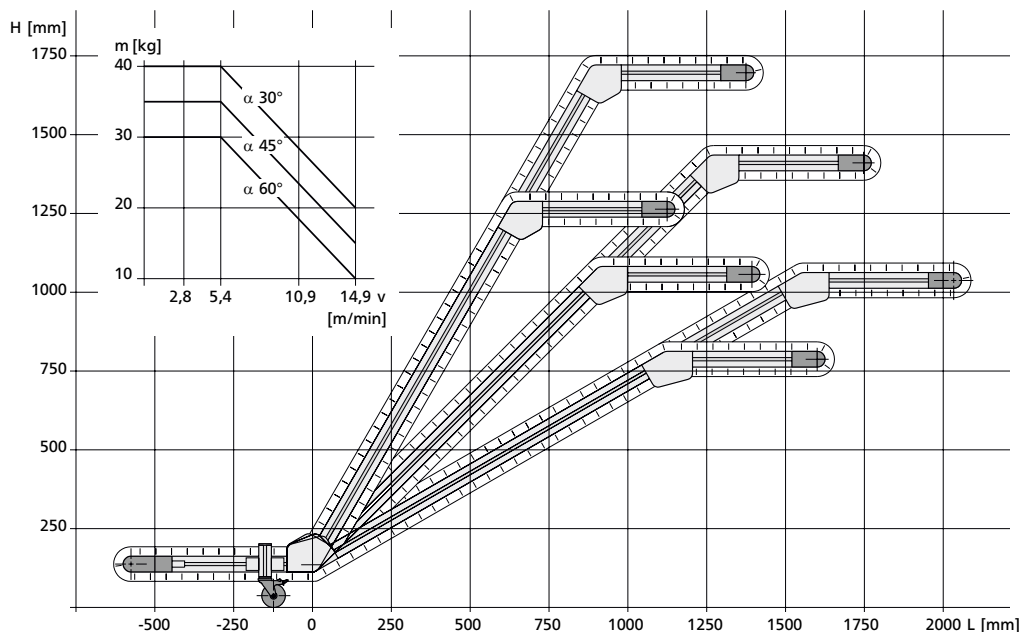
B20.00.015



ECO stands for economy, constructed out of high quality materials and fulfilling of customer requirements at an attractive price. Thanks to the limited number of options for this conveyor, fast delivery and high availability are ensured. With the optimum ratio of effective width to total width the conveyor is ideally suited for integration into existing systems. Thanks to the mobility it can be used as a movable conveyor unit for filling containers or wire-mesh boxes.

Dimensions – technical information	
Conveyor length L (L1+L2+L3)	2400/2900 mm (L1 = 600 mm, L2 = 1300/1800 mm, L3 = 500 mm)
Conveyor frame width B	400, 500, 600 mm (usable width: B-160 mm)
Drive location	discharge side left/right above, motor orientation 270°, for additional charge 0°
Drive and speed	2,8; 5,5; 11,2; 15,2 m/min, other speeds on request or via Reglomat
Load capacity	depending on incline and speed up to 40 kg
Bends α	30, 45 and 60°
Product	height to 55 mm, length to 300 mm, weight to 5 kg/field
Belt	GU-V0106-028DG
Cleats and sidewalls	height lateral cleats MT30 and sidewalls 30 mm, Polyurethane, green for L2=1300 16 lateral cleats with cleat spacing of 303 mm for L2=1800 19 lateral cleats with cleat spacing of 308 mm

B20.00.015



See the table (above) for the optimum variant for your application. Without additional information the conveyor is designed with a drive location 270° top, front left, and speed 5.4 m/min.

Variant (L2 1300 mm)	A1	A2	A3	A4	A5	A6	A7	A8	A9
Conveyor frame width B [mm]	400	400	400	500	500	500	600	600	600
Conveyor bend α	30°	45°	60°	30°	45°	60°	30°	45°	60°

Variant (L2 1800 mm)	B1	B2	B3	B4	B5	B6	B7	B8	B9
Conveyor frame width B [mm]	400	400	400	500	500	500	600	600	600
Conveyor bend α	30°	45°	60°	30°	45°	60°	30°	45°	60°

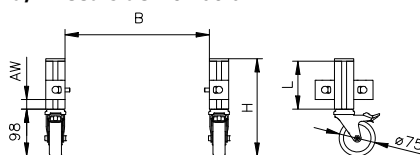
KFG-P 2000

Stands

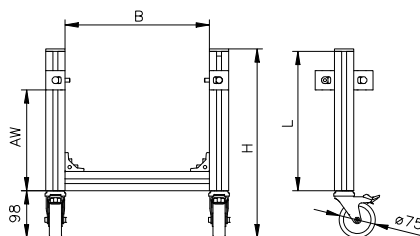
Stand, incline conveyor, type ECO

This stand, developed especially for the incline conveyor and incline conveyor modular belt, is characterized by its simplicity and light structure with the mk profile 2040.40.

Stand, infeed side B67.06.014

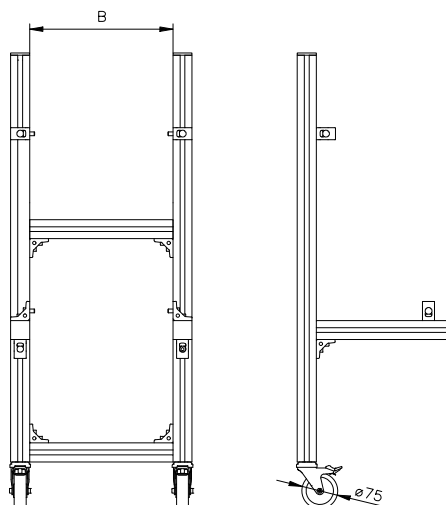


Feed height (ELH) = 166-349 mm

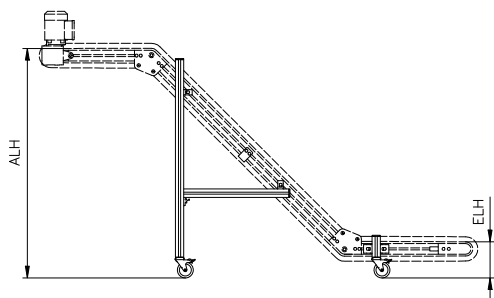


Feed height (ELH) = 350-500 mm

Stand, discharge side B67.06.015

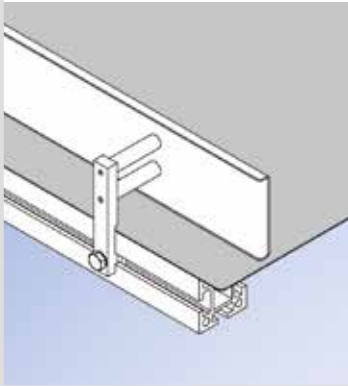


The swivel casters used can be locked in place and thus guarantee safe support, even at high conveyor speeds. Depending on the configuration, the stands are adapted in height and width, see ordering example on the right.



- ELH = Feed height
- ALH = Discharge height
- B = Conveyor frame width
- H = Height of the stand
- L = Length of the stand profile
- AW = Distance of the angle bracket to the profile edge

Side rails

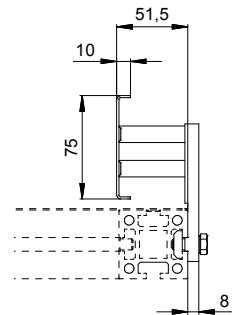


Side rails KFG-P 2000

Shown is our standard side rail for this conveyor style. It is designed to minimize the gap between the conveyor frame and the belt surface in order to avoid product loss and potential damage.

B17.00.035

Height 75 mm,
others on request



Order example

KFG-P 2000 type S (B20.00.010)

Drive AF, motor orientation 90° as shown

Speed 15 m/min

Width B = 500 mm

Length L1 = 500 mm; L2 = 1000 mm; L3 = 600 mm

Bend $\alpha 1 = 60^\circ$; bend $\alpha 2 = 60^\circ$

Cleat type T20 with side rail B17.00.035

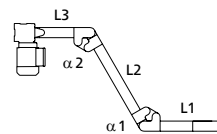
Stand, incline conveyor, type ECO

Feed height ELH = 200 mm

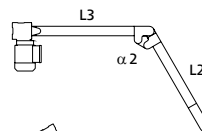
Discharge height ALH = 1200 mm

Type configuration

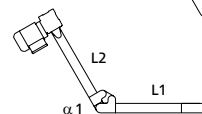
Type S



Type K



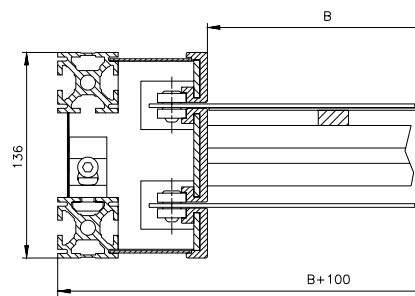
Type L



Curved Belt Conveyors KGF-P 2040



Conveyor frame cross-section





The conveyor system KGF-P 2040 is based on our Profile Series 40, and is compatible with all other mk conveyor systems. The exterior profile frame features 10 mm T-slots which allow for mounting of additional accessories such as side rails, sensors, etc. The structural profiles used ensure rigid

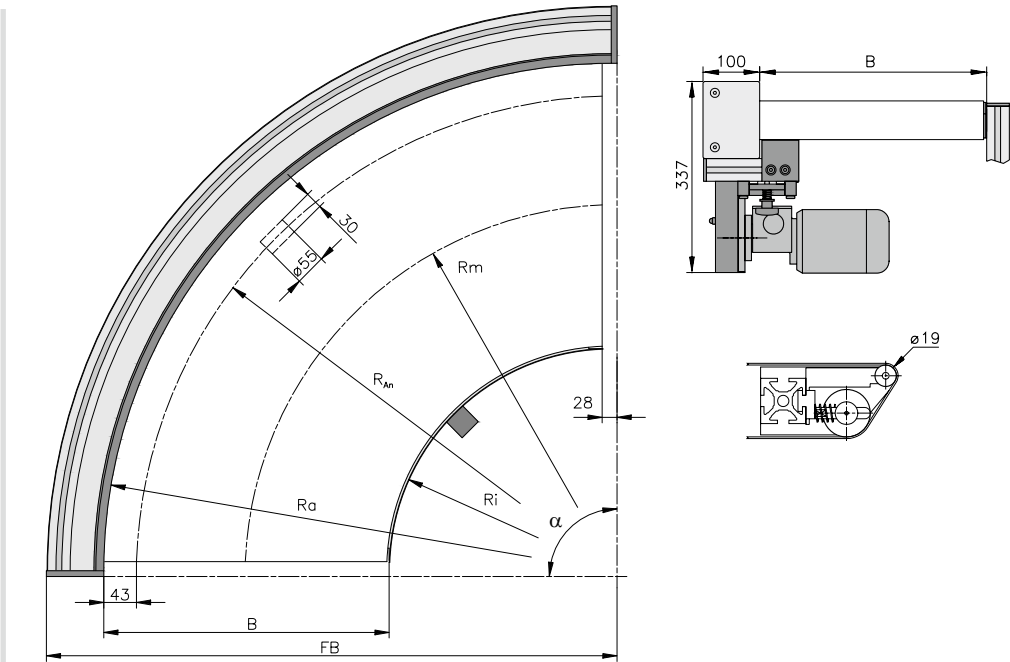
construction with excellent load bearing capacities, noting the values for maximum loads and speeds are directly dependent, and thus vary in relation. The conveyor features a $\varnothing 20$ mm rolling nosebar which allows for the transfer of small parts. Automatic belt tensioning is built

into the tails which compensates for normal belt stretch, while at the same time ensuring a fixed, unchanging installed dimension. The compact center drive features no external protrusions when using our standard motor.

KGF-P 2040 BC

Curved belt conveyor center drive, standard

B20.40.020 for 90° curve, B20.40.021 for 180° curve

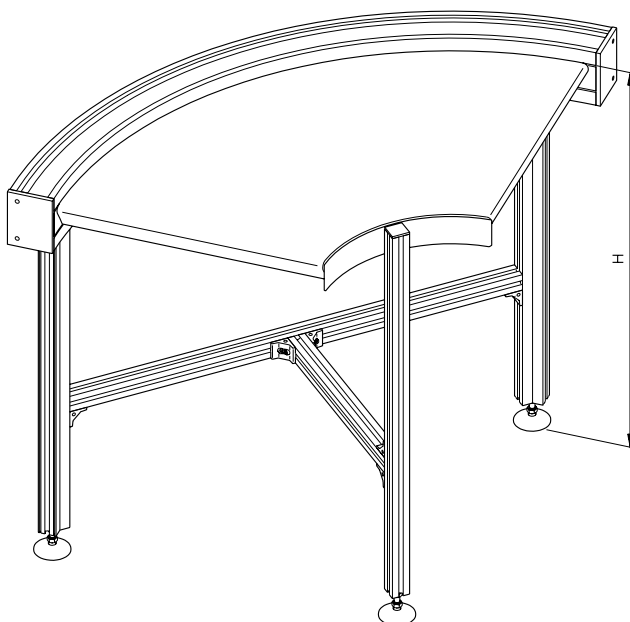


For this conveyor mk offers drive version BC, featuring usable belt widths of 300, 400, 500 and 600 mm for the conveyor radii 90° and 180°. The compact construction simplifies the integration of the conveyor within existing lines. The \varnothing 55 mm drive roll ensures good grip and efficient motor power transfer.

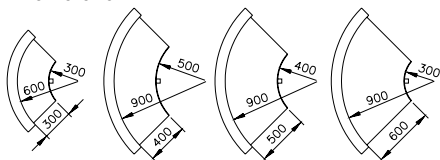
Dimensions – technical information		Notes
Conveyor angle α	90° and 180°	others on request
Usable widths B	300 at $R_a=600$ mm, $R_i=300$ mm, $FB=706$ 400 at $R_a=900$ mm, $R_i=500$ mm, $FB=1006$ 500 at $R_a=900$ mm, $R_i=400$ mm, $FB=1006$ 600 at $R_a=900$ mm, $R_i=300$ mm, $FB=1006$	
Drive location	below	
Drive and speed	5 to 30 m/min (15-100 ft/min) in R_m	others on request
Stands	standard, or with belt change support	
Load capacity	to 30 kg (65 lbs), depending on radius, speed and product	
Belts		belts see from page 84

KGF-P 2040

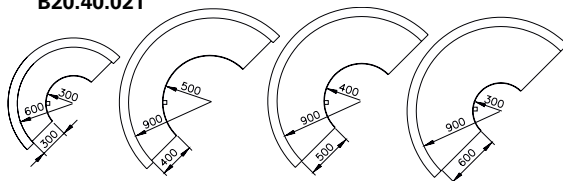
Stands and configurations



**Radius Versions curve 90°
B20.40.020**



**Radius Versions curve 180°
B20.40.021**



Order example

KGF-P 2040

Version Ra 900 / Ri 500

Speed 15 m/min

Usable Width B = 400 mm

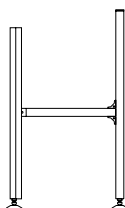
Belt type

Stands with (or without)
belt change support

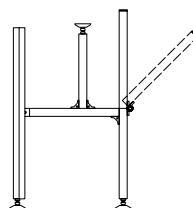
Height H = 800 mm

Type configuration

**type 1
standard**

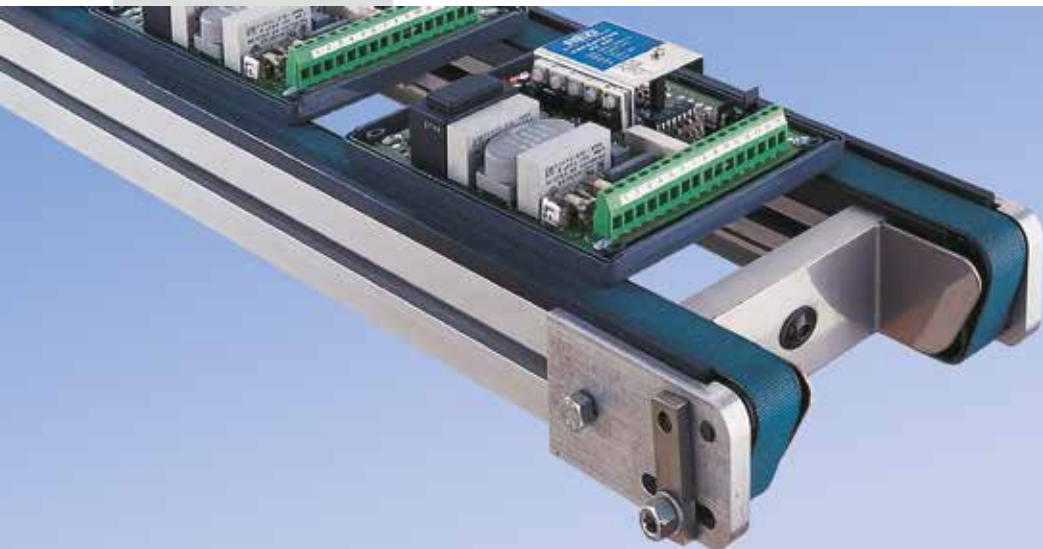


**type 2
with belt change support***

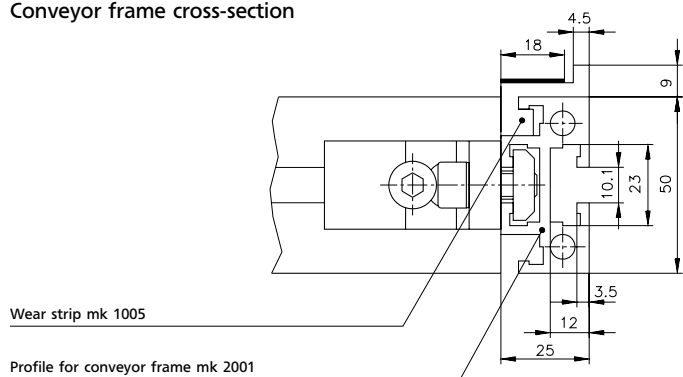


*from usable belt widths B = 400 mm

Dual Belt Conveyors DGF-P 2001



Conveyor frame cross-section





Conveyor System DGF-P 2001 is primarily designed for the transport of pallets. It is ideally suited to assembly areas, for example such as those in the electronics industry. The small diameter tail roll allows for the

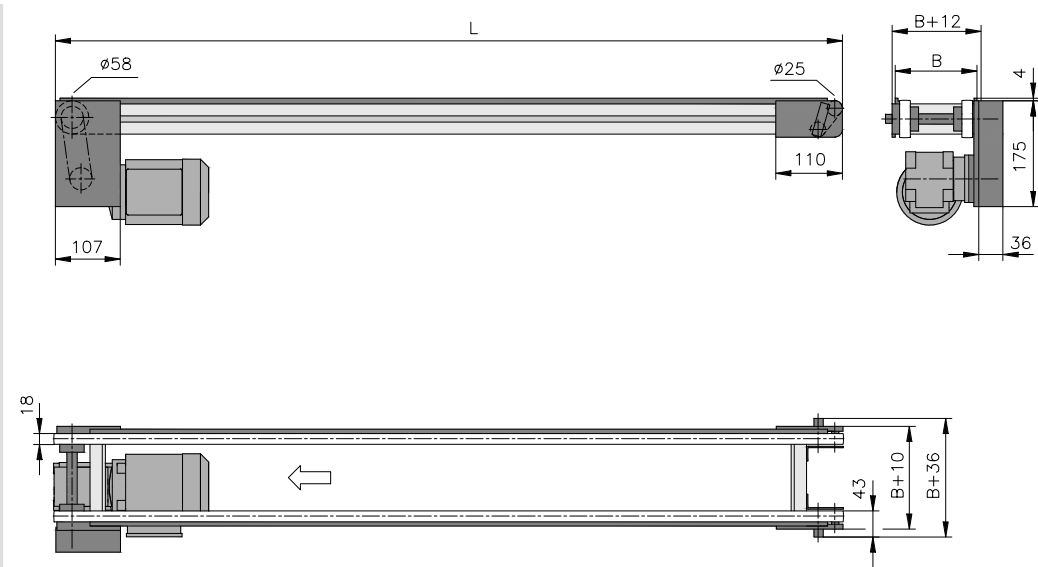
transfer of relatively short pallets. Belt tensioning is accomplished using the lower tail return roller. As the roll holders are not moved, a fixed overall length is achieved. The belts run entirely on standard mk UHMW wear strips. A maxi-

mum total load of 15 kg (33 lbs) is possible. Pallets for the DGF-P 2001 conveyors are supplied by mk in aluminum, as a standard. Machining is done according to the customer's specifications.

DGF-P 2001 AC

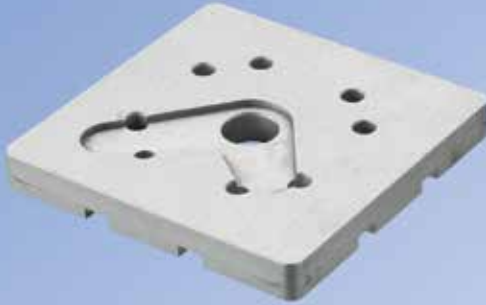
Dual belt conveyor with head drive, standard

B20.11.701



The compact conveyor frame is ideal for integrating this conveyor into new or existing equipment. The \varnothing 58 mm drive rolls ensure sufficient motor power transmission.

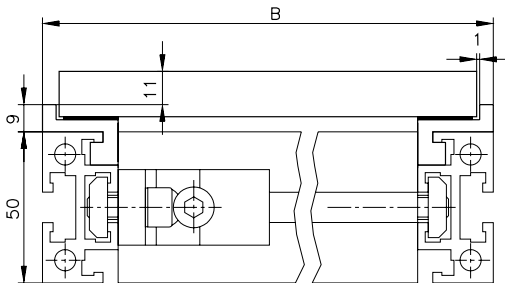
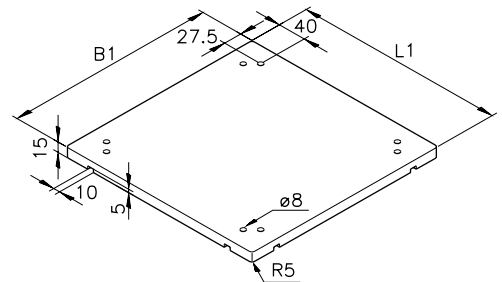
Dimensions – technical information		Notes
Conveyor length L	between 300-2000 mm	any increment possible
Conveyor width B	100, 125, 150, 175, 200 and 250 mm	
Belt width	18 mm	belts see from page 84
Drive location	discharge side left/right below	infeed side on request
Speed	to 15 m/min (50 ft/min) constant or variable	
Stands and side rails		see from page 262
Load capacity	total load to 15 kg (33 lbs) section load to 10 kg (22 lbs)/m	higher on request



DGF-P 2001

Pallets

As standard, the pallets for Conveyor System DGF-P 2001 are manufactured using aluminum (2017A, or 3.1325). The width is fixed in relation to the conveyor (Pallet=B-11 mm). The minimum pallet length is 90 mm. Depending on the product to be conveyed, anodized aluminum or other pallet materials are also available. Below is a representation of our standard, with a customer-specific tooling, shown on the left.



Rework

On request we can design specific pallets for your application or manufacture them according to the drawing you have created.

Belt Conveyors

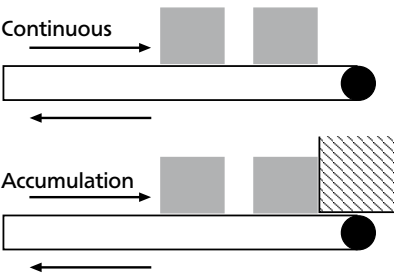
Belts

General information

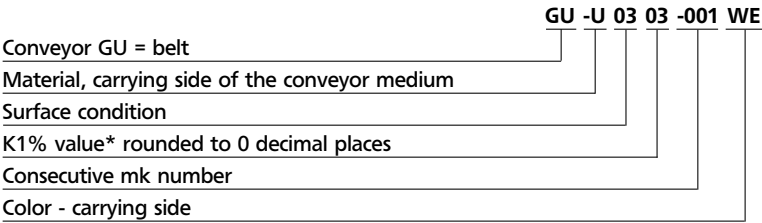
The belt types listed here meet the majority of customer requirements; additional belts are available upon request. Accumulation-capable belts are suitable for permanent accumulating-operation and are defined via the surface condition (coefficient of friction).

Belts that are for limited accumulation (or light accumulation) are not designed for steady accumulation operation. Limited accumulation is defined as movements, such as running against an end stop, or slight speed differences from one conveyor to the next or at lateral pushing (only with laterally stiff belts) of light loads.

The belts that are not capable of accumulating, also known as non-slip belts, are characterized by high surface friction or structured top surfaces.



Order designation



Material		Surface condition		Color topside	
-F	Felt	01	accumulation	BL	transparent
-R	Rubber (NBR)	02	limited accumulation	WE	white
-T	Polyester (PET)	03	no accumulation	LB	blue
-U	Polyurethan (PU)			DG	green
-V	Polyvenylchlorid (PVC)			SW	black

*The K1% value is the force at which the belt is elongated by 1% per mm of width. It is an indication of the strength level and thus the load-bearing capacity of the belt.

Belt Conveyors

Belts


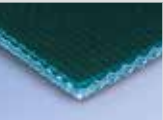
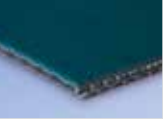



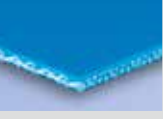
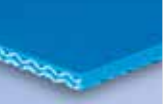
Price category, prices in ascending order

Ident-no. and description	Accumulation	Material	Color	Surface texture	Min. ø tail	Perm. temperature	Belt thickn. app.	Properties	Price category
K1029003 GU-T0105-003BL									
	yes	PET	colorless	woven	6 mm	-10 to 70 °C	1,2 mm	laterally stiff, antistatic, FDA suitable, oil tolerated*	2
K1029008 GU-T0101-008BL									
	yes	PET	colorless	woven	20 mm	-10 to 70 °C	1,3 mm	antistatic, FDA suitable, suitable for curved belt conveyor	2
K1029028 GU-V0106-028DG									
	yes	PVC	green	smooth	14 mm	-15 to 80 °C	1,8 mm	laterally stiff, FDA suitable, suitable for incline conveyor	2
K1029015 GU-U0107-015DG									
	yes	PU	green	smooth	40 mm	-10 to 70 °C	1,6 mm	laterally stiff, antistatic, oil tolerated*	3
K1029010 GU-V0103-010SW									
	yes	PVC	black	smooth	30 mm	-10 to 60 °C	1,8 mm	antistatic, suitable for curved belt conveyor	2
K1029019 GU-F0106-019SW									
	yes	Felt	black	smooth	30 mm	-10 to 120 °C	2,5 mm	antistatic, suitable for curved belt conveyor	2
K1029007 GU-U0204-007WE									
	limited	PU	white	smooth	6 mm	-30 to 100 °C	1,3 mm	laterally stiff, antistatic, FDA suitable, oil tolerated*	3
K1029050 GU-U0205-050LB									
	limited	PU	blue	smooth	6 mm	-30 to 100 °C	1,3 mm	laterally stiff, antistatic, FDA suitable, oil tolerated*	3

Belt Conveyors

Belts

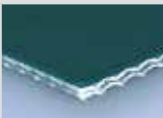

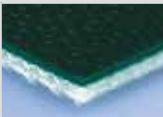
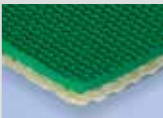
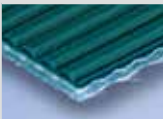
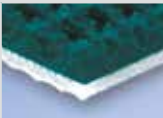

Price category, prices in ascending order

Ident-no. and description	Accumulation	Material	Color	Surface texture	Min. ø tail	Perm. temperature	Belt thickn. app.	Properties	Price category
K1029006 GU-V0203-006DG single-ply***									
	limited	PVC	green	smooth	30 mm	-10 to 70 °C	0,8 mm	laterally stiff, antistatic	1
K1029011 GU-U0205-011DG									
	limited	PU	green	smooth	50 mm	-15 to 80 °C	1,6 mm	laterally stiff, antistatic, FDA suitable, oil tolerated*	4
K1029029 GU-U0310-029DG									
	no	PU	green	smooth	50 mm	-30 to 90 °C	2,4 mm	laterally stiff, FDA suitable, suitable for incline conveyor, oil tolerated*	4
K1029001 GU-U0302-001WE single-ply***									
	no	PU	white	smooth	6 mm	-20 to 70 °C	0,7 mm	antistatic, FDA suitable, oil tolerated*	1
K1029004 GU-U0305-004WE									
	no	PU	white	smooth	6 mm	-30 to 80 °C	1,2 mm	laterally stiff, antistatic, FDA suitable, oil tolerated*	3
K1029017 GU-U0306-017WE									
	no	PU	white	smooth	10 mm	-30 to 80 °C	1,4 mm	laterally stiff, antistatic, FDA suitable, oil tolerated*	3
K1029030 GU-U0308-030LB									
	no	PU	blue	smooth	6 mm	-30 to 100 °C	1,4 mm	laterally stiff, antistatic, FDA suitable, oil tolerated*	3
K1029024 GU-U0305-024LB									
	no	PU	blue	smooth	6 mm	-30 to 100 °C	1,5 mm	laterally stiff, antistatic, FDA suitable, oil tolerated*	3

Belt Conveyors

Belts

Price category, prices in ascending order

Ident-no. and description	Accumulation	Material	Color	Surface texture	Min. ø tail	Perm. temperature	Belt thickn. app.	Properties	Price category
K1029012 GU-U0306-012DG									
	no	PU	green	smooth	25 mm	-30 to 100 °C	1,4 mm	laterally stiff, antistatic, FDA suitable, oil tolerated*	3
K1029009 GU-V0303-009DG									
	no	PVC	green	smooth	25 mm	-10 to 70 °C	1,8 mm	antistatic, suitable for curved belt conveyor	2
K1029013 GU-V0307-013DG									
	no	PVC	green	smooth	40 mm	-10 to 60 °C	2,0 mm	laterally stiff, antistatic	2
K1029005 GU-R0303-005DG									
	no	NBR	green	woven	30 mm	0 to 80 °C	1,5 mm	antistatic, oil tolerated*, cut resistant**	3
K1029016 GU-U0305-016DG									
	no	PU	green	structure	40 mm	-30 to 80 °C	1,9 mm	antistatic, oil tolerated*	4
K1029014 GU-V0306-014DG									
	no	PVC	green	structure	50 mm	-10 to 60 °C	4,9 mm	laterally stiff, antistatic	3
K1029018 GU-V0307-018SW									
	no	PVC	black	structure	40 mm	-10 to 60 °C	2,2 mm	laterally stiff, antistatic	2

* Depending on the type of the used oil, the oil tolerance of the belt must be checked.

** Cut resistant belts ensure a longer life for the transport of sharp-edged products, eg stampings.

*** Single-ply belts are less robust and must not be pre-tensioned too forcefully.

Belt Conveyors

Cleats and sidewalls

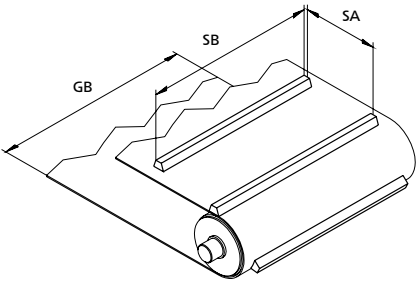
When selecting a cleat, please ensure that the belting and the cleat material are the same. Segmented lateral cleats as well as combinations of lateral and longitudinal cleats are possible. The distance from the cleats to the belt edge must be at least 2 mm.

The adhesive joints of the cleats generally have a more limited temperature range than the belt and cleat material itself.

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

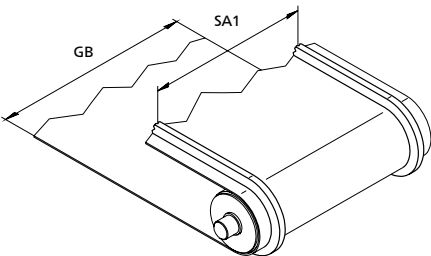
Lateral cleats, topside

act as a pusher for the transported product, especially on inclined conveyors.



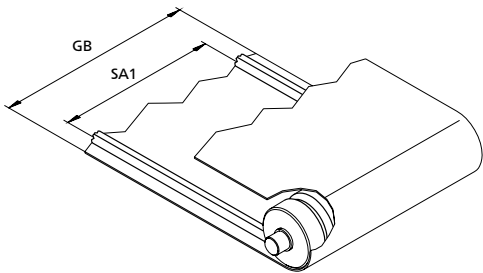
Longitudinal cleats, topside

are used primarily for guiding the belt, e.g. as in inclined conveyors.



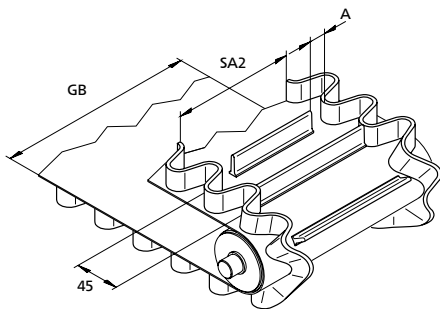
Longitudinal cleats, underside

are a belt guide option and are usually used if lateral forces act on the belt. Unevenness can occur in the belt in the area of longitudinal cleats.



Sidewalls, topside








can be used instead of side rails and are used in particular in inclined conveyors.



Belt Conveyors

Cleats and sidewalls

Longitudinal cleats (can also be used as lateral cleats)

Description	Material/color				Min. SA1* [mm]	Weight [g/m]	Min. ø tail roll [mm]		
	PVC green	PVC white	PU colorless	PU green			Longitudinal cleats underside	Longitudinal cleats topside	Lateral cleats topside
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	100
F20/3 	•	•			30	75	70	50	70
F30/8 	•	•			45	290	120	90	120


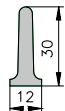
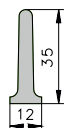
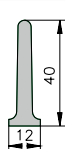
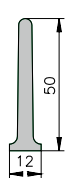
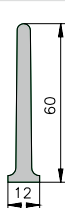

*SA1 = minimum distance of the longitudinal cleats

**This cleat must be used for belt guidance on the carrying side for the incline conveyor.

Belt Conveyors

Cleats and sidewalls

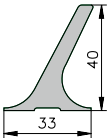
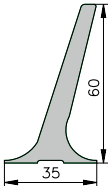
Lateral cleats

Description	Material/color				Weight [g/m]	Min. ø tail roll [mm] Lateral cleats topside
	PVC		PU			
	green	white	green	white		
T20U 			•	•	140	50
T30U 			•	•	180	50
T35U 			•	•	200	50
T40U 			•	•	220	50
T50U 			•	•	250	50
T60U 			•	•	280	50
T20 	•	•			160	90





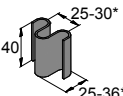
Belt Conveyors

Cleats and sidewalls

Lateral cleats

Description	Material/color						Min. ø tail roll [mm] Lateral cleats topside
	green	PVC white	green	PU white	Weight [g/m]		
L40 			•	•	140		85
L60 			•	•	180		85

Sidewalls

Description	Material/color						Min. ø tail roll [mm]
	green	PVC white	blue	green	PU white	blue	
WK20 	•	•	•	•	•	•	40
WK25 	•	•	•	•	•	•	50
WK30 	•	•	•	•	•	•	50
WK35 	•	•	•	•	•	•	70
WK40 	•	•	•	•	•	•	80

The minimum distance of the sidewall to the edge of the belt is 5 mm.

*Varies depending on version

Belt Conveyors

Application examples



GUF-P MINI with a center drive BC and with adjustable side rails for integration into an existing system



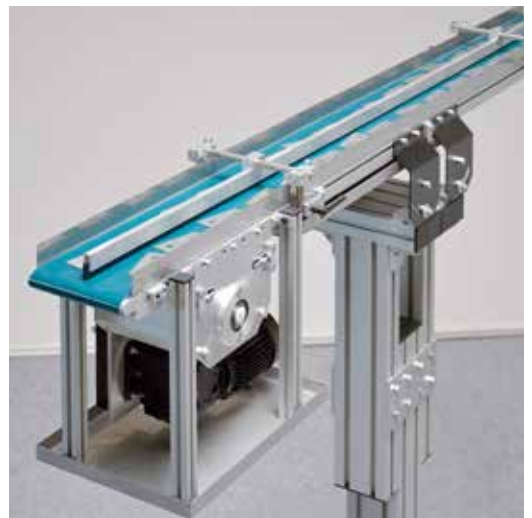
GUF-P MINI with head drive AF; as type-L incline conveyor, for parts transport to a lower conveyor level



GUF-P MINI with center drive BC as special configuration with 5 conveyor lanes, inner conveyor lanes can be manually adjusted and guided by guide rods



GUF-P MINI with center drive BC as inclined conveyor, stand system 53.12



GUF-P MINI with single stand and drip pan underneath the motor for slightly oily punched parts

Belt Conveyors

Application examples



GUF-P 2000 with head drive AC with multi-strand side rails is discharge conveyor, complete with drip pan



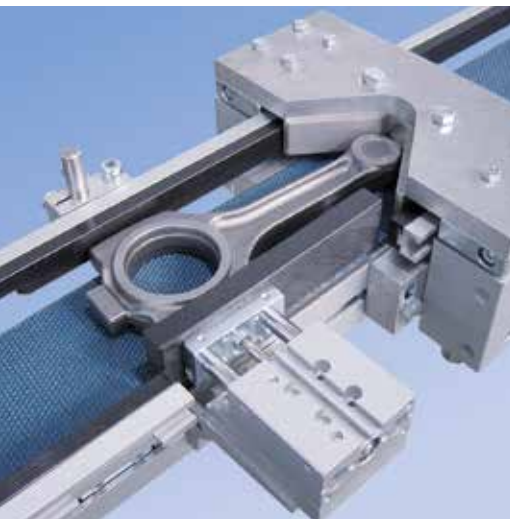
Combination of 2x GUF-P 2000 for conveying slanted transport containers



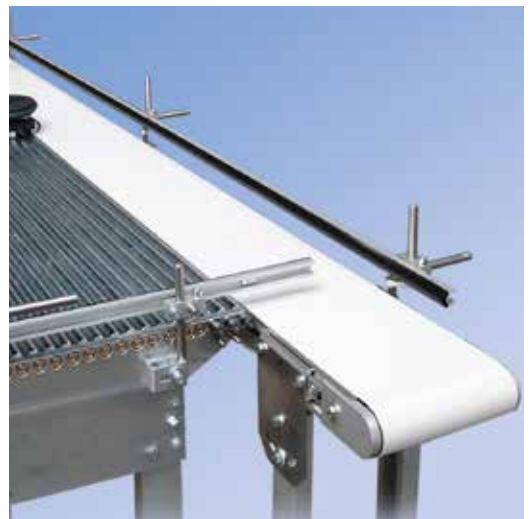
Mobile GUF-P 2000 featuring discharge chute with variable inclination angle



GUF-P 2000 AC with mechanism for folding and setting up paper bags upstream of the filling process



GUF-P 2000 for piston rods with pneumatic pressure cylinders mounted on the side for securing the product



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

Belt Conveyors

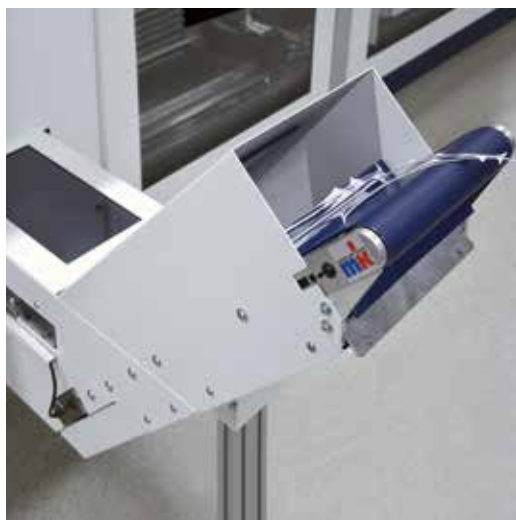
Application examples



GUF-P 2000 with comb-style cleated belt



**GUF-P 2000 with head drive
AC with wire mesh belt for
conveyed goods to 150°C**



**GUF-P 2045 belt conveyor for
integration in blister packaging systems
with minimal installation space**



GUF-P 2000 as cross conveyor and separator



GUF-P 2000 with integrated adjustment unit (VST 2011) for height adjustment of the scraper brushes



Accumulation table using parallel running GUF-P 2000 as flow, return and continuous conveyor



GUF-P 2000 with rolling knife edge and separator conveyor with head drive AF

Belt Conveyors

Application examples INOX conveyors



**Combination of INOX belt conveyor and angled belt conveyor
for transport of praline balls with granulate**



**INOX vacuum belt conveyor with
connections for vacuum pump**



**INOX vacuum belt conveyor
with custom side rails**



INOX belt conveyor with roller blade edge for the transfer/handling of small transport goods



INOX belt conveyor with adjustable side rails



INOX belt conveyor with head drive AF

Belt Conveyors

Application examples



GUF-P 2041 with protective tunnel as discharge belt for rear axle parts



GUF-P 2041 with a pneumatic diverter



GUF-P 2041 with adjustable side rail



GUF-P 2041 with center drive BC, the frame can be adjusted in height via a hydraulic pump



GUF-P 2041 with head drive AC and 90 watt fans in the conveyor frame, Reglomat mounted on top of the conveyor frame



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

Belt Conveyors

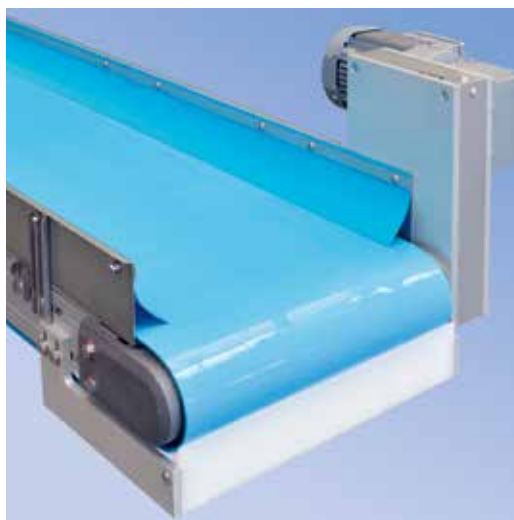
Application examples



Conveyor combination of two GUF-P 2041 (with head drive AC) and KGF-P 2040 (with center drive BC) and with a Reglomat



GUF-P 2041, head drive AC with support pan and lateral cleats



GUF-P 2041 with an overhead, offset, head drive AC and with belt slide plates (on both sides) and front belt scraper at the discharge



Circulation system for manually sorting laundry on the basis of GUF-P 2041 and GUF-P 2000 conveyors with head drive AC



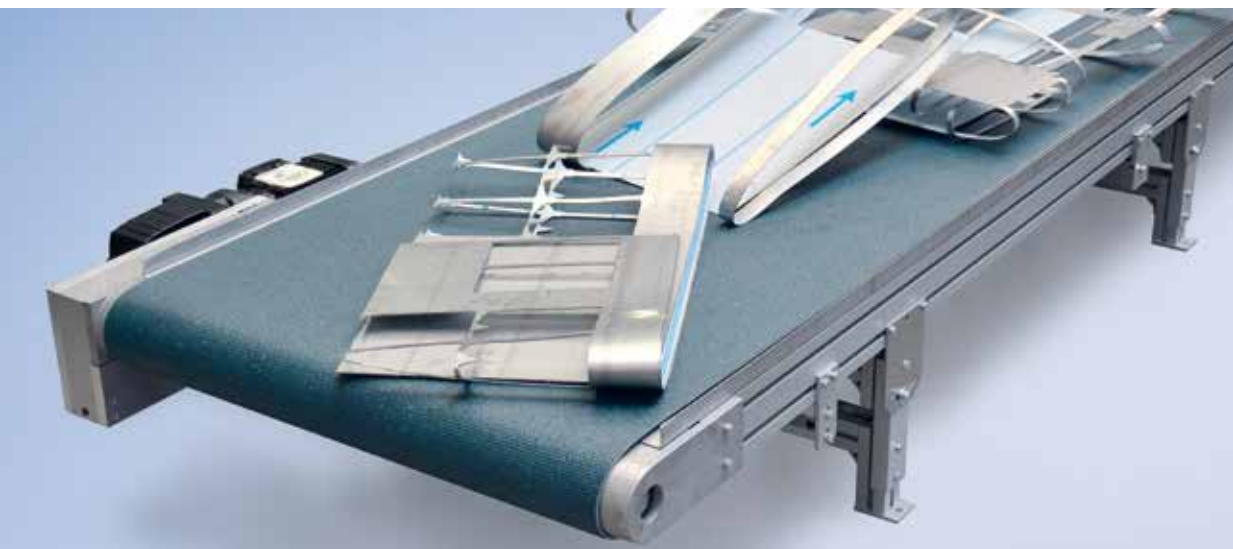
C-frame with recirculating ball bearing guides, each with 2 carriages for lifting or lowering the GUF-P 2004 conveyors



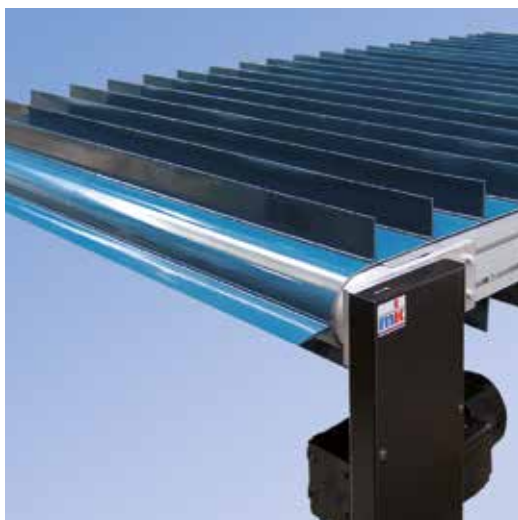
GUF-P 2004 with outside head drive AS as 2-level conveyor with drip pan on common base frame

Belt Conveyors

Application examples



GUF-P 2004 with head drive AS, lateral outside and robust special belt for punch scrap



GUF-P 2004 with head drive AC and lateral cleats



Conveyor belt combination of GUF-P 2004 with drum motor CA and 2-lane KTF-P 2004



GUF-P 2004 designed with maximum width $B=2\text{ m}$



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



GUF-P 2004 as a conveyor line for automobile backrests, the topside of the belt is divided into numbered sections

Belt Conveyors

Application examples incline conveyors



KFG-P 2000 with corrugated sidewalls, for product containment, and lateral cleats



KFG-P 2000 with head drive AU and 45° incline



KFG-P 2000 ECO with head drive AF and 60° incline variant B3 (B20.00.015-B3)



KFG-P 2000 with head drive AF as feed conveyor



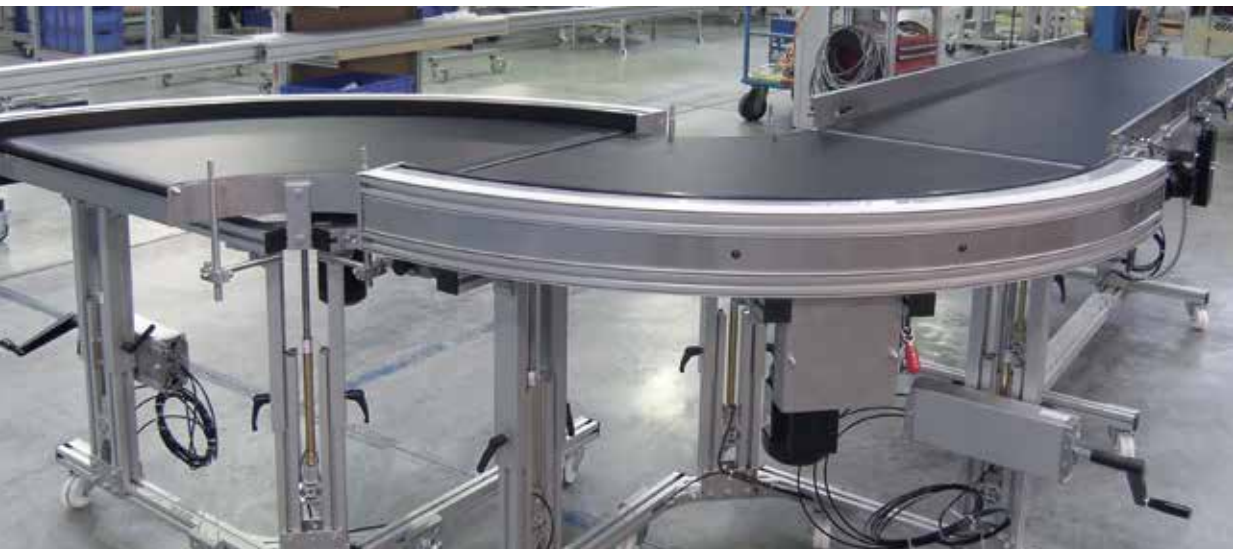
Mobile KFG-P 2000, type K with side rail SF 9.1 (VA sheet steel, tilted) and transfer hopper at the beginning of the conveyor, including controller



KFG-P 2000 with head drive AC with side rail SF 8.1, belt guidance on both sides via longitudinal cleats K10

Belt Conveyors

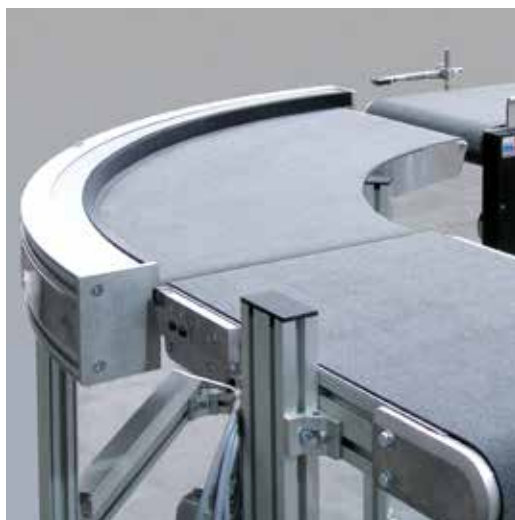
Application examples curved belt conveyors



KGF-P 2040 with center drive BI and hydraulic height adjustment of the conveyor stand via hand crank



Combination of 90° and 180° KGF-P 2040 curved belt conveyors with center drive BI, reversible



Transfer between KGF-P 2040 and GUF-P 2041 with rolling nosebar for product lengths from 50 mm



KGF-P 2040 with center drive BI and rotating brush below the conveyor (return)



180° KGF-P 2040 with side rail



KGF-P 2040 for transfer to the belt conveyor without knife edge



180° KGF-P 2040 with secured guard and inner radius 0 mm

Belt Conveyors

Application examples dual belt conveyors



DGF-P 2001 with center drive BC



DGF-P 2001 with head drive AC and lifting station with V-Belt conveyor between the conveyor lanes



GUF-P 2000, dual-strand conveyor, the free space between the belts allows access from below

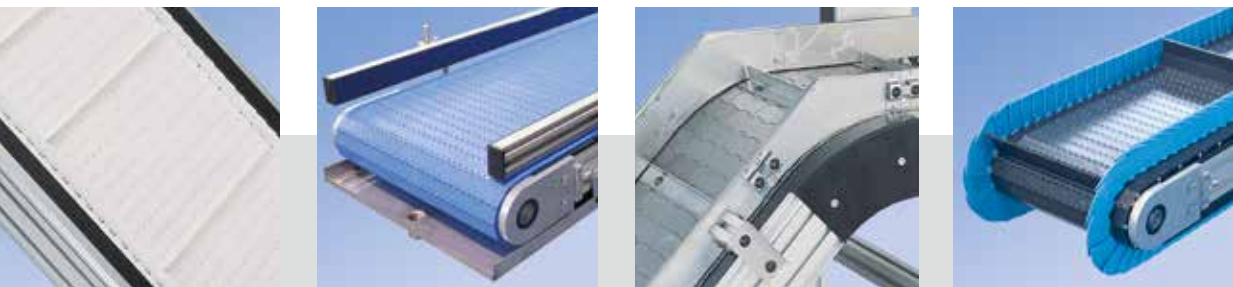


DGF-P 2001 with side rail for extra-wide products



DGF-P 2001 with center drive BC

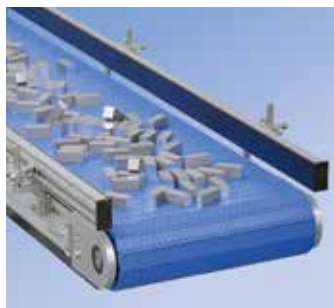
Modular Belt Conveyors



Contents modular belt conveyors



Selecting the conveyor system **114**



MBF-P 2040 **116**
Head drives **118**



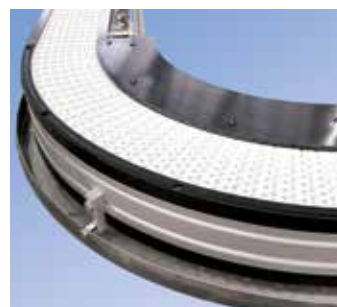
KFM-P 2040 **120**
Head drives **122**
Stands **124**



Modular belt chains **126**



KFS-P 2040.86 **128**
Head drives **130**
Stands and side rails **132**
Modular belt chains steel **133**



Application examples **134**

Modular Belt Conveyors

Selecting the conveyor system

Dimensions – technical information

Conveyor system	Conveyor width [mm]	Conveyor length [mm]	Total load* usually to [kg]	Speed to [m/min]	Tail ø [mm]	Reversing operation	Accumulated operation	Cycle operation
Modular belt conveyors								
MBF-P 2040	app. 200-1000	475-10000	250	30	app. 100		•	•
Incline conveyor with modular belt								
KFM-P 2040	app. 200-1000	1000-4000	100	30	app. 100			•
Incline steel link belt conveyor								
KFS-P 2040.86	210-710	1400-10000	150	12	150			•

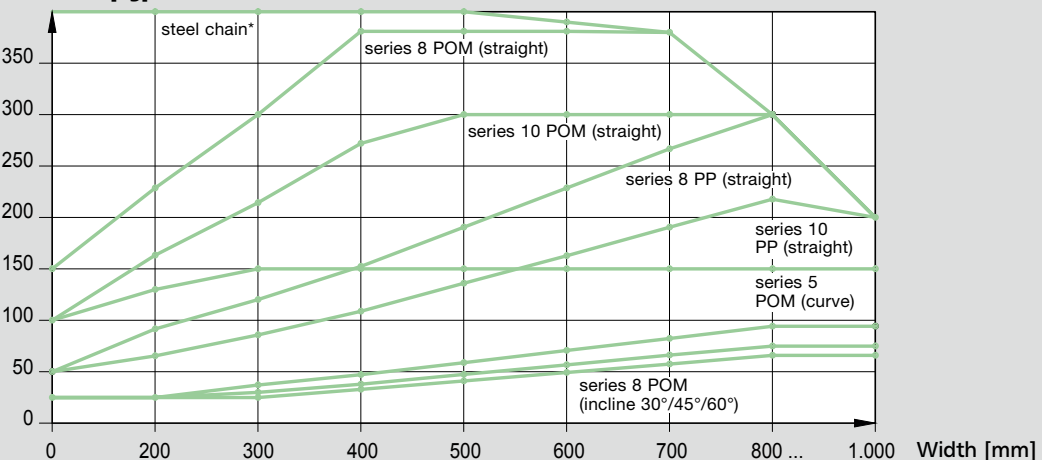
*Maximum load that is transported by the respective system with a usual configuration and for a usual application. The permissible load depends on the width, number of teeth, drive chain sprockets, and chain type, as well as load distribution, operating mode, and environmental influences.

System selection based on load, belt width, and chain series

Based on the diagram, the permissible total load can be determined depending on conveyor width and chain series. For the plastic modular chains a coefficient of friction of $\mu=0.3$ is assumed. For the steel chain (flat top chain conveyor) a coefficient of friction of $\mu=0.15$ is assumed

For accumulated operation the mass that accumulates must also be taken into account with $\mu=0.3$ for the total load; this means the mass in accumulated operation must theoretically be doubled (200 kg in accumulated operation equals 400 kg in continuous operation). Applications with lateral cleats, particularly for the incline conveyors, do not allow accumulated operation.

Total load [kg]



*The total load for the steel chain is the total of payload and deadweight of the chain.

Application areas

Through the positive locking drive and the conveyor frame; the plastic modular belt conveyors are recommended where a flat belt is not possible due to slip, and an unfavorable length-width ratio or transverse forces. Series 8 and 10 plastic modular conveyor chains are the standard offering; and are low maintenance.

On request we design with reinforced bearings, supplemental supports of the drive shaft, as well as an appropriate number of additional sprockets, and thus use the full performance capacity of the chain, and after testing and coordination, enable widths of up to 2 m.

For harsh environmental conditions, and conveying of punched parts, cast parts, forged parts or wood parts, the incline conveyor with steel chain is recommended. It is particularly well-suited for the conveyance of hot goods to 200°C and can also be configured as a straight section (type G).

On request, lateral cleats are bolted-on or welded-on. Stainless steel or perforated chain options are available. Due to a gap of 1-3 mm between the side rail and chain, the conveyor system is not suitable for discharge of pointed punch scrap or metal chips.

Modular belt chains

The improved MBF-P 2040 differs from its predecessor, the MBF-P 2040.86, through its more stable conveyor frame and the new chain series 8 and 10. Series 8 is characterized by its robustness and is particularly used in industrial applications.

The series 10 is suitable for transport of light to medium-heavy goods in hygienically sensitive applications, such as in the food industry or in the pharmaceuticals industry. For this the chain geometry and the sprockets were designed with particular emphasis on easy cleaning, avoidance of cavities and gaps with a limited self-cleaning function.

Lateral cleats, to 75 mm in height, and side plates, to 100 mm in height, are available for both series. This makes a complex side rail unnecessary and avoids the problems associated with gaps and relative movements between chain and side rail.

To ensure reliable durability, for the permissible tensile load a safety factor of three relative to the permissible tensile loads of the chain was included in the calculation. With a length of up to 3 meters, the usual chain sag can be dispensed with. This allows the operator to reverse the operation to a limited extent. With lengths > 3 meters or high loads, the conveyor can be equipped with a compensation function.

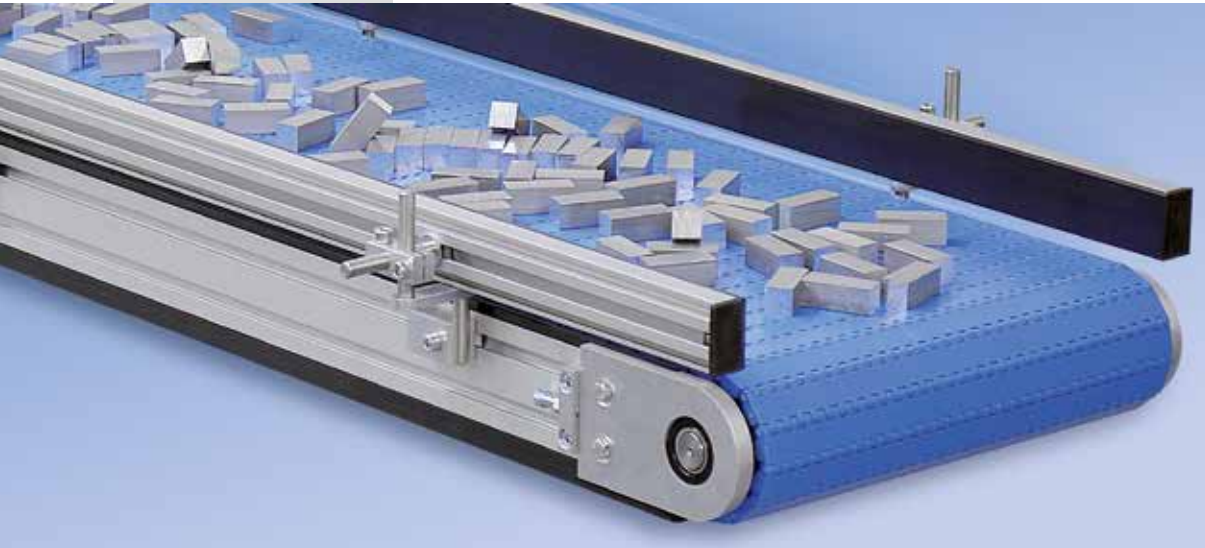
Chain material

For industrial applications with chain series 8 the notched impact-resistant, attractively priced polypropylene (PP) is the standard. Polyethylene (PE) for the series 10 has become established in the food industry.

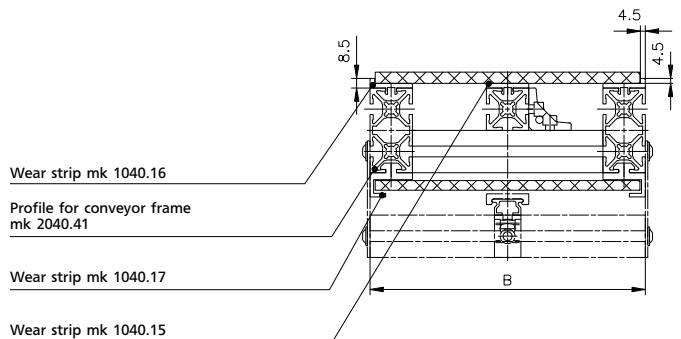
If particularly high requirements are imposed on maximum load and/or cut resistance, we recommend polyoxymethylene (POM, POM-CR). This material also accommodates an occasional abrupt impact of the conveyed goods on the chain or the lateral cleats.

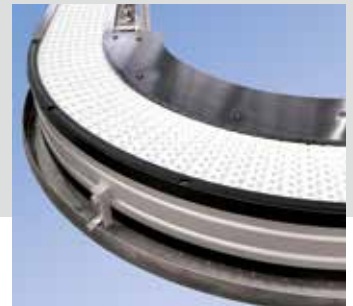
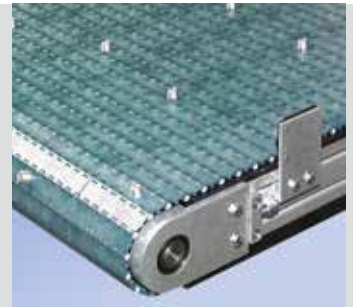
Modular Belt Conveyors

MBF-P 2040



Conveyor frame cross-section





Conveyor System MBF-P 2040 with modular belting and cleanly integrated drive assemblies distinguishes itself with high load capacities even at narrow belt widths. The belting is positively driven and cannot deviate from its direction of travel. As a result, parts may

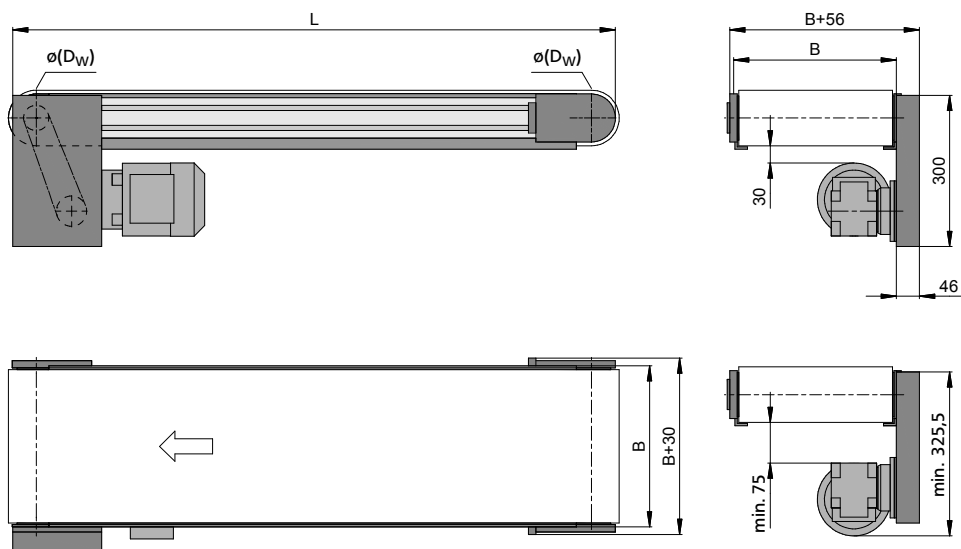
be discharged off the side of the conveyor. The belting material is very low friction and extremely resistant to wear. With the selection of appropriate belting materials, this conveyor system has applications in the food industry, does well in higher temperature en-

vironments and has good chemical resistance. Belt accessories include sidewalls and lateral cleats. Maintenance operations such as belt tensioning or replacement of individual links are quick and simple.

MBF-P 2040 AC

Modular belt conveyor with head drive, standard

B20.40.806



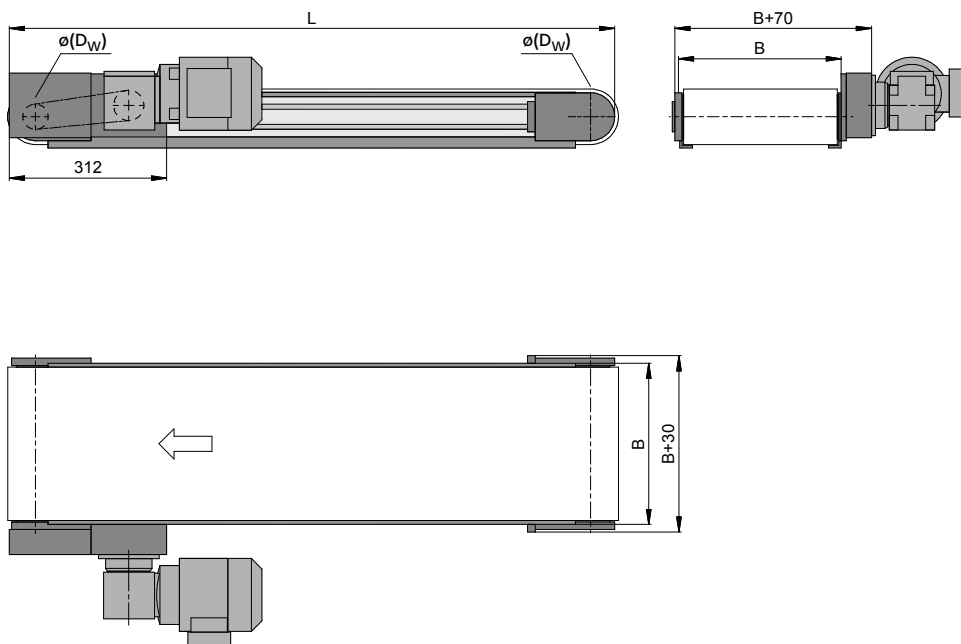
The compact frame design simplifies integration of the conveyor into new or existing equipment. The molded drive sprockets positively engage with the underside of the belt and ensure proper grip and tracking.

Dimensions – technical information		Notes
Conveyor length L	individually 475-10000 mm	any increment possible
Conveyor width B	depend. on chain type from app. 200-1000 mm	see page 126
Drive location	left/right below	
Drive and speed	to 30 m/min (100 ft/min)	see chart on page 12
Stands		see from page 262
Load capacity	total load to 250 kg (550 lbs) section load to 75 kg (165 lbs)/m	see chart on page 114
Effective diameter (D _W)	chain S8=99,7 mm; chain S10=98 mm	

MBF-P 2040 AS

Modular belt conveyor with head drive, outside

B20.40.807



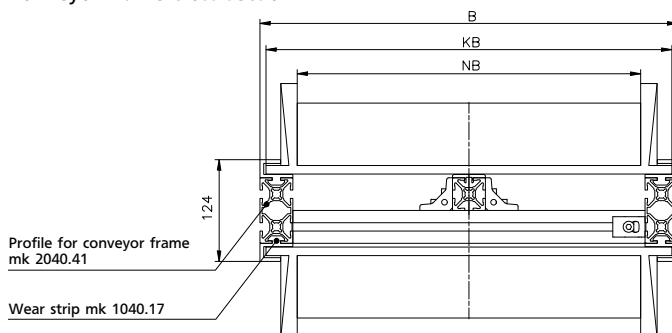
The overall height of the conveyor is held to an absolute minimum. The molded drive sprockets positively engage with the underside of the belt and ensure proper grip and tracking.

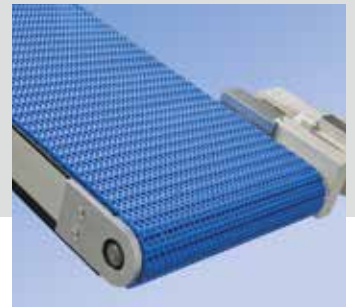
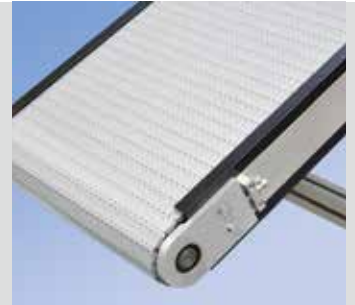
Dimensions – technical information		Notes
Conveyor length L	individually 610-10000 mm	any increment possible
Conveyor width B	depend. on chain type from app. 200-1000 mm	see page 126
Drive location	left/right below	
Drive and speed	to 30 m/min (100 ft/min)	see chart on page 12
Stands		see from page 262
Load capacity	total load to 250 kg (550 lbs) section load to 75 kg (165 lbs)/m	see chart on page 114
Effective diameter (D_W)	chain S8=99,7 mm; chain S10=98 mm	

Incline Conveyors Modular Belts KFM-P 2040



Conveyor frame cross-section





The KFM-P 2040 conveyor system with its compact conveyor frame structure; is well suited for integration into existing machines or as a mobile conveyor unit, for the filling of containers, for example. The plastic modular belt chain, completely guided in PE-1000 wear strips, is used, for example, for transporting slugs or

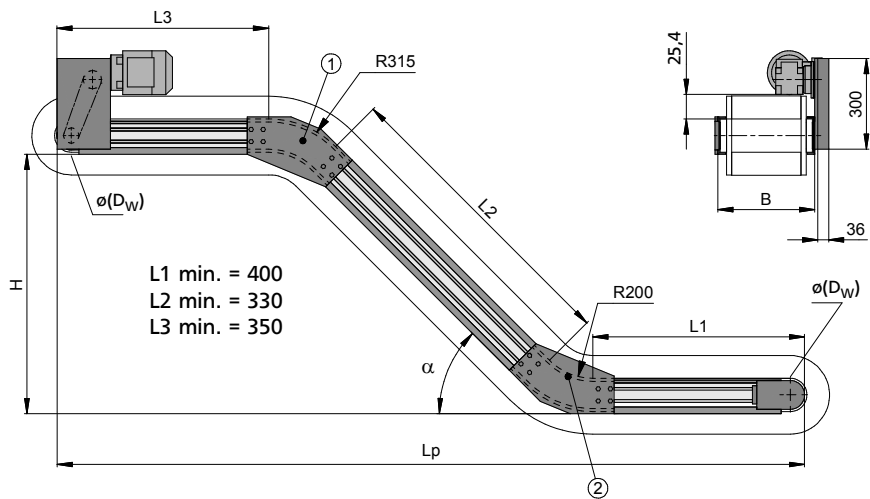
molded plastic parts, light punched parts or food products. The material of the modular belt chains offers a high level of wear-resistance and abrasion resistance. Due to different chain materials the conveyor system is suitable for food products, high temperatures, and it is chemically resistant. Accessories, such as

side plates and lateral cleat profiles are also included in the product range. Accessories, such as hoppers and discharge chutes are easy to attach on the T-slots of the profile. Depending on the goods to be conveyed, please see our other incline conveyors with belt or flat top chain.

KFM-P 2040 AC

Incline conveyor modular belt with head drive, standard

Type S: B20.40.810, type K: B20.40.811, type L: B20.40.812



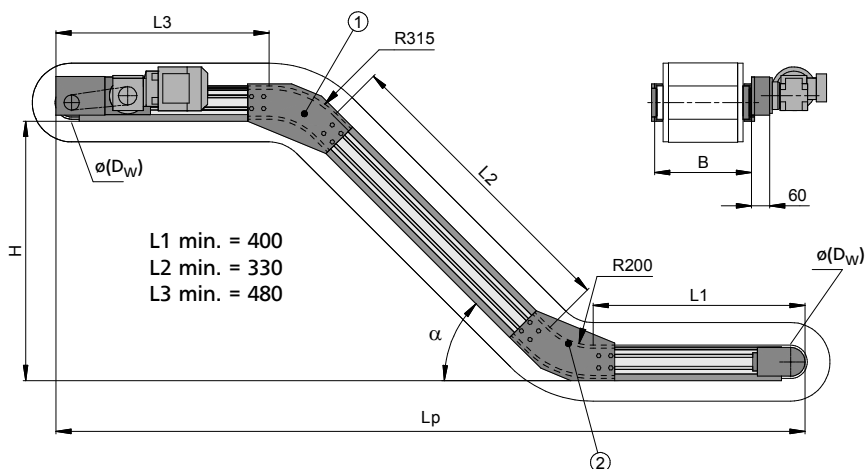
mk offers a variety of motor options for drive version AC which are sized and selected for each application's specific speed and load requirements. The molded drive sprocket conforms to the underside of the belt, and ensures proper grip and tracking.

	Dimensions – technical information	Notes
Conveyor length L (L1+L2+L3)	depending on conveyor design and load to 4000 mm	any increment possible
Conveyor width B	depend. on chain type from app. 200-1000 mm	see page 126
Drive location	discharge side left/right below/above	
Drive and speed	to 30 m/min (100 ft/min)	see chart on page 12
Stands		see page 124
Load capacity	total load to 100 kg (220 lbs) section load to 50 kg/m, 15 kg/field	see chart on page 114
Bends α 1 and 2	30, 45 and 60°	other on request
Effective diameter (D _w)	chain S8=99,7 mm; chain S10=98 mm	

KFM-P 2040 AS

Incline conveyor modular belt with head drive, outside

Type S: B20.40.813, type K: B20.40.814, type L: B20.40.815



The overall height of the conveyor is held to an absolute minimum. The molded drive sprockets positively engage with the underside of the belt and ensure proper grip and tracking.

	Dimensions – technical information	Notes
Conveyor length L (L1+L2+L3)	depending on conveyor design and load to 10000 mm	any increment possible
Conveyor width B	depend. on chain type from app. 200-1000 mm	see page 126
Drive location	discharge side left/right	
Drive and speed	to 30 m/min (100 ft/min)	see chart on page 12
Stands		see page 124
Load capacity	total load to 100 kg (220 lbs) section load to 50 kg/m, 15 kg/field	see chart on page 114
Bends α 1 and 2	30, 45 and 60°	other on request
Effective diameter (D_w)	chain S8=99,7 mm; chain S10=98 mm	



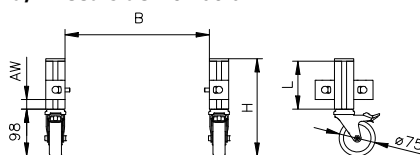
KFM-P 2040

Stands

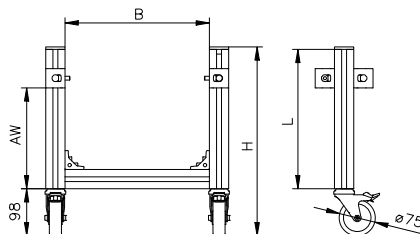
Stand, incline conveyor, type ECO

The stand, developed especially for the incline conveyor and incline conveyor modular belt, is characterized by its simplicity and light structure with the mk profile 2040.40.

Stand, infeed side B67.06.014

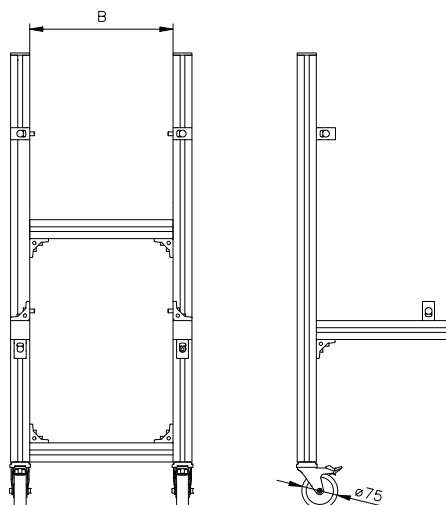


Feed height (ELH) = 166-349 mm

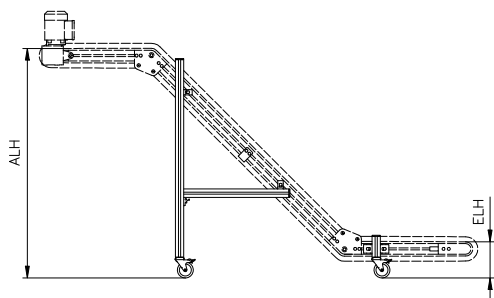


Feed height (ELH) = 350-500 mm

Stand, discharge side B67.06.015

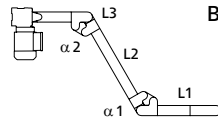
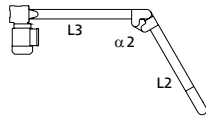
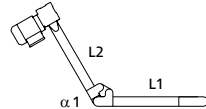


The swivel casters used can be completely locked in place and thus guarantee safe operation, even at high conveyor speeds. Depending on the configuration, the stand is adapted in height and width; see the ordering example, on the right.



- ELH = Feed height
- ALH = Discharge height
- B = Conveyor frame width
- H = Height of the stand
- L = Length of the standard profile
- AW = Distance of the angle bracket to the profile edge

Order example

KFM-P 2040 type S (B20.40.810)	Type configuration				
Drive version AC, motor orientation 0° as shown		Drive	AC	AS	
Speed 15 m/min	Type S		B20.40. ...	810	813
Width B = 460 mm	Type K		B20.40. ...	811	814
Length L1 = 500 mm; L2 = 1000 mm; L3 = 600 mm	Type L		B20.40. ...	812	815
Bend $\alpha 1 = 60^\circ$; bend $\alpha 2 = 60^\circ$					
Cleat height H1/S8 = 25,4 mm (see p. 127)					
Stand, incline conveyor, type ECO					
Feed height ELH = 200 mm					
Discharge height ALH = 1200 mm					

Modular belt chains

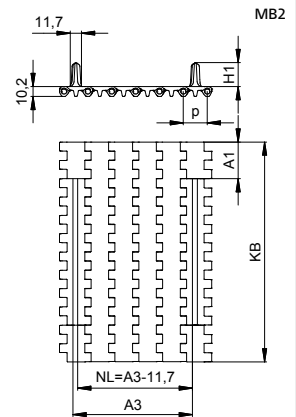
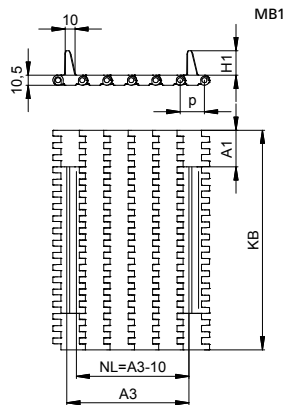
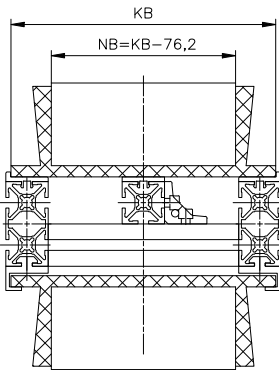
Depending on the customer requirements, mk offers two modular belt chains series for the modular conveyor system. Series 8 modular belt chains are suitable for conveyance of medium-heavy to heavy goods, such as containers, bottles, boxes, etc. in industrial applications. Series 10 is suitable for conveyance 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 colors, light blue and white.

Series 8 (S8) K11455		Series 10 (S10) K11455	
Belt width [mm]	Chain width [mm]	Belt width [mm]	Chain width [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.

Here it is possible to interchange, chains without changes on the conveyor frame.



Modular belt type

Series 8 (S8)

Series 10 (S10)

Cleat height H1

25,4 mm and 76,2 mm
others on request

25 mm and 100 mm
others on request

Cleat spacing A3

25,4 mm increments

25,4 mm increments

Pitch p

25,4 mm

25,4 mm

Belt thickness

10,5 mm

10,2 mm

Min. cleat edge clearance A1

for KFM 38,1 mm

for KFM 38,1 mm

FDA/USDA suitability

partial

FDA approval

Material

PP:
+5 to +100°C
color: white, light gray

POM:
-45 to +90°C
color: blue

POM CR:
-45 to +90°C
color: anthracite

- particularly impact resistant and cut resistant
- good cleaning
- minimized scoring
- minimal danger of material separation

PE:
-70 to +65°C
color: white, light blue

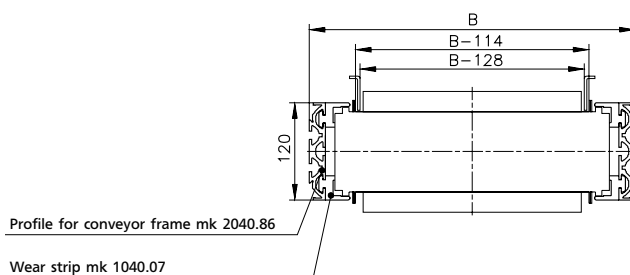
PP:
+5 to +100°C
color: white, light blue

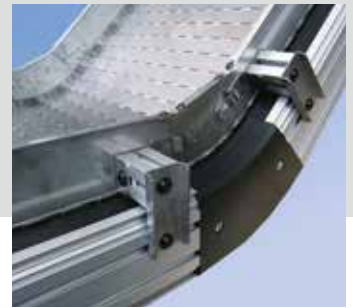
POM:
-45 to +90°C
color: white, light blue

Incline Steel Link Belt Conveyors KFS-P 2040.86



Conveyor frame cross-section





With its compact design using our aluminum profile systems, Conveyor System KFS-P 2040.86 is ideally suited for continuous duty applications in multiple shift environments. The belt is guided entirely on UHMW (PE1000) wear strips, and is designed for the removal or conveyance of stampings castings, machined parts or bulk material handling. The belt is also available in stain-

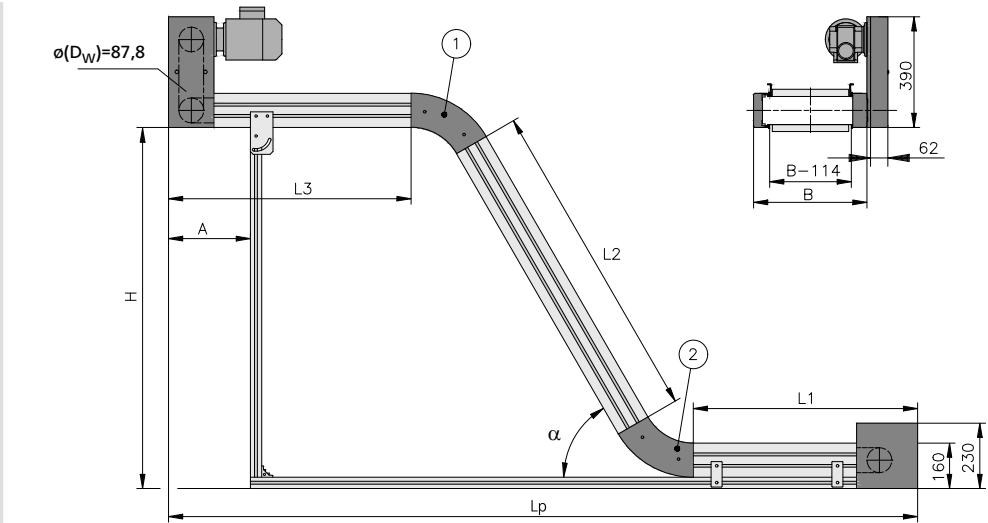
less steel, or with perforations. It is ideal for hot parts. With the modular construction using all the inherent benefits of our mk Profile Technology Systems, this conveyor can be readily integrated into new or existing equipment, or be used as a free-standing conveyor for bulk handling and loading applications. The conveyor frame features T-slots to which accessories including

stands, side rails, hoppers and chutes easily mounted. Through the use of standard components, mk is in a position to deliver a truly versatile conveyor. Customer specific requirement, such as special hoppers, are possible upon request. Depending on the product to be conveyed, please also consider our other Incline Conveyors featuring Modular Plastic or Fabric belting.

KFS-P 2040.86 AC

Incline steel link belt conveyor with head drive, standard

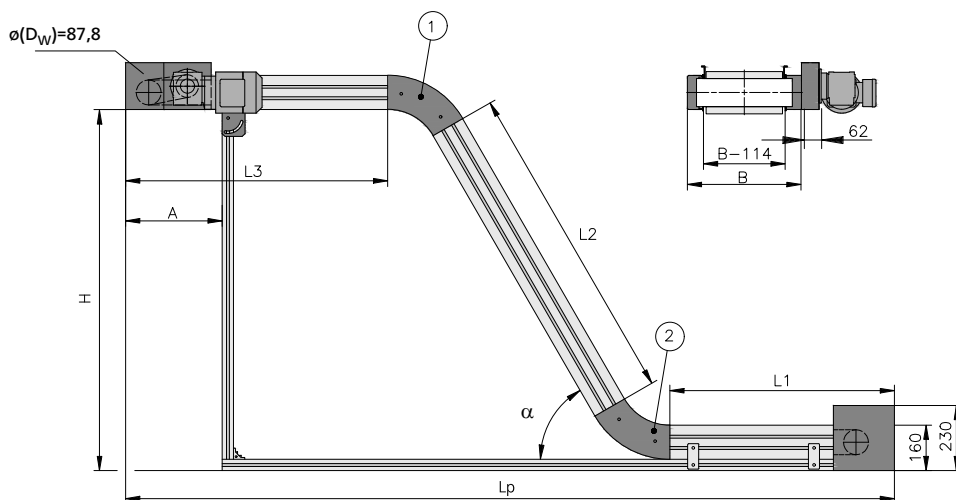
Type S: B20.40.606, type K: B20.40.607, type L: B20.40.608, type G: B20.40.605



Steel drive sprockets positively engage roller chains on the underside of the belt and ensure proper grip and tracking.

Dimensions – technical information		Notes
Conveyor length L ($L_1+L_2+L_3$)	depending on conveyor design and load to 10000 mm	any increment possible
Conveyor width B	210 to 710 mm (in 50 mm increments)	others on request
Drive location	discharge side left/right below/above	
Drive and speed	to 12 m/min (39 ft/min)	see chart on page 12
Stands and side rails		see page 132
Load capacity	total load to 150 kg (330 lbs) section load to 50 kg/m, 15 kg/field	see chart on page 114
Bends α 1 and 2	15, 30, 45 and 60°	

Type S: B20.40.610, type K: B20.40.611, type L: B20.40.612, type G: B20.40.609

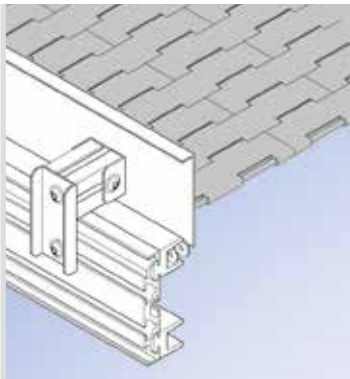


The overall height of the conveyor is held to an absolute minimum. The molded drive sprockets positively engage with the underside of the belt and ensure proper grip and tracking.

	Dimensions – technical information	Notes
Conveyor length L (L1+L2+L3)	depending on conveyor design and load to 10000 mm	any increment possible
Conveyor width B	210 to 710 mm (in 50 mm increments)	others on request
Drive location	discharge side left/right	
Drive and speed	to 12 m/min (39 ft/min)	see chart on page 12
Stands and side rails		see page 132
Load capacity	total load to 150 kg (330 lbs) section load to 50 kg/m, 15 kg/field	see chart on page 114
Bends α 1 and 2	15, 30, 45 and 60°	

KFS-P 2040.86

Stands and side rails



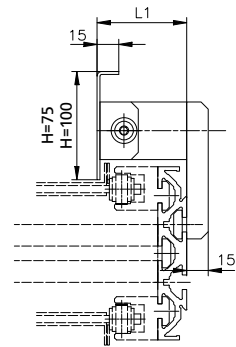
Side rails

The example shows our standard side rails. They are designed to minimize the gap between the conveyor frame and the modular belt (up to 1-3 mm).

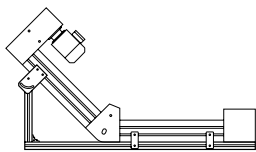
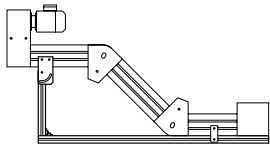
Side Rail SF 8.1

B17.00.026

Height H = 75 mm
Height H = 100 mm



Stand type A



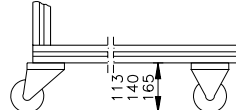
Stands

The stand type A shown can be furnished with all pad options. If ordering configuration type G, all stands of the mk conveyor technology system can be utilized.

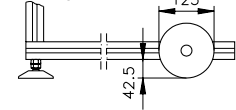
The pad option 1 features swivel casters with total lock brakes which guarantee stable support even at high speeds.

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

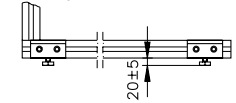
Pad option 1

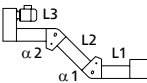
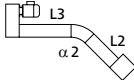
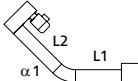



Pad option 2



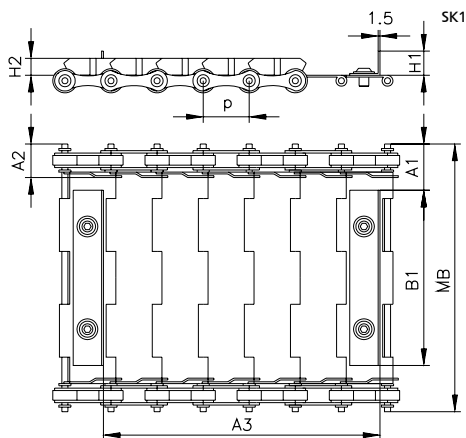
Pad option 3



Order example	Type configuration			
KFS-P 2040.86 type S (B20.40.606)		Drive	AC	AS
Drive version AC, motor orientation 0° as shown	Type S 	B20.40. ...	606	610
Speed 10 m/min				
Width B = 460 mm	Type K 	B20.40. ...	607	611
Length L1 = 500 mm; L2 = 1000 mm; L3 = 600 mm				
Bend α 1 = 60°; Bend α 2 = 60°	Type L 	B20.40. ...	608	612
Cleat Height H1 = 20 mm (see page 133)				
Stand Type A, pad option 1, Roll \varnothing 75 mm	Type G 	B20.40. ...	605	609
Feed height ELH = 200 mm				
Discharge height ALH = 1200 mm				

KFS-P 2040.86

Flat top chains



Flat top chain type

SK1

A1 (without sidewalls/with sidewalls)

38.1 mm

A2

25.5 mm

MB

146.5-645.5 mm

Cleat height H1

20/40 mm

Sidewall height H2

14 mm

Cleat spacing A3

38.1 mm increments

Color

steel

Pitch p

38.1 mm

Belt thickness

13 mm

Material

steel

FDA/USDA suitability

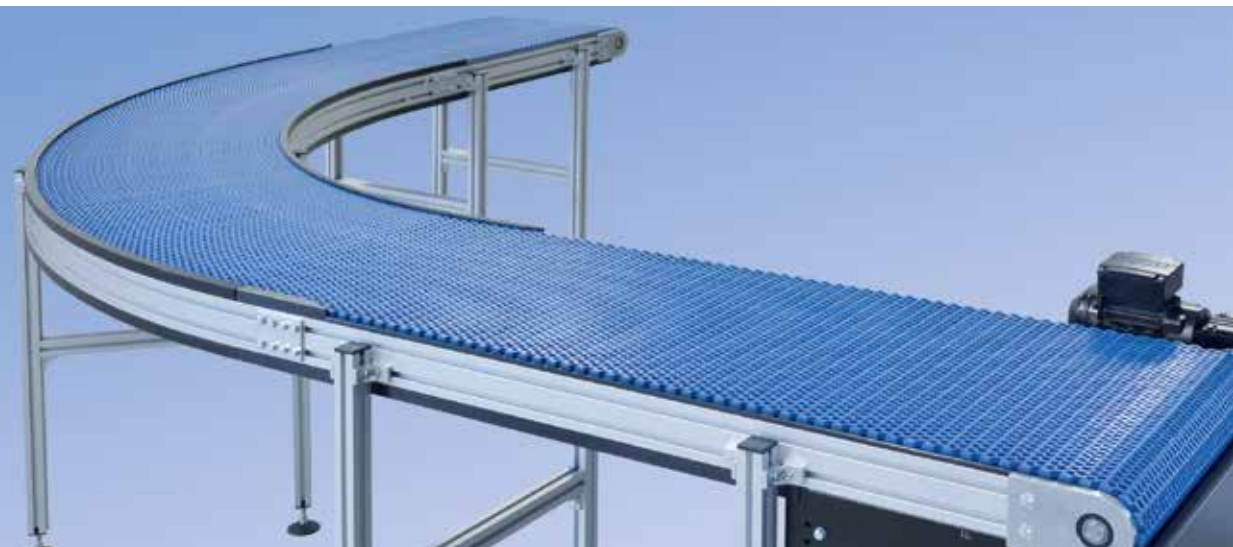
no

Technical properties

steel
wear resistant
heat resistant to 300° C
shockproof
low friction

Modular Belt Conveyors

Application examples MBF-P 2040



**Curved modular belt conveyor KMF-P 2040,
with one drive for complex routes**



**Interlinking MBF-P 2040 with unilateral
side rail and unilateral border
for supporting the product**



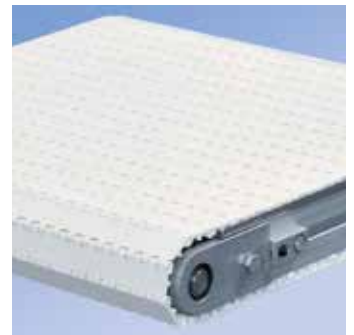
MBF-P 2040 with side flights and cleats



Sideflexing MBF-P 2040 with head drive AC and drip pan over the entire length



MBF-P 2040 modular belt conveyor with head drive AC and plastic bristles for gentle transport



Special short MBF-P 2040 with laterally projecting modular belt chain

Modular Belt Conveyors

Application examples incline conveyors



KFM-P 2040 with collecting pan and discharge flap



KFM-P 2040 AS type K with standard stand



KFM-P 2040 head drive AS with protective box, hopper and oil pan on the return side for slightly oily parts



KFM-P 2040 head drive AS with lateral cleats and side plate of the modular conveyor chain



KFS-P 2040.86 head drive AC with perforated flat top chain, transverse cleats for better carrying of product



KFS-P 2040.86 AF with two 45° bends



Solid support of the KFS-P 2040.86 for conveying heavy loads



KFS-P 2040.86 for hot products with changeable size parts reservoir

Timing Belt Conveyors



Contents *timing belt conveyors*



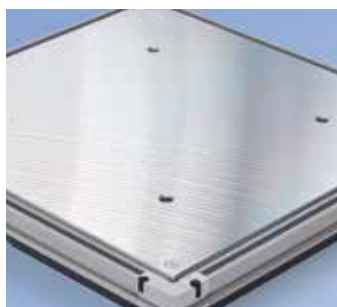
**Selecting the
conveyor system** **140**



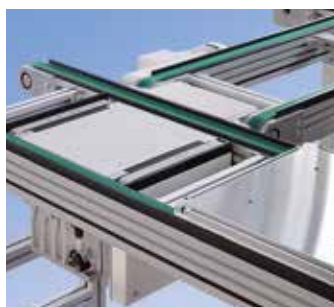
ZRF-P 2040 **142**
Head drives **144**



ZRF-P 2010 **146**
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Center drives **153**
Wear strips **155**



Accessories
Pallets **156**
Timing belts **159**
Stops **160**



Application examples **162**

Timing Belt Conveyors

Selecting the conveyor system

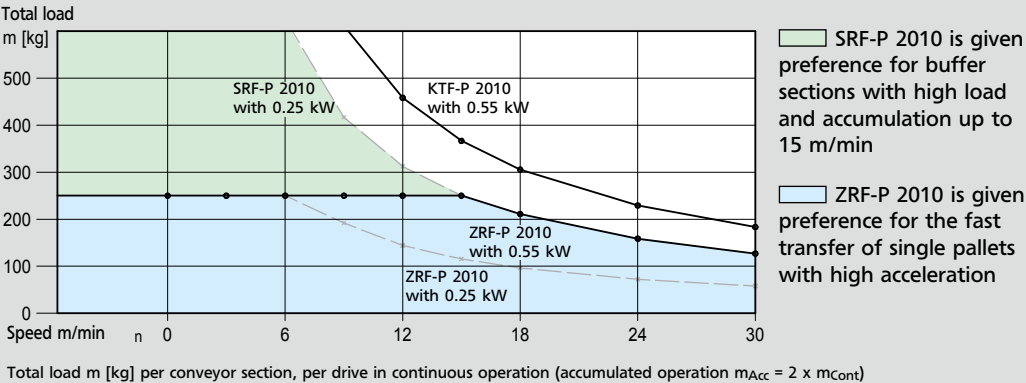
Dimensions – technical information

Conveyor system	Conveyor width [mm]	Conveyor length [mm]	Total load* usually to [kg]	Speed to [m/min]	Tail ø [mm]	Reversing operation	Accumulated operation	Cycle operation
Timing belt conveyor (single-strand)								
ZRF-P 2040	40/80/120/160	650-6000	250	60	app. 90		•	•
Timing belt conveyor (dual-strand)								
ZRF-P 2010	200-1000	500-6000	250	60	app. 90		•	•

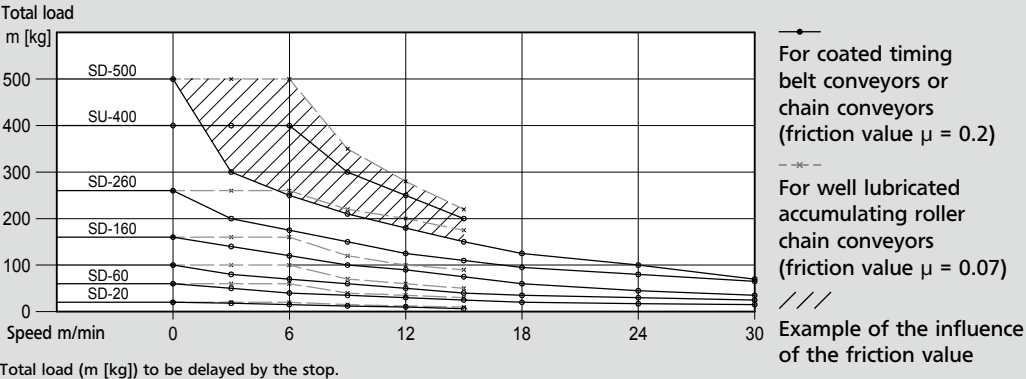
*Maximum load that is transported by the respective system with a usual configuration and for a usual application. The permissible load depends on the width, timing belt material, type, as well as load distribution, operating mode, and environmental influences.

Selection of the dual-strand conveyor based on load and speed

The diagram shows dual-strand conveyor systems depending on load and speed. The comparison shows timing belt conveyors (ZRF), chain conveyors (KTF), and accumulation roller chain conveyors (SRF).



Selection of stops



Application areas

Timing belt conveyors are ideally suited for indexed (or cycled) transportation of products. Available with different drive options, as single-strand, dual-strand, or multi-strand conveyor, they are often used for setting up complex integrated solutions. As a dual-strand solution, transfer of pallets is a typical application. In this regard, timing belt conveyors are more likely to be used where high-speed and acceleration are required. Chain conveyors and accumulation roller chain conveyors are used for heavy loads (see the following chapter).

A variety of timing belt materials allows the belt to be designed to best match the workpiece, depending on the application. In addition to aluminum pulleys, anodized pulleys or stainless steel pulleys (for reduced wear, and increased corrosion resistance) are available.

The ZRF-P 2040 timing belt conveyor is typically used as a single-strand solution. Cleats or threaded sleeves can be welded on or preferably bolted onto the timing belt for product take up. For bolted-on cleats, an AT timing belt is used due to the wider tooth shape. In addition to greater tooth rigidity and the larger conveyance surface, this model offers the necessary space for plug-in threaded sleeves. Therefore, this system is also suitable for precise feeding and positioning, to a total load of 250 kg.

As a dual-strand system, the ZRF-P 2010 timing belt conveyor is ideally suited for indexed transportation of pallets or laterally stable goods. In conjunction with a variety of drive possibilities this system offers the basis for setting up complex integrated automation systems. The return of the timing belt in the interior of the profile permits a compact structure and reduces the risk of accident to a minimal level.

Timing belts

The standard timing belt consist of polyurethane with a high-strength steel cord tension member. The belts for the 2010 system have the T10 pitch and are up to 32 mm wide (others available on request). To ensure optimal operation, different backings can be used (see page 159).

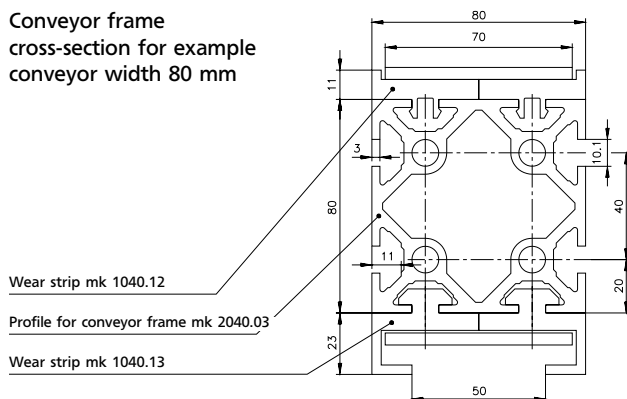
A tooth-side coating (PAC = polyamide tooth-side) is recommended for conveyor speeds above 30 m/min. The standard timing belts; with the PU base material on the toothed side, there is a noise development tendency. In addition to good lubrication, there is also a PAZ coating available for the tooth side.

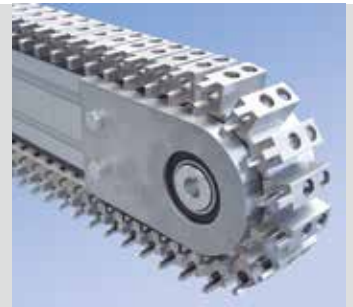
The PAZ coating consists of a nylon fabric on the tooth side, and in addition there is an impregnated version used to satisfy ESD requirements. In clean room applications, use of the nylon fabric is not recommended, due to the extremely fine abrasion. Many of our customers prefer the coarser, visible abrasion of the PU base material. For electronic components, and in the "Ex Area", and upon request we use a conductive base material.

Timing Belt Conveyors ZRF-P 2040



Conveyor frame
cross-section for example
conveyor width 80 mm





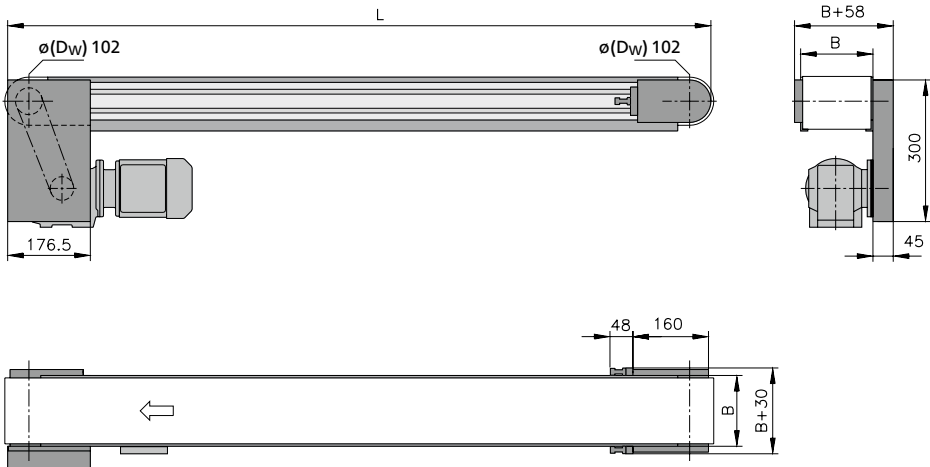
The ZRF-P 2040 timing belt conveyor system is designed specifically for product index operation applications where a cleated, or fixtured belt is required, or for wider timing belt applications. Timing belts are available with a variety of backing materials, or with welded fixtures. Many cleat types are available. Plain cleats,

as shown at left, are used for product separation. Others are available with threaded inserts for customer installed fixtures. This conveyor is ideal for special conveying; requiring positioning or loading of products. Depending on the product and the application, custom fixtures and other belt widths are available.

ZRF-P 2040 AC

Timing belt conveyor with head drive, standard

B20.40.301



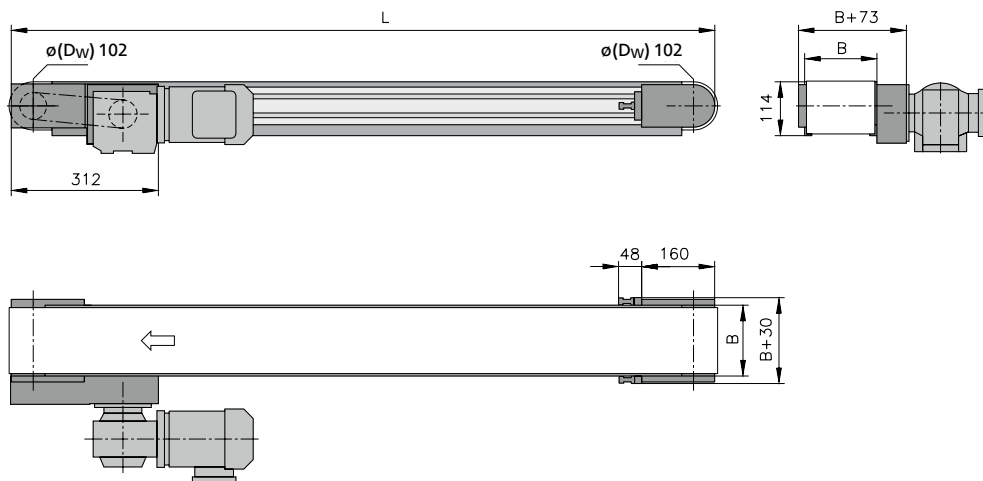
Use of timing belts with fixtures is possible with this drive version. When using cleats, the maximum possible height must be requested.

	Dimensions – technical information	Notes
Conveyor length L	individually 650-6000 mm	any increment possible
Conveyor width B	40/80/120/160 mm	others on request
Timing belt width	32/70/110/150 mm	
Timing belt type		timing belts see page 158
Drive location	discharge side left/right below	
Drive and speed	to 60 m/min (200 ft/min) higher on request	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 125 kg section load to 50 kg/m for B = 40 mm total load to 250 kg section load to 100 kg/m from B = 80 mm	higher on request

ZRF-P 2040 AS

Timing belt conveyor with head drive, outside

B20.40.302



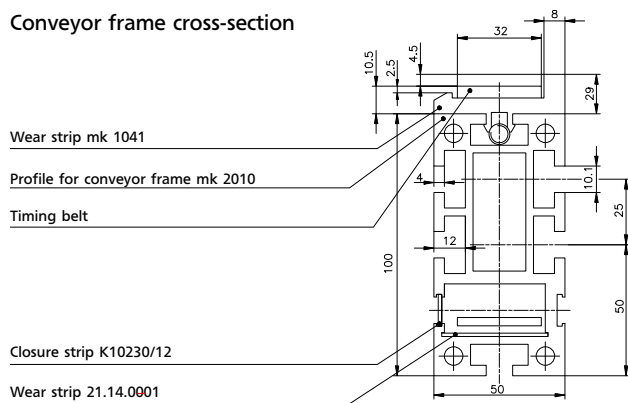
The overall height of the drive assembly is held to an absolute minimum. The timing belt pulley ensures outstanding transmission of the motor power. Use of timing belts with fixtures is possible without restriction with this drive version.

	Dimensions – technical information	Notes
Conveyor length L	individually 650-6000 mm	any increment possible
Conveyor width B	40/80/120/160 mm	others on request
Timing belt width	32/70/110/150 mm	
Timing belt type		timing belts see page 158
Drive location	discharge side left/right	
Drive and speed	to 60 m/min (200 ft/min) higher on request	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 125 kg section load to 50 kg/m for B = 40 mm total load to 250 kg section load to 100 kg/m from B = 80 mm	higher on request

Timing Belt Conveyors ZRF-P 2010



Conveyor frame cross-section





Timing Belt Conveyor System ZRF-P 2010 is designed for the transportation of heavy pallets or structurally rigid products. Due to the positive engagement of the belt teeth and the sprockets, the belts are synchronized and the conveyors are ideal for indexing applications. The wear-strips, high-molecular polyethylene, on which the timing belt runs and is guided, are a characteristic of

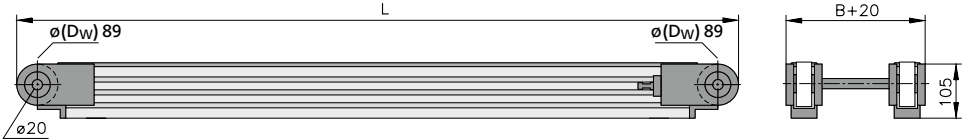
this conveyor system. The wear strips have a low coefficient of friction, and provide good wear resistance over a broad temperature range (continuous to 65° C, or 149° F). An additional design feature is the belt return, which occurs within the frame profile itself. This is a safety benefit, and also serves to protect the belt. In addition, T-slots are accessible on three sides on the profile frame

for the attachment of stands, side rails, sensors and stops (10 mm opening). A variety of belt coatings are available, providing further options for specific product and project related handling applications. With its wide and varied drive options, System ZRF-P 2010 serves as a key element for the manufacture of larger automation and material handling systems.

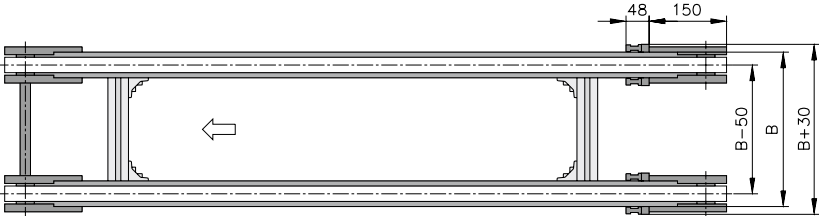
ZRF-P 2010 AA

Timing belt conveyor with head drive without motor

B20.10.350



Wear strip options see page 155



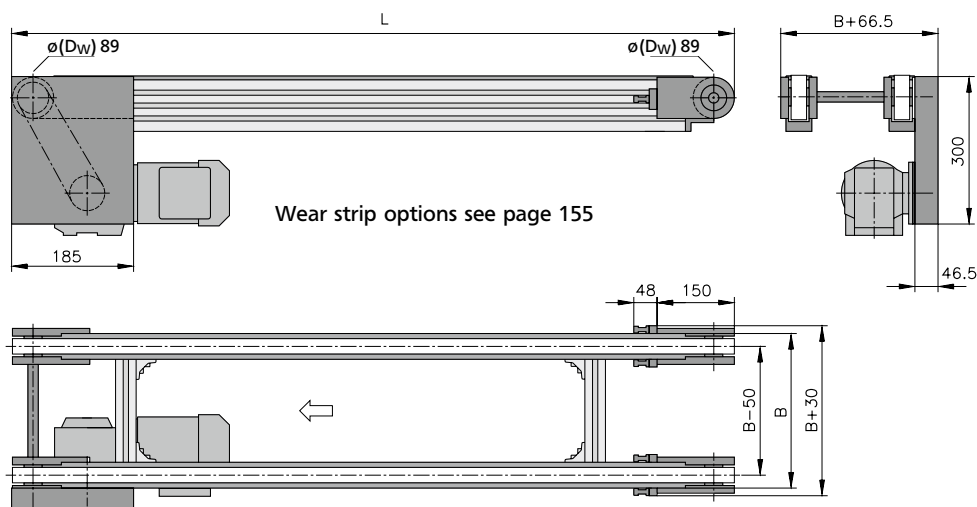
Drive version AA is primarily used where multiple lanes are to be slave driven, either parallel or in-line, using a single drive motor. Depending on the requirement, the conveyor is designed either with a hollow shaft or with a connecting shaft with shaft journal (\varnothing 20 mm, usable length 34 mm, incl. shaft key DIN 6885). Use of fixtured timing belts is not possible with this drive version.

Dimensions – technical information		Notes
Conveyor length L	between 500-6000 mm	any increment possible
Conveyor width B	200 to 1000 mm	
Timing belt width	32 mm	see page 158
Drive and speed	to 60 m/min (200 ft/min) higher on request	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 250 kg (550 lbs) section load to 100 kg (220 lbs) /m	higher on request

ZRF-P 2010 AC

Timing belt conveyor with head drive, standard

B20.10.351



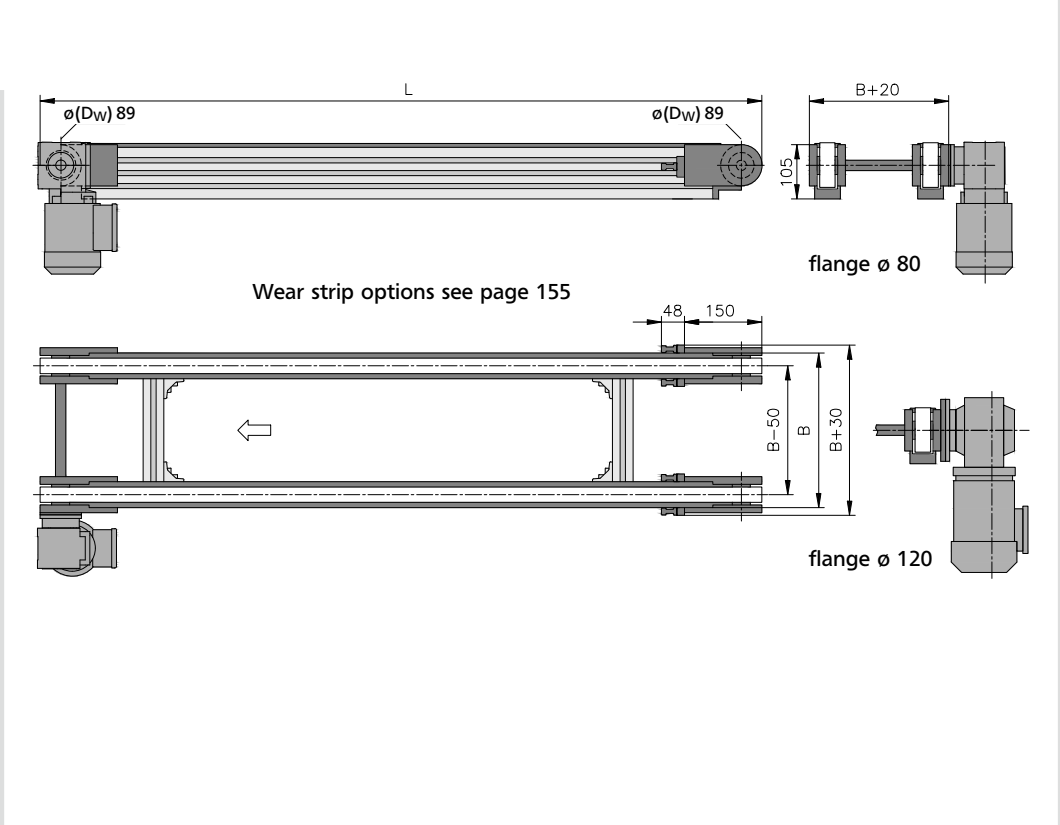
Use of high torque motors is possible due to positive drive system. Use of fixtured timing belts is not possible with this drive version.

	Dimensions – technical information	Notes
Conveyor length L	between 500-6000 mm	any increment possible
Conveyor width B	200 to 1000 mm	
Timing belt width	32 mm	see page 158
Drive location	discharge side left/right below	
Drive and speed	to 60 m/min (200 ft/min) higher on request	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 250 kg (550 lbs) section load to 100 kg (220 lbs) /m	higher on request

ZRF-P 2010 AF

Timing belt conveyor with head drive, direct

B20.10.357



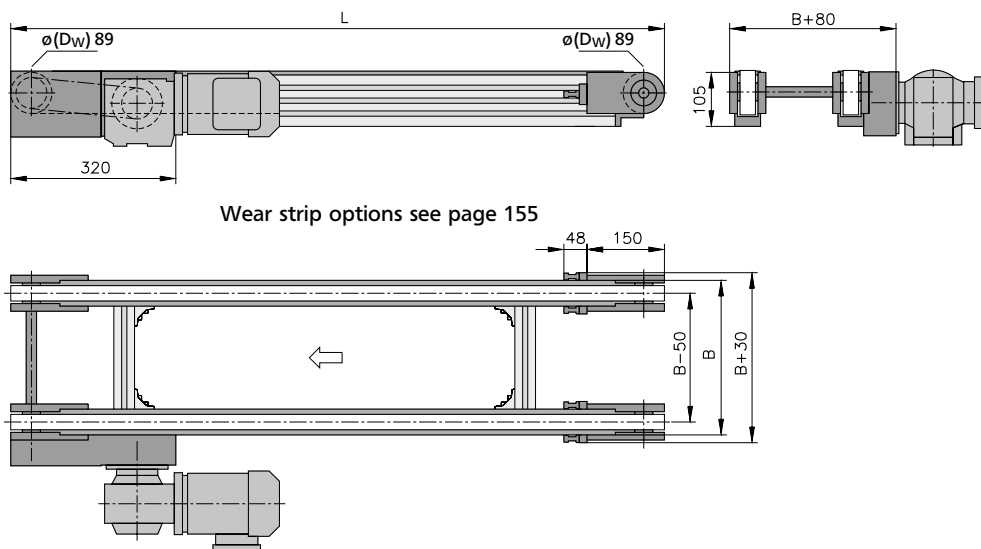
By placing the motor directly onto the drive shaft, this drive version minimizes not only the space required at the drive yet also the number of moving parts and maintenance requirements. Use of fixtured timing belts is not possible with this drive version.

Dimensions – technical information		Notes
Conveyor length L	between 500-6000 mm	any increment possible
Conveyor width B	200 to 1000 mm	
Timing belt width	32 mm	see page 158
Drive location	discharge side left/right	
Drive and speed	to 60 m/min (200 ft/min) higher on request	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 250 kg (550 lbs) section load to 100 kg (220 lbs) /m	higher on request

ZRF-P 2010 AS

Timing belt conveyor with head drive, outside

B20.10.355



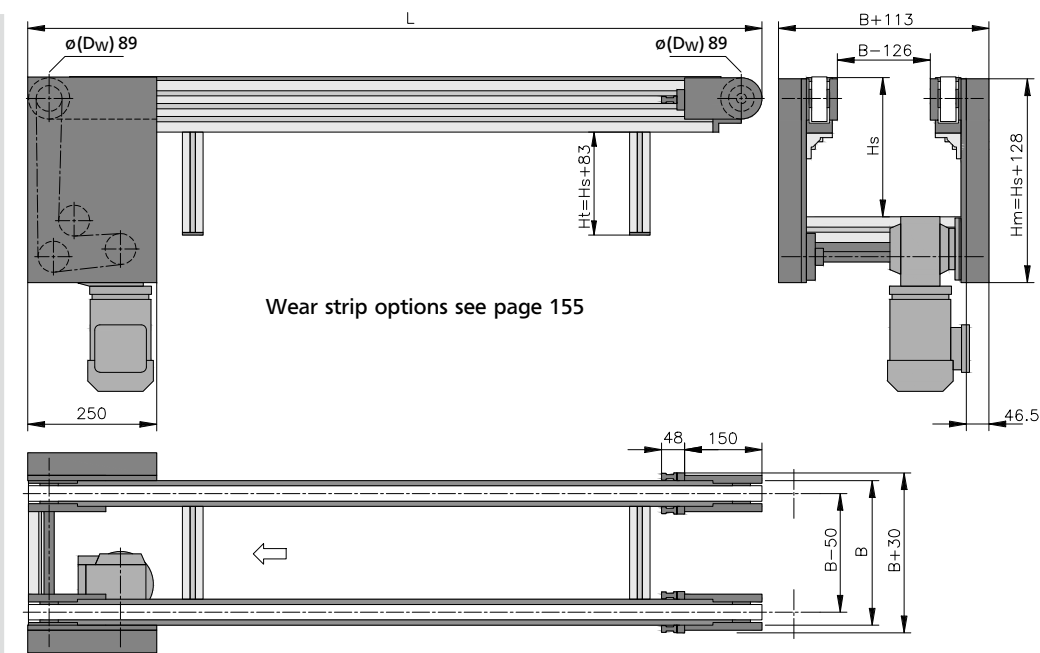
The overall height of the drive assembly is held to an absolute minimum. Use of fixtured timing belts is not possible with this drive version.

Dimensions – technical information		Notes
Conveyor length L	between 700-6000 mm	any increment possible
Conveyor width B	200 to 1000 mm	
Timing belt width	32 mm	see page 158
Drive location	discharge side left/right	
Drive and speed	to 60 m/min (200 ft/min) higher on request	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 250 kg (550 lbs) section load to 100 kg (220 lbs) /m	higher on request

ZRF-P 2010 AQ

Timing belt conveyor with head drive, dual-strand

B20.10.354



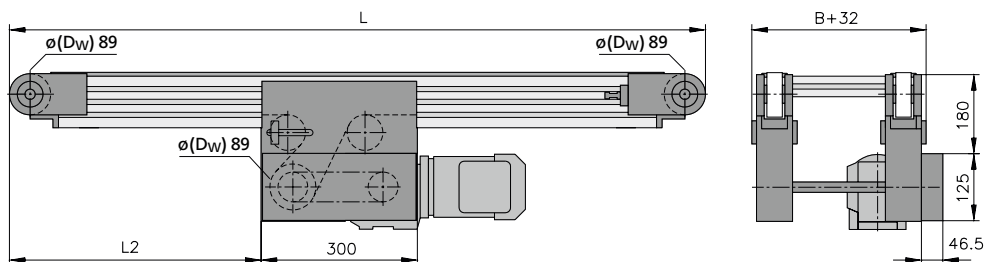
In principle, the drive concept of the AQ version is the same as for the AC version. However, this drive is used when the goods to be transported, or the pallets, require a free space between the conveyor lanes. Use of fixtures timing belts is not possible with this version.

Dimensions – technical information		Notes
Conveyor length L	between 500-6000 mm	any increment possible
Conveyor width B	200 to 1000 mm	
Timing belt width	32 mm	see page 158
Drive location	discharge side left/right below	
Drive and speed	to 60 m/min (200 ft/min) higher on request	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 250 kg (550 lbs) section load to 100 kg (220 lbs) /m	higher on request

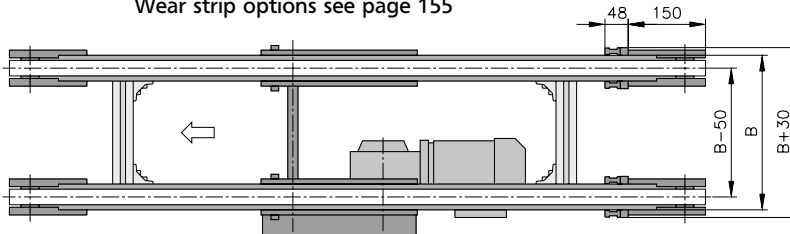
ZRF-P 2010 BC

Timing belt conveyor with center drive, standard

B20.10.356



Wear strip options see page 155



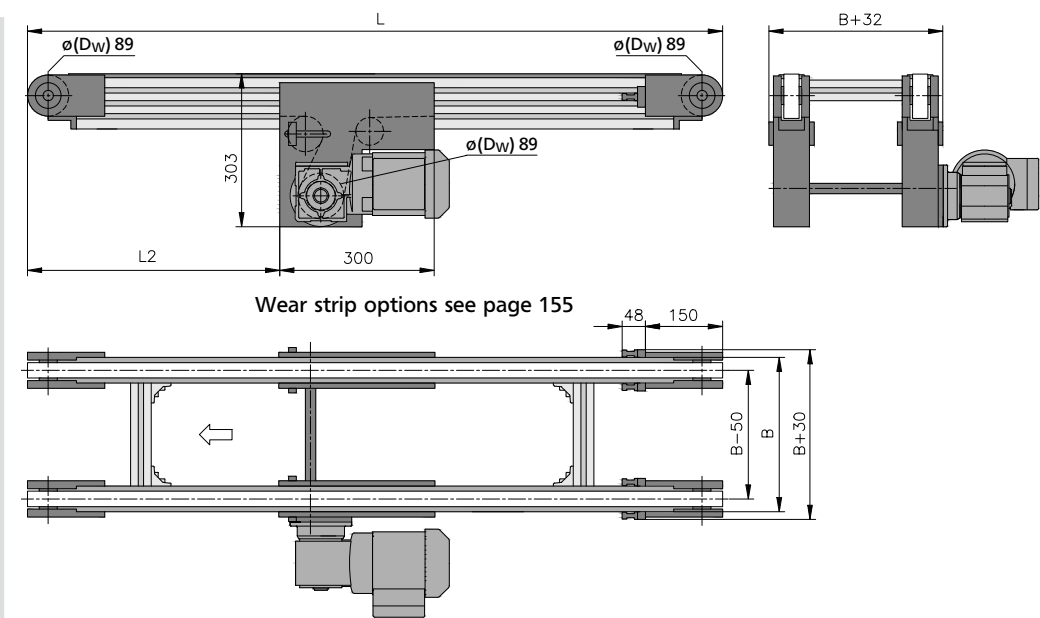
The compact design, and the ability to place the drive location anywhere along the conveyor frame (during manufacture), simplifies the integration of this conveyor into new or existing equipment. Use of fixtured timing belts is not possible with this drive version.

	Dimensions – technical information	Notes
Conveyor length L	between 700-6000 mm	any increment possible
Conveyor width B	200 to 1000 mm	
Timing belt width	32 mm	see page 158
Drive location	left/right below	
Drive and speed	to 60 m/min (200 ft/min) higher on request	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 250 kg (550 lbs) section load to 100 kg (220 lbs) /m	higher on request

ZRF-P 2010 BF

Timing belt conveyor with center drive, direct

B20.10.359

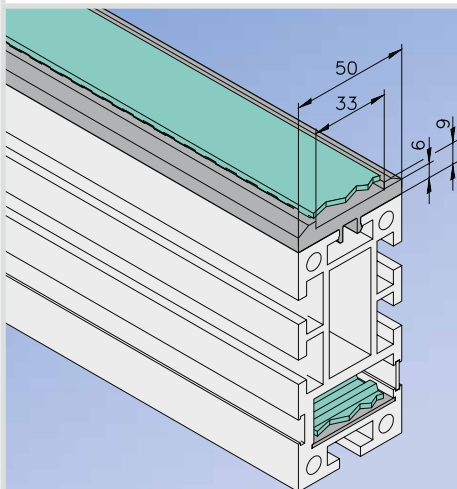


Thanks to the motor mounted directly on the drive shaft, this drive version keeps spatial requirements and maintenance efforts to a minimum. The compact conveyor frame and the possibility of freely selecting the drive position (during manufacture) over the entire length of the conveyor, facilitates integration of the conveyor in existing systems. The travel direction is reversible. Use of fixtured timing belts is not possible with this drive version.

	Dimensions – technical information	Notes
Conveyor length L	between 700-6000 mm	any increment possible
Conveyor width B	200 to 1000 mm	
Timing belt width	32 mm	see page 158
Drive location	left/right below	
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	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 250 kg (550 lbs) section load to 100 kg (220 lbs) /m	higher on request

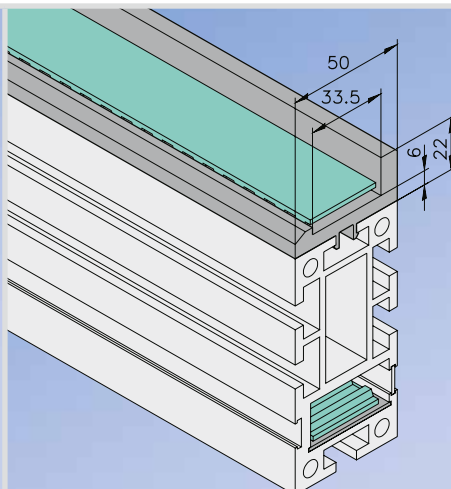
mk Guide- and wear strips feature low friction and high wear resistance.
The wear strips are made of PE-UHMW (PE-1000). Temperature max. 65° C (149° F).

Option A



Wear strip mk 1042, 22.42.2000

Option B



Wear strip mk 1041, 22.41.2000

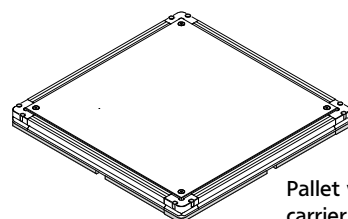
Accessories

Pallets

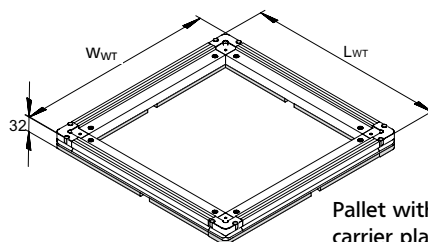
Pallets can be freely configured to meet special requirements; they can be delivered completely pre-assembled or for assembly on a do-it-yourself basis. The max. total weight per pallet is determined based on the allowable total load per meter (100 kg/m) for the system. Please note, that for optimal guidance of the pallets, the clear width of the side rail must be 2-4 mm greater than the width of the pallets.

Individual pallet components:

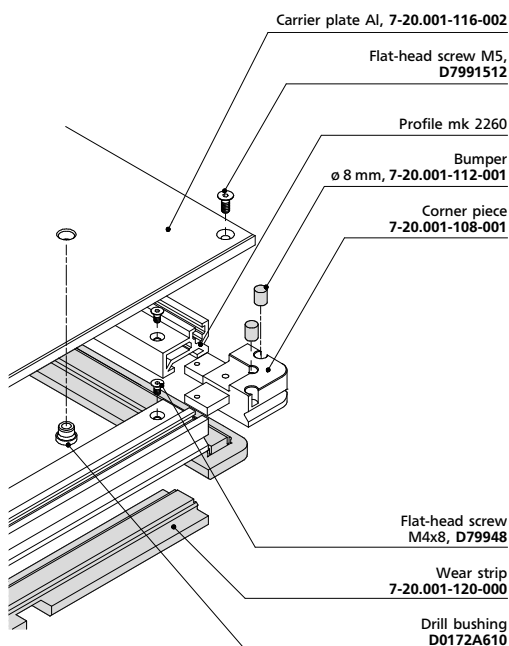
- Aluminum profile frame consisting of the mk 2260 profile and corner pieces
- PE-1000 plastic wear strips underneath the profile frame
- Carrier plates of various plate thicknesses (5, 6, 8, 10 and 12 mm)
- Bumpers/Rubber buffers
- Positioning bushings



Pallet with
carrier plate
7-20.001-116-000



Pallet without
carrier plate
7-20.001-116-050

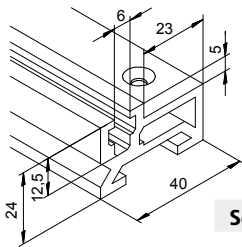


W _{WT} mm	L _{WT} mm	Carrier plate mm	Weight _{WT} kg
400	400	8	5
400	600	8	8
600	600	10	14
600	800	10	16
800	800	12	24
800	1000	12	30

Pallets components

Profile mk 2260 with end services

The prism-shaped profile slot at the outer side is used for positioning the pallet.



Profile mk 2260

1,16 kg/m
AlMgSi 0,5 F25

Stock length **52.60.6100**

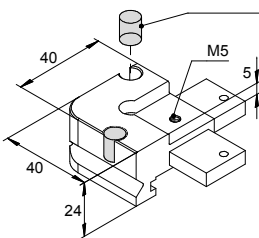
Cut **52.60.***

Services

Ø 8  **5260BB***

Corner piece

The corner pieces are used for connecting the profile sections and facilitate easy attachment of the carrier plate.



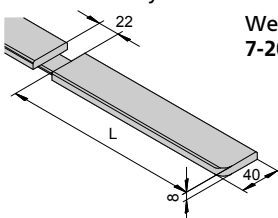
Bumper Ø 8 mm,
7-20.001-112-001

Corner piece 7-20.001-108-001

Al tumbled

Wear strip

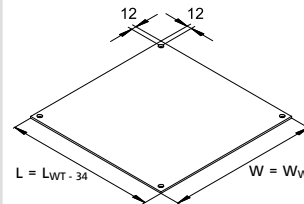
The wear strip (optional antistatic version) is clipped to the profile section from below and used to ensure optimum transport conditions for the pallet on the conveyor.



Wear strip PE-1000
7-20.001-120-000

Pallet carrier plate

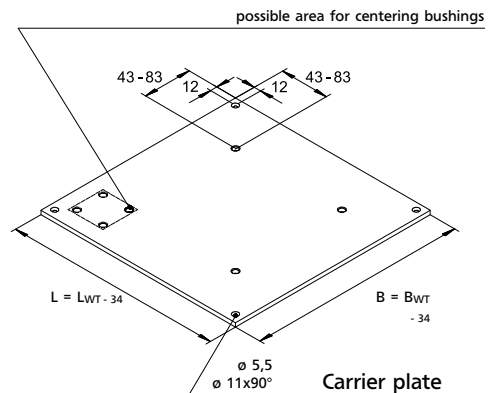
The carrier plate is bolted to the base frame and used for positioning the workpieces. Available materials include rolled aluminum and finely milled aluminum for high precision applications. Stainless steel, steel, plastic or wood is also available for special requirements.



Carrier plate 7-20.001-116-002

Thickness: 5 or 6 mm,
without positioning
bushings

Al tumbled



Carrier plate 7-20.001-116-001

Thickness: 8, 10 or 12
mm with drill holes for
positioning bushings

Finely milled aluminum

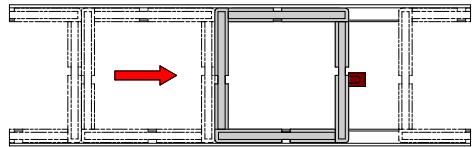
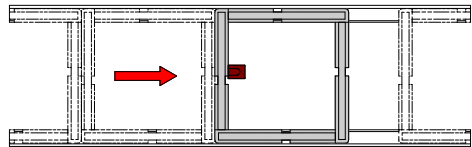
Accessories

Pallets

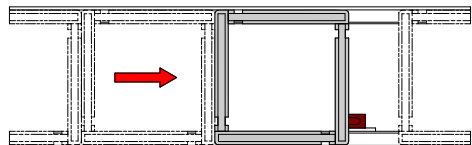
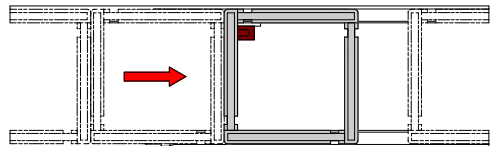
Stopping and separating

In order to stop or separate the pallets, the stops can be positioned at the center or outside.

Center stop position



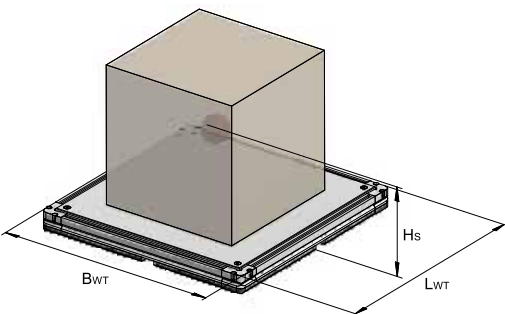
Outer stop position



Balanced load

Due attention has to be given to the position of the product being transported to ensure smooth and fault-free transport.

We recommend centering (to the extent possible) the product being transported on the pallet. The height of the center of gravity should not be greater than 0.5 times the smallest side length of the pallet.



Timing belts

The standard toothed belts are made of polyurethane with a high-strength steel-cord reinforcement. The belts have a T10 pitch and a width of 32 mm (others available on request). Different backings can be used to ensure optimum transportation. For conveyor speeds greater than 30 m/min., a coating on the tooth side is also recommended to reduce friction and noise.

Properties	Timing belt material				
	Base material	Backing			
	Polyurethane	Polyamide PAR/PAZ**	PVC white FDA	Rubber, coarse structure (supergrip)*	Linatex***
Moisture resistance	+				+
Resistant against oil and grease	+		+-	+	+-
Suitable for food (FDA-conformity)			+		
Abrasion resistance	+				+-
Wear resistance				+	
Adhesion property (inclined conveying)				+	++
Anti-frictional property (accumulation)	-	+			-
Cut-resistance	+				
Low noise		+ (PAZ)			
Color	diverse	green	white	green	red
Temperature resistance	-20 to +60°C	-20 to +60°C	-40 to +100°C	-10 to +90°C	-40 to +70°C
Hardness	90 Shore A		65 Shore A	40 Shore A	40 Shore A

*not suitable for use in the ZRF-P 2010 except with conveyor frame rework.

**PAR = Polyamid Rücken(Trag)seite; PAZ = Polyamid Zahnseite

***Counter-bending, e.g. as is the case with center drives, is not permitted

Accessories

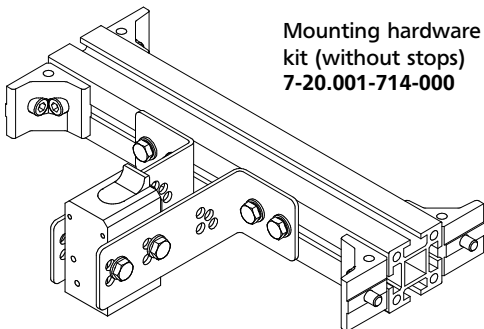
Stops

Undamped stop (SU)

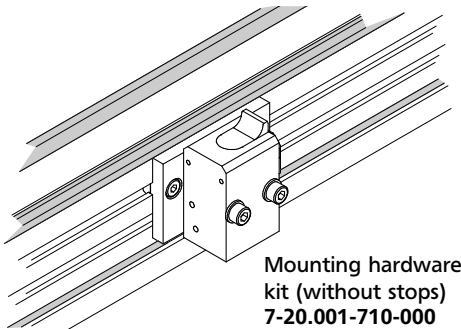
These stops are used for stopping or separating the pallets. Stop variants are selected according to the pallet weight and conveyor speed. A selection of various stop heights is available, depending on customer requirements.

Installation situation

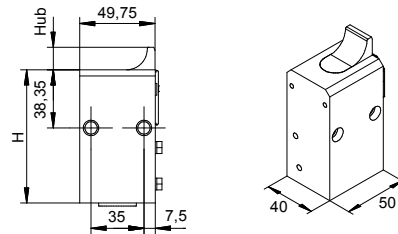
Damped or undamped stops can be connected at the center or the sides.



Installation situation: for stopping at the center.



Installation situation: for stopping at the side.



SU 400 undamped stop

Ident. no.		Stroke	v = 6	v = 9	v = 12	v = 18
		(mm)	m/min [kg]	m/min [kg]	m/min [kg]	m/min [kg]
K503011401	EW	9	400	300	250	200
K503012401	DW	9	400	300	250	200

EW = single-acting (= pressureless stop)

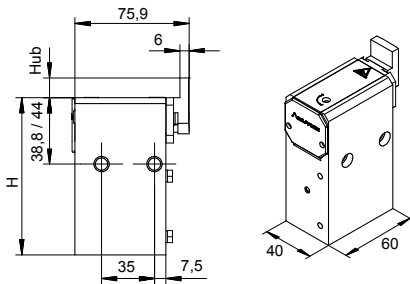
DW = double-acting (= previous stop position is maintained)



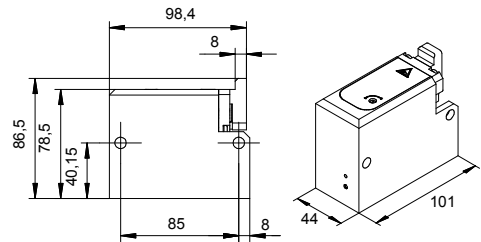
Stops

Damped stop (SD)

The damped stopping procedure enables a gentle, delayed stop of the first pallet. The pallet is prevented from shifting due to the damping action. Electric or inductive scanning devices at the stop are available as an option. For correct functioning of the stop, a minimum pallet mass of 3 kg is required.



SD 60 damped stop



SD 100 damped stop

Ident. no.	Stroke (mm)	v = 6 m/min [kg]	v = 12 m/min [kg]	v = 24 m/min [kg]	v = 30 m/min [kg]
K503021061	EW	8	3-60	3-35	3-24
K503022061	DW	8	3-60	3-35	3-24

Indicated values are applicable for a friction value of $\mu = 0,07$
Stops for higher loads available upon request

EW = single-acting (= pressureless stop)

DW = double-acting (= previous stop position is maintained)

Ident. no.	Stroke (mm)	v = 6 m/min [kg]	v = 12 m/min [kg]	v = 24 m/min [kg]	v = 30 m/min [kg]
K503021101	EW	8	3-100	3-60	3-40
K503022101	DW	8	3-100	3-60	3-40

Indicated values are applicable for a friction value of $\mu = 0,07$
Stops for higher loads available upon request

EW = single-acting (= pressureless stop)

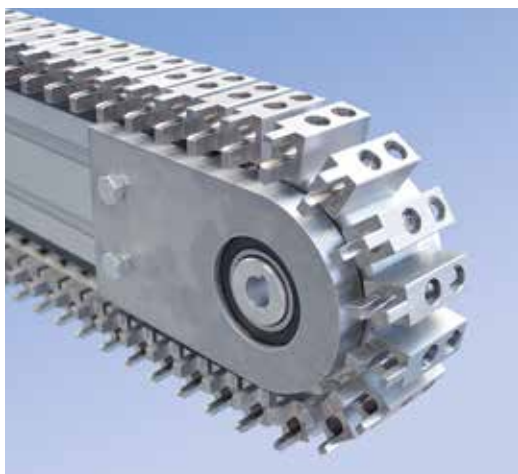
DW = double-acting (= previous stop position is maintained)

Timing Belt Conveyors

Application examples



ZRF-P 2040 with threaded bushings recessed in the timing belt and installed, customer-specific cleats



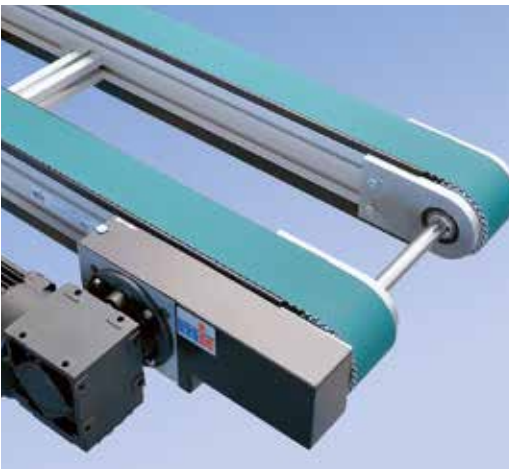
ZRF-P 2040 with VA-steel insert frames for product accommodation bolted onto the timing belt



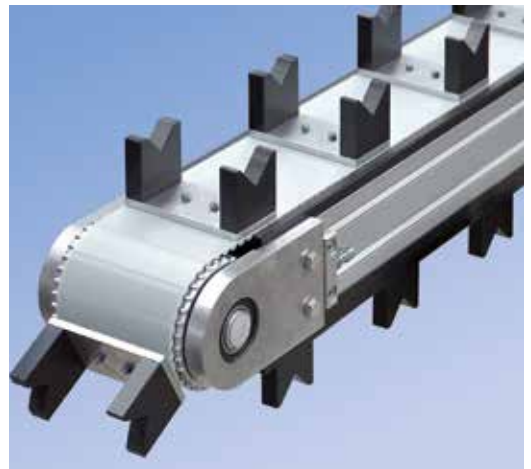
Customer-specific timing belt conveyor with elevated conveyor frame and partial cleat packages



ZRF-P 2040 with AC drive and glued-on V-blocks for accommodating bars



Dual timing belt conveyor ZRF-P 2040 with head drive AS



ZRF-P 2040 with bolted-on prismatic workpiece holders

Timing Belt Conveyors

Application examples



ZRF-P 2010 with coupled lift and transfer station



**Lift and transfer unit with turning station
and pneumatic delivery stroke**



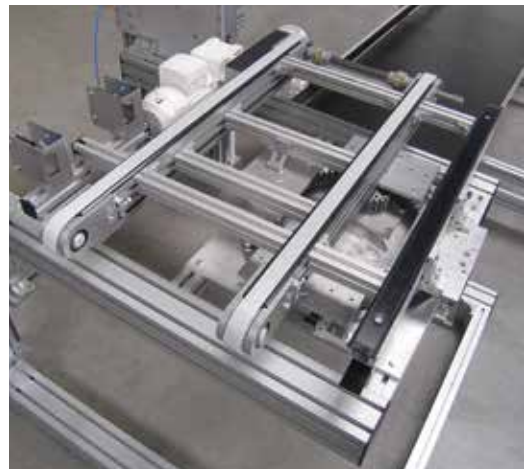
**ZRF-P 2010 with drive version
BC and side rails**



ZRF-P 2010 as right-angle transfer in ZRF-P 2040



ZRF-P 2010 with stop/separator function and Makrolon cover as protective guard



ZRF-P 2010 with head drive AS on rotary module (0/90/180/270°)

Timing Belt Conveyors

Application examples



ZRF-P 2010 as feed system and storage system with side rail and controller



Timing belt conveyor with bolted on fixtures



Tail and return of the ZRF-P 2010



Adjustable width dual-lane timing belt conveyor with cleats



Timing belt conveyor with underframe and drip pan



Infeed and discharge module with ZRF-P 2040 as lift transfer station

Chain Conveyors



Contents chain conveyors



Selecting the conveyor system 170



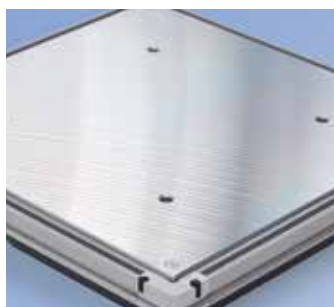
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Chain Conveyors

Selecting the conveyor system

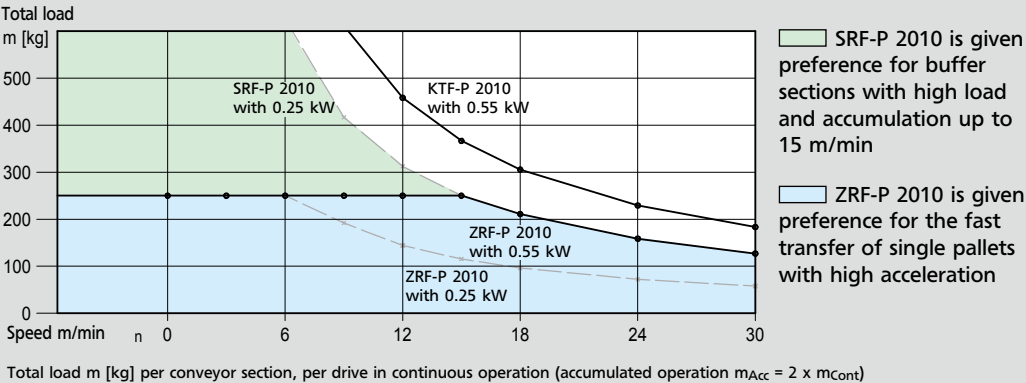
Dimensions – technical information

Conveyor system	Conveyor width [mm]	Conveyor length [mm]	Total load* usually to [kg]	Speed to [m/min]	Tail ø [mm]	Reversing operation	Accumulated operation	Cycle operation
Chain conveyors								
KTF-P 2010	200-2000	500-10000	1000	30	app. 90	•	•	•
Accumulation roller chain conveyors								
SRF-P 2010	200-2000	500-10000	750	30	app. 90	•	•	•
SRF-P 2012	200-2000	1000-10000	1000	30	app. 90	•	•	•

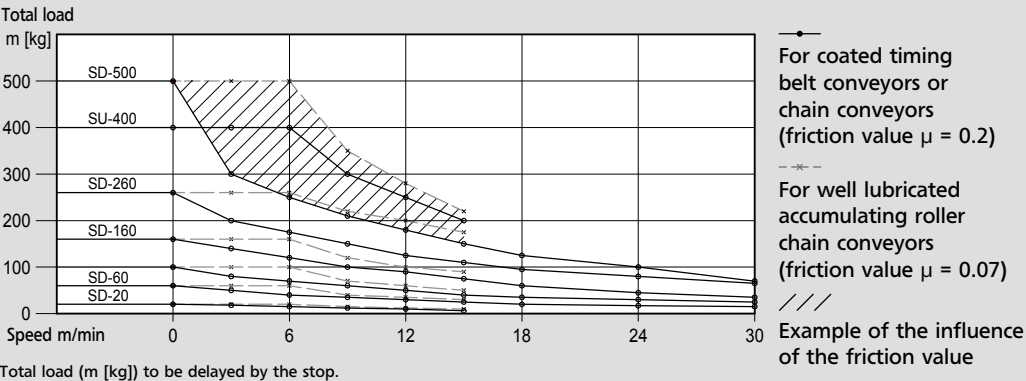
*Maximum load that is transported by the respective system with a usual configuration and for a usual application. The permissible load depends on the width, chain type, as well as load distribution, operating mode, and environmental influences.

Selection of the dual-strand conveyor based on load and speed

The diagram shows dual-strand conveyor systems depending on load and speed. The comparison shows timing belt conveyors (ZRF), chain conveyors (KTF), and accumulation roller chain conveyors (SRF).



Selection of stops



Application areas

Chain conveyors are ideally suited for indexed transportation of products. Available with different drive options, they are often used for setting up complex interlinked solutions. Typical applications are the transfer of pallets in two-strand applications for high loads at moderate speeds. For high speeds or positioning tasks, low maintenance, and low-noise timing belt conveyors are used, (see the graphic on the left and the previous chapter). Various chains, in conjunction with our robust and solidly designed wear strips, allow for conveyor systems to be ideally matched to the application.

The **KTF-P 2010 chain conveyor** is primarily used as the basic element for setting up transfer sections. The system is available as a single-strand, dual-strand, or multiple-strand system, with a single roller chain or with duplex roller chain for greater load capacity and more support area.

The **SRF-P 2010 accumulating roller chain conveyor** is also constructed from the mk 2010 profile and is suitable for accumulated operation. Thus the conveyor is ideal for buffering between workstations. Additionally, like all chain conveyors, the system can be equipped with a tensioning station and a continuous lubrication station.

Our **SRF-P 2012 accumulating roller chain conveyor** is for a higher load range (up to 1000 kg) and is designed so that even in accumulated operation the conveyor runs very quietly. The accumulation force is kept to a minimum. Typical applications are the integration of workstations, or buffering between workstations and assembly stations.

Chains

The chains used (see from page 202) are available in different versions to ensure optimal performance in accordance with the customer requirement. In the standard product range, a single roller chain and a duplex roller chain are included. The duplex chain can convey higher loads and offers a larger support surface.

For accumulated operation, accumulating roller chains are available with either plastic rollers or steel rollers. Plastic rollers are quieter and require less maintenance than do steel rollers, however they are not suitable for environments with continuous temperatures above 60°C, or for paint shop or Atex applications. When using steel rollers, it must be ensured that for the pallets to be conveyed, plastic slide strips (PE or POM) are attached on the contact surfaces.

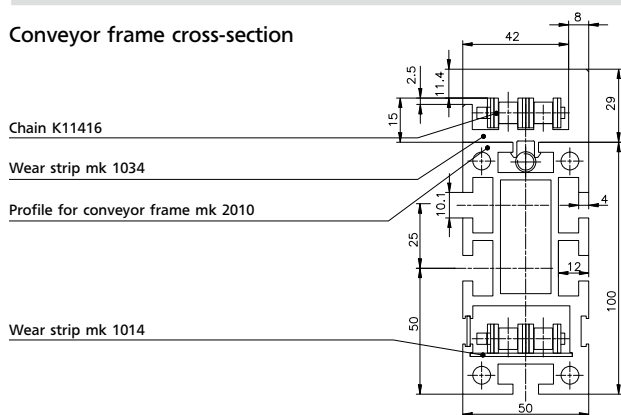
The accumulating roller chain is available with the rollers inline, one behind the other (more robust and with higher fracture strength) or with accumulating rollers offset. The offset rollers offer more contact points and thus quieter operation, and a higher maximum section load. Optionally these chains can be provided with finger-guards.

Unlike the timing belt, chains always require good lubrication. They can be used to 60°C, or to 140°F. Higher temperatures are available upon request. Low-maintenance chains are available as an option.

Chain Conveyors KTF-P 2010



Conveyor frame cross-section





Chain Conveyor System KTF-P 2010 is designed for the transport of heavy pallets. The different chain and wear strip options make for an extremely low-maintenance and robust conveyor. The wear strips have a low coefficient of friction, and provide good wear

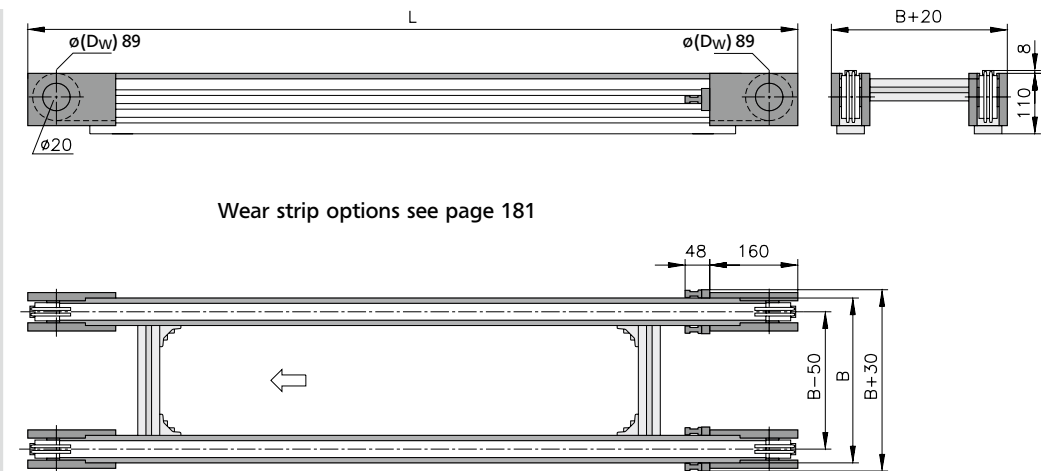
resistance over a broad temperature range (continuous to 65° C, or 149° F). Another design feature is the chain return, which occurs within the frame profile itself. T-slots are accessible on three sides on the profile frame for the attachment of stands, side rails, sensors and

stops (10 mm opening). In combination with the wide and varied drive options, System KTF-P 2010 serves as a key element for the manufacture of larger automation and material handling systems.

KTF-P 2010 AA

Chain conveyor with head drive without motor

B20.10.450



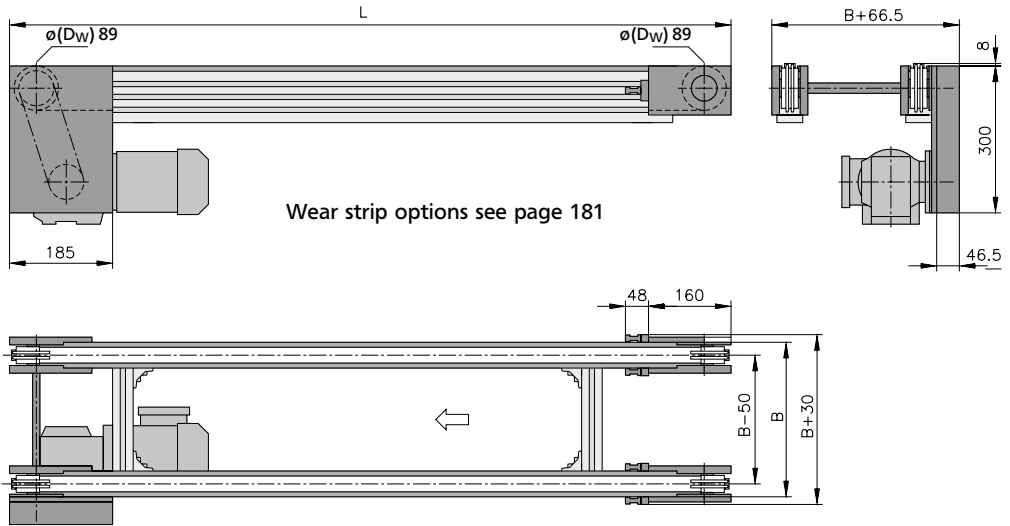
Drive option AA, offers the advantage of operating multiple conveyor strands in parallel or in series with one drive. Depending on the requirement, the conveyor is designed either with a hollow shaft or with a connecting shaft with shaft journal ($\phi 20$ mm, usable length 34 mm, incl. feather key DIN 6885) Use of attachment chain is not possible with this drive version.

Dimensions – technical information		Notes
Conveyor length L	between 500-10000 mm	any increment possible
Conveyor width B	200 to 2000 mm	
Chain	1/2" single or dual strand	see from page 202
Drive location	discharge side left/right	
Drive and speed	to 30 m/min (100 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 1000 kg (2200 lbs) section load to 150 kg/m (with duplex chain)	higher on request

KTF-P 2010 AC

Chain conveyor with head drive, standard

B20.10.453



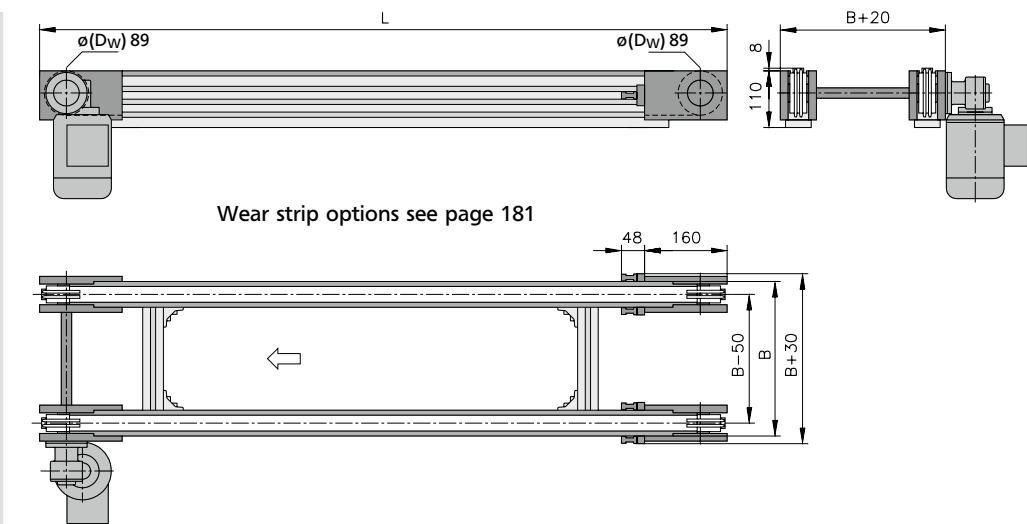
The sprocket ensures outstanding transmission of the motor power. Use of attachment chain is not possible with this drive version.

	Dimensions – technical information	Notes
Conveyor length L	between 500-10000 mm	any increment possible
Conveyor width B	200 to 2000 mm	
Chain	1/2" single or dual strand	see from page 202
Drive location	discharge side left/right below	
Drive and speed	to 30 m/min (100 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 1000 kg (2200 lbs) section load to 150 kg/m (with duplex chain)	higher on request

KTF-P 2010 AF

Chain conveyor with head drive, direct

B20.10.459



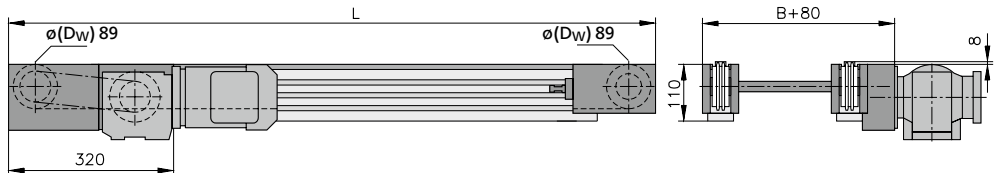
By placing the motor directly onto the drive shaft, this drive version minimizes not only the space required at the drive but also the number of moving parts and maintenance requirements. Use of attachment chain is not possible with this drive version.

Dimensions – technical information		Notes
Conveyor length L	between 500-10000 mm	any increment possible
Conveyor width B	200 to 2000 mm	
Chain	1/2" single or dual strand	see from page 202
Drive location	discharge side left/right below	
Drive and speed	to 30 m/min (100 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 1000 kg (2200 lbs) section load to 150 kg/m (with duplex chain)	higher on request

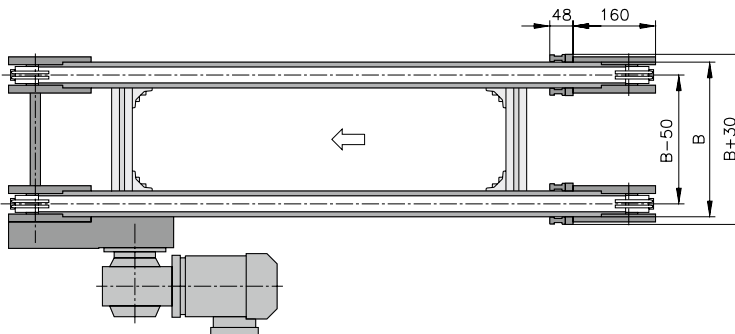
KTF-P 2010 AS

Chain conveyor with head drive, outside

B20.10.457



Wear strip options see page 181



The overall height of the drive assembly is held to an absolute minimum. Use of attachment chain is not possible with this drive version.

Dimensions – technical information		Notes
Conveyor length L	between 700-10000 mm	any increment possible
Conveyor width B	200 to 2000 mm	
Chain	1/2" single or dual strand	see from page 202
Drive location	discharge side left/right	
Drive and speed	to 30 m/min (100 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 1000 kg (2200 lbs) section load to 150 kg/m (with duplex chain)	higher on request

Chain Conveyor with head drive, dual-strand

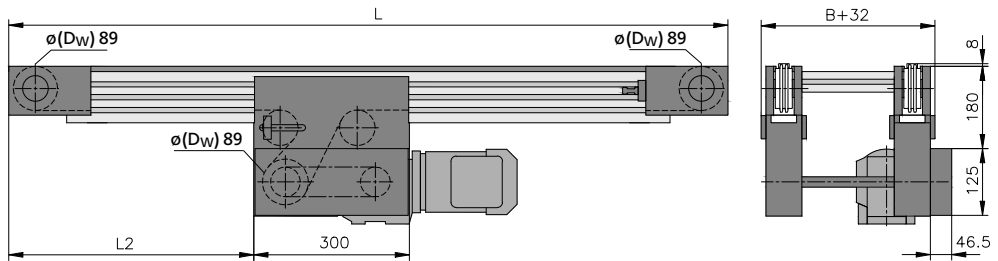
Wear strip options see page 181

	Dimensions – technical information	Notes
Conveyor length L	between 500-10000 mm	any increment possible
Conveyor width B	200 to 2000 mm	
Chain	1/2" single or dual strand	see from page 202
Drive location	discharge side left/right below	
Drive and speed	to 30 m/min (100 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 1000 kg (2200 lbs) section load to 150 kg/m (with duplex chain)	higher on request

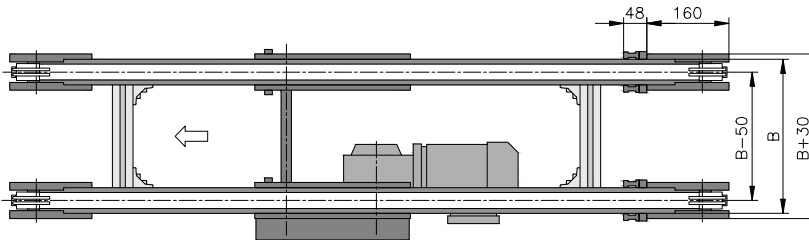
KTF-P 2010 BC

Chain Conveyor with center drive, standard

B20.10.458



Wear strip options see page 181



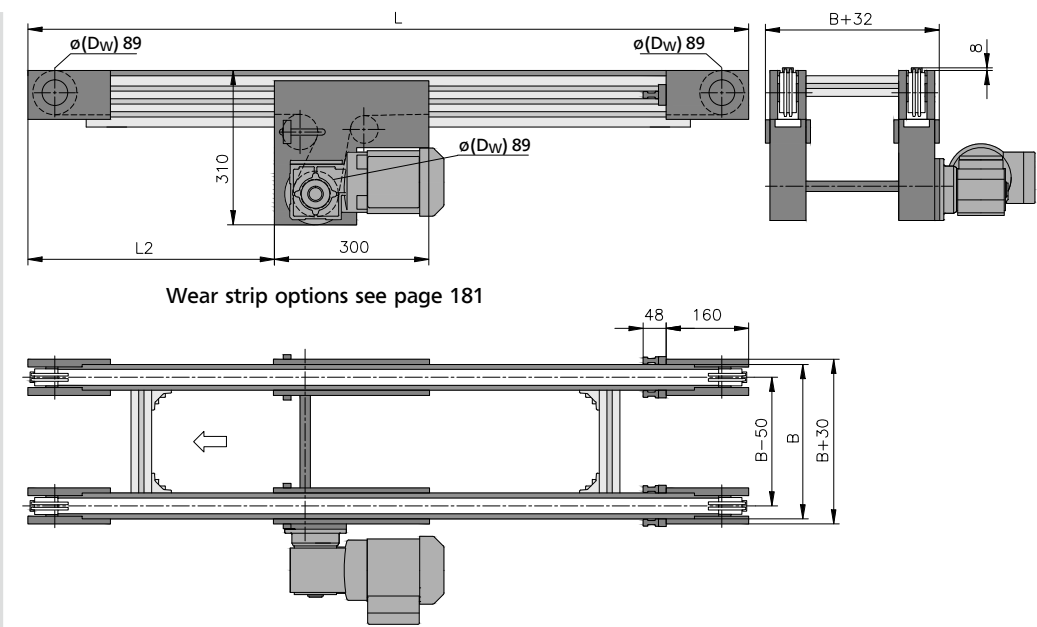
The compact design, and the ability to place the drive location anywhere along the conveyor frame (during manufacture), simplifies the integration of this conveyor into new or existing equipment. Use of attachment chain is not possible with this drive version.

Dimensions – technical information		Notes
Conveyor length L	between 700-10000 mm	any increment possible
Conveyor width B	200 to 2000 mm	
Chain	1/2" single or dual strand	see from page 202
Drive location	left/right below	
Drive and speed	to 30 m/min (100 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 1000 kg (2200 lbs) section load to 150 kg/m (with duplex chain)	higher on request

KTF-P 2010 BF

Chain Conveyor with center drive, direct

B20.10.461



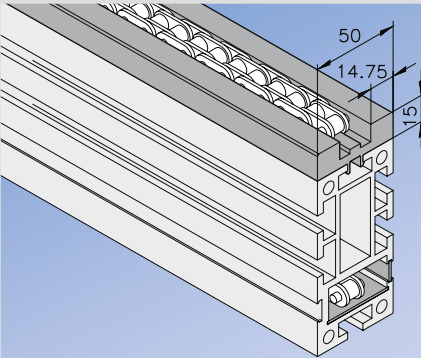
Thanks to the motor mounted directly on the drive shaft, this drive version keeps spatial requirements and maintenance efforts to a minimum. The compact conveyor frame and the possibility of freely selecting the drive position (during manufacture) over the entire length of the conveyor, facilitates integration of the conveyor in existing systems. The travel direction is reversible. Use of attachment chain is not possible with this drive version.

	Dimensions – technical information	Notes
Conveyor length L	between 700-10000 mm	any increment possible
Conveyor width B	200 to 2000 mm	
Chain	1/2" single or dual strand	see from page 202
Drive location	left/right below	
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	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 1000 kg (2200 lbs) section load to 150 kg/m (with duplex chain)	higher on request

mk guide and wear strips feature low friction and high wear resistance.

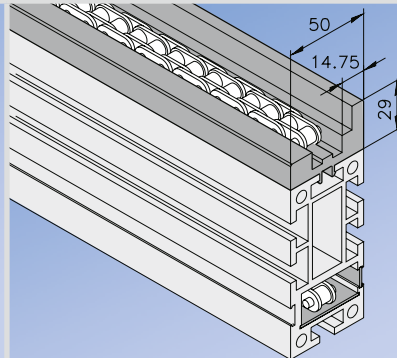
The wear strips are made of PE-UHMW (PE-1000). Temperature maximum is 65° C (149° F).

Option A



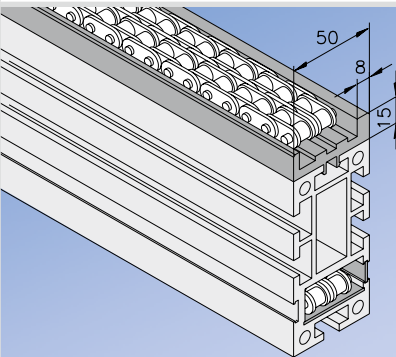
Wear strip above mk 1037, 22.37.2000
Wear strip below 21.14.0001
Closure strip K10230/12

Option B



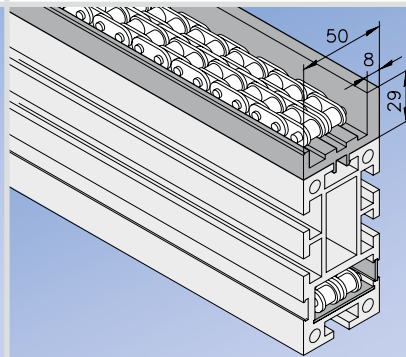
Wear strip above mk 1038, 22.38.2000
Wear strip below 21.14.0001
Closure strip K10230/12

Option C



Wear strip above mk 1033, 22.33.2000
Wear strip below 21.14.0001
Closure strip K10230/12

Option D

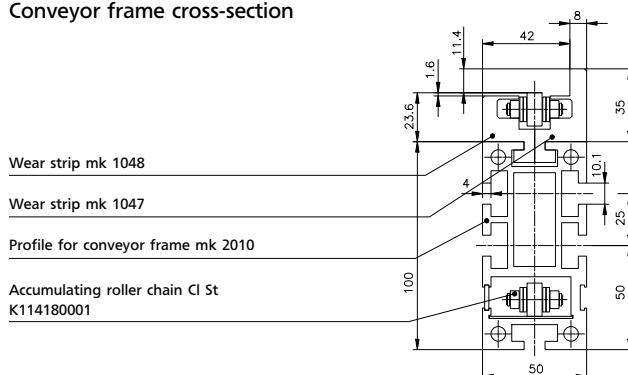


Wear strip above mk 1034, 22.34.2000
Wear strip below 21.14.0001
Closure strip K10230/12

Chain Conveyors SRF-P 2010



Conveyor frame cross-section





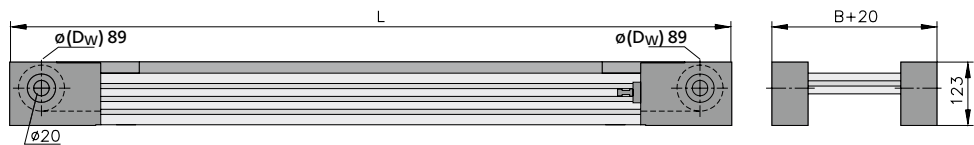
Accumulating roller chain conveyor SRF-P 2010 is designed for the transport and accumulation of loads up to 750 kg (1,650 lbs). As pallets travel on the large idler rollers, the conveyor is very quiet even in accumulation zones. The force required to hold accumulating pallets is minimal. Typical applications include product

transfer between workstation or accumulation of products between processes. Entire handling systems can be designed using this conveyor system. T-slots are accessible on three sides on the profile frame for the attachment of stands, side rails, sensors and stops (10 mm opening).

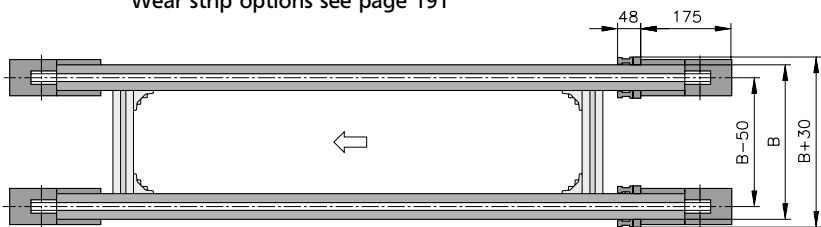
SRF-P 2010 AA

Accumulating roller chain conveyor with head drive, without motor

B20.10.554



Wear strip options see page 191



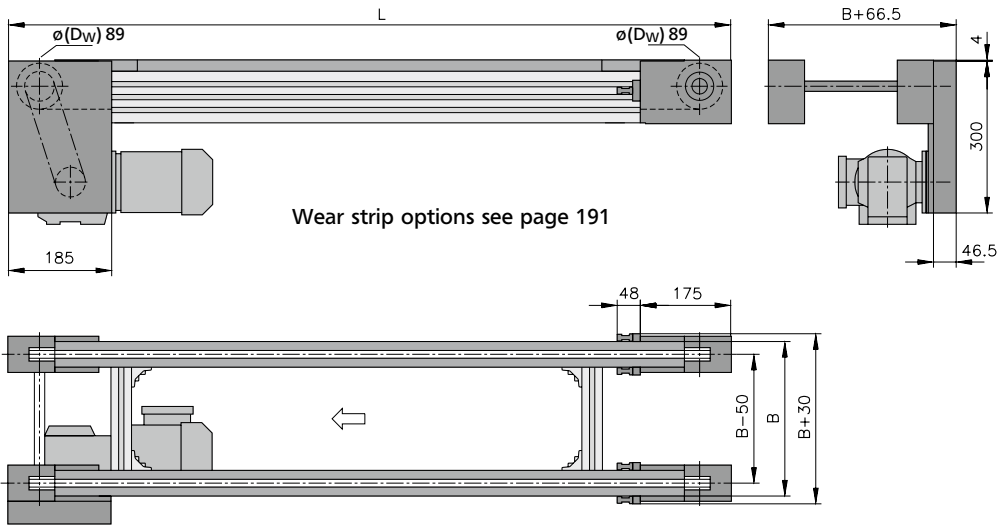
Drive version AA is primarily used where multiple lanes are to be slave driven, either parallel or in-line, using a single drive motor. Depending on the requirement, the conveyor is designed either with a hollow shaft or with a connecting shaft with shaft journal ($\varnothing 20$ mm, usable length 34 mm, incl. feather key DIN 6885).

Dimensions – technical information		Notes
Conveyor length L	between 500-10000 mm	any increment possible
Conveyor width B	200 to 2000 mm	
Chain	accumulating roller chain 1/2" with plastic or steel roller	see from page 202
Drive and speed	to 30 m/min (100 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 750 kg (1650 lbs) section load to 100 kg/m (in series) section load to 150 kg/m (offset)	higher on request

SRF-P 2010 AC

Accumulating roller chain conveyor with head drive, standard

B20.10.555



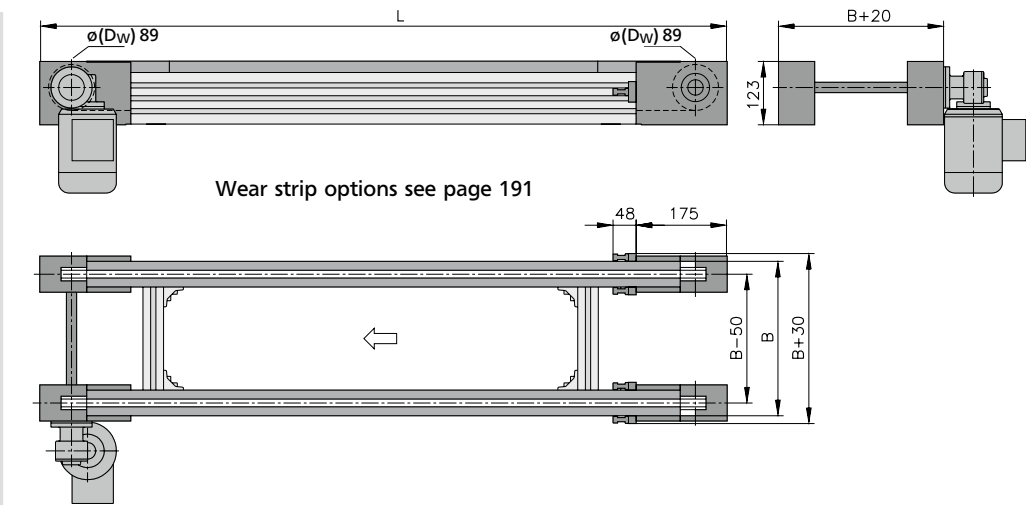
The sprocket ensures outstanding transmission of the motor power.

	Dimensions – technical information	Notes
Conveyor length L	between 500-10000 mm	any increment possible
Conveyor width B	200 to 2000 mm	
Chain	accumulating roller chain 1/2" with plastic or steel roller	see from page 202
Drive location	discharge side left/right	
Drive and speed	to 30 m/min (100 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 750 kg (1650 lbs) section load to 100 kg/m (in series) section load to 150 kg/m (offset)	higher on request

SRF-P 2010 AF

Accumulating roller chain conveyor with head drive, direct

B20.10.561



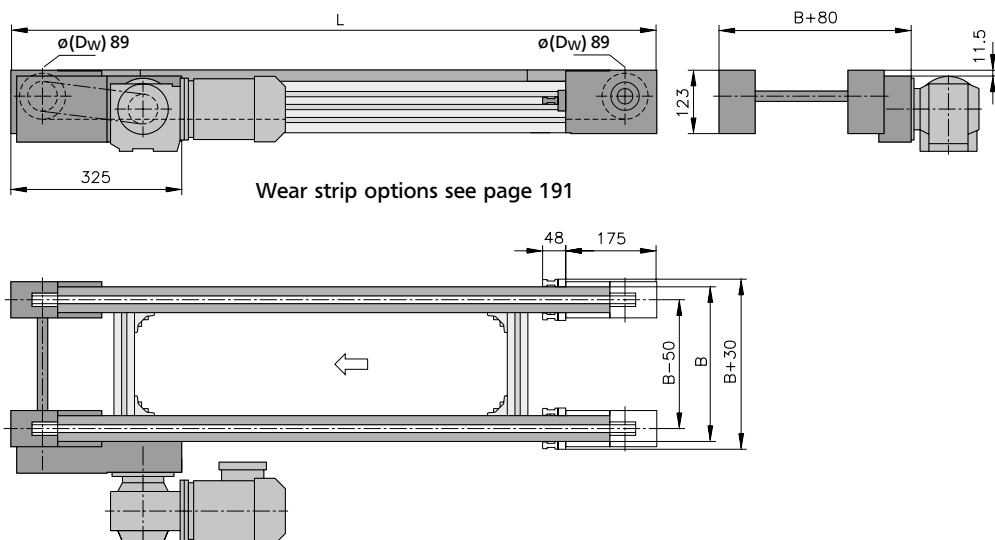
By placing the motor directly onto the drive shaft, this drive version minimizes not only the space required at the drive but also the number of moving parts and maintenance requirements.

Dimensions – technical information		Notes
Conveyor length L	between 500-10000 mm	any increment possible
Conveyor width B	200 to 2000 mm	
Chain	accumulating roller chain 1/2" with plastic or steel roller	see from page 202
Drive location	discharge side left/right	
Drive and speed	to 30 m/min (100 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 750 kg (1650 lbs) section load to 100 kg/m (in series) section load to 150 kg/m (offset)	higher on request

SRF-P 2010 AS

Accumulating roller chain conveyor with head drive, outside

B20.10.559



The overall height of the drive assembly is held to an absolute minimum.

Dimensions – technical information		Notes
Conveyor length L	between 700-10000 mm	any increment possible
Conveyor width B	200 to 2000 mm	
Chain	accumulating roller chain 1/2" with plastic or steel roller	see from page 202
Drive location	discharge side left/right	
Drive and speed	to 30 m/min (100 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 750 kg (1650 lbs) section load to 100 kg/m (in series) section load to 150 kg/m (offset)	higher on request

Accumulating roller chain conveyor with head drive, dual-strand

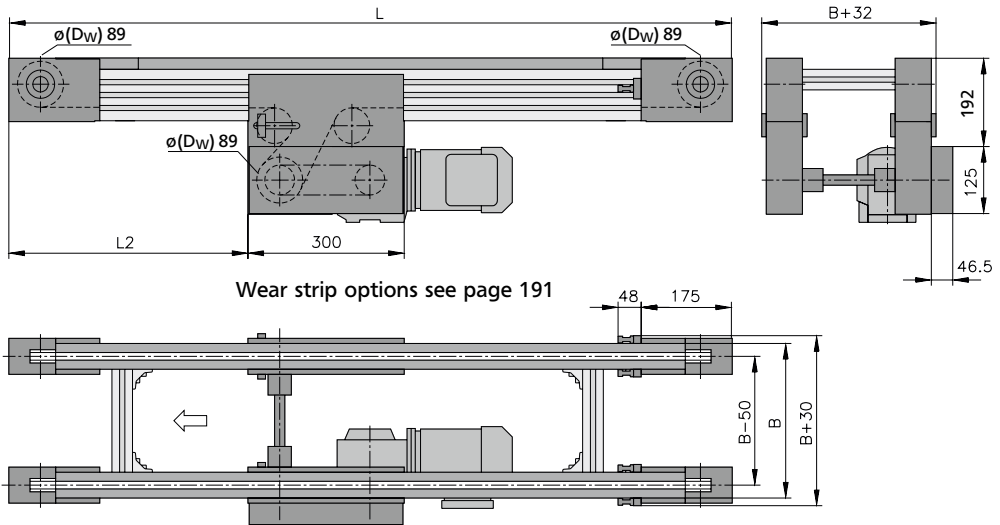
Wear strip options see page 191

	Dimensions – technical information	Notes
Conveyor length L	between 500-10000 mm	any increment possible
Conveyor width B	200 to 2000 mm	
Chain	accumulating roller chain 1/2" with plastic or steel roller	see from page 202
Drive location	discharge side left/right	
Drive and speed	to 30 m/min (100 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 750 kg (1650 lbs) section load to 100 kg/m (in series) section load to 150 kg/m (offset)	higher on request

SRF-P 2010 BC

Accumulating roller chain conveyor with center drive, standard

B20.10.560



The compact design, and the ability to place the drive location anywhere along the conveyor frame (during manufacture), simplifies the integration of this conveyor into new or existing equipment. The drive sprocket in conjunction with the snub rollers ensures an outstanding transmission of the motor torque.

	Dimensions – technical information	Notes
Conveyor length L	between 700-10000 mm	any increment possible
Conveyor width B	200 to 2000 mm	
Chain	accumulating roller chain 1/2" with plastic or steel roller	see from page 202
Drive location	left/right below	
Drive and speed	to 30 m/min (100 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 750 kg (1650 lbs) section load to 100 kg/m (in series) section load to 150 kg/m (offset)	higher on request

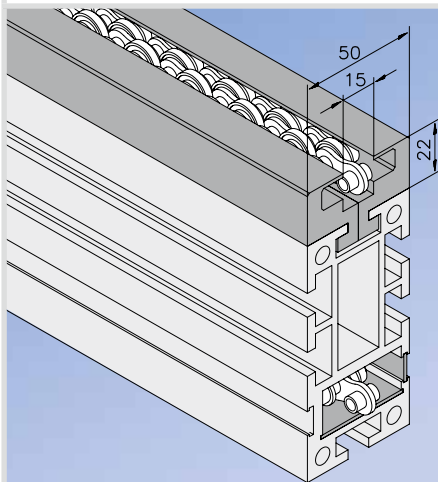
Accumulating roller chain conveyor with center drive, direct

	Dimensions – technical information	Notes
Conveyor length L	between 700-10000 mm	any increment possible
Conveyor width B	200 to 2000 mm	
Chain	accumulating roller chain 1/2" with plastic or steel roller	see from page 202
Drive location	left/right below	
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	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 750 kg (1650 lbs) section load to 100 kg/m (in series) section load to 150 kg/m (offset)	higher on request

mk guide and wear strips feature low friction and high wear resistance.

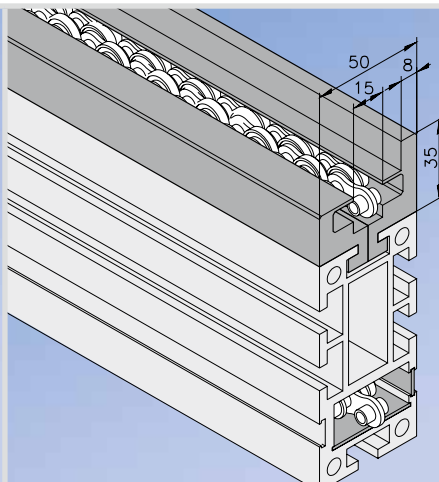
The wear strips are made of PE-UHMW (PE-1000). Temperature maximum is 65° C (149° F).

Option A



Wear strip above mk 1048, 22.48.2000
Wear strip below 21.14.0001
Closure strip K10230/12

Option B

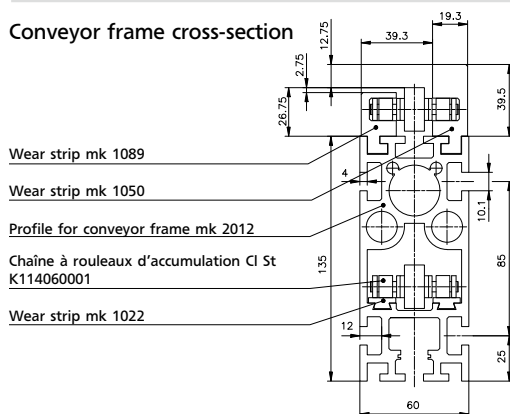


Wear strip above right mk 1047, 22.47.2000
Wear strip above left mk 1048, 22.48.2000
Wear strip below 21.14.0001
Closure strip K10230/12

Chain Conveyors SRF-P 2012



Conveyor frame cross-section





Accumulating roller chain conveyor SRF-P 2012 is designed for the transport and accumulation of loads up to 1000 kg (2,200 lbs). As pallets travel on the large idler rollers, the conveyor is very quiet even in accumulation zones. The force required

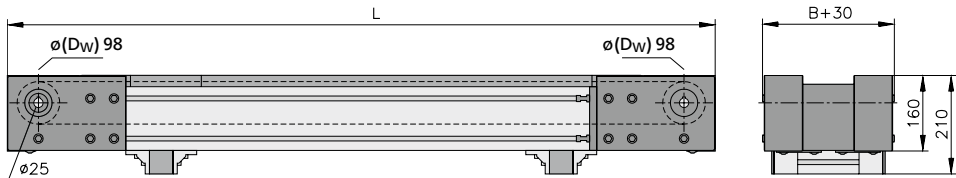
to hold accumulating pallets is minimal. Typical applications include product transfer between workstations or the accumulation of products between processes. Entire handling systems can be designed using this conveyor system. T-slots are accessible on

three sides on the profile frame for the attachment of stands, side rails, sensors and stops (10 mm opening). mk offers a low-maintenance design for extending time between service intervals.

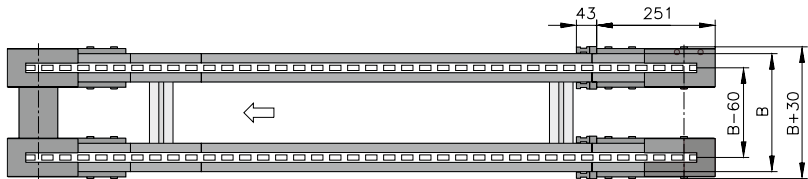
SRF-P 2012 AA

Accumulating roller chain conveyor with head drive without motor

B20.12.008



Wear strip options see page 199



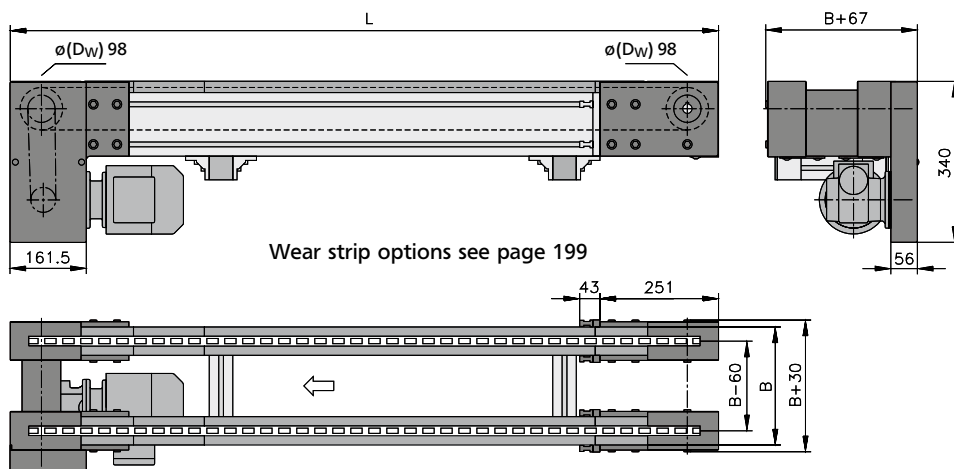
Drive version AA is primarily used where multiple lanes are to be slave driven, either parallel or in-line using a single drive motor. Depending on the requirement, the conveyor is designed either with hollow shaft or with a connecting shaft with shaft journal (\varnothing 20/25 mm, usable length 40 mm, incl. feather key DIN 6885).

Dimensions – technical information		Notes
Conveyor length L	between 1000-10000 mm	any increment possible depending on chain pitch
Conveyor width B	200 to 2000 mm	
Chain	accumulating roller chain 3/4" with plastic or steel roller	see from page 202
Drive and speed	to 30 m/min (100 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 1000 kg (2200 lbs) section load to 150 kg (330 lbs) /m	higher on request

SRF-P 2012 AC

Accumulating roller chain conveyor with head drive, standard

B20.12.007



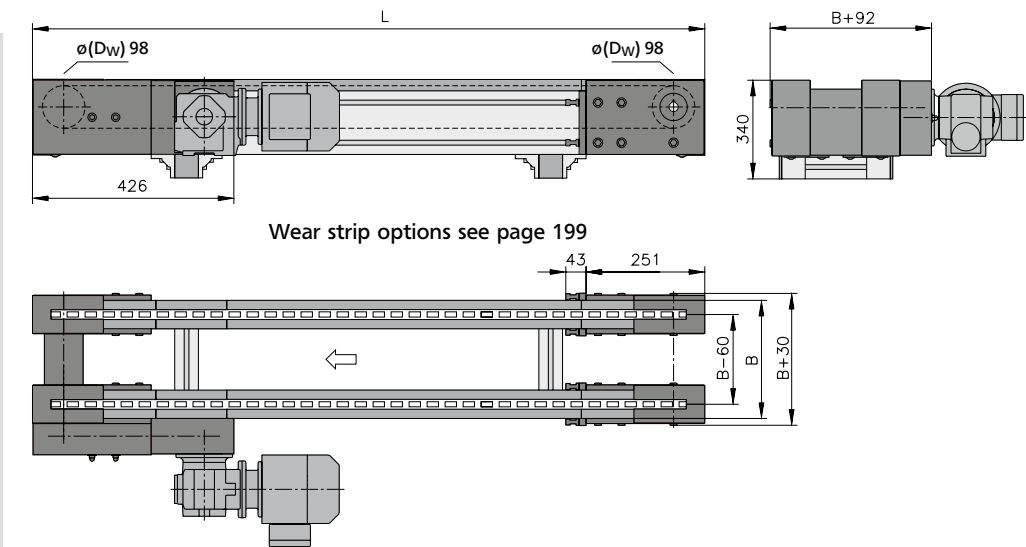
The sprocket ensures outstanding transmission of the motor power.

	Dimensions – technical information	Notes
Conveyor length L	between 1000-10000 mm	any increment possible depending on chain pitch
Conveyor width B	200 to 2000 mm	
Chain	accumulating roller chain 3/4" with plastic or steel roller	see from page 202
Drive location	discharge side left/right below	
Drive and speed	to 30 m/min (100 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 1000 kg (2200 lbs) section load to 150 kg (330 lbs) /m	higher on request

SRF-P 2012 AS

Accumulating roller chain conveyor with head drive, outside

B20.12.009



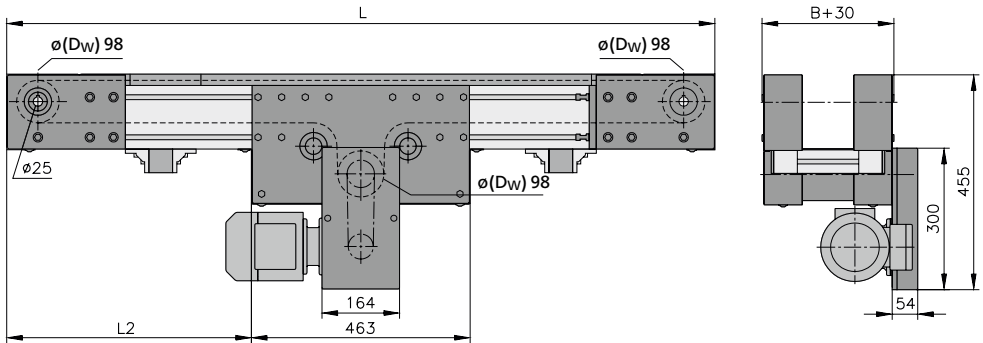
The overall height of the drive assembly is held to an absolute minimum.

Dimensions – technical information		Notes
Conveyor length L	between 1000-10000 mm	any increment possible depending on chain pitch
Conveyor width B	200 to 2000 mm	
Chain	accumulating roller chain 3/4" with plastic or steel roller	see from page 202
Drive location	discharge side left/right	
Drive and speed	to 30 m/min (100 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 1000 kg (2200 lbs) section load to 150 kg (330 lbs) /m	higher on request

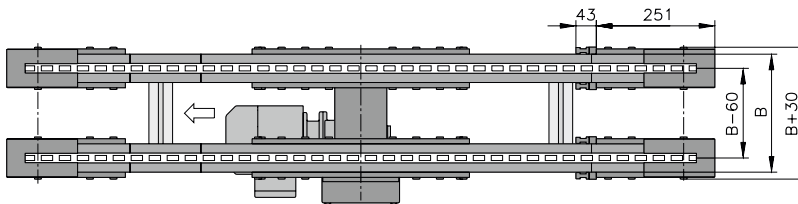
SRF-P 2012 BC

Accumulating roller chain conveyor with center drive, standard

B20.12.010



Wear strip options see page 199



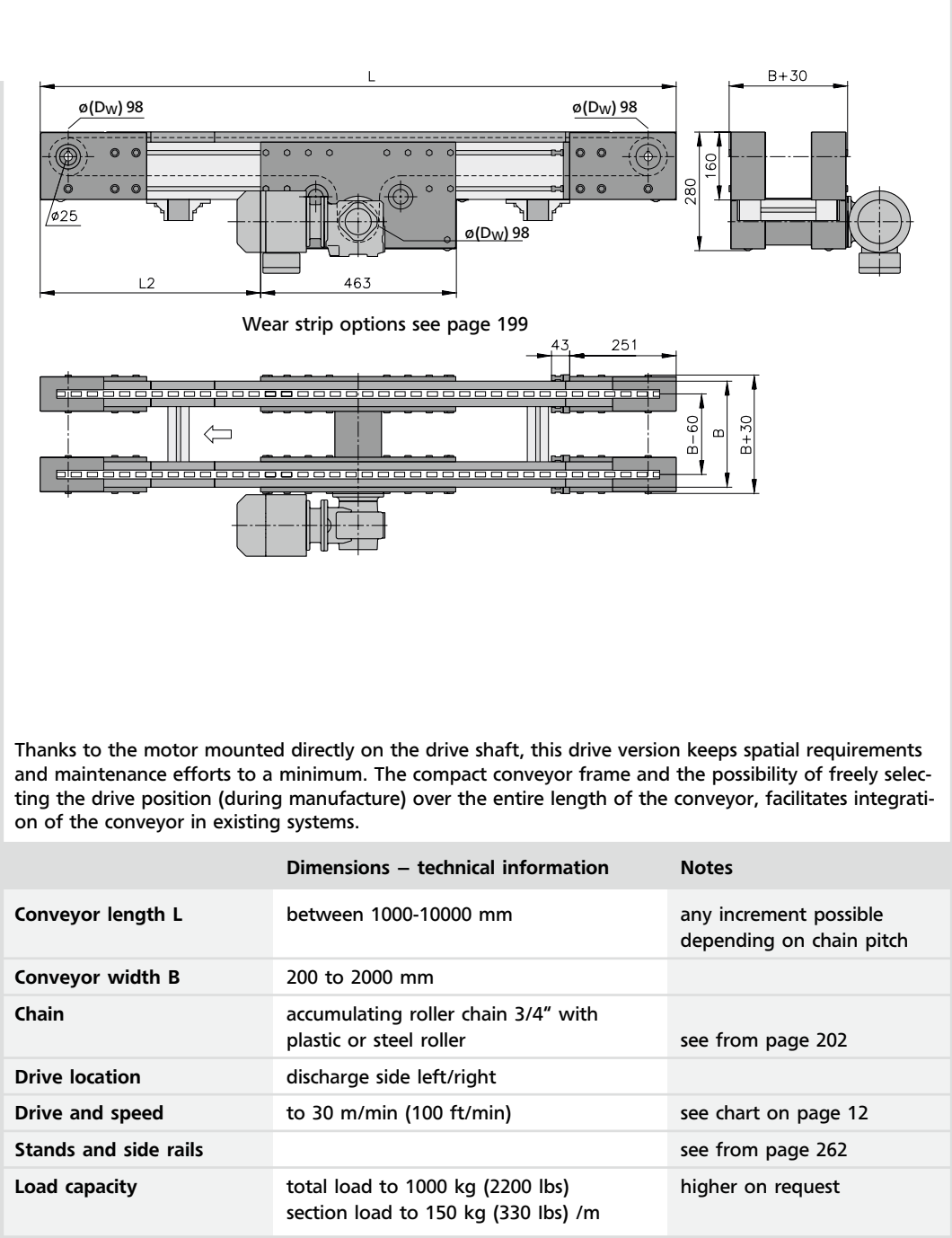
The compact design, and the ability to move the drive location anywhere along the conveyor frame, simplifies the integration of this conveyor into new or existing equipment.

	Dimensions – technical information	Notes
Conveyor length L	between 1000-10000 mm	any increment possible depending on chain pitch
Conveyor width B	200 to 2000 mm	
Chain	accumulating roller chain 3/4" with plastic or steel roller	see from page 202
Drive location	left/right below	
Drive and speed	to 30 m/min (100 ft/min)	see chart on page 12
Stands and side rails		see from page 262
Load capacity	total load to 1000 kg (2200 lbs) section load to 150 kg (330 lbs) /m	higher on request

SRF-P 2012 BF

Accumulating roller chain conveyor with center drive, direct

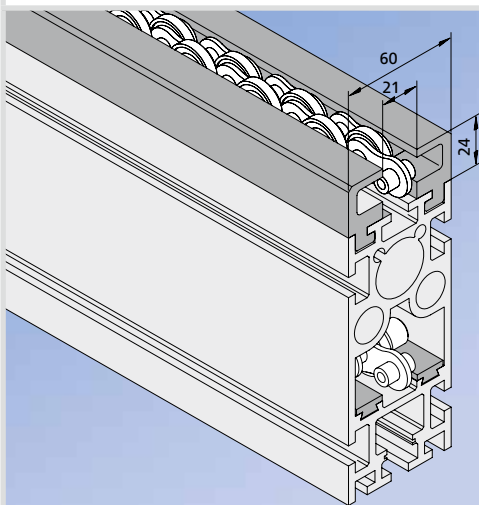
B20.12.011



mk guide and wear strips feature low friction and high wear resistance.

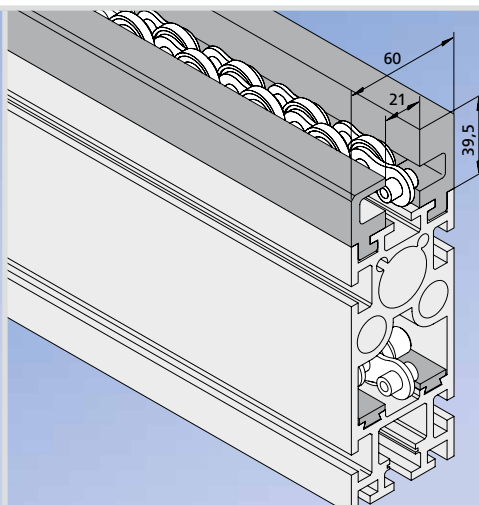
The wear strips are made of PE-UHMW (PE-1000). Temperature maximum is 65° C (149° F).

Option A



Wear strips above mk 1089, 22.89.2000
Wear strip below mk 1022, 22.22.2000

Option B



Wear strip above right mk 1050, 22.50.2000
Wear strip above left mk 1089, 22.89.2000
Wear strip below mk 1022, 22.22.2000

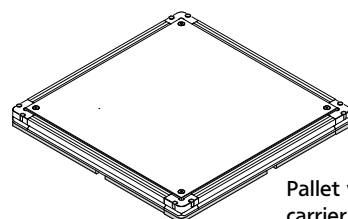
Accessories

Pallets

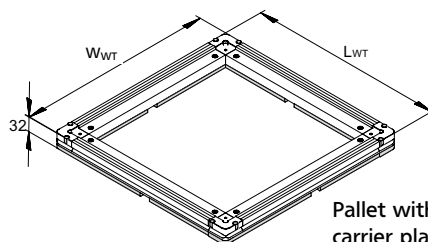
Pallets can be freely configured to meet special requirements; they can be delivered completely pre-assembled or for assembly on a do-it-yourself basis. The max. total weight per pallet is determined based on the allowable total load per meter (100 kg/m) for the system. Please note, that for optimal guidance of the pallets, the clear width of the side rail must be 2-4 mm greater than the width of the pallets.

Individual pallet components:

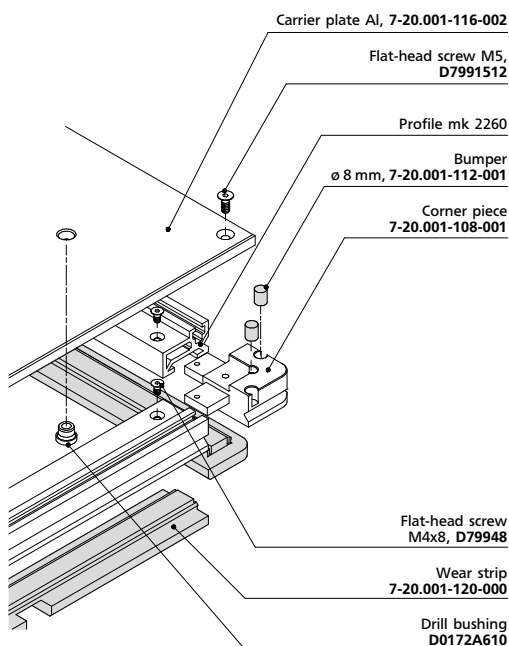
- Aluminum profile frame consisting of the mk 2260 profile and corner pieces
- PE-1000 plastic wear strips underneath the profile frame
- Carrier plates of various plate thicknesses (5, 6, 8, 10 and 12 mm)
- Bumpers/Rubber buffers
- Positioning bushings



Pallet with carrier plate
7-20.001-116-000



Pallet without carrier plate
7-20.001-116-050



W _{WT} mm	L _{WT} mm	Carrier plate mm	Weight _{WT} kg
400	400	8	5
400	600	8	8
600	600	10	14
600	800	10	16
800	800	12	24
800	1000	12	30

More information from page 157

Maintenance kit

Assembly aid for chain replacement

The accumulating roller chain has to be loosened at the tail of the conveyor in order to replace it. This integrated assembly aids the in facilitation of the chain replacement by a separate removable piece of the wear strip. The accumulating roller chain has to be moved along until the chain master link, marked by a blue ring, appears at the opened space. The accumulating roller chain can then be separated and replaced.



Service indicator

mk offers an automatic service indicator as an option, which indicates when the chain needs to be shortened. The indicator lights work similar to a traffic light system.

- Green: OK
- Yellow: Shortening not yet required
- Red: Chain has to be shortened, unless the maximum chain extension of 3% has been reached

The chain and sprockets need to be replaced in the case of a 3% chain extension.

Continuous lubrication station

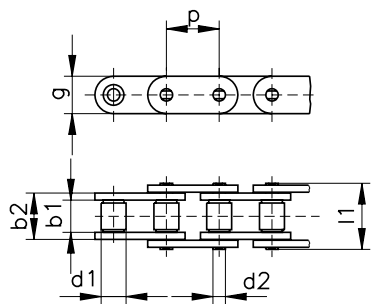
Manual chain lubrication is not required if the lube station (optional) is used. Integrated oil brushes are used for the continuous lubrication of the chain with oil.

This station can easily be retrofitted. Along with a decentralized version with cartridges and a battery-operated drive; also available is a central lubrication station with PLC controlled pulses.

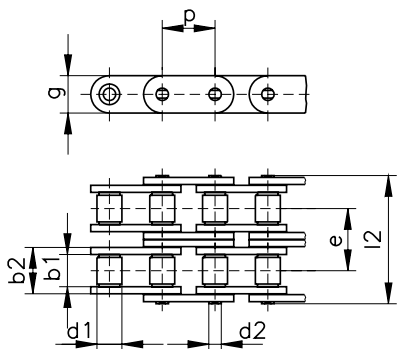


Accessories

Chains



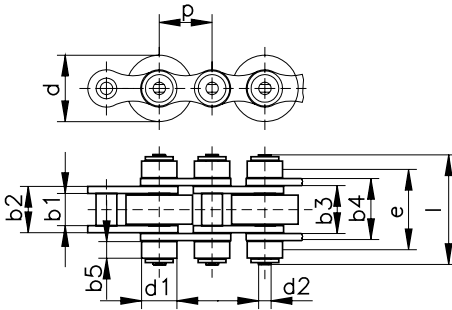
to 60° C/140° F (Specials to 120° C/248° F)



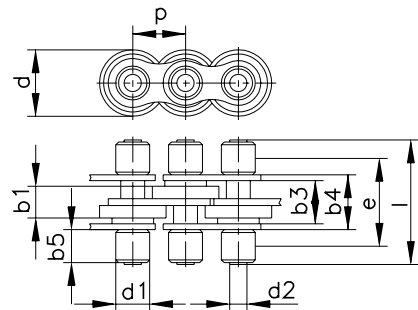
to 60° C/140° F (Specials to 120° C/248° F)

Dimensions	Single-strand roller chain with straight nuts	Dimensions	Dual-strand roller chain with straight nuts
	KTF-P 2010		KTF-P 2010
	Chain K11402 Connecting link K114020001		Chain K11416 Connecting link K114160001
p	12.70 (1/2" x 5/16")	p	12.70 (1/2" x 5/16")
b1	7.75	b1	7.75
b2	11.30	b2	11.30
b3	•	b3	•
b4	•	b4	•
d1	8.51	d1	8.51
g	11.50	g	11.80
d2	4.45	d2	4.45
l1	17.00	l1	•
l2	•	l2	31.00
e	•	e	13.92
l	•	l	•
b5	•	b5	•
d	•	d	•

St = Steel roller, PI = Plastic roller, Hg = Hand guard, CI = Connecting link



Accumulation rollers in series
to 60° C/140° F (Specials to 120° C/248° F)



Offset accumulation rollers
to 60° C/140° F (Specials to 120° C/248° F)

Dimensions	Accumulating roller chain plastic or steel rollers		Dimensions	Accumulating roller chain plastic or steel rollers	
	SRF-P 2010 Chain St K11418 Chain PI K11435 Chain St Hg K11425 Chain PI Hg K11424 CI K114180001	SRF-P 2012 Chain St K11406 Chain PI K11407 CI K114060001		SRF-P 2010 Chain St K11421 Chain PI K11420 CI K114180001	SRF-P 2012 Chain St K11423 Chain PI K11422 CI K114060001
p	12.70 (1/2")	19.05 (3/4")	p	12.70 (1/2")	19.05 (3/4")
b1	7.75	11.68	b1	9.20	11.70
b2	11.15	15.62			
b3	11.40	15.80	b3	11.40	15.80
b4	14.70	20.00	b4	14.50	19.55
d1	8.50	12.00	d1	8.51	12.07
g	•	•	g	•	•
d2	4.45	5.72	d2	4.45	5.72
l1	•	•	l1	•	•
l2	•	•	l2	•	•
e	•	•	e	18.70	31.50
l	27.00	48.00	l	27.00	45.00
b5	4.00	11.50	b5	6.25	12.73
d	16.00	24.00	d	16.00	24.00

Accessories

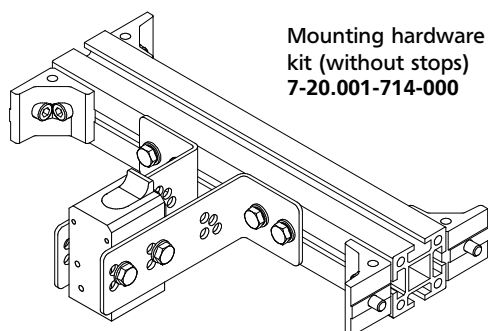
Stops

Undamped stop (SU)

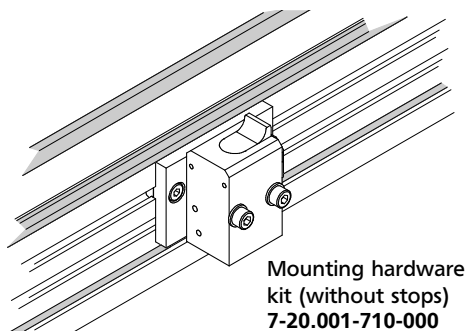
These stops are used for stopping or separating the pallets. Stop variants are selected according to the pallet weight and conveyor speed. A selection of various stop heights is available, depending on customer requirements.

Installation example

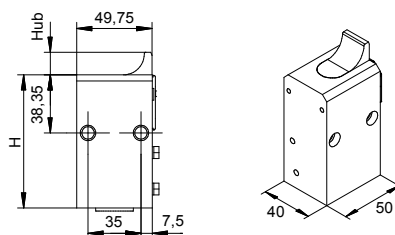
Damped or undamped stops can be connected at the center or the sides.



Installation example: for stopping at the center.



Installation example: for stopping at the side.



SU 400 undamped stop

Ident. no.		Stroke	v = 6	v = 9	v = 12	v = 18
		(mm)	m/min [kg]	m/min [kg]	m/min [kg]	m/min [kg]
K503011401	EW	9	400	300	250	200
K503012401	DW	9	400	300	250	200

EW = single-acting (= pressureless stop)

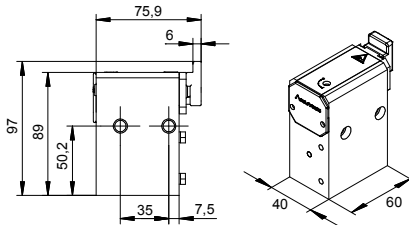
DW = double-acting (= previous stop position is maintained)



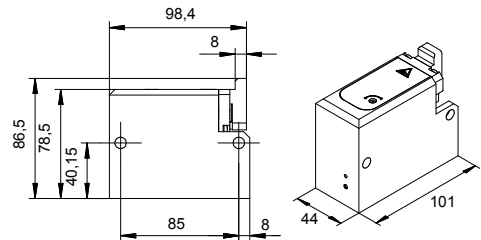
Stops

Damped stop (SD)

The damped stopping procedure enables a gentle, delayed stop of the first pallet. The pallet is prevented from shifting due to the damping action. Electric or inductive scanning devices at the stop are available as an option. For correct functioning of the stop, a minimum pallet mass of 3 kg is required.



SD 60 damped stop



SD 100 damped stop

Ident. no.	Stroke (mm)	v = 6 m/min [kg]	v = 12 m/min [kg]	v = 24 m/min [kg]	v = 30 m/min [kg]
K503021061	EW	8	3-60	3-35	3-24
K503022061	DW	8	3-60	3-35	3-24

Indicated values are applicable for a friction value of $\mu = 0,07$
Stops for higher loads available upon request

EW = single-acting (= pressureless stop)
DW = double-acting (= previous stop position is maintained)

Ident. no.	Stroke (mm)	v = 6 m/min [kg]	v = 12 m/min [kg]	v = 24 m/min [kg]	v = 30 m/min [kg]
K503021101	EW	8	3-100	3-60	3-40
K503022101	DW	8	3-100	3-60	3-40

Indicated values are applicable for a friction value of $\mu = 0,07$
Stops for higher loads available upon request

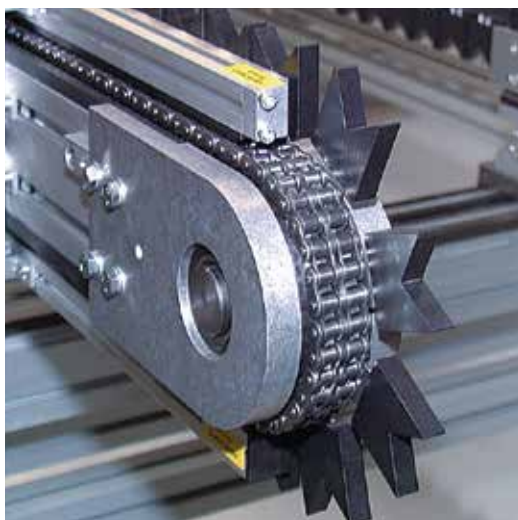
EW = single-acting (= pressureless stop)
DW = double-acting (= previous stop position is maintained)

Chain Conveyors

Application examples



KTF-P 2010 with head drive AC with drip pan and moveable underframe



KTF-P 2010 with prismatic holders



KTF-P 2010 with adjustable side rails and adjustable handles for frequently changing product widths



3-strand conveyor KTF-P 2010



Combination of belt conveyor and chain conveyor with transverse rail for simulation of a floor obstruction



KTF-P 2040 with custom constructions that ensure horizontal mounting of the products to be conveyed for incline transport



Chain conveyor KTF-P 2040 with prisms as pallets

Chain Conveyors

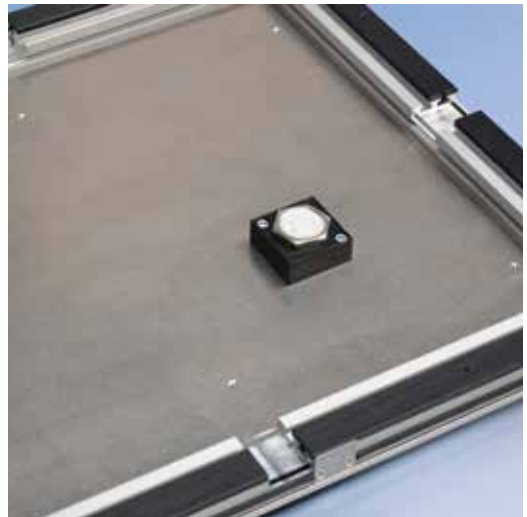
Application examples



Robot unloading position with damped stops, pneumatic lifting with indexing from above, and RFID write/read module



Customer-specific pallet, corrosion-resistant version for a cleaning system



Pallet with optional RFID transponder



Station for 4 removal slots on a pallet with undamped stops and back stop. Accumulated pallets are separated upstream of the station in the process via damped stops on the buffer section.



Heavy-duty version of SRF-P 2012 system with offset accumulating roller chain in POM strips and SU 800 stops



Fail-safe lift and turning station linking production cells in the automotive sector

Chain Conveyors

Application examples



Linking of production cells in automotive sector. Manual feeding of pallets, removal with customer-supplied handling system and robot. Lower return level with lift and shuttle.



Ready-for-use interlink to assembly automation



**Lift and storage system for pallets
with two chain conveyors running in
opposite directions and pallet slots**



**Pallet circulation system for various
transport levels with 3-axis portal**



**Confusion-proof parts receiving for left-hand
and right-hand sided products**

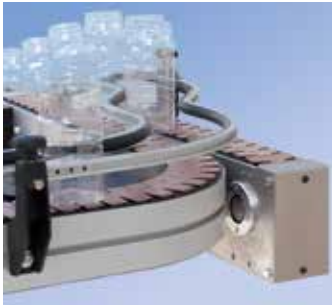


**Ready-for-use complete system
with melting furnace and PLC**

Flat Top Chain Conveyors



Contents flat top chain conveyors



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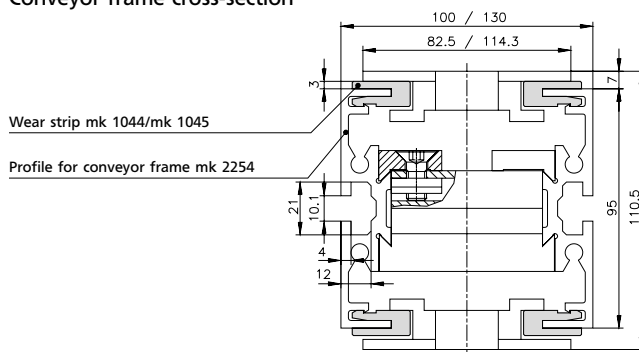


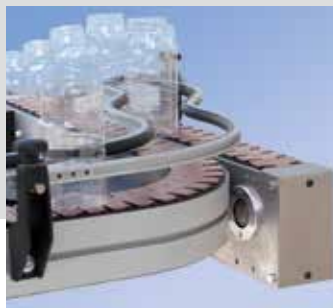
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Flat Top Chain Conveyors SBF-P 2254



Conveyor frame cross-section





The modular mk flat top chain conveyor system SBF-P 2254 is ideal for product handling in either stand-alone or integrated applications. Applications can be found in the packaging, manufacturing, bottling, glass, food, medical and pharmaceutical industries. Conveyors can be manufactured quickly and economically using the various individual components. Due to

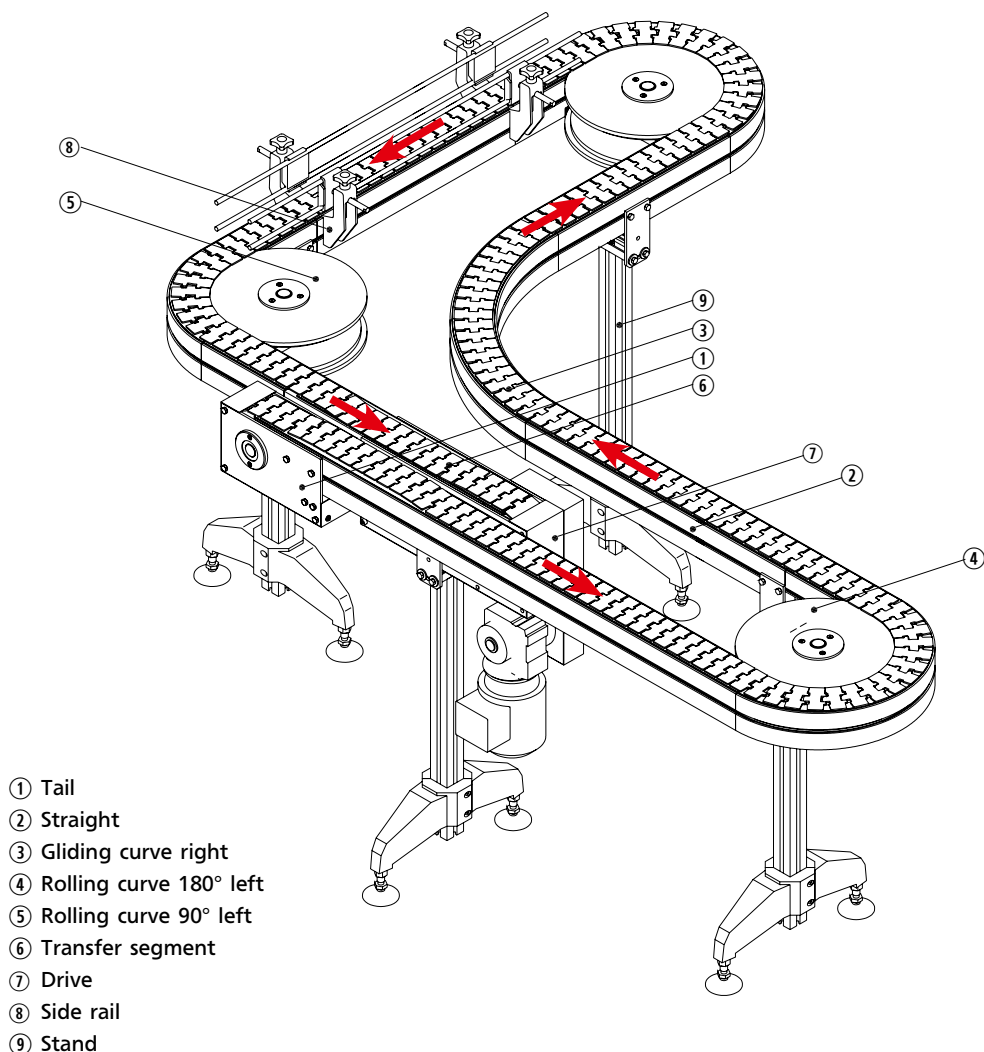
the modular construction, later reconfigurations necessitated by product or production changes can be accomplished with relatively little effort. The system is available in two standard widths and can accept chain from a variety of suppliers. Conveyor frames are manufactured using our Profile mk 2254 which features a 10 mm T-slot. Accessories such as side rails, stands, etc.

can be easily mounted to the conveyor at any time. The chain is completely guided using wear strips on the running side as well as the return. A special feature of the modular design is the use of individual subassemblies. Components designed specifically for this conveyor system ensure a simple and quick assembly of the individual elements into a complex material handling system.

Ordering instructions

Various factors need to be considered when configuring flat top chain conveyors. The total belt length, as well as the number of curves, the product to be conveyed, the conveyor environment, the product weight and the line speed all influence the motor power requirement. Motors

will be specified by mk depending on the above factors for each specific application. For systems which are to be completely installed by mk, please note that the direction (left/right) for the drive, transfer segments and curves must be defined in the direction in which the conveyor runs, i.e. towards the drive.



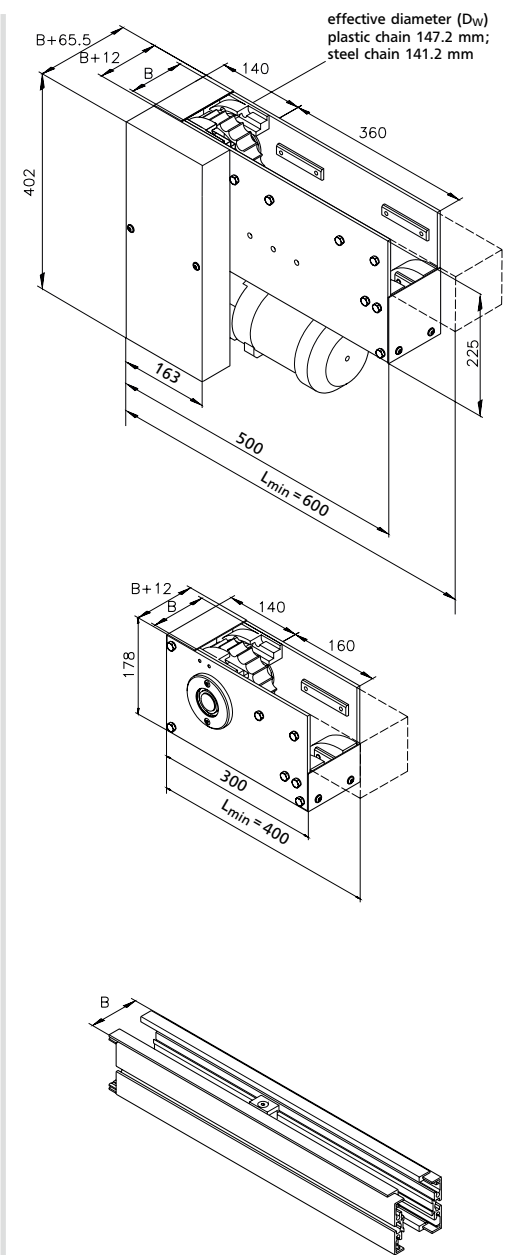
Order example

Name	Details	Ident-No.
Tail		B80.00.409
Transfer segment	left	B37.00.002
Straight L1	670 mm	B08.00.409
Rolling curve 180°	left	B36.00.428
Straight L2	700 mm	B08.00.409
Gliding curve 90°	(R = 500 mm) right	B36.00.414
Straight L3	380 mm	B08.00.409
Rolling curve 180°	left	B36.00.428
Straight L4	700 mm	B08.00.409
Rolling curve 90°	left	B36.00.428
Transfer segment	right	B37.00.002
Drive	head/left 230/400 VAC, 50 Hz speed 20-100 ft/min Reglomats frame width 100 mm	B01.00.409
Side rail	SF10.1	B17.00.020
4 x Stands	System 52.5 (H = 700 mm)	B67.05.008
Chain		K114510031

SBF-P 2254

Module overview

The modules can only be ordered as spare parts and are not suited for building a complete solution yourself.



Drive AC

The motor can be located on the left (as shown) or right side. Motor power requirements typically vary between 1/3 - 3/4 Hp. Line speeds of about 8 - 40 m/min (130 fpm) are possible. Speeds less than 8 m/min. can cause the chain to not run smoothly. In the range of L_{min} = 600 mm, only straight lane elements may be used.

Width B	Chain width B1	Type	Ident-no.
100 mm	82.5 mm	sideflexing	B01.00.409*
130 mm	114.3 mm	sideflexing	B01.00.410*

*without profiles and chain

Tail

The tail, consisting of aluminum side plates and stainless steel covers, guides the belt precisely onto the running surface using high quality belt returns. In the range of L_{min} = 400 mm, only straight lane elements may be used.

Width B	Chain width B1	Type	Ident-no.
100 mm	82.5 mm	sideflexing	B80.00.409*
130 mm	114.3 mm	sideflexing	B80.00.410*

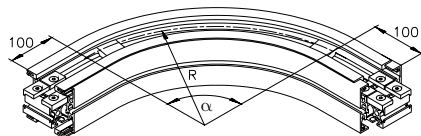
*without profiles and chain

Straight

Manufactured using our Profile mk 2254, the conveyor frame in extremely rigid. The belt is guided above and below using standard mk UHMW wear strips.

Width B	Chain width B1	Ident-no.
100 mm	82.5 mm	B08.00.409*
130 mm	114.3 mm	B08.00.410*

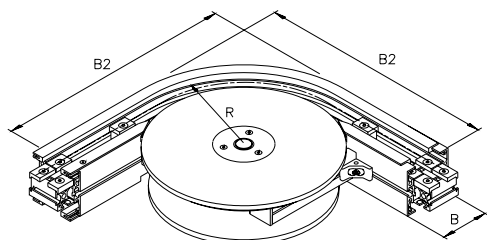
*Assemblies with connecting elements, less chain and less wear strip



Gliding curve

The chain is routed in the entire curve area in a high-quality wear strip of PE 1000. The dimensioning of the wear strip guarantees secure run of the chain. This results in long conveyor service life. Sliding curves are mainly used in short conveyor systems, with minimal loads and low speeds.

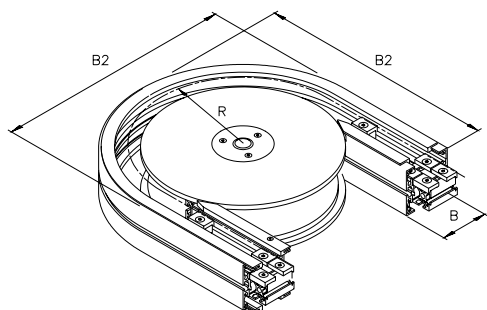
Width B	Chain width B1	R	Ident-no.
100 mm	82.5 mm	300 mm	B36.00.416*
100 mm	82.5 mm	500 mm	B36.00.414*
130 mm	114.3 mm	300 mm	B36.00.417*
130 mm	114.3 mm	610 mm	B36.00.415*



Rolling curve 90°

Designed using idler disks, the rolling curves significantly reduce the friction and tensile forces on the belt. As such, they are used where longer conveyor lengths, higher loads and higher speeds are required.

Width B	Chain width B1	B2	R	Ident-no.
100 mm	82.5 mm	500 mm	200 mm	B36.00.428*
130 mm	114.3 mm	530 mm	200 mm	B36.00.429*

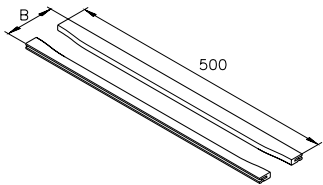
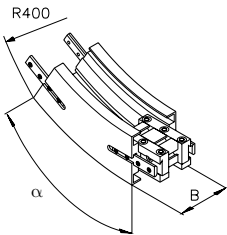


Rolling curve 180°

Designed using idler disks, the rolling curves significantly reduce the friction and tensile forces on the belt. As such, they are used where longer conveyor lengths, higher loads and higher speeds are required.

Width B	Chain width B1	B2	R	Ident-no.
100 mm	82.5 mm	500 mm	200 mm	B36.00.430*
130 mm	114.3 mm	530 mm	200 mm	B36.00.431*

*Assemblies with connecting elements, less chain and less wear strip



Vertical bend

The vertical bend is designed for elevation changes. Depending on the product, we recommend cleated belts to prevent product slippage. As is also the case in the curve segments, wear strips guarantee low friction and safe running of the chain.

Width B	Chain width B1	Type	Ident-no.
100 mm	82.5 mm	15°	B36.00.434*
100 mm	82.5 mm	30°	B36.00.435*
100 mm	82.5 mm	45°	B36.00.436*
130 mm	114.3 mm	15°	B36.00.438*
130 mm	114.3 mm	30°	B36.00.439*
130 mm	114.3 mm	45°	B36.00.440*

*Assemblies with connecting elements, less chain

Transfer segment

Using the transfer segment, products can be moved between conveyors on parallel lanes. With the precise guides and minimal gap, products remain very stable during transfer.

Width B	Chain width B1	Type	Ident-no.
100 mm	82.5 mm	500 mm	B37.00.002
130 mm	114.3 mm	500 mm	B37.00.003

Wear strips section

The wear strips from mk are made of polyethylene (PE 1000) and ensure low friction and safe run of the flat top chain. This results in long conveyor service life.

Width B	Chain width B1	Type	Ident-no.
100 mm	82.5 mm	2000 mm	22.44.2000
130 mm	114.3 mm	2000 mm	22.45.2000

Flat top chains

The flat top chains shown in the tables below are our standards. All chains shown are FDA-compliant. Plastics are not suitable for sharp-edged products or for cleaning with phosphoric acid/nitric acid. The right chain is selected at mk for each application individually using a chain calculation program which takes into account conveyor length, chain speed, dynamic pressure, lubrication, product type and weight; this is more accurate than other means to selecting the chain. Other belts and materials are available.

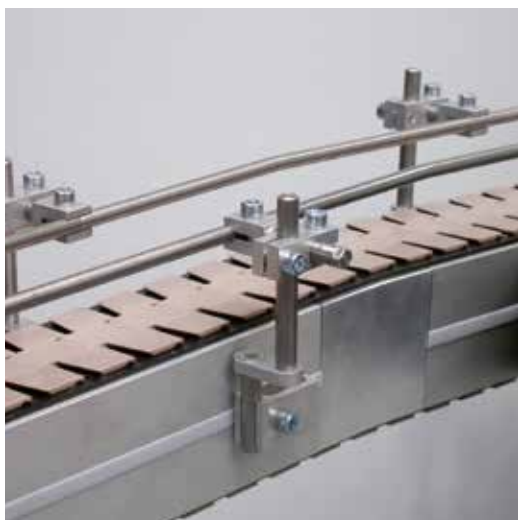
Plastic Chains	Description	Ident-no.	Frame width [mm]	Chain width [mm]	R min [mm]	max. belt strength [N]	Material	Degree of hardness cleat
	LF 880 TAB-BO-K325	K114510031	100	82.5	200	1680	POM brown	
	LF 880 TAB-K325	K114510030	100	82.5	500	2100	POM brown	
	LF 880 TAB-BO-K450	K114510090	130	114.3	200	1680	POM brown	
	LF 880 TAB-K450	K114510085	130	114.3	500	2100	POM brown	
	WLF 880 TAB-BO-K325	K114510048	100	82.5	200	1680	POM white	
	WLF 880 TAB-BO-K450	K114510091	130	114.3	200	1680	POM white	
	with Cleats (not suitable for accumulated operating or side-discharge)							
	HFP 880 TAB-BOT-K325	K114510044	100	82,5	200	1680	POM brown	60 shore A
	HFP 879 TAB-BO-K450	K114510094	130	114,3	200	2100	POM brown	60 shore A
Steel chains	Description	Ident-no.	Frame width [mm]	Chain width [mm]	R min [mm]	max. belt strength [N]	Material	
	S 881 TAB-K325	K114510047	100	82.5	500	8350	Carbon steel hardened	
	S 881 TAB-K450	K114510063	130	114.3	610	8350	Carbon steel hardened	
	SSR 8811 TAB-BO-K325	K114510022	100	82.5	200	4500	Stainless steel	
	SSC 8811 TAB-K450	K114510062	130	114.3	500	6000	Stainless steel	

Flat Top Chain Conveyors

Application examples



**SBF-P 2254 for transporting cartons
before and after filling**



Short vertical incline with side rail



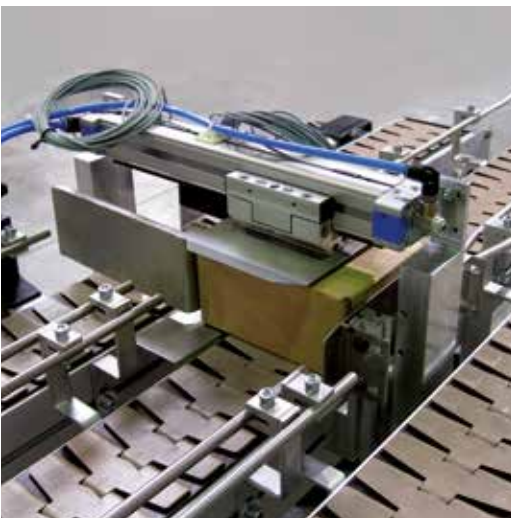
180° curve, gliding with side rail



Transfer segments from
two sides



Transfer segment with side rails



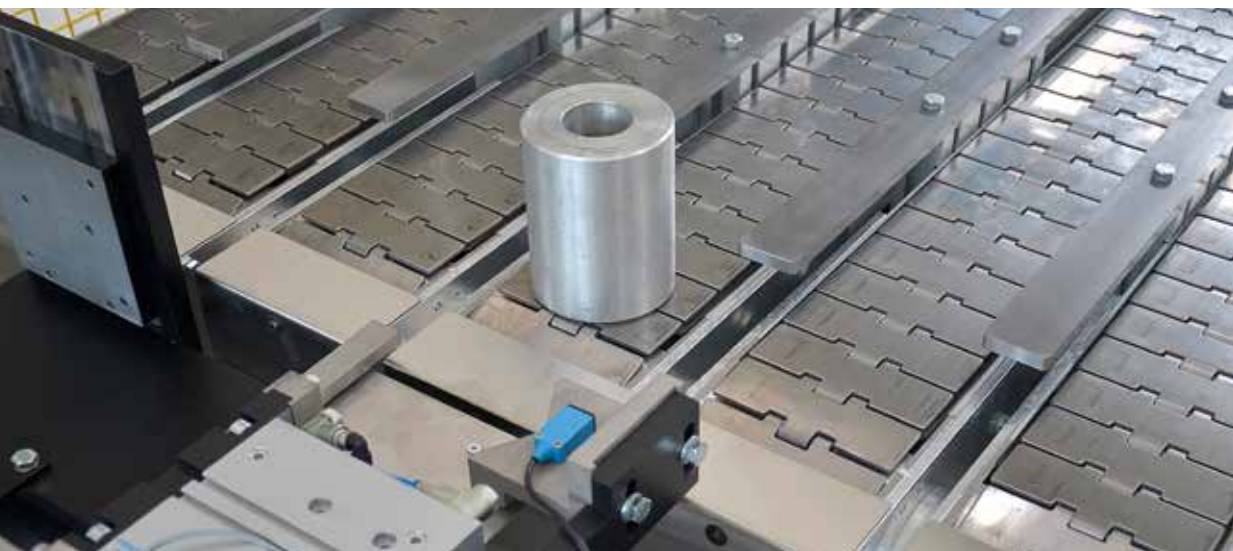
SBF-P 2254 with transverse pusher,
e.g. for the packaging industry



SF 10.1 and lube station
in the gliding curve

Flat Top Chain Conveyors

Application examples



Multiple flat top conveyors on a common conveyor frame for removal transport of various classified goods



Flat top chain with cleats



Mini-roller insert for bridging gaps when conveying small products



Section with small space requirements, e.g.
for cooling the conveyed product



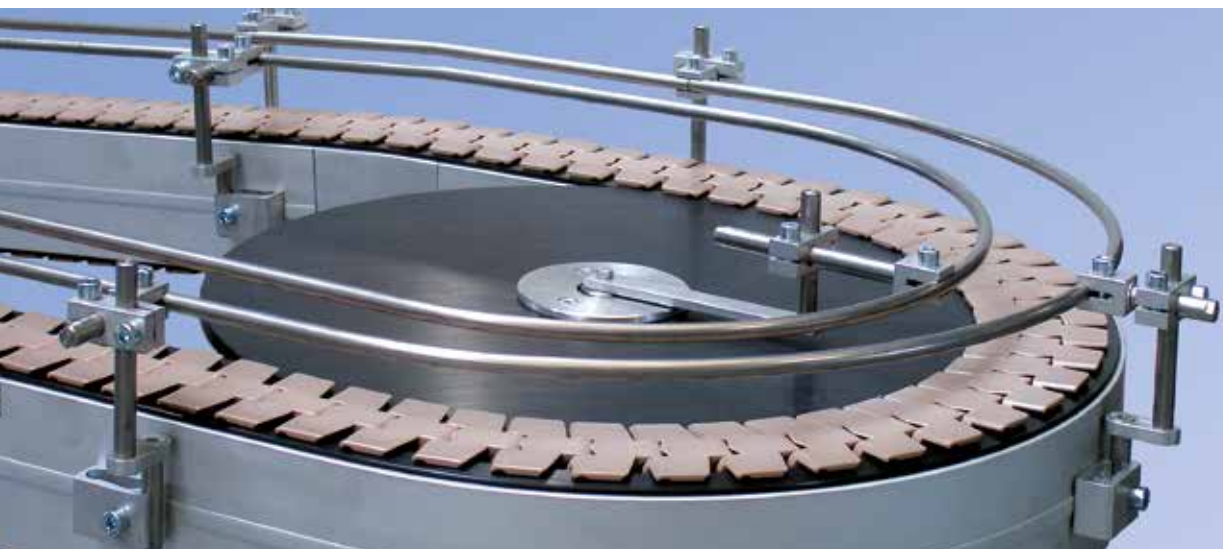
Dual-strand flat top chain conveyors
with one motor



SBF-P 2254 with SF 02 side rail with
adjustable guide height and guide width

Flat Top Chain Conveyors

Application examples



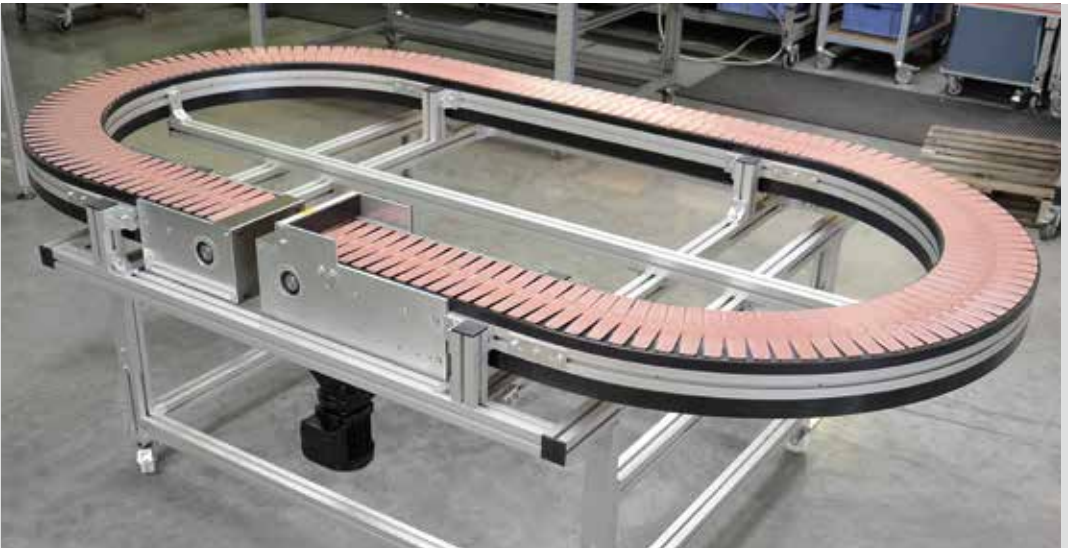
180° curve element



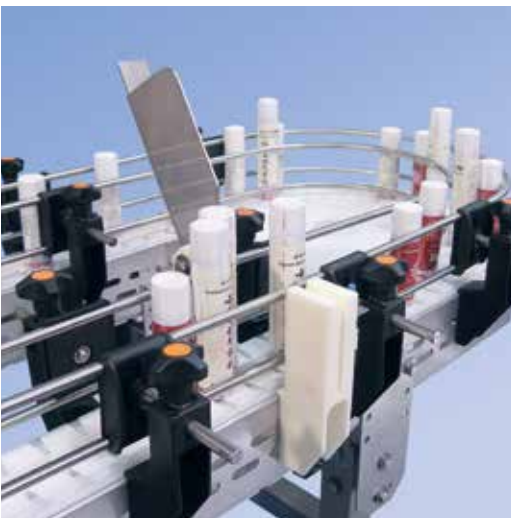
**INOX flat top chain conveyor
with vertical bend**



**INOX flat top chain conveyor with
standard side rail SF 10.1**



Oval flat top chain conveyor with head drive AF, designed with two gliding 180° curves

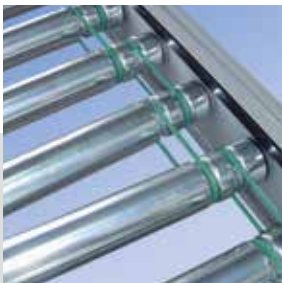
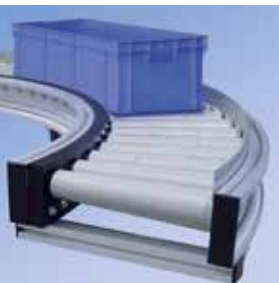


Integration of an INOX flat top chain conveyor with rolling 180° curve



INOX flat top chain conveyor curve, gliding 90°

Roller Conveyors



Contents roller conveyors



**Selecting the
conveyor system** **230**



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Curve 235



RBS-P 2255 **236**
Straight 238
Curve 239



RBT-P 2255 **240**
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Curve 243



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Rollers **248**
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Roller Conveyors

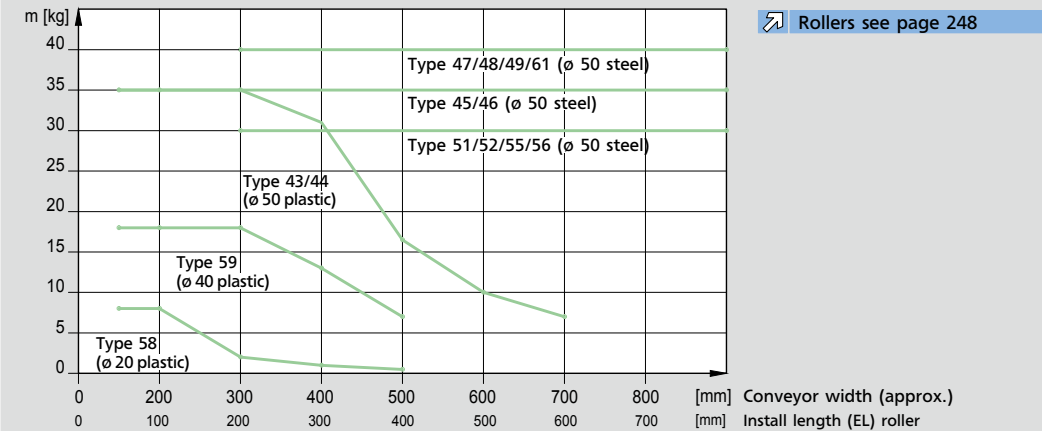
Selecting the conveyor system

Dimensions – technical information

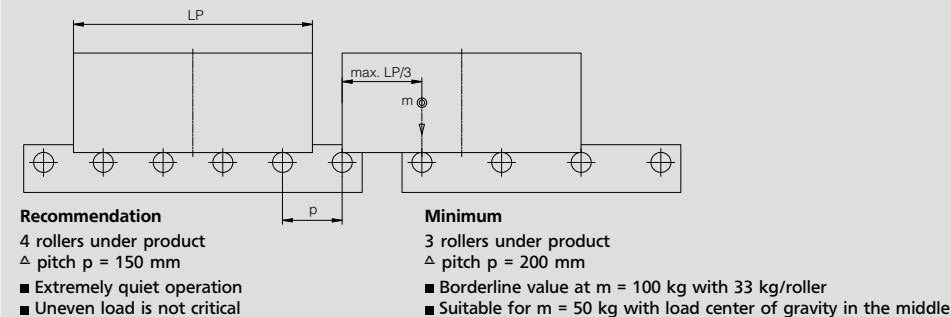
Conveyor system	Conveyor width [mm]	Conveyor length [mm]	Total load* usually to [kg]	Speed to [m/min]	Tail ø [mm]	Reversing operation	Accumulated operation	Cycle operation
Gravity roller conveyors								
RBS-P 2065/2066	150-1050	200-5000**	1000	30	app. 90	•	•	•
RBS-P 2255	150-1050	500-10000**	750	30	app. 90	•	•	•
Roller conveyor tangential chain drive								
RBT-P 2255	320-720	500-10000	750	30	app. 90	•	•	•
Roller conveyor with motorized roller								
RBM-P 2255	480-680	500-10000	750	70	app. 90	•	•	•

*Maximum load that is transported by the respective system with a usual configuration and for a usual application.
**Length refers to one roller conveyor segment (one-piece). With separating points endless lengths are possible.

Selection of the roller type depending on width and load per roller



Roller pitch depending on the product length (LP)



Application areas

Gravity roller conveyors (RBS) are often used for semi-automatic systems, at picking stations, and also for Kanban shelves. The rollers should be selected from $\varnothing 20$ to 50 in accordance with the total load and the required pitch. If a side rail is not required; or if the product is wider than the roller conveyor, then the RBS-P 2065 is the suitable solution. A decline of 1-2° usually suffices for conveyance via gravity. Please note that for longer sections and greater declines, higher speeds are reached, thus the use of a soft or cushioned stop is recommended.

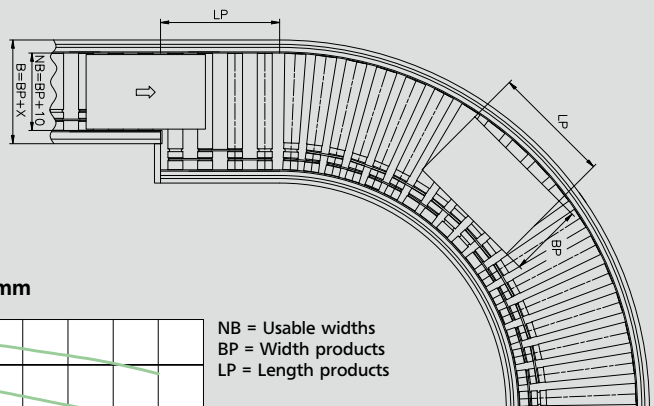
Our **roller conveyor with a tangential chain drive (RBT)** is used wherever long conveyor sections with a motor drive are required. Driven via a ½" pitch chain; which is encapsulated in a durable wear strips, the conveyor rollers are driven on a tangent from below via a sprocket. One drive for a conveyor section up to 10 m is possible. The chain tail is equipped with ball bearing supported tail rollers for minimal friction losses.

For the **motorized roller conveyor (RBM)** up to nine additional rollers can be driven by the motorized drive roller via round belts. It is characterized by minimal interference contours and easy cleaning, and is thus well-suited for clean environments and rigorous hygiene requirements. Also available is IP 66 rated units upon request, as well rolls with an electronic holding brake for slopes and inclines.

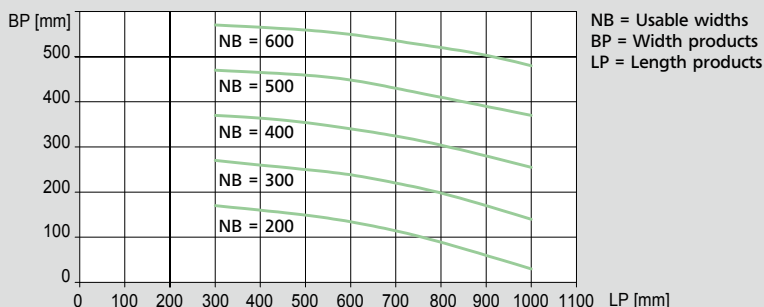
Rollers with friction drive are available for dynamic buffering areas. This reduces the accumulation pressure and the roller remains steady under the product without relative movement (note: reciprocal friction preferred if load distribution is unclear). Adjustable friction rollers are used for particularly light products. For this application the load can be raised to the upper limit of the roller. For example this is used for higher acceleration, pitch or positioning of the product.

Necessary effective width (NB) of a curve depending on the product dimensions

Supplemental requirement (X) imposed on conveyor width (B) of the straight elements for curve connection:
RBS-/RBM-P 2255: X = 98 mm
RBT-P 2255: X = 125 mm



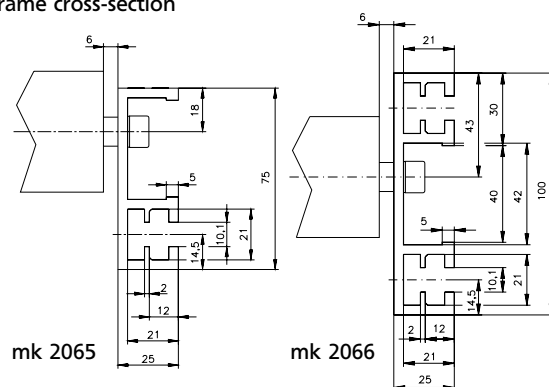
Examples for curve radius Ri = 800 mm



Roller Conveyors RBS-P 2065/2066



Conveyor frame cross-section





The gravity roller conveyors, RBS-P 2065 and 2066 are used in many areas of industrial automation. The RBS-P 2065 and 2066 roller conveyors differ only in the fact that for the 2065 conveyor frame profile, the rollers project over the top of the profile frame (suitable for products wider than

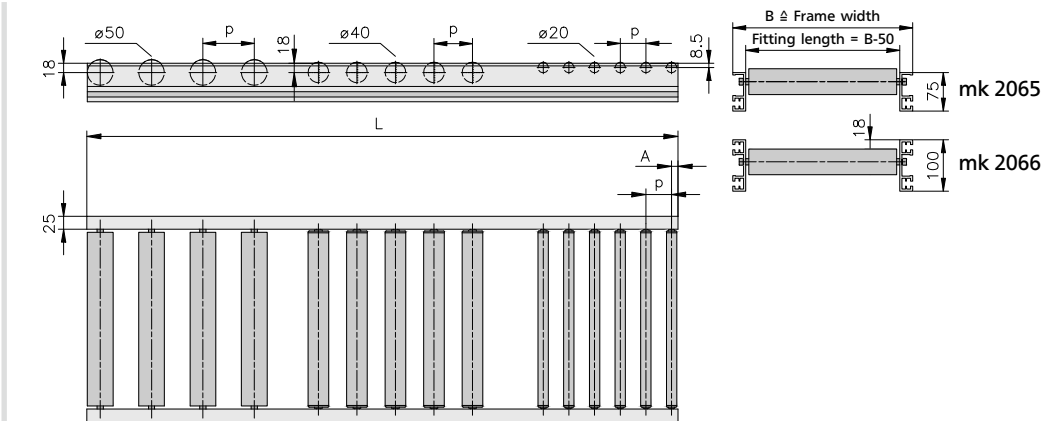
the conveyor), while for the RBS-P 2066 the conveyor frame profile serves as an integrated side rail. An extensive selection of different roller types makes the system extremely flexible and usable for a wide variety of applications. The conveyors can be delivered as straight conveyors,

as well as curved conveyors. The roller diameters 20, 40, and 50 mm ensure safe and trouble-free transport of small, as well as large, work-pieces. The longitudinal T-slots of frame profiles can be used for fastening of side rails, stands, sensors or other accessories.

RBS-P 2065/2066

Gravity roller conveyor, straight

ø 20: B61.00.001/ø 40: B61.00.002/ø 50: B61.00.003



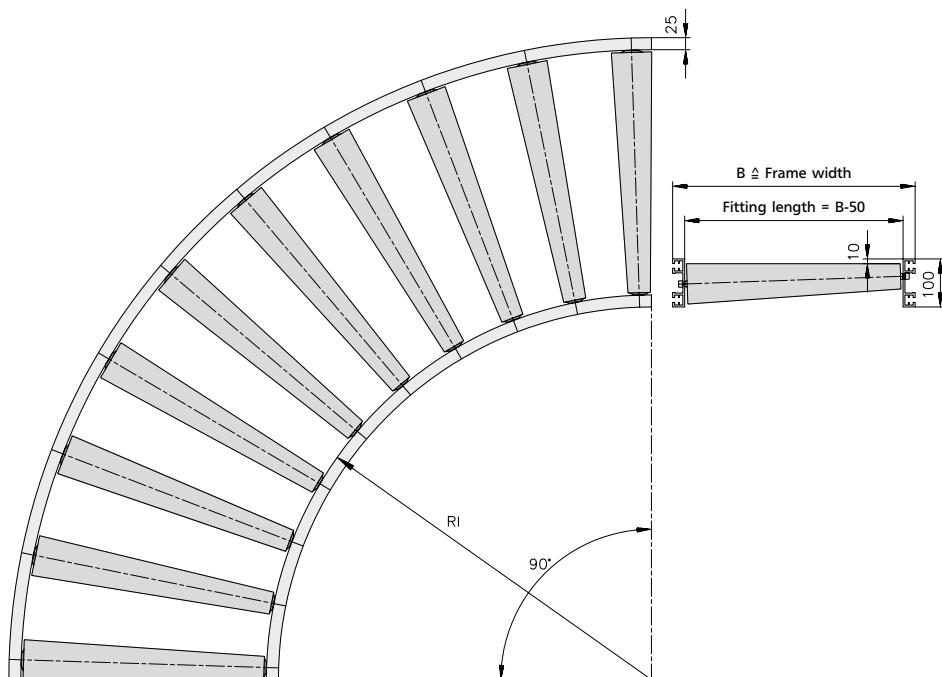
The RBS-P 2065 and 2066 gravity roller conveyors differ in the fact that for the conveyor frame profile 2065, the rollers are above the upper edge of the profile (suitable for over-wide goods), while for the RBS-P 2066, the conveyor frame profile serves as side rail.

Dimensions – technical information		Notes
Frame width B ø 20 plastic	150, 200, 250, 300 and 350 mm	Ident-no.: B61.00.001
ø 40 plastic	150, 200, 250, 300 and 350 mm	Ident-no.: B61.00.002
ø 50 plastic	250, 350, 450, 550 and 650 mm	Ident-no.: B61.00.003
ø 50 steel Zn	250-1050 mm in 100 mm increments	Ident-no.: B61.00.003
Conveyor length L	200-5000 mm	
Roller pitch ø 20	25, 50 and 75 mm	A = 12,5 mm
ø 40	50, 75, 100 and 125 mm	A = 25 mm
ø 50	75, 100, 125, 150, 175, 200, 225 and 250 mm	A = 25 mm
Frame profile	mk 2065 or mk 2066	
Roller types	type 43-46, 58 and 59	see from page 248
Stands		see from page 262
Load capacity	depending on frame width and roller type to 100 kg/m and 400 kg total load	higher on request

RBS-P 2066

Gravity roller conveyor, curve

B61.00.004

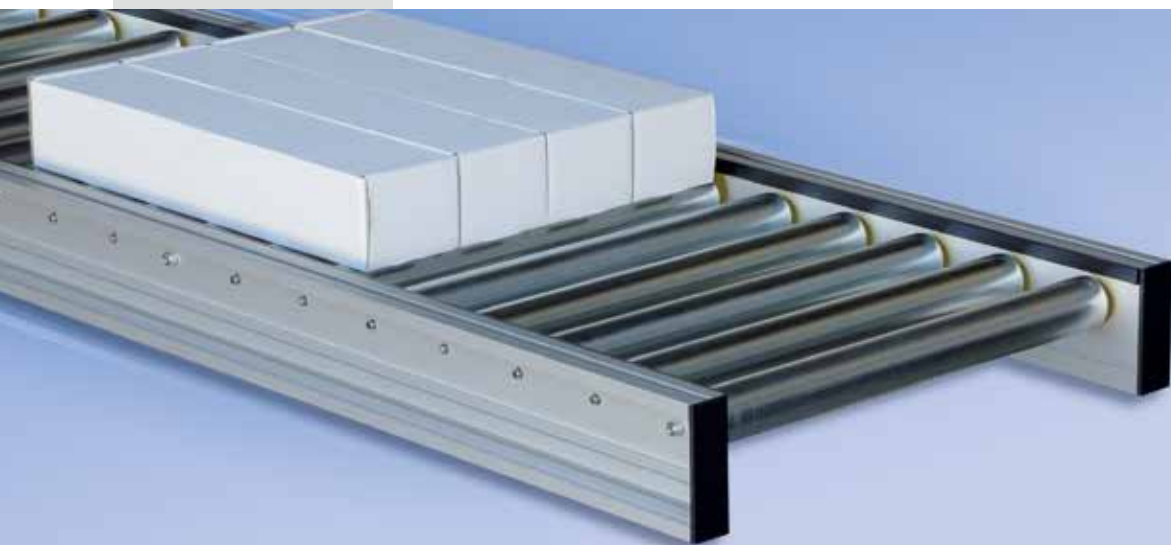


The gravity roller conveyors of System 2066 are noted primarily for their simple construction. The use of conical rollers ensures proper orientation of products is maintained along the conveyor.

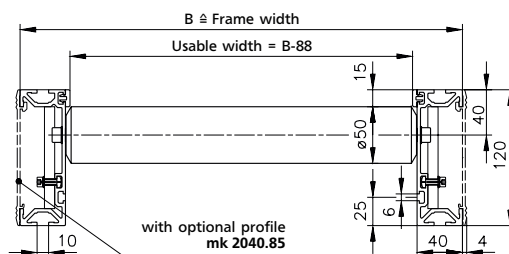
Dimensions – technical information								Notes
Frame width B	310-860 mm							in 50 mm increments
Inner radius RI	800 (for B = 360, 460, 560, 660, 760, 860) 850 (for B = 310, 410, 510, 610, 710, 810)							
Conveyor angle	90°							others on request
Product length	150	200	250	300	350	450	550	
recc. roller quantity	21	17	15	13	11	10	9	
Frame profile	mk 2066							
Roller types	Typ 47 and 48							see from page 248
Stands								see from page 262
Load capacity	depending on frame width and roller type to 100 kg/m and 400 kg total load							higher on request

Roller Conveyors

RBS-P 2255



Conveyor frame cross-section





The roller conveyors RBS-P 2255 is designed for heavier weight product transfers than RBS-P 2065 and 2066. Products may be moved either by hand, or by gravity in decline applications. Gravity rollers are most often

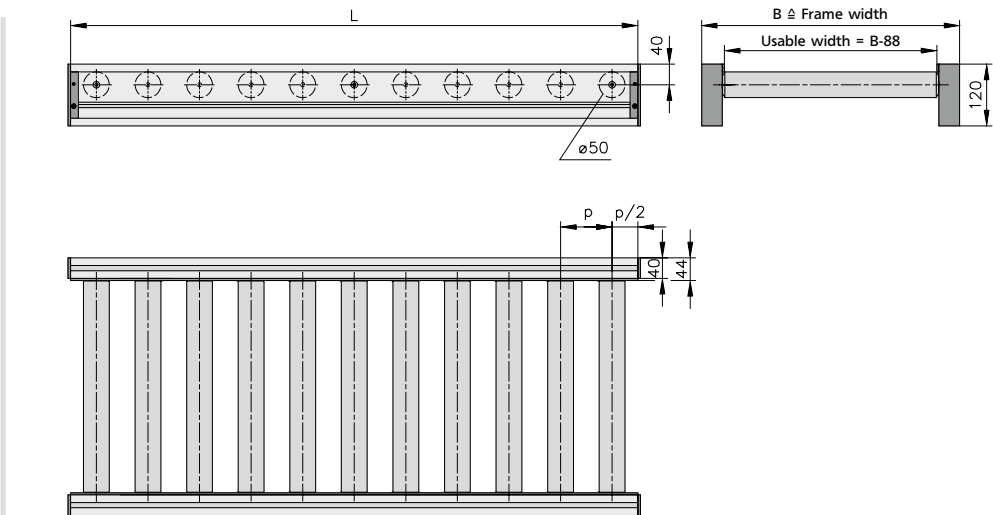
used for picking applications, as accumulating storage, or within assembly or packaging lines. The gravity roller conveyors are available in straight or curved sections, and may be combined with our driven roller conveyors

(RBT and RBM). All conveyors are manufactured using our new Roller Conveyor Profile mk 2255 which features longitudinal T-slots for easy mounting of side rails, stands, sensors or other accessories.

RBS-P 2255

Gravity roller conveyor, straight

B61.02.001



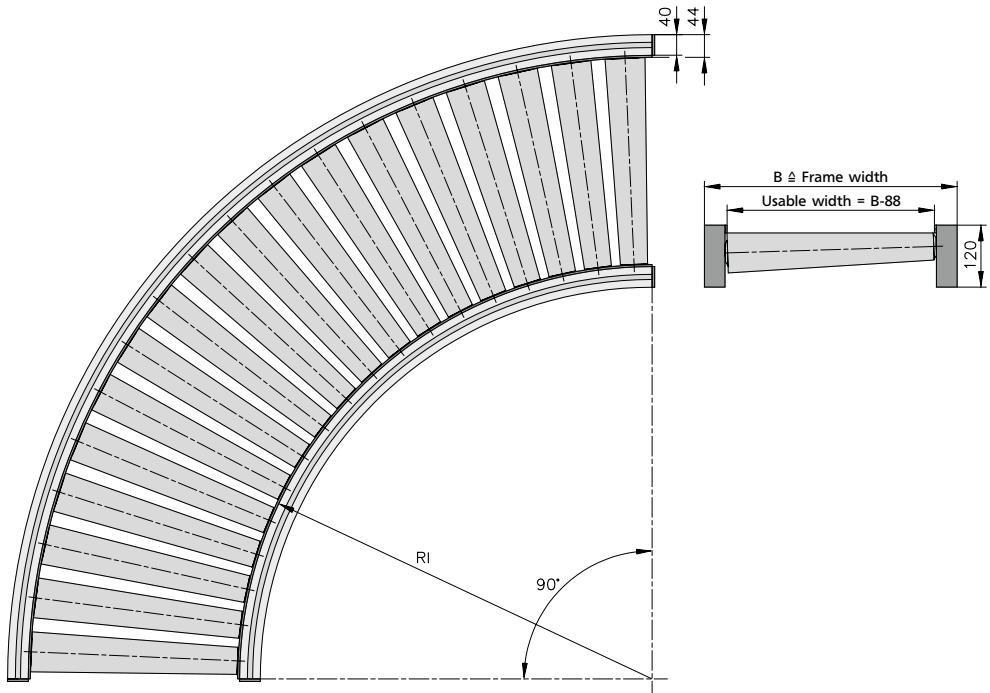
The gravity roller conveyor is manufactured using Profile mk 2255. The anodized structural extrusions are punched for the pitch options 75, 100 and 125 mm and designed for use with a roller diameter of 50 mm.

Dimensions – technical information		Notes
Roller diameter	50 mm	plastic/steel, ZN
Frame width B	290, 390, 490, 590 and 690 mm	
Conveyor length L	500-10000 mm	
Roller pitch p	75, 100 and 125 mm	
Frame profile	mk 2255	
Roller types	plastic 43 + 44 or steel 45 + 46	see from page 248
Stands	only with conveyor frame fastening variant D	see from page 262
Load capacity	depending on frame width and roller type to 100 kg/m and 400 kg total load	higher on request

RBS-P 2255

Gravity roller conveyor, curve

B61.02.002



The gravity roller conveyor is manufactured using Profile mk 2255. The anodized structural extrusions are punched for a 5° pitch, and designed for use with a roller diameter of 50 mm.

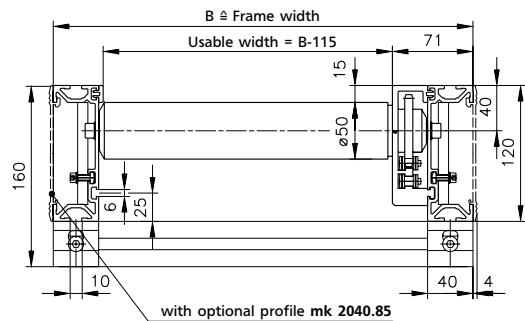
Dimensions – technical information		Notes
Roller diameter	50 mm conical	plastic
Frame width B	390, 490, 590 and 690 mm	
Inner radius RI	800 mm	
Conveyor angle	90°	others on request
Roller pitch	5°/number of rollers: 18	
Frame profile	mk 2255	
Roller types	type 47 and 48	see from page 248
Stands	only with conveyor frame fastening variant D	see from page 262
Load capacity	depending on frame width and roller type to 100 kg / 90°	higher on request

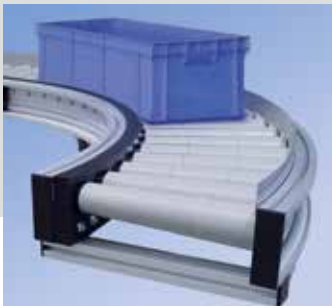
Roller Conveyors

RBT-P 2255



Conveyor frame cross-section





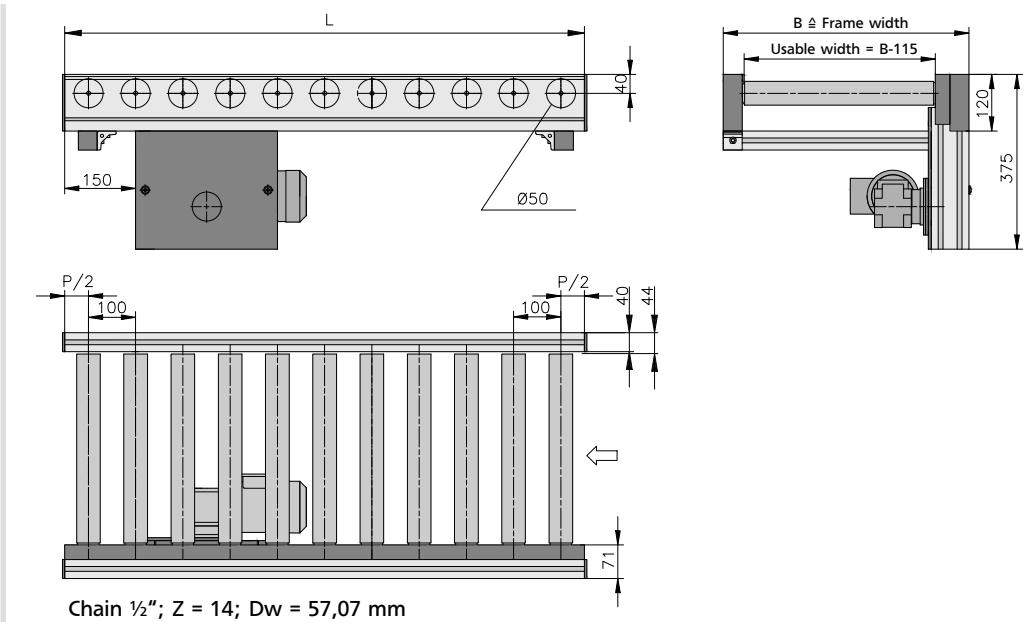
The roller conveyor, RBT-P 2255 with a tangential chain drive is used wherever long conveyor sections with a motor drive are required. Drive occurs via a $\frac{1}{2}$ " pitch chain, which encapsulated is a durable wear strip, driving the conveyor rollers on a tangent from below via a sprocket. The tangential roller conveyor can

also be used in a dirty or oily environment. The tangential roller conveyor is available straight or curved and can be combined with our roller conveyors (RBS and RPM). The longitudinal T-slots of frame profiles can be used for fastening of side rails, stands, sensors or other accessories.

RBT-P 2255

Tangential chain roller conveyor, straight

B61.02.003



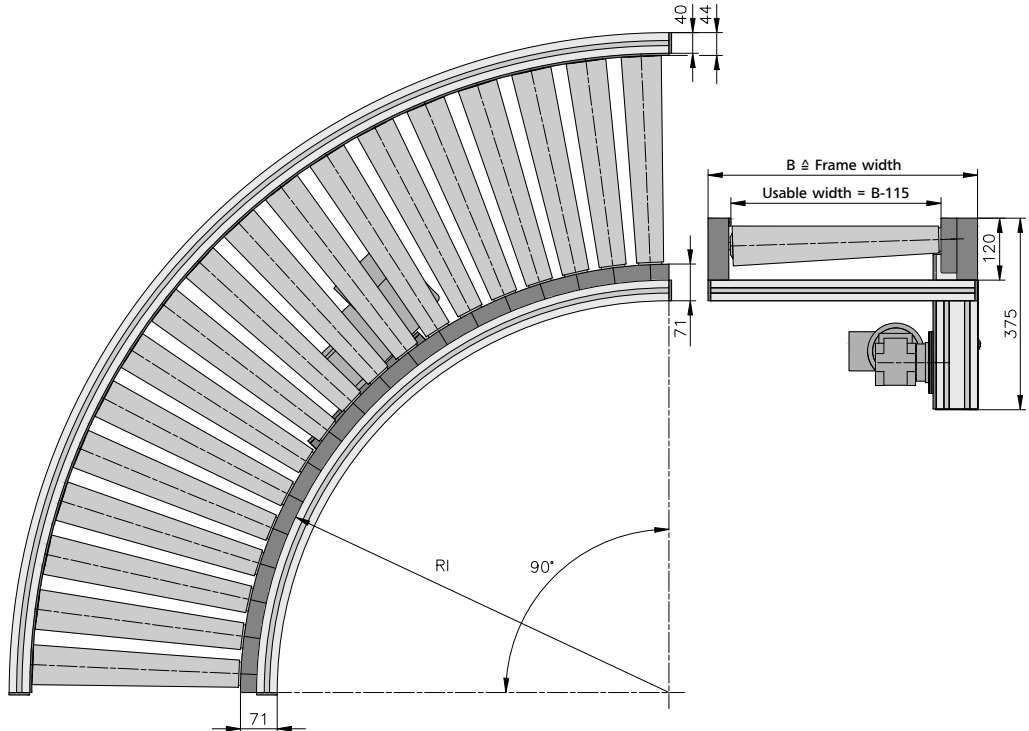
The tangential chain roller conveyor is manufactured using Profile mk 2255. The anodized structural extrusions are punched for 100 mm pitch and designed for use with a roller diameter of 50 mm.

Dimensions – technical information		Notes
Roller diameter	50 mm	steel, ZN
Frame width B	320, 420, 520, 620 and 720 mm	others on request
Conveyor length L	600-10000 mm	others on request
Roller pitch p	100 mm (optional 75, 150, 200)	others on request
Frame profile	mk 2255	
Roller types	type 49 and 57, 60 or 61	see from page 248
Speed	to 30 m/min (100 ft/min)	see chart on page 12
Stands	only with conveyor frame fastening variant D	see from page 262
Load capacity	depending on frame width and roller type to 100 kg/m and 400 kg total load	higher on request

RBT-P 2255

Tangential chain roller conveyor, curve

B61.02.004



The curve is based on the straight section with a cylindrical roller \varnothing of 50 mm. The curve is fitted with conical elements according to the radii. The speed information refers to the middle of the conveyor. For quiet running, in the standard version, the rollers are designed with a 5° pitch.

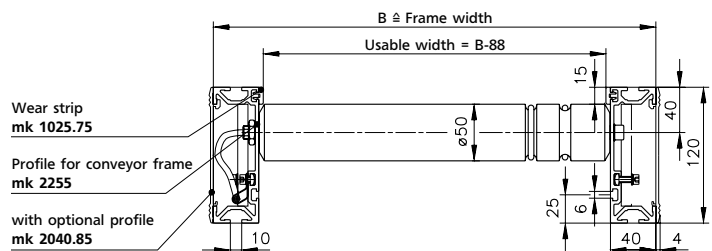
Dimensions – technical information		Notes
Roller diameter	50 mm conical	plastic
Frame width B	420, 520, 620 and 720 mm	
Inner radius RI	800 mm	
Conveyor angle	90°	others on request
Roller pitch	5°/number of rollers: 18	
Frame profile	mk 2255	
Roller types	type 50	see from page 248
Speed	to 30 m/min (100 ft/min)	see chart on page 12
Stands	only with conveyor frame fastening variant D	see from page 262
Load capacity	"depending on frame width and roller type to 100 kg / 90°"	higher on request

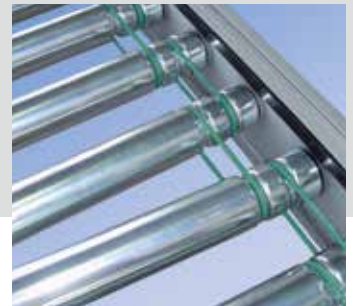
Roller Conveyors

RBM-P 2255



Conveyor frame cross-section





For the motorized roller conveyor RPM-P 2255, up to nine additional rollers can be driven by the motorized roller via round belts. Through this segmentation of the drives it is possible with this type of roller conveyor to implement different speeds, or start or stop functions on a conveyor

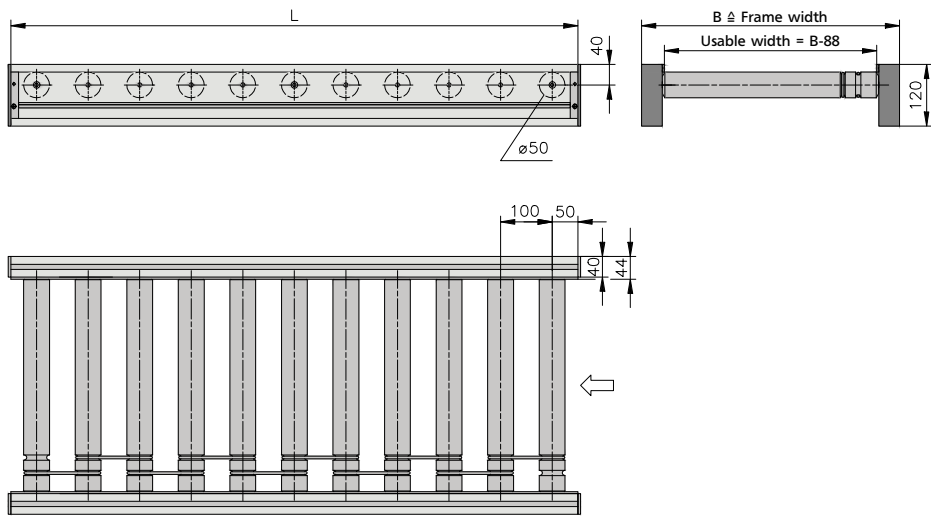
section. This provides the possibilities of separating, stopping, and buffering; with these complex material flow processes can be used flexibly with the correct control scheme. In this regard, speed and direction of rotation are controlled via the control module. The motorized roller

conveyor is available straight or curved and can be combined with our roller conveyors (RBS and RBT). The longitudinal T-slots of frame profiles can be used for fastening of side rails, stands, sensors or other accessories.

RBM-P 2255

Drive roller conveyor, straight

B61.02.005



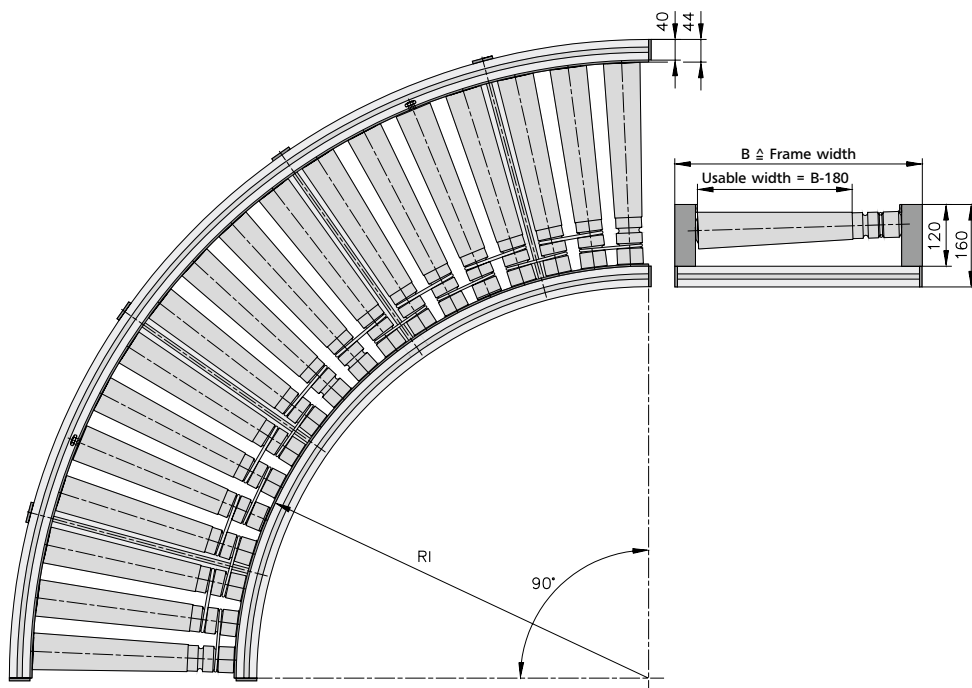
The drive roller conveyor is manufactured using profile mk 2255. The anodized structural extrusions are punched for 100 mm pitch and designed for use with a roller diameter of 50 mm. Depending on the motorized roller, a maximum of 5 rollers upstream and downstream of the motorized roller are coupled and driven via round belts. The recommendation is to use one motorized roller per meter at a pitch (p=100 mm).

	Dimensions – technical information	Notes
Roller diameter	50 mm	steel, ZN
Frame width B	480, 580 and 680 mm	others on request
Conveyor length L	500-10000 mm	
Roller pitch p	100 mm	
Frame profile	mk 2255	
Roller types	type 51, 55 and 66	see from page 248
Speed	to 70 m/min (230 ft/min)	see chart on page 12
Stands	only with conveyor frame fastening variant D	see from page 262
Load capacity	depending on the gear ratio of the motorized rollers and the number of installed drives max. 100 kg/m	i=9:1 for 6-70 m/min: 3 kg i=16:1 for 4-60 m/min: 5 kg i=48:1 for 1,5-20 m/min: 15 kg i=96:1 for 0,6-9 m/min: 30 kg

RBM-P 2255

Drive roller conveyor, curve

B61.02.006



The curve is based on the straight section with a cylindrical roller \varnothing of 50 mm. The curve is fitted with conical elements according to the radii. The speed information refers to the middle of the conveyor. For quiet running, in the standard version, the rollers are designed with a 5° pitch.

Dimensions – technical information		Notes
Roller diameter	50 mm conical	plastic
Frame width B	480, 580 and 680 mm	
Inner radius RI	800 mm	
Roller pitch	5°/number of rollers: 18	
Frame profile	mk 2255	
Roller types	type 52, 56 and 57	see from page 248
Speed	to 30 m/min (100 ft/min)	see chart on page 12
Stands	only with conveyor frame fastening variant D	see from page 262
Load capacity	depending on frame width and roller type to 55 kg / 90°	higher on request

Roller Conveyors

Rollers

Gravity rollers are non-driven bearing rollers. They are used for universal roller conveyors where goods are transported by hand or gravity over an incline.

Gravity rollers for RBS-P 2065/2066 and RBS-P 2255, cylinder

Roller	ø	Color	Usable width*	Material	Mounting	Friction	Load/Roller
Type 43	50 mm	gray	B-50 B-88	plastic	threaded M8	-	7-35 kg
Type 44	50 mm	gray	B-50 B-88	plastic	spring shaft ø 8 mm	-	7-35 kg
Type 45	50 mm	silver	B-50 B-88	steel, ZN	threaded M8	-	35 kg
Type 46	50 mm	silver	B-50 B-88	steel, ZN	spring shaft ø 8 mm	-	35 kg
Type 58	20 mm	gray	B-50 B-88	plastic	spring shaft ø 6 mm	-	1-8 kg
Type 59	40 mm	gray	B-50 B-88	plastic	spring shaft ø 8 mm	-	10-18 kg
Type 64	20 mm	silver	B-50 B-88	stainless steel	spring shaft ø 6 mm	-	9 kg

Gravity rollers for RBS-P 2065/2066 and RBS-P 2255, conical

Roller	ø	Color	Usable width*	Material	Mounting	Friction	Load/Roller
Type 47	50 mm	gray	B-50 B-88	plastic	threaded M8	-	40 kg
Type 48	50 mm	gray	B-50 B-88	plastic	spring shaft ø 8 mm	-	40 kg

*for RBS-P 2065 and RBS-P 2066 | RBS-P 2255

Rollers driven by a tangential chain are suitable for small to medium-heavy loads. They are suitable for dirty or oily environments.

Tangential chain rollers for RBT-P 2255, cylinder

Roller	ø	Color	Usable width	Material	Mounting	Friction	Load/Roller
Type 49	50 mm	silver	B-115	steel, ZN	threaded M8	-	40 kg
Type 57	50 mm	silver	B-115	steel, ZN	threaded M8	one sided	30 kg
Type 60	50 mm	silver	B-115	steel, ZN	threaded M8	both sides	30 kg
Type 61	50 mm	silver	B-115	steel, ZN	threaded M8	adjustable	40 kg

Tangential chain rollers for RBT-P 2255, conical

Roller	ø	Color	Usable width	Material	Mounting	Friction	Load/Roller
Type 50	50 mm	gray	B-115	plastic	threaded M8	-	40 kg

*Friction rollers can only be used for conveyed goods with a smooth and firm surface

Roller Conveyors

Rollers

Motor rollers are driven rollers that offer the maximum usable width and minimum interference contours. Different speeds and start/stop functions can be realized through separately driven sections.

Motorized roller for RBM-P 2255, cylinder

Roller	ø	Color	Usable width	Material	Mounting	Friction	Load/Roller
Type 66*	50 mm	silver	B-88	steel, ZN	threaded M8 external thread M12x1	-	30 kg

Motorized roller for RBM-P 2255, conical

Roller	ø	Color	Usable width	Material	Mounting	Friction	Load/Roller
Type 67*	50 mm	gray	B-180	plastic	threaded M8 external thread M12x1	-	30 kg

Rollers for RBM-P 2255, cylinder

Roller	ø	Color	Usable width	Material	Mounting	Friction	Load/Roller
Type 51	50 mm	silver	B-88	steel, ZN	threaded M8	-	30 kg
Type 55	50 mm	silver	B-88	steel, ZN	spring shaft ø 8 mm	-	30 kg

Rollers for RBM-P 2255, conical

Roller	ø	Color	Usable width	Material	Mounting	Friction	Load/Roller
Type 52	50 mm	gray	B-180	plastic	threaded M8	-	30 kg
Type 56	50 mm	gray	B-180	plastic	spring shaft ø 8 mm	-	30 kg

*Motorized roller with 450 mm cable, incl. plug. Cable can be extended up to 10 m. Speed regulation of the motorized roller via Drivecontrol. Drivecontrol and extension cable must be ordered separately.

Drive control for motorized rollers

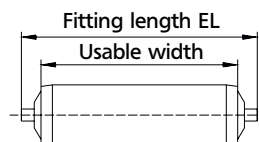
Rated voltage 24 V DC, voltage range 18-26 V, rated current 2 A, max. 5 A, degree of protection IP 54. On request, also available in IP 20 for installation in the control cabinet. Incl. fastening material.

Drive control for rollers type 66 **B46.10.001**
Drive control for rollers type 67 **B46.10.002**

Extension cable (2 m) **K106066VK54**
(max. 5 x 2 m per motorized roller permitted)

How to order

Ident-no. **K106 /... /...**
Roller types (p.e. type 57 = 057)
Fitting length EL (p.e. 450 mm = 0450)



Roller Conveyors

Application examples



Kanban workstation with RBS-P 2065 gravity conveyors for feed



RBS-P 2066 gravity roller conveyor with 45° curve



RBS-P 2065 gravity roller conveyor with 12° pitch



RBT-P 2066 roller conveyor with vertical drive shaft and diagonal rollers for workpiece location on one end



Gravity roller conveyor RBS-P 2066 with height-adjustable stand and angle plate as side rail



Gravity roller conveyor RBS-P 2065 as feed and discharge conveyor for laundry baskets

Roller Conveyors

Application examples



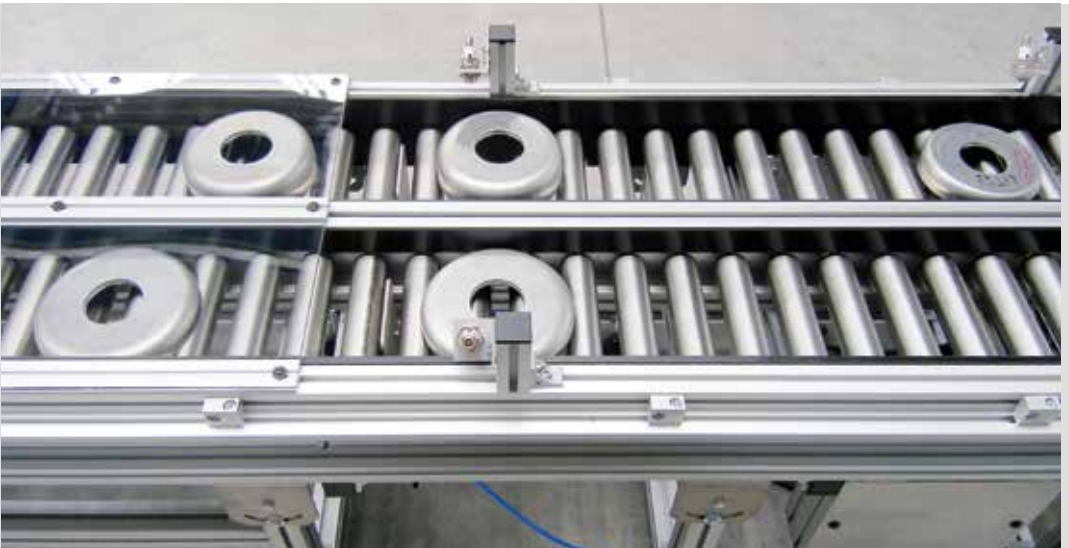
RBT-P 2255 friction roller conveyor with swivel conveyor as lift function to return empty baskets



RBS-P 2255 with drip pan and integrated discharge chute under the conveyor



RBS-P 2255 with plastic rollers in \varnothing 40 mm



RBS-P 2255 as parallel delivery conveyor for product removal by a robot



RBT-P 2255 conveyor belt combination with integrated lift-transfer conveyor



Combination of turntable and RBT-P 2255, with \varnothing 50 mm steel rollers; and with a buffer table for order picking tasks

Roller Conveyors

Application examples



RBT-P 2255 with integrated lift and transfer conveyor, belt loading capacity 100 kg/m with additional side rails and drip pan



RBT-P 2255 as 90° curve



RBT-P 2255 90° roller conveyor curve chain driven



Motorized roller conveyor RPM-P 2255 as lift-transfer unit with control module, includes a belt discharge via gravity roller conveyor RBS-P 2065



Conveyor discharge via gravity roller conveyor RBS-P 2255 with end stop



With the RBM-P 2255 motorized roller conveyor, a motorized roller drives up to nine other rollers

Turntables

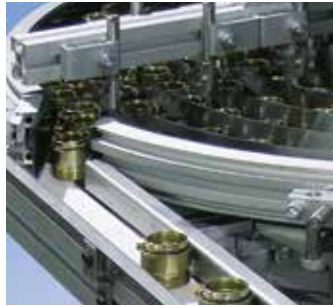


Contents turntables



Turntables

DTZ-P 2040



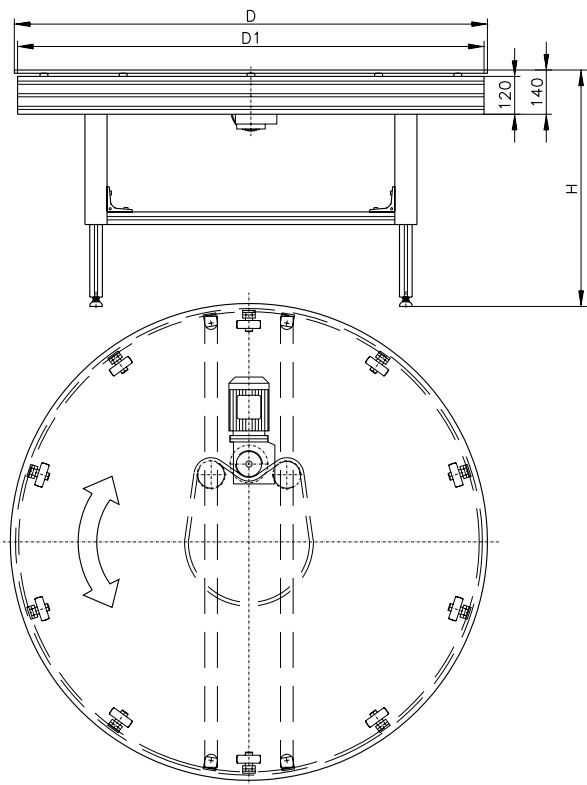
Application examples **260**

258

DTZ-P 2040

Turntable with timing belt driven

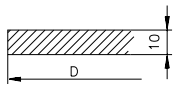
B12.01.001



Dimensions – technical information		Notes
ø Turntable	D1 = 750, 1000, 1250, 1500 mm	others on request
ø Surface	Dmin = D1-30, Dmax = D1+100	
Surface plate		see page 259
Drive design	timing belt	specials on request
v const (rev/min)	1 - 8 rev/min	others on request
Side rails		on request
Height H	H = 500 - 1500 mm	others on request

Surface plates

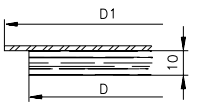
The following surface plates are our standards. Specials are possible on request.



Option 1.1
Laminated surface



Option 1.2
Laminated surface
with SS cover

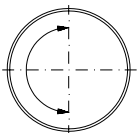


Option 1.3
Laminated surface
with overhanging
SS cover
(for smaller products)

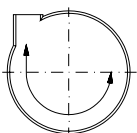
Construction, product flow

The following examples are standard configurations which can be combined. All constructions are available in clock- or counterclockwise.

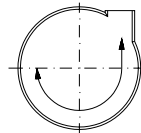
When designing diverters, the product weight and shape is critical to successful performance. The actual details of these diverters are therefore designed specifically to each customer's application. Because of our experience in the areas of material handling and conveying, mk can refer to numerous solutions offered in the past. Control integrated diverters are, therefore, also possible.



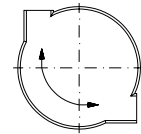
Construction A



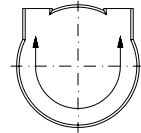
Construction B
chute left



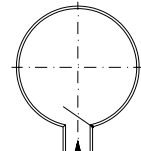
Construction C
chute right



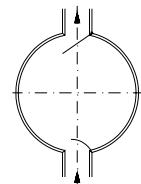
Construction D
chutes 90°



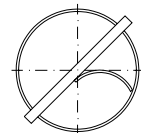
Construction E
chutes 180°



Construction F
chutes middle



Construction G
chutes 2 x middle,
with diverters



Construction H
adjustable diverter

Order example

DTZ-P 2040 construction C

D1 = 1000 mm

D = 1075 mm

H = 800 mm

Surface option 1.1

v = 2 rev/min clockwise

Turntables

Application examples



Turntable
"light" with
timing belt drive



Turntable "light" with timing belt drive,
including belt conveyor, together can be electrically
adjusted in height via a telescoping pillar



Turntable "light" with timing belt drive (ø 2000 mm),
applications in the pharmaceutical industry



DTZ-P 2040 swivel table with timing belt drive



Turntable with direct drive, perimeter stainless steel plate and leader gage plate in the feed area



Turntable with friction drive



Turntable with direct drive, perimeter stainless steel plate and single-strand discharge

Stands

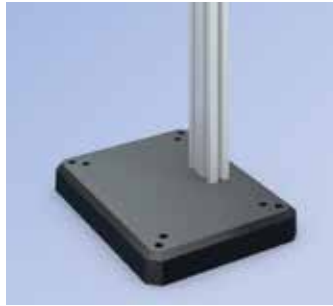


Contents stands



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Stands, heavy

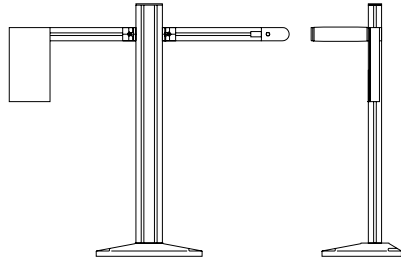
277

Stands

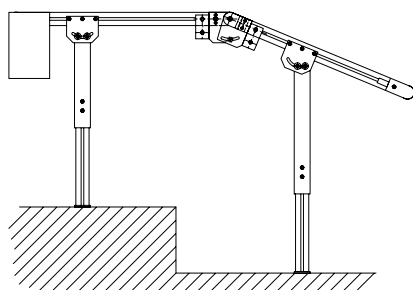
General informations

mk provides the right stand system for all conveyors. With regard to stability of the system, please pay attention to the ratio of height to width, as well as the center of gravity of the load and other influences. We would be pleased to advise you concerning the optimal configuration, or use our online configurator (www.quickdesigner.com).

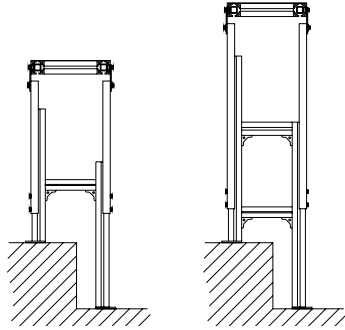
Example – single stand



Example – stand, height-adjustable



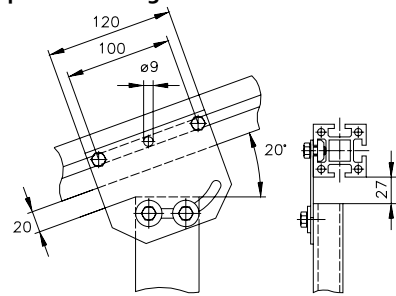
Example – stand, special version



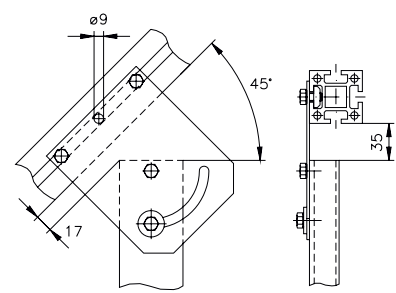
Conveyor frame fastening elements

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

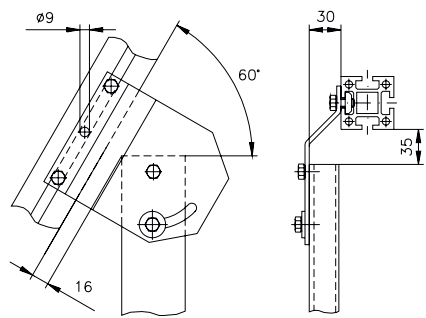
Example – fastening variant A 20°



Example – fastening variant B 45°



Example – fastening variant C 60°

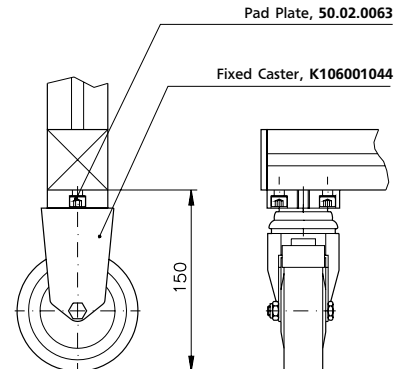




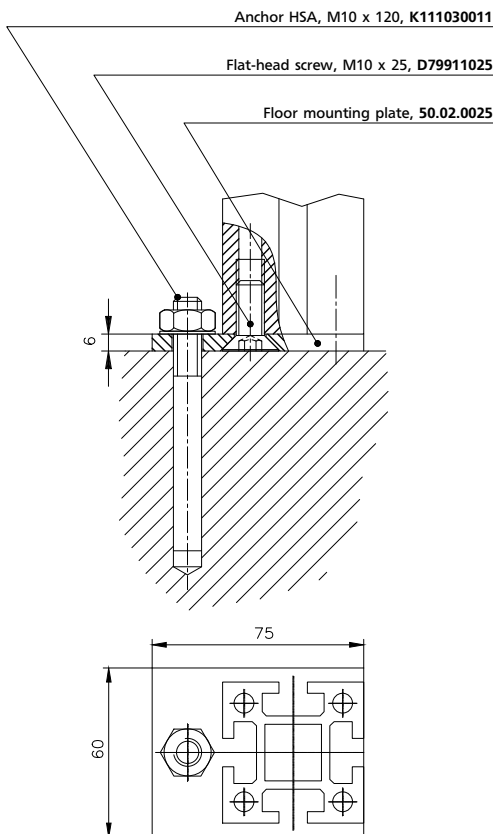
Pad options

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

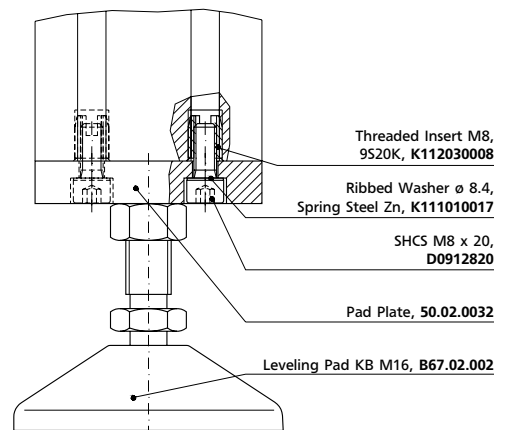
Example – fixed and swivel casters type A



Example – floor mounting plate



Example – leveling pad KB M16





Single stands

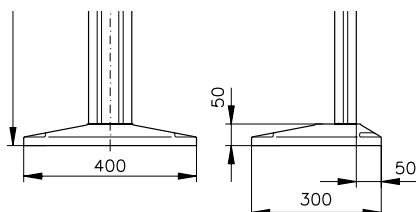
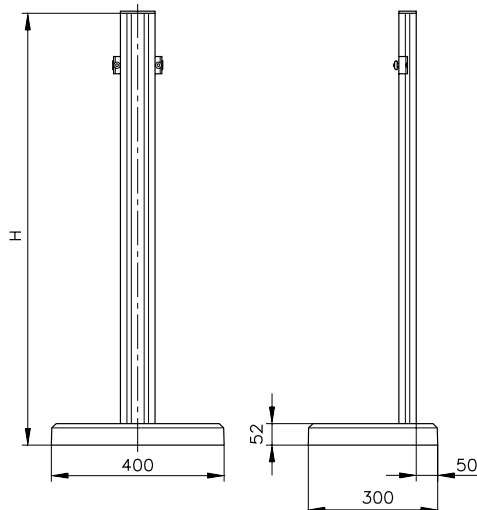
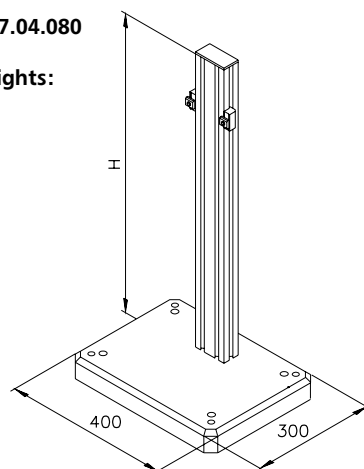
Stand 54.80

Single stand with profile mk 2040.41 for conveyors to a maximum width of 250 mm. Can be used for belt conveyors GUF-P MINI, GUF-P 2000, and modular belt conveyor MBF-P 2040.

Ident-no. B67.04.080

Standard heights:

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



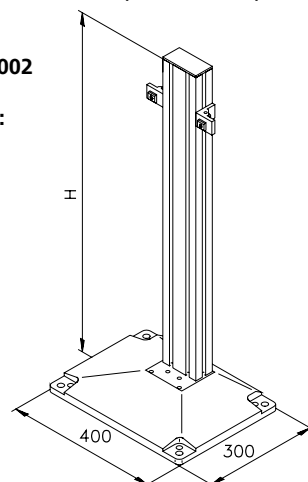
Stand 51.2

Single stand with profile mk 2004 for conveyors to a maximum width of 250 mm. Can be used for belt conveyors GUF-P MINI, GUF-P 2000, and MBF-P 2040.

Ident-no. B67.04.002

Standard heights:

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



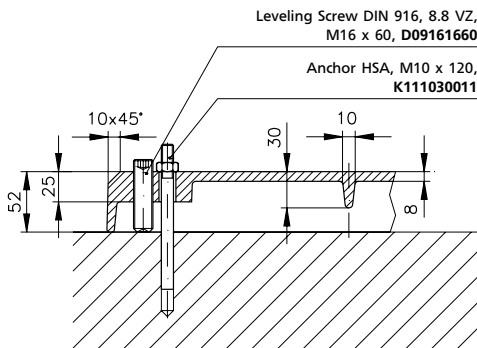
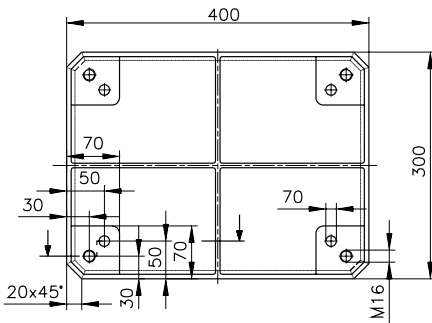
Single stands

Floor fastening for single stand

Base plates as floor fastening elements for single stands ensure a safe stance, they come standard with a black paint finish, and have a defined hole pattern for facilitating anchoring on the floor.

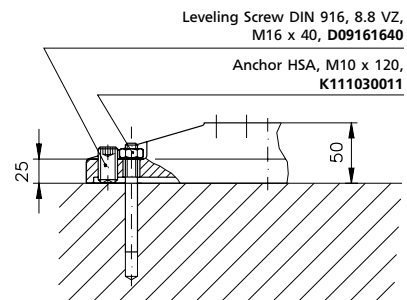
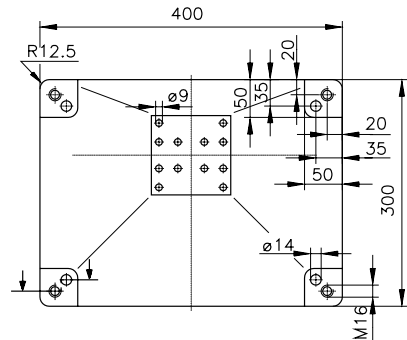
Pedestal Base 7, 50.02.0089

Cast Iron, painted matte black



Pedestal Base 1, 50.02.0023

Cast Iron, painted matte black





Single stands

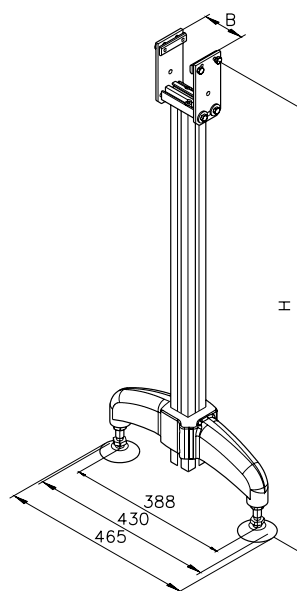
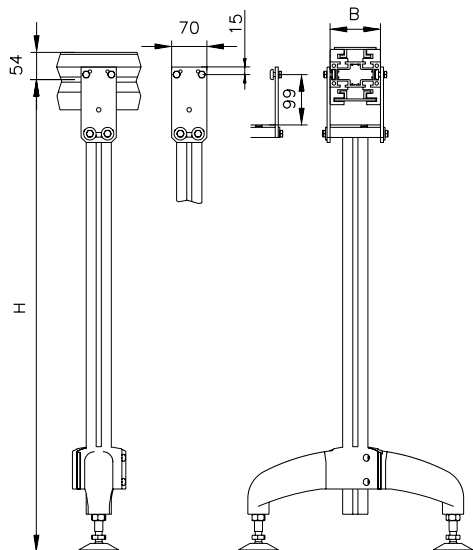
Stand 52.5

Single stand, height-adjustable with profile mk 2000. Can be used for flat top chain conveyor SBF-P 2254.

Ident-no. B67.05.008

Standard heights:
H 500 mm - 1500 mm
± 70 mm

Standard width:
B 100 mm
B 130 mm
B 205 mm



Stands, light

Stand 55.1

Light stand in elementary H version with profile mk 2040.40 (light). Can be used for virtually all conveyor systems, except curved conveyors and incline conveyors.

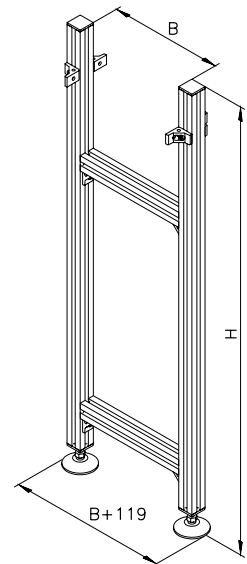
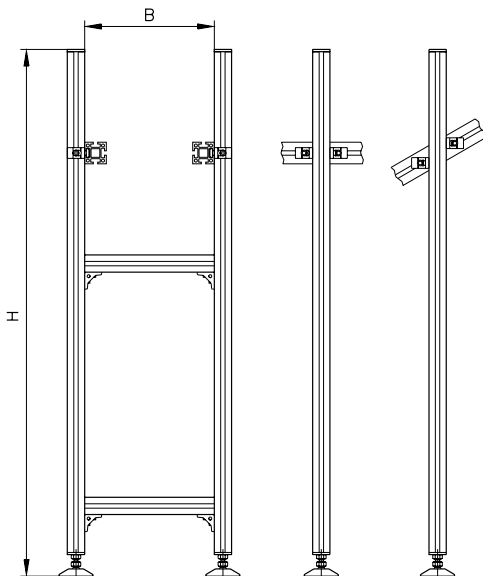
Ident-no. B67.06.011

Standard heights:

H 500 mm
H 750 mm
H 1000 mm
H 1200 mm

Standard width:

B = 200 - 1200 mm





Stands, light

Stand 53.1

Light, height-adjustable stand in H-design with profile mk 2001. Can be used for virtually all conveyor systems, except curved conveyors and incline conveyors.

Ident-no. B67.06.001

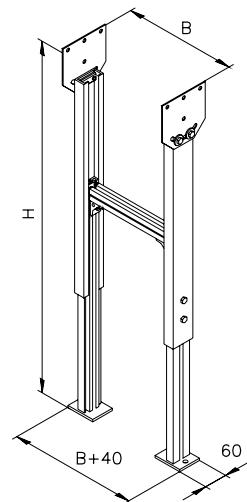
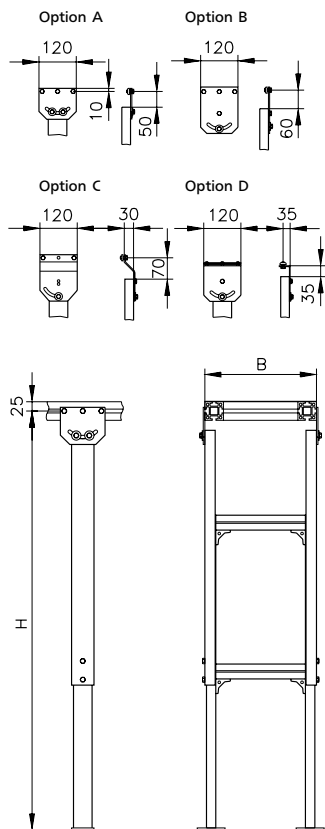
Standard heights with adjustable range:

- H 325 mm \pm 25 mm
- H 400 mm \pm 50 mm
- H 550 mm \pm 100 mm
- H 700 mm \pm 150 mm
- H 850 mm \pm 200 mm

Standard width:

B = 200 - 800 mm

As of H 700 mm
with 2 braces



Stands, light

Stand 53.11

Light, height-adjustable stand with base cross-bar in H-design with profile mk 2001. Can be used for virtually all conveyor systems, except curved conveyors and incline conveyors. The stand is suitable for fixed casters and swivel casters.

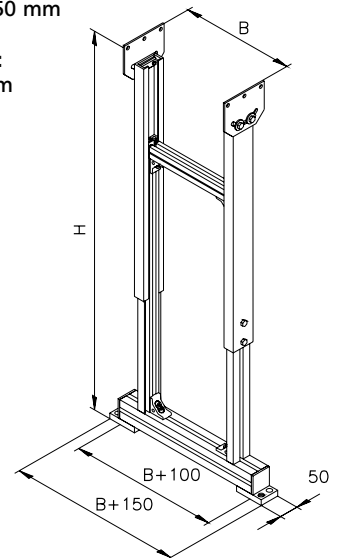
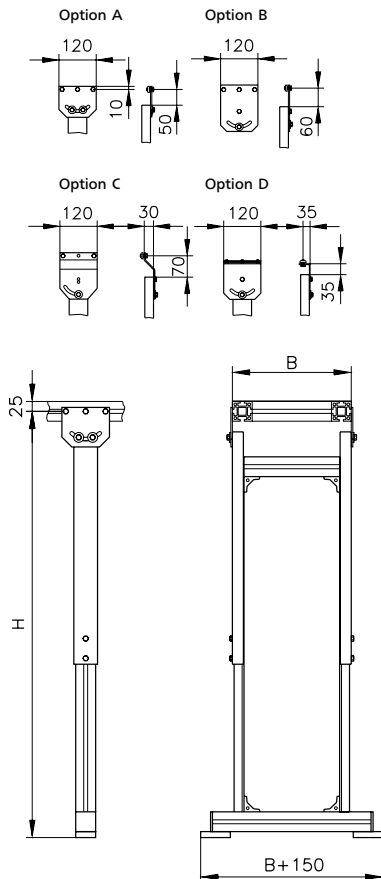
Ident-no. B67.06.002

Standard heights with adjustable range:

- H 400 mm ± 25 mm
- H 450 mm ± 25 mm
- H 500 mm ± 50 mm
- H 600 mm ± 50 mm
- H 700 mm ± 100 mm
- H 800 mm ± 150 mm

Standard width:

B = 100 - 500 mm





Stands, light

Stand 53.11 mobile

Light, height-adjustable movable stand with base cross-bar in H-design with profile mk 2001. Can be used for virtually all conveyor systems, except curved conveyors and incline conveyors.

Ident-no. B67.06.100

Standard heights with adjustable range:

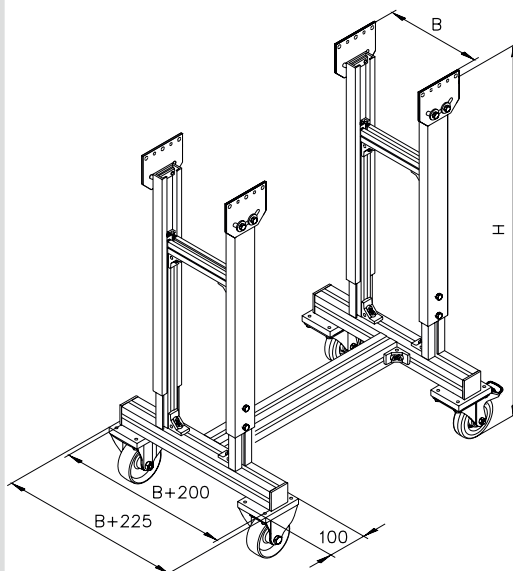
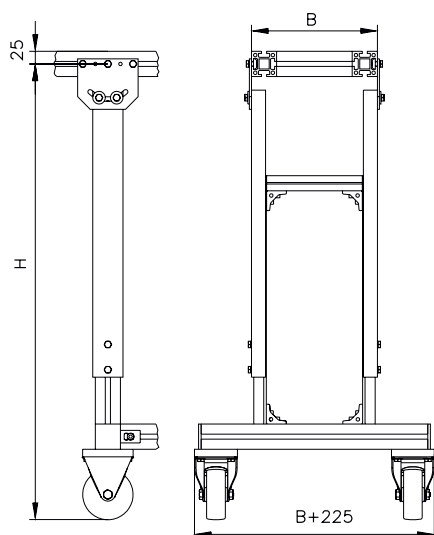
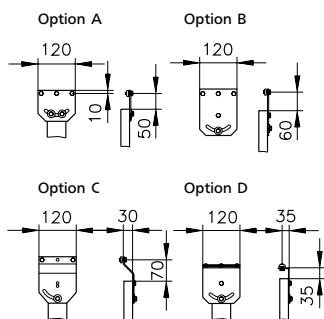
H 600 mm \pm 25 mm

H 700 mm \pm 50 mm

H 800 mm \pm 100 mm

Standard width:

B = 100 - 500 mm



Stands, medium-heavy

Stand 53.2

Medium-heavy, height-adjustable stand in H-design with profile mk 2014. Can be used for virtually all conveyor systems, except curved conveyors and incline conveyors.

Ident-no. B67.06.003

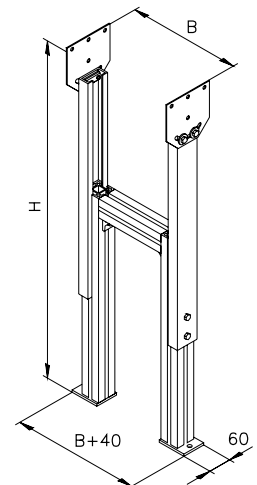
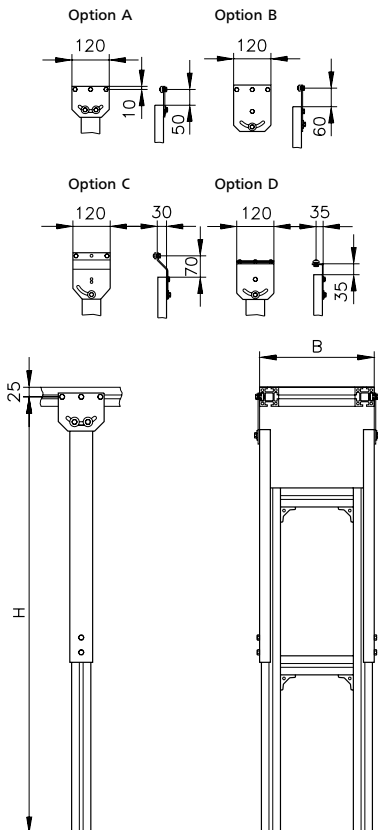
Standard heights with adjustable range:

- H 325 mm ± 25 mm
- H 400 mm ± 50 mm
- H 550 mm ± 100 mm
- H 700 mm ± 150 mm
- H 850 mm ± 200 mm
- H 1000 mm ± 200 mm
- H 1200 mm ± 200 mm

Standard width:

B = 200 - 1500 mm

As of H 700 mm
with 2 braces





Stands, medium-heavy

Stand 53.21

Medium-heavy, height-adjustable stand with base cross-bar in H-design with profile mk 2014. Can be used for virtually all conveyor systems, except curved conveyors and incline conveyors. The stand is suitable for fixed casters and swivel casters.

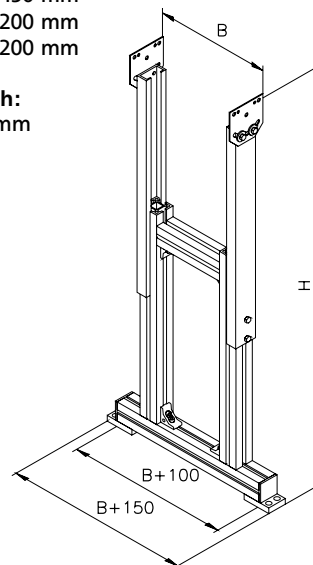
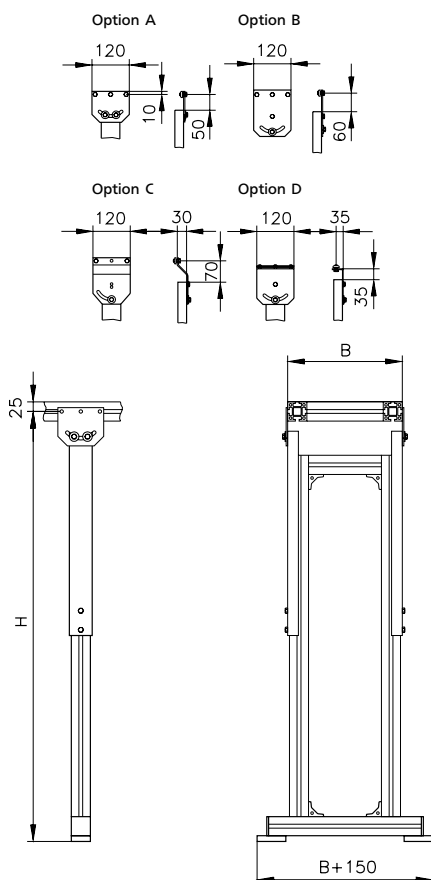
Ident-no. B67.06.004

Standard heights with adjustable range:

- H 400 mm \pm 25 mm
- H 450 mm \pm 25 mm
- H 500 mm \pm 50 mm
- H 600 mm \pm 50 mm
- H 700 mm \pm 100 mm
- H 800 mm \pm 150 mm
- H 1000 mm \pm 200 mm
- H 1200 mm \pm 200 mm

Standard width:

B = 200 - 800 mm



Stands, medium-heavy

Stand 53.21 mobile

Medium-heavy, height-adjustable movable stand with base cross bar in H-design with profile mk 2014. Can be used for virtually all conveyor systems, except curved conveyors and incline conveyors.

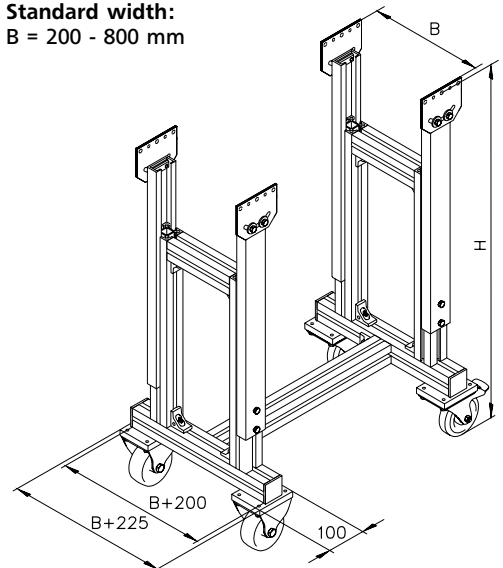
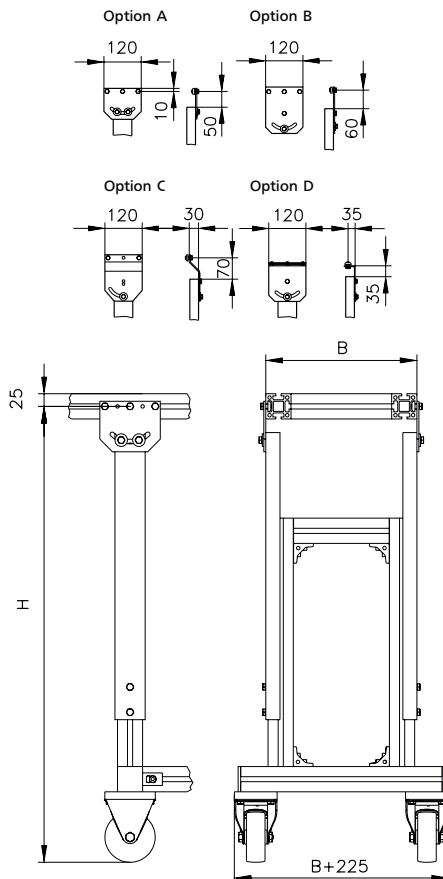
Ident-no. B67.06.101

Standard heights with adjustable range:

- H 600 mm \pm 25 mm
- H 700 mm \pm 50 mm
- H 800 mm \pm 100 mm
- H 1000 mm \pm 150 mm
- H 1200 mm \pm 200 mm

Standard width:

B = 200 - 800 mm





Stands, medium-heavy

Stand 53.32

Medium-heavy, height-adjustable stand with base cross-bar in H-design with profile mk 2014. Can be used for virtually all conveyor systems, except curved conveyors and incline conveyors.

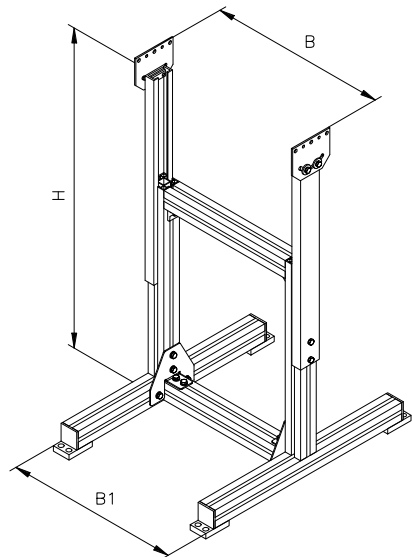
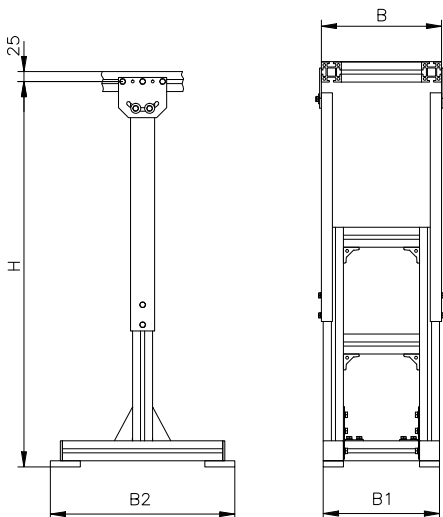
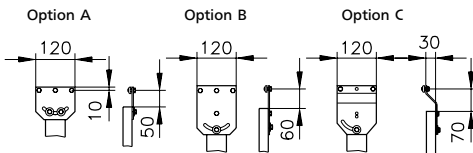
Ident-no. B67.06.016

Standard heights with adjustable range:

- H 450 mm \pm 25 mm
- H 500 mm \pm 50 mm
- H 600 mm \pm 50 mm
- H 700 mm \pm 100 mm
- H 800 mm \pm 150 mm
- H 1000 mm \pm 200 mm

Standard width:

- B = 300 - 1000 mm
- B1 = B-10
- B2 = 460, 660 mm



Stands, heavy

Stand 31

Heavy, height-adjustable stand in H-design with profile mk 2031. Can be used for virtually all conveyor systems, except curved conveyors and incline conveyors.

Ident-no. B67.03.002

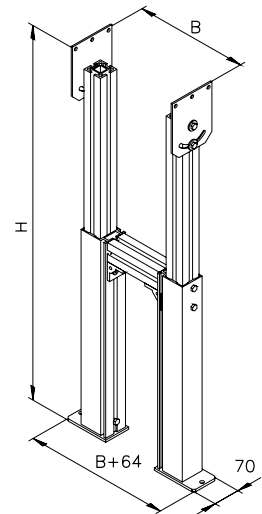
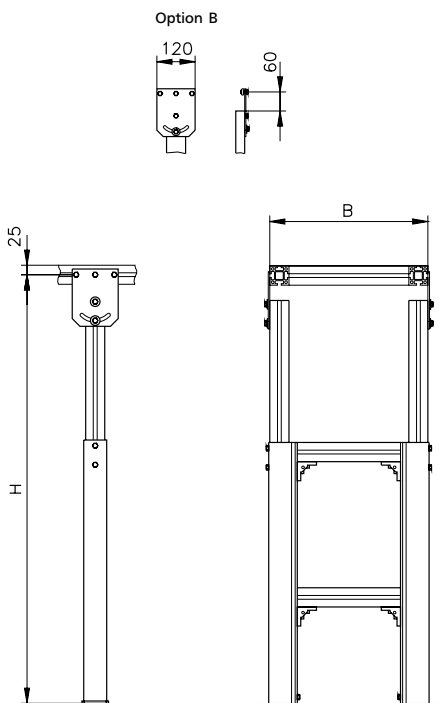
Standard heights with adjustable range:

- H 325 mm ± 25 mm
- H 400 mm ± 50 mm
- H 550 mm ± 100 mm
- H 700 mm ± 150 mm
- H 850 mm ± 200 mm
- H 1000 mm ± 250 mm
- H 1150 mm ± 300 mm
- H 1500 mm ± 300 mm
- H 2000 mm ± 300 mm

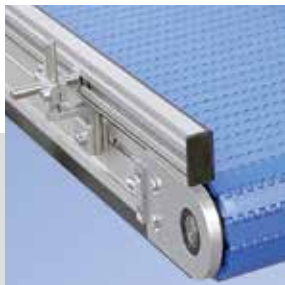
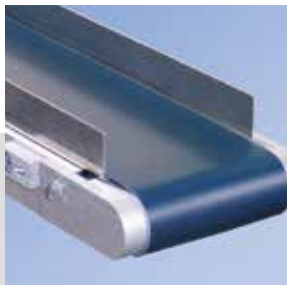
Standard width:

B = 500 - 2000 mm

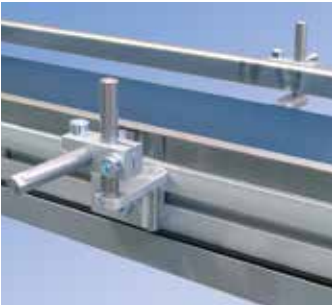
As of H 1150 mm
with 2 braces



Side rails



Contents side rails



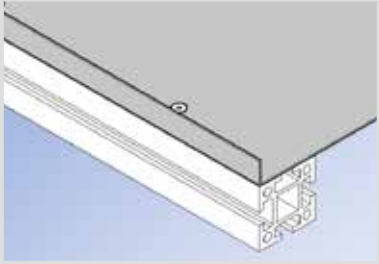
Side rails

Fixed side rails	280
Adjustable side rails	281

Side rails

Fixed side rails

Side rail SF1.3

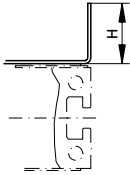


B17.00.003

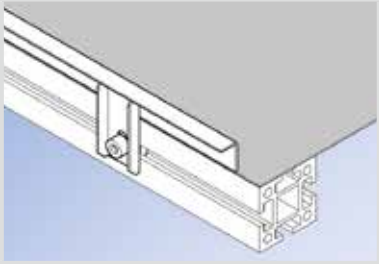
Height 10-100 mm

The length of these side rails is limited to the length of the sheet metal under the conveyor and therefore, is shorter than conveyor length, L. It cannot be removed.

Only available for belt conveyors!

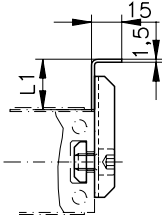


Side rail SF2.1

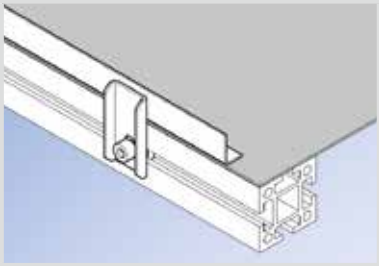


B17.00.004

Variable	Value
L1	25
	50
	75

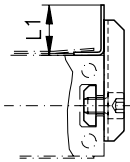


Side rail SF2.2



B17.00.005

Variable	Value
L1	25
	50
	75

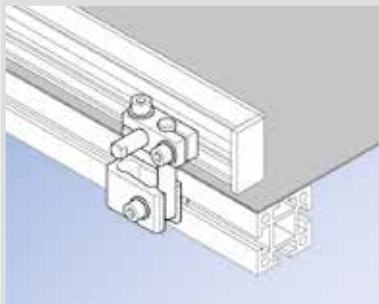


Side rails

Adjustable side rails

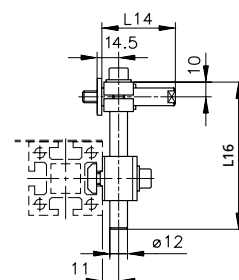
Side rail SF01 complete

B17.00.101



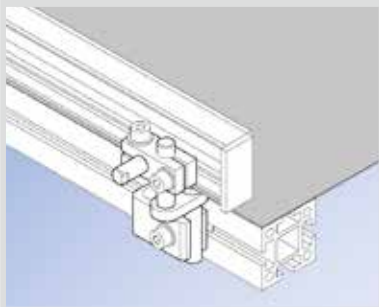
Separate holder HSF01 **B27.01.001**

Variable	Value
L14	50, 75, 100 mm
L16	75, 100, 150, 200 mm



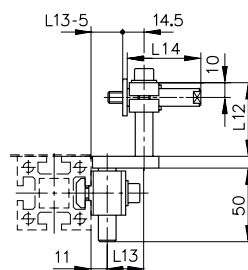
Side rail SF02 complete

B17.00.102

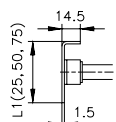


Separate holder HSF02 **B27.01.002**

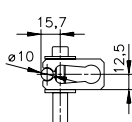
Variable	Value
L12	50, 75, 100, 150 mm
L13	25, 50 mm
L14	50, 75, 100 mm



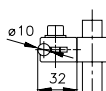
Side rail versions



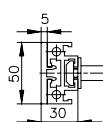
type 01
B17.01.013



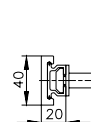
type 11
B17.01.017



type 12
B17.01.018



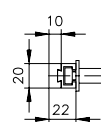
type 21
B17.01.010



type 22
B17.01.014

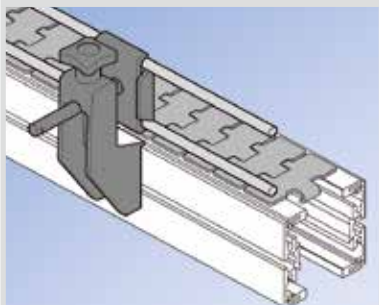


type 23
B17.01.015



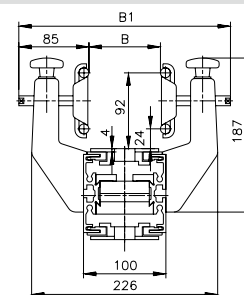
type 24
B17.01.016

Side rail for flat top chain conveyor

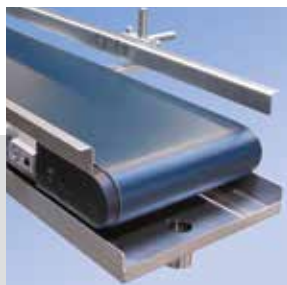


System SF10.1 **B17.00.020**
for straight section

System SF10.2 **B17.00.021**
for curved section



Accessories



Contents accessories



Nuts

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Electronic accessories

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Drip pan

289



Application examples

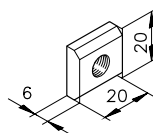
290

Accessories

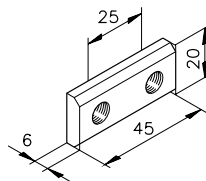
Nuts

Nuts can be ordered for mounting accessories, such as inhibitors, stops, holders, etc.

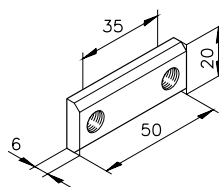
For profile slot 10 mm
(all systems except GUF-P MINI)



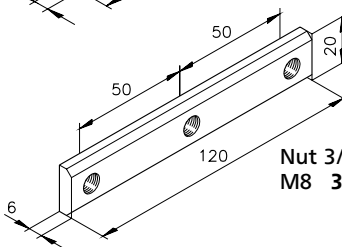
Nut 1, Steel Zn
M6 34.02.0008
M8 34.01.0001



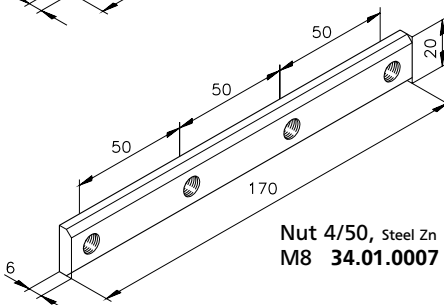
Nut 2/25, Steel Zn
M6 34.02.0010
M8 34.01.0002



Nut 2/35, Steel Zn
M8 34.01.0011

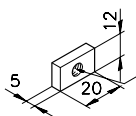


Nut 3/50, Steel Zn
M8 34.01.0006

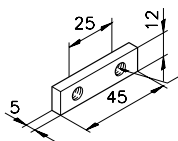


Nut 4/50, Steel Zn
M8 34.01.0007

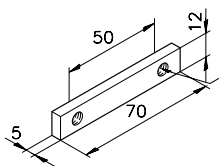
For profile slot 7 mm
(GUF-P MINI)



Nut 1, Steel Zn
M6 34.02.0001
without chamfer



Nut 2/25, Steel Zn
M6 34.02.0002



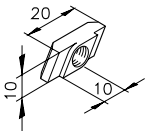
Nut 2/50, Steel Zn
M6 34.02.0003

Nuts for last-minute assembly

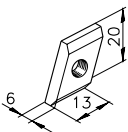
The nuts for last-minute assembly can be pivoted into the profile slot. In addition, they can also be used for profiles with polished slots that are only opened on the joint. The drop-in nuts with spring also provides an ESD function as well as locking in the slot.

For profile slot 10 mm
(all systems except GUF-P MINI)

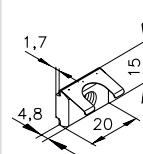
For profile slot 10 mm
(all systems except GUF-P MINI)



T-Nut, Steel Zn
M4 **34.07.0004**
M5 **34.07.0003**
M6 **34.07.0002**
M8 **34.06.0002**

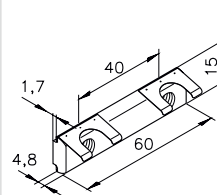


Slot Nut, Stainless steel
M6 **34.04.0003**
M8 **34.03.0002**



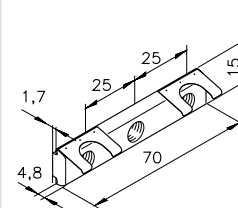
Drop-in Nut 1 steel Zn,
with spring steel sheet, ESD

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



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

M8 **34.16.0834**

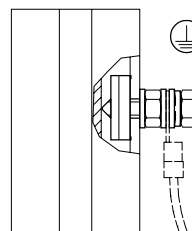


Drop-in Nut 3/25 steel Zn,
with spring steel sheet, ESD

M8 **34.16.0835**



Ground connection



Ground connection
B02.99.151



Accessories

Electronic accessories

Reglomats

The integration of conveyor systems with existing equipment is becoming ever more complex. On request mk provides not only complete solutions from the control concept until handover at the customer, but also wiring on the terminal box, input/output modules or field bus system according to customer specification. Even if your electronic requirements are minimal, you can rely on a complete system of standard components.

Via mk Reglomat, the speed of the conveyor with three-phase current (AC) can be regulated in the range 1:7 (10-70 Hz) starting from the rated speed at 50 Hz. For direct-current in the range of 1:6 (0.25-1.5 A or 0.5-3 A).

Reglomats for direct current motor

- Input: alternating current 230 V 50 Hz
- Range: 1:6 (0,25-1,5 A or 0,5-3 A)
- Analog input 0 to +10 V DC
- Digital input for enable
- Digital output 24 V DC/ 50 mA
- All digital and analog signals can also be controlled externally
- B x H x T = 200 x 300 x 160 mm

Reglomats for three-phase motors

- Input: alternating current 230 V 50 Hz
- Range: 1:7 (10-70 Hz)
- Analog input 0 to +10 V DC
- Three digital inputs, e.g. for enable, direction of rotation reversal, light barrier, etc.
- Digital output 24 V DC/ 50 mA
- B x H x T = 200 x 300 x 160 mm

Ident-No.	Description
EREG180DC/3A	Reglomat until 0,25 KW 180/200V DC
EREG180DC/3ARV	Reglomat with reversing option

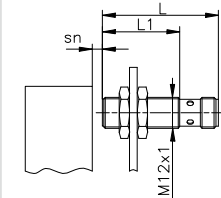
Ident-No.	Description
EREG230AC/0.25	Reglomat until 0,18 KW Motor power
EREG230AC/0.25RV	Reglomat with reversing option
EREG230AC/0.37	Reglomat until 0,25 KW Motor power
EREG230AC/0.37RV	Reglomat with reversing option
EREG230AC/0.55	Reglomat until 0,37 KW Motor power
EREG230AC/0.55RV	Reglomat with reversing option
EREG230AC/0.75	Reglomat until 0,55 KW Motor power
EREG230AC/0.75RV	Reglomat with reversing option

Note: Due to different voltage requirements, the controllers described here are not available in North America.

Electronic accessories

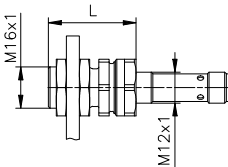
Initiators

Initiators are used for controlling, positioning, and monitoring automation technology processes. Initiators in the mk conveyor technology consists of four components, the inductive sensor, the clamp holder, the sensor cable, and the initiator holder.



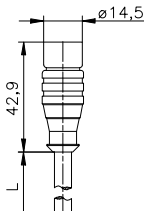
Inductive sensor M12x1

Ident-no.	L [mm]	L1 [mm]	sn [mm]
E-M12-SN4-3P-BE	45	30	4
EBES516325E5CS4	45	30	2
EBES516325G54C	70	40	4



Clamp holder for
M12x1 inhibitors

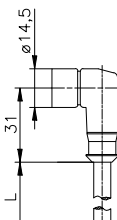
Ident-no.	L [mm]
EBES12,0-KH-2S	34
EBES12,0-KH-2L	44,5



Inhibitor cable with
bushing* M12x1, straight

Ident-no.	L [m]
ELAPP83405165	5
EKDM12-4POL10MGR	10

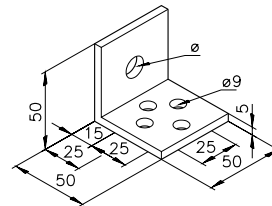
*other end loose cable



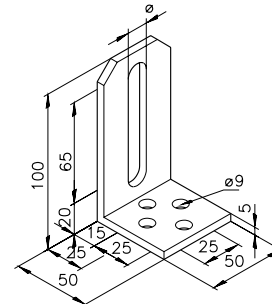
Inhibitor cable with
bushing* M12x1, angled

Ident-no.	L [m]
EKDM12-4POL05MGW	5
EKDM12-4POL10MGW	10

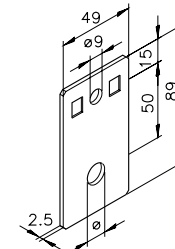
*other end loose cable



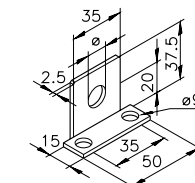
Inhibitor bracket A
 Ø 13 - 16.00.0000
 Ø 19 - 16.00.0001
 R1/4" - 16.05.0011
 Al tumbled



Inhibitor bracket B
 Ø 13 - 16.00.0006
 Ø 19 - 16.00.0007
 Al tumbled



Inhibitor bracket C
 Ø 9 - 16.00.0011
 Ø 13 - 16.00.0012
 Ø 19 - 16.00.0013
 Steel, ZN

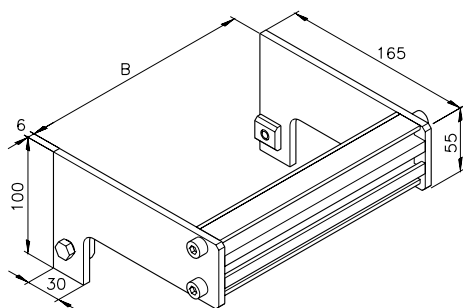
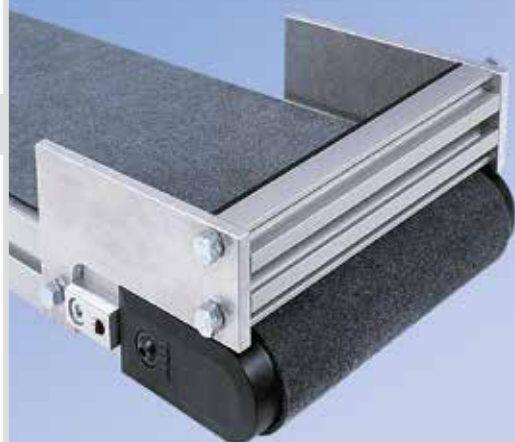


Inhibitor bracket E
 Ø 9 - 16.00.0026
 Ø 13 - 16.00.0027
 Ø 19 - 16.00.0028
 Steel, ZN

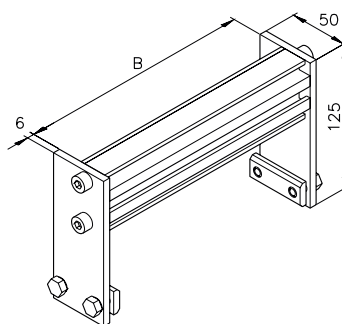
Accessories

End stops

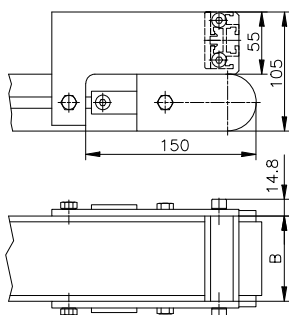
Processes often require that products be accumulated, especially on belt and roller conveyors. For this purpose mk offers its end stop. It can be easily fastened on the conveyor frame in the system T-slots of the conveyor frame profile. To prevent the conveyed goods from being damaged, the accumulation bracket is fitted with a plastic strip.



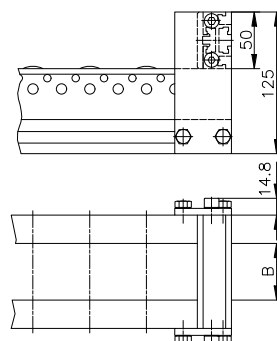
End stop GUF-P 2000
B66.00.004
incl. mounting hardware



End stop RBS-P 2065/66
B66.00.003
incl. mounting hardware



Belt conveyor GUF-P 2000

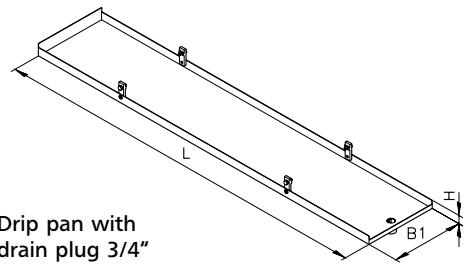
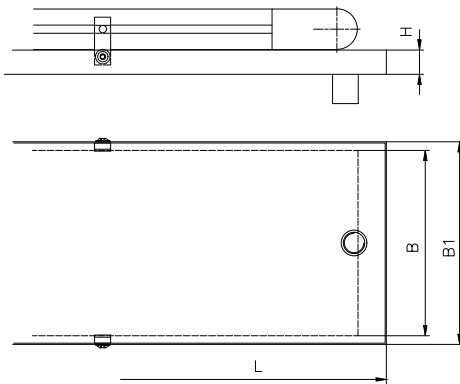


Roller conveyors RBS-P 2065



Drip pan

The drip pan, manufactured out of stainless steel; can be adapted in height, width, and length to the conveyor system, and is primarily suited for belt conveyors and modular belt conveyors. It is supplied standard with a $\frac{3}{4}$ " drain plug on which the appropriate drain lines can be connected. Typical applications are products to be conveyed that are only slightly wet.



**Drip pan with
drain plug $\frac{3}{4}$ "
B11.01.002**

Stainless steel
Holder Al tumbled

Accessories

Application examples



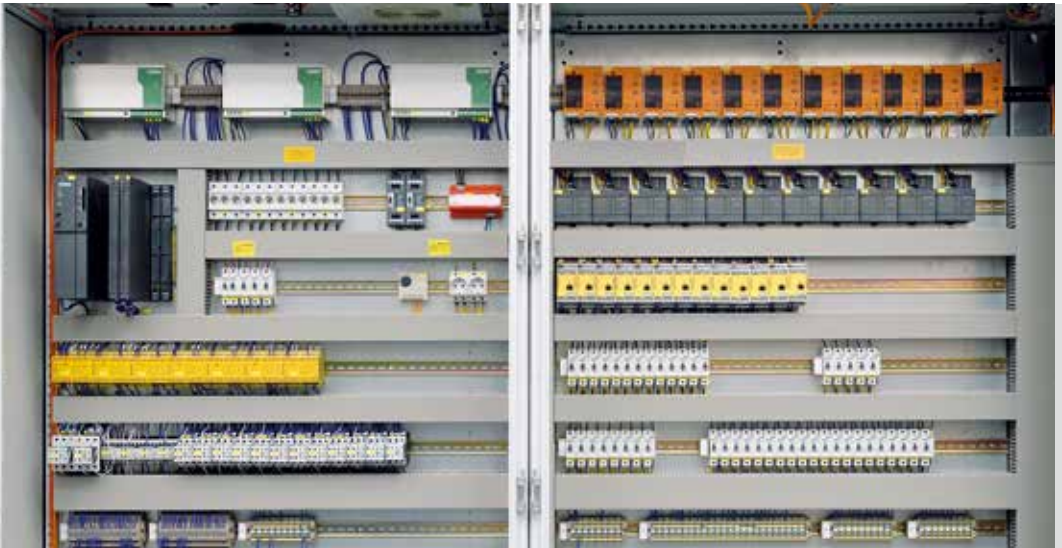
Safety circuit for emergency accesses, stop accesses and operating accesses



Complete small controller with integrate operator panel



Emergency stop button



Complete control system with Siemens S7 and bus system



Control cabinet attached on the frame and protective device combination

Accessories

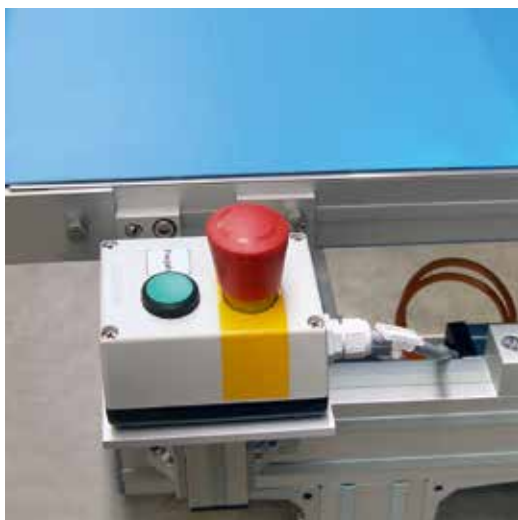
Application examples



Control cabinet with operator panel on which minor program changes can be directly executed



Valve technology



Enable button with emergency stop button



Clear button



Main switch with motor protection switch



Mobile touch screen with connection box and offset main switch



Compact control device for manual control of transport conveyors and their speed



Standardized operating device

Accessories

Application examples



**Slide-up and slide-down
including initiators**



**Initiator holder of
VA-steel sheet**



**Initiator holder of
aluminum angle bracket**



Square inductive sensor



Transverse pusher



Flexible compressed air connection



Adjustable reflector holder



Adjustable holders for light barriers

Accessories

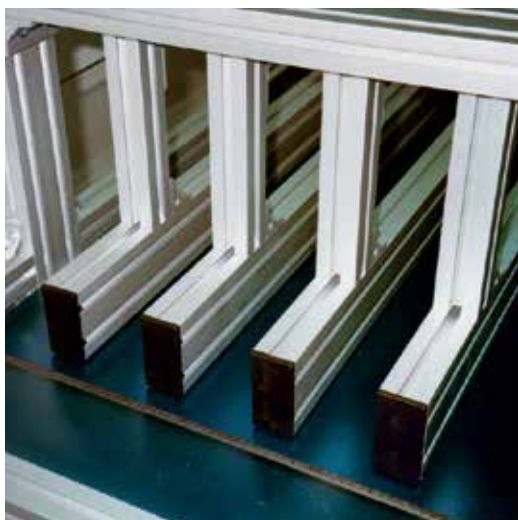
Application examples



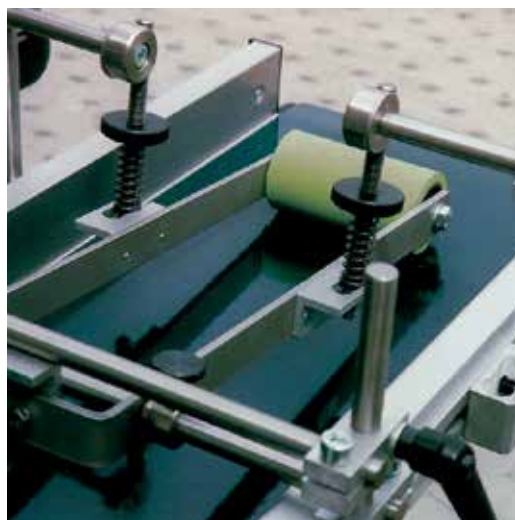
**Belt conveyor GUF-P 2000 AC
with end stop**



**Modular belt conveyor MBF-P
2040 with end stop**



**Multi-line, adjustable side rail
in portal arrangement**



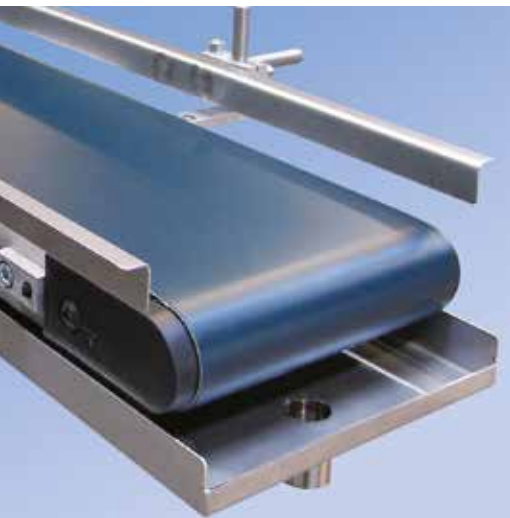
**Pressure roller for light
products, such as paper**



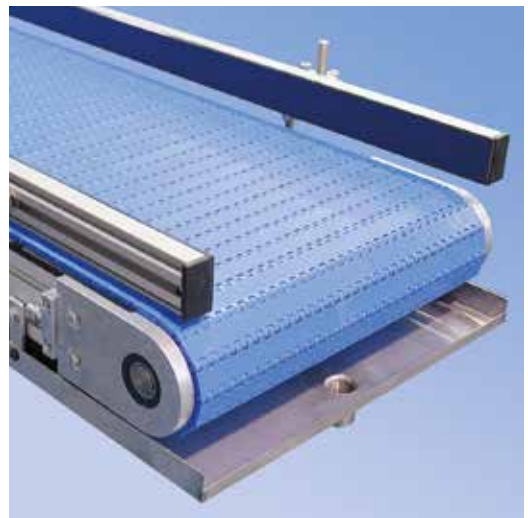
Belt conveyor with dust collection sack



Belt conveyor with dust collection sack



**Drip pan with drain port at the
beginning of the conveyor**



**Modular belt conveyor
with collecting pan**

Customer Specific Application examples





Customer Specific Application examples



GUF-P 2000 with protective cover made of welded fencing



Lifting unit with pallet lock



GUF-P 2000 with straightening unit for paper bags



Inclined conveyor with FDA belt and sidewalls



Accumulating roller chain conveyor with infed and outfeed segments



Modular belt conveyor with brushes for metal sheets susceptible to scratching



V-belt conveyor combination

Customer Specific Application examples



**Twin timing belt conveyor with integrated lifting cylinder
and roller conveyor for transporting glass panes**



GUF-P 2041 with separator



**Multiflex Chain Conveyor
with special fixtures for moving candles**



Timing belt conveyor combination
with swiveling upper unit



System for filling boxes with integration of an
upstream tube filling station and integration of
the provided scale with NOK discharge



Modul-Con circulation system – the transport
medium is a 3/4" vertical hollow pin chain
arranged between the wear strips



GUF-P 2041 with direct head drive AF
as hopper conveyor

Customer Specific Application examples



**Special roller conveyor for transporting pallets
integrated in a complete system**



**GUF-P 2000 in use for
weighing technology**



**GUF-P 2000 with pneumatic
pusher/deflector**



Side Grip Conveyor for bottle
or glass conveying



Transport and turning system with
integrated CD labelling station



KTF-P 2040 runs in 20° angle from a cleaning
bath with prisms for spindle loading



Customer-specific roller conveyor with
integrated parts guide for charging cleaning
systems, e.g. in the automobile industry

Customer Specific Application examples



Steel flat top chain conveyor



**Curved modular conveyor chain
for tubes with NOK discharge**



**Accumulation-capable flat top
chain conveyor for separation
and positioning**



Accumulating 2-strand pallet recirculation system, as a feed conveyor for a bitumen melting plant



Integration of 2-strand pallet recirculating system with belt conveyor, GUF-P 2000, as a removal conveyor for NOK parts



Accumulating table top chain conveyor with workpiece fixtures returning underneath

Customer Specific Application examples



Pallet discharge from main line into two parallel transverse conveyor lines



Electrically driven
"stand alone" lift frame with guarding



Lift, accessible from three sides,
with slewing ring in cage



Lift and transfer conveyor with coupled drive and central stroke unit for bridging very short transverse sections



Lift and transfer conveyor with short transfer conveyor section



Lift and transfer conveyor in parallel arrangement with support roller for bridging small gaps



Lift and transfer conveyor with chain and coupled drive for the automatic removal of products with cycle operation from below

Customer Specific Application examples



Pivoting conveyor system with integrated slug clamping, that picks off and clamps blow molded parts on the machine, and transports them away



Magnetic S conveyor specifically adapted to the installation of a production system for brake shoes



Ready-for-use interlink system, including controller and protective enclosure with integrated robot island and integrated melting ovens



Supply transport and removal transport of the pallets via dual-strand timing belt conveyor within a production cell



Production cells with double continuous-lift accumulator for feed parts and discharge parts

Service

mk customer service

We are at your side in each phase of a project – whether for on-site consulting, planning and design, or for maintenance and spare parts supply. Short delivery times with high availability are

ensured through our in-stock, modular system and our dense sales network. Our quality management, certified in accordance with EN ISO 9001, guarantees maximum process reliability.

Spare parts supply

An extensive, well-sorted spare parts warehouse guarantees fast availability



On-site consulting

We are in your area. Your personal customer service representative would be pleased to support you and advise you



Maintenance and service on site

Our service team offers service and maintenance over the entire life cycle



Planning and design

Our design team provides custom designs to your specifications



Fast delivery and high availability

We guarantee this through our in-stock modular system



Quality management

Our quality management, certified in accordance with EN ISO 9001, guarantees the highest level of process reliability



With mk at your side, you're working with a supplier of more than just components, modules and complete systems. All of our products are of the highest quality and are delivered as promised. We

offer an all-inclusive service over the entire product lifecycle for long-lasting and successful business collaboration on the basis of trust.

mk Comparison and Selection Tool



Determine the most suitable mk conveyor technology or linear technology system!

- Online selection tool for determining the optimal system based on the parameters entered
- Comparison of up to 3 systems at a glance
- Motor selection program
- Redirection to the product configurator „mk QuickDesigner“ or to our E-catalogs

mk QuickDesigner – our online configurator



Your conveyor at the touch of a button!

- Online at www.quickdesigner.com
- Create your mk conveyor, quickly, easily, and specifically
- Receive CAD model and quote automatically
- Live view during the configuration
- Save configurations and edit later
- Detailed help
- German/English

mk Quick Delivery Program (QDP)



We deliver your belt conveyor on short notice! For the majority of GUF-P MINI and GUF-P 2000 belt conveyors (see QDP flyer).

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

Locations

We're there where you need us



Headquarters in Troisdorf,
Germany

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

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

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Information material

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

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

mk Profile Technology Catalog



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

mk Conveyor Technology Catalog



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

mk Linear Motion Catalog



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

mk Factory Equipment Catalog



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

Mini-CD mk E-Catalogs



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

Current mk Flyer



Download our latest flyer as PDF format on our website „www.mk-group.com“. Or order the flyer as print version at info@mk-group.com.

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