item



The item Conveyor Belt System
Comprehensive Catalogue

The item Conveyor Belt System



Modular – perfectly coordinated conveyor belt lines

Specialised components and standard profiles in thousands of possible combinations provide you with exactly the right system, whatever goods you need to transport:

- Individual or parallel Flat Conveyor Belts and Timing Belts
- Up to 2400 mm in width and 6000 mm in length
- Electric motors with integrated or separate gearbox



Extendible – seamless integration into your working environment

item conveyor belts are compatible with the over 4000 components in the item Building Kit System and are easy to integrate into machinery, guards and enclosures:

- Huge selection of compatible accessories and profiles
- Suitable for use as a free-standing solution and for integration into systems
- Solutions for uniform and consistent production and goods flow



Reliable – low-maintenance design and tried-and-tested technology

item belt conveyor technology is designed to keep maintenance requirements low and has been tested for durability:

- Self-centring return assemblies for Flat Conveyor Belts and Timing Belts
- Self-aligning ball bearings and elastomer couplings even out misalignments
- Tensioning function integrated into the groove

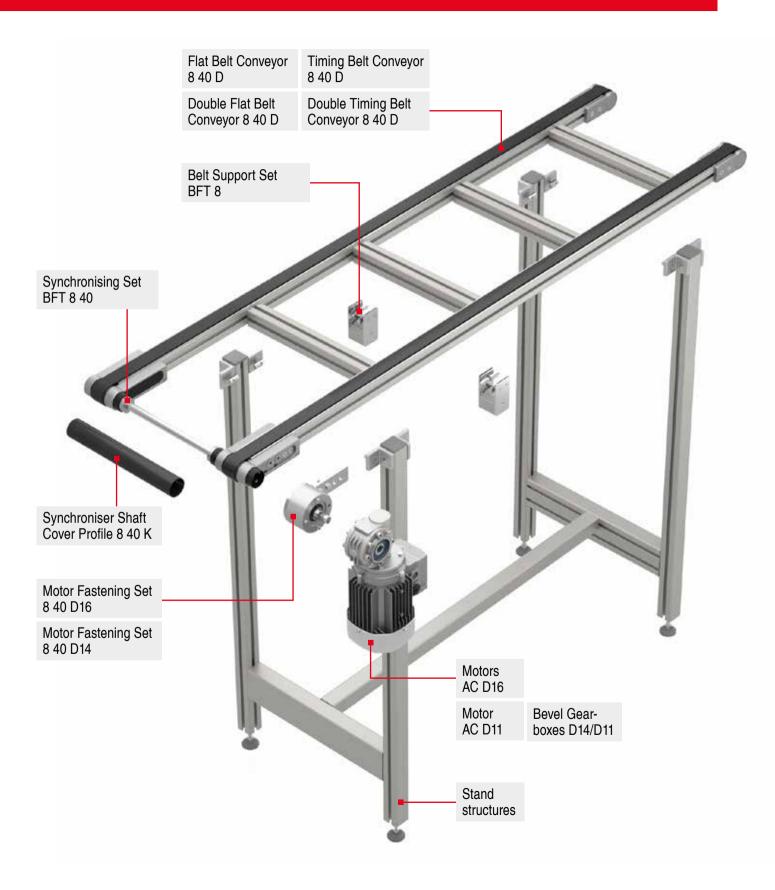


Available – simple optimisation and short delivery times

We look after the details. item will optimise your conveyor belt system to suit your requirements and deliver it in next to no time:

- Experienced planners will configure every conveyor belt in line with your specifications
- Your system will be assembled in the item production and logistics centres and delivered to you ready to install
- The item logistics chain and warehouses ensure a high level of delivery availability





Contents



Belt conveyor technology

Flat Belt Conveyor	16
Double Flat Belt Conveyor	18
Timing Belt Conveyor	20
Double Timing Belt Conveyor	22



Drive elements

Motors and Gearboxes	25
Motor Fastening Sets	31
Synchronisation	33



Accessories

Belt Support Set BFT 8	36
Stand structures	37



Technical data

omenclature of product names	39
flotors	41
evel Gearboxes	41



Interlinking work benches with automated continuous conveyors

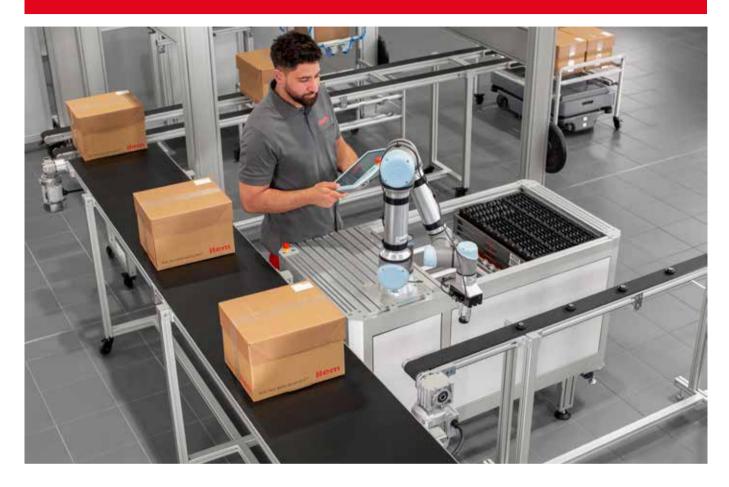


When it comes to interlinking workstations, conveyor belts keep materials flowing at all times, without staff having to make any manual interventions. Depending on their design, conveyor belts can transport products either in a random sequence or presorted on workpiece carriers or in containers. Both lightweight individual parts and heavy assemblies can be conveyed in this way, with the transport speed being adapted to the requirements of the working process.

The benefits of the item Conveyor Belt System:

- 1) Thanks to its large selection of conveyor belts, conveyor widths and drives, the system can be optimised for any task
- 2) The use of aluminium profiles with Line 8 system grooves and compatibility with the item Building Kit System ensure the system can be integrated easily into other structures
- 3) The slim return pulley helps to create an especially small gap at the output end for a safe, material-friendly transition point
- 4) A torsion-resistant load-bearing frame and an optimised stand structure that can be simply adapted to the installation scenario deliver excellent process reliability

Cyclical interlinking of working processes



A conveyor belt being used on a cyclical basis can help you synchronise two working processes with each other. Product removal can therefore be fully or semi-automated so that, for instance, individual articles can be efficiently collated into larger packaging units. Seamlessly integrating processes like this allows for onward transport to a warehouse or dispatch by conveyor belt or an automated guided vehicle (AGV) system.

The benefits of the item Conveyor Belt System:

- Simple interlinking for working processes because the conveyor belt can be integrated directly into working cells or machines
- 2) Simple planning and reduced variety of parts because single and double belts are based on the same design principles
- 3) Precise control of the working cycle thanks to numerous drive variants with coordinated gear ratios
- 4) Excellent reliability due to low-maintenance components and self-centring return assemblies for Flat Conveyor Belts and Timing Belts



Hybrid use of conveyor belts and roller conveyors



Production environments usually use a mix of different transportation methods, and it is the interfaces between these that determine the efficiency of intralogistics. On the one hand, the transition from one transport method to another must be precisely coordinated so products don't come under unnecessary stress from impacts. On the other hand, the strain on staff also needs to be factored in, because heavy lifting and repetitive movements cause fatigue and can lead to a drop in concentration or physical injuries.

The benefits of the item Conveyor Belt System:

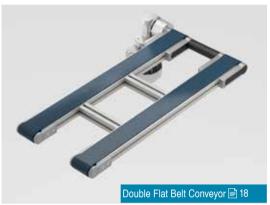
- 1) Thanks to the item Building Kit System, roller conveyors, transport trolleys and racks can all be easily adapted for the use of a conveyor belt
- 2) Smooth transitions from roller conveyor to conveyor belt and back due to space-saving return pulley and precise alignment of travel heights
- 3) 100 percent customisable solutions thanks to wide range of compatible components for industrial use
- 4) Dependable operation due to torsion-resistant load-bearing frame that can be easily extended with custom attachments

The item Conveyor Belt System - an overview



Flat Belt Conveyor 8 40 D

- Continuous flat belt
- In eight widths up to 400 mm
- For unit loads, even ones with irregular bases
- Maximum line load of up to 25 kg/m
- Accumulating belts available
- Incline of up to 20°
- Two drive concepts available
- Length of conveyor section: 500 to 6000 mm
- Conveyor belt speed of 2.5 to 28.9 m/min



Double Flat Belt Conveyor 8 40 D

- Parallel belts
- Choice of 40 or 80 mm conveying width
- Total width up to 2400 mm
- For transporting goods that are inherently stable
- Maximum line load 25 kg/m
- Accumulating belts available
- Incline of up to 20°
- Two drive concepts available
- Length of conveyor section: 500 to 6000 mm
- Conveyor belt speed of 2.5 to 28.9 m/min



Timing Belt Conveyor 8 40 D

- Reinforced Timing Belt
- Choice of 40 or 80 mm conveying width
- For transporting heavy objects
- Maximum line load 25 kg/m
- Accumulating belts available
- Incline of up to 20°
- Two drive concepts available
- Length of conveyor section: 500 to 6000 mm
- Conveyor belt speed of 2.8 to 31.4 m/min



Double Timing Belt Conveyor 8 40 D

- Parallel, reinforced Timing Belts
- Choice of 40 or 80 mm conveying width
- Total width up to 2400 mm
- For transporting heavy loads
- Runs true even under lateral forces
- Maximum line load 25 kg/m
- Accumulating belts available
- Incline of up to 20°
- Two drive concepts available
- Length of conveyor section: 500 to 6000 mm
- Conveyor belt speed of 2.8 to 31.4 m/min



Five technical highlights in focus



1) Durable design compensates for misalignments

A small deviation can have a big impact. If the axles and bearings on conveyor belts are not precisely aligned, uneven loading can cause premature wear on components. That is why the item Conveyor Belt System uses compensating self-aligning ball bearings and elastomer couplings. These independently even out misalignments to ensure components achieve a long service life. Thanks to their conical/cylindrical shape, the pulleys automatically centre the belt.



2) Tensioning function integrated into the groove

Awkward tension adjustment? Not with the item Conveyor Belt System. The tensioning function is integrated into the groove of the supporting profile to enable ideal force transmission into the profile. What's more, the tensioning screw can be very precisely adjusted and tightened. The only downside is that, since your conveyor belt will be supplied preassembled, you probably won't notice this feature at all because you won't need to adjust the tension.



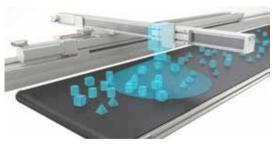
3) Two drive concepts to choose from

Lots of conveyor belts are closed systems. However, it doesn't need to be that way. The item Conveyor Belt System allows you to choose what your ideal drive should look like. Would you prefer a motor and gearbox in one single unit? Energy-efficient Motor AC D16 features an integrated Spiroplan® bevel gearbox and is installed in just one step. Alternatively, would you like the option of using a different gear ratio so you can run your conveyor belt at different speeds? When choosing Motor AC D11, the electric drive and Gearbox are separate components. That means you can simply swap out the Gearbox and continue using the conveyor belt with the same Motor.



4) Change the position and orientation of the Motor with ease

Sometimes, being flexible in production means changing the way your workstations and storage locations are arranged. That is why the product designers behind the item Conveyor Belt System factored in this adaptability right from the outset. The Motor Fastening Sets give you the option to swap the drive to the other side in next to no time and without having to disassemble the conveyor belt. Moreover, the orientation of the Motor and Gearbox combination can be changed in 90° increments. That means a drive installed above the conveyor belt can be turned 180° and fastened in place in just a few minutes.



5) Modular design for every installation scenario

Conveyor belts are always part of a production process. The item Conveyor Belt System has therefore been designed to slot neatly into your production environment. Do you need a free-standing 5500 mm belt at a height of 1500 mm and in a width of 400 mm? No problem! Do you have to move heavy workpieces 1500 mm in a machine? That's fine. Or do you want to transport products on a regular basis in a plant? The modular design boasts all the versatility you have come to expect from the item Building Kit System. Everything is compatible and can be connected together using the universal system groove to create an end-to-end solution.



item supplies ready-to-install solutions

Your item conveyor belt will be manufactured to your specifications in our production and logistics centres and then delivered to you as rapidly as possible. Our global logistics chain ensures excellent delivery reliability.

The configuration tool – a rapid route to your conveyor belt.

The item Conveyor Belt System makes it easy to take delivery of the ideal conveyor line in next to no time. Simply use the online configuration tool on the item website to sketch out your transport task and key data. An experienced designer will then create a suitable system based squarely on your specifications.

That saves you having to calculate line load, motor output and deflection. Instead, you will get a quotation along with a CAD model and detailed description straight away. All the details can be adjusted to suit your needs.

This approach means you can take delivery of a customised, ready-to-install conveyor belt in the space of just a few days. Simply unpack it, connect it up and start using it straight away.

The following criteria need to be taken into account when selecting an appropriate conveyor belt.

1. Transport task

1.1. Product characteristics

Product characteristics such as weight, dimensions and surface finish (oily, sharp edges, high temperature) play a part in determining which is the right type of conveyor belt. The transport position of the products also affects the selection. Timing Belt Conveyors are very suitable for heavier products.

Criteria:

- Product weight [kg]
- Product dimensions: Length x width x height [mm]
- Product shape
- Container/workpiece carrier: Yes/no
- Special features: Hot, oily, sharp-edged surface, sensitivity to impacts

1.2. Cyclical operation

A conveyor belt combines two working processes – receiving goods (entry) and delivering goods (output) at a set pace. The speed of the belt can be compared to cycle time. Most conveyor belts run continuously without any interruptions and products are also removed from them continuously. When using an accumulating conveyor belt, the belt continues to run underneath products as they stack up at the end of the conveyor line. The weight and friction of the products to be transported influence which combination of motor and gearbox is best.

Criteria:

- Entry [parts per minute]
- Entry cycle: Regular/chaotic
- Output [parts per minute]
- Output cycle: Regular/chaotic
- Accumulation: Yes/no

2. Transport route and travel speed

The length of the conveyor line and total volume of material being transported at any one time are key criteria when selecting the best conveyor belt. Furthermore, the type of transport (individual parts, small load carriers, workpiece carriers) and the travel speed also need to be factored in. Belt conveyors over 2000 mm in length require a belt support on the return run.

Criteria:

- Length of conveyor line: [mm]
- Conveying speed: [m/s]
- Conveying height/incline: [degrees]

All details can be found starting on page 15 ("Belt conveyor technology" section).

3. Drive and transmission

The motor and gearbox work together to determine the desired conveying speed in relation to the line load. Depending on the usage concept, you can choose between a direct drive with integrated bevel gearbox or one with a separate gearbox. When using the item Conveyor Belt System, the position of the electric motor can also be retrospectively changed and the orientation of the drive altered in 90° increments.

Criteria:

- Gearbox: Integrated/separate
- Motor position: Right/left
- Motor orientation: 0°/90°/180°/270°

All details can be found starting on page 24 ("Drive elements" section).

4. Stand/installation scenario

Thanks to their modular design, item conveyor belts can be used as free-standing solutions or can be integrated into other systems. Compatibility with the item Building Kit System gives you maximum flexibility when it comes to usage. Coordinated stand designs make it easy to used conveyor lines at the required working height.

All details can be found starting on page 35 ("Accessories" section).



item does the planning for you!

Use our practical configuration tool.



item design & awards



Quality and design

Nothing is more important than reliability. That's why designers put their trust in products from item. We place a great deal of value on quality management throughout every stage of production. All our components pass through a thorough programme of testing before they can move on from the design stage. Existing product lines are also subject to repeated testing.

For item, good design means utilising physical principles to find the optimum technical solution. The result is a range of products that are both elegant and functional. And that is why item regularly wins top design awards.











Other item product lines

One principle, unlimited possibilities. The item product lines can be easily combined and used alongside each other. For instance, compatible components and adapters ensure that a frame built using profiles from the MB Building Kit System can be used with Profile Tubes from the Lean Production Building Kit System on a bench from the Work Bench System. Separate catalogues can be downloaded or ordered for the various product lines.

item reviews and extends its product range on a regular basis. You can always find all the latest information on new and existing products on our website: item24.com

MB Building Kit System

The item MB Building Kit System is the solution for all design and construction tasks involving factory equipment engineering. It can be used to build everything from simple frames to fully automated production lines. The modular components are the basis for profile frames, racks, enclosures, guards and electric and pneumatic solutions. Universal fastening and opening elements enable users to build doors, hatches and solid panels. Reliability and extendibility ensure that all constructions have a long useful life.

Line XMS

Perfectly tailored machine cabins: Line XMS can be used to build the ideal machine frame for any working process with ease. The highly practical Line XMS profiles feature integrated functions such as cable conduits and special seal grooves for creating dust-tight, noise-absorbing doors. Frames can be built with four, six or eight sides. Process levels can be partitioned off to make servicing easy. The smooth outer surfaces are very easy to clean and meet the highest design standards.

Lean Production Building Kit System

Optimised for lean production. Aluminium Profile Tube System D30 is a speedy solution for building cost-effective factory equipment such as stable racks, transport trolleys and workstations. Entire logistics solutions with integrated roller conveyors can be constructed on site and continuously adapted and extended. Mechanical automation systems that don't need complex and costly drives or sensors provide an extra boost for productivity. Thanks to the long-lasting hold of the fasteners, running and maintenance costs are lean, too.



item24.de/en/epaper-mb



item24.de/en/epaper-xm



item24.de/en/epaper-lp



All the information you need at your fingertips

item product catalogues are available online as clearly laid out and convenient e-papers. Take your pick and get browsing!

Automation System

The item Automation System comprises high-performance, ready-to-install Linear Units. An item linear motion unit® consists of a Linear Unit, Motor, Gearbox and Controller. When using selection and design software item MotionDesigner®, all components can be customised to suit your application precisely. The turnkey system is delivered in the length required and is ready for use straight away. This reduces overall costs significantly. A wide range of different drive elements etc. is available to suit all requirements.

Stairway / Platform System

The Stairway / Platform System is the specialist for building regulation-compliant bridges, safe maintenance platforms and all-round working platforms. As a result, staff can reach every corner of a machine or plant and work there safely. The solutions can be configured to suit the space available, with components used on a free-standing basis or seamlessly integrated into a machine frame. The end results are reliable and uniform stairways, guard-rails and platforms that satisfy all requirements in terms of ergonomics and safety.

Online tools

Better than thumbing through catalogues, putting together drawings and carrying out calculations, software and online tools from item help you engineer custom solutions in record time. Intelligent configurators know the components inside out and the online tools ensure that everything comes together perfectly – from design through optimisation to commissioning. Digital engineering speeds up planning and coordination thanks to personal project memories, parts lists, CAD data and 3D PDFs. The online tools include the Engineeringtool, item MotionDesigner® and the Work Bench Configurator.



item24.de/en/epaper-au



item24.de/en/epaper-tp



item24.de/en/configurators





Belt conveyor technology

Specialised but still modular. Four conveyor belt solutions are available that have each been optimised for different tasks. However, they are all based on the same design principles, which ensure maximum versatility and durability. That means you can always select the right transport system for your task without having to compromise on its integration into other systems.

The following belt conveyors are available:

- Flat Belt Conveyor 8 40 D with a continuous belt in widths up to 400 mm
- Double Flat Belt Conveyor 8 40 D with parallel belts in two widths and variable spacings
- Timing Belt Conveyor 8 40 D for heavy loads, with a continuous belt in two widths
- Double Timing Belt Conveyor 8 40 D with parallel belts in two widths and variable spacings

Thanks to their modular design, all four product lines offer the same benefits:

- Two belt surfaces for either accumulating operation or non-accumulating operation on an incline of up to 20°
- Tensioning function integrated into groove
- Mechanical components boast long service life thanks to self-aligning ball bearings and elastomer coupling for evening out misalignments
- Compact return assembly at output end leaves plenty of space for the downstream process
- Electric motor with either integrated or separate gearbox
- Option to quickly switch the motor position without disassembling the conveyor belt
- Gearbox suitable for installation in four orientations
- Stable load-bearing frame with freely accessible Line 8 grooves for easy attachment of accessories and stands
- Compatible with over 4000 components from the item Building Kit System
- Safety in line with DIN EN 619:2019-06 for continuous conveyors and systems



Overview of Flat Belt Conveyor

- Available in eight widths up to 400 mm
- Low-maintenance and forgiving design
- For unit loads, even ones with irregular bases

Flat Belt Conveyor 8 40 D is available in eight widths up to 400 mm and in lengths up to 6000 mm. This continuous flat belt facilitates the efficient transportation of unit loads, including loads with irregular bases.

The stable load-bearing frame with two freely accessible Line 8 grooves makes it easier to attach accessories, connect stands and integrate machines.

Depending on the type of belt used, Flat Belt Conveyor 8 40 D can either have reduced static friction to enable accumulation or be designed to keep workpieces moving on an incline of up to 20°. A low-friction glide plate made of 2 mm stainless steel gives the belt additional support.



All the benefits are series-standard:

- Continuous belt for lightweight small parts
- Stainless steel glide plate for additional support
- Accumulating belt available
- Low-maintenance self-aligning ball bearings
- Fast, ready-to-install delivery





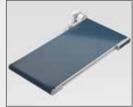












Conveying system	Conveyor belt speed	Max. total load (non-accumulating)	Max. total load (accumulating)
Flat Belt Conveyor 8 40 D -40	2.5-28.9 m/min	15 kg	4 kg
Flat Belt Conveyor 8 40 D -80	2.5-28.9 m/min	27 kg	8 kg
Flat Belt Conveyor 8 40 D -120	2.5-28.9 m/min	38 kg	12 kg
Flat Belt Conveyor 8 40 D -160	2.5-28.9 m/min	51 kg	17 kg
Flat Belt Conveyor 8 40 D -200	2.5-28.9 m/min	63 kg	22 kg
Flat Belt Conveyor 8 40 D -240	2.5-28.9 m/min	75 kg	26 kg
Flat Belt Conveyor 8 40 D -320	2.5-28.9 m/min	100 kg	35 kg
Flat Belt Conveyor 8 40 D -400	2.5-28.9 m/min	100 kg	45 kg

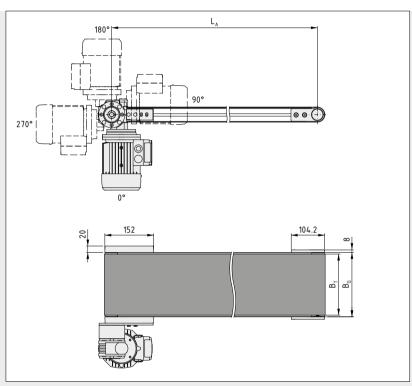


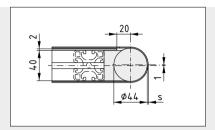


Flat Belt Conveyor 8 40 D

- One continuous belt
- Total conveying width up to 400 mm
- Maximum total line load 25 kg/m







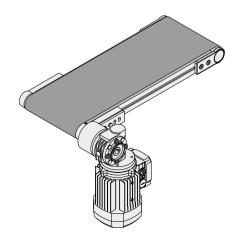
Flat Belt Conveyor	S
Accumulating (black)	1.8 mm
Non-accumulating (petrol blue)	2.0 mm



item does the planning for you!

Use our practical configuration tool.

Motors and Gearboxes	2 5 2 5
Motor Fastening Sets	■ 31



Flat Belt Conveyor 8 40 D

Length of axle spacing L_A Total width of conveyor B_G Conveyor belt width B_T Conveyor belt speed Max. total load (non-accumulating) Max. total load (accumulating) Max. line load Drive arrangement Drive position

500-6000 mm 40, 80, 120, 160, 200, 240, 320, 400 mm B_{6} -10 (but B_{6} -5 if B_{6} = 40 or 80) 2.5-28.9 m/min 100 kg 45 kg 25 kg/mOutput side left/right 0° ; 90° ; 180° ; 270°

a 41

. 3



Overview of Double Flat Belt Conveyor

- Belt spacing up to 2400 mm
- For inherently stable products
- For continuous transport with and without accumulation

Double Flat Belt Conveyor 8 40 D is available with two belt widths and in lengths of up to 6000 mm. The spacing between the belts can be selected as required. The synchronised belts help to move inherently stable products efficiently from A to B.

The stable load-bearing frame with four freely accessible Line 8 grooves makes it easier to attach accessories, connect stands and integrate machines. The gap between the two belts provides space for installing sensors and actuators below the conveyed loads.

Depending on the type of belt used, Double Flat Belt Conveyor 8 40 D can either have reduced static friction to enable accumulation or be designed for continuous conveying on an incline of up to 20°.



All the benefits are series-standard:

- Two synchronised belts
- Motor can be quickly moved to a different position
- Tensioning mechanism in groove
- Sensors etc. can be fitted between the belts
- Durable and low-maintenance





Conveying system	Conveyor belt speed	Max. total load (non-accumulating)	Max. total load (accumulating)
Double Flat Belt Conveyor 8 40 D -40	2.5-28.9 m/min	30 kg	8 kg
Double Flat Belt Conveyor 8 40 D -80	2.5-28.9 m/min	55 kg	17 kg

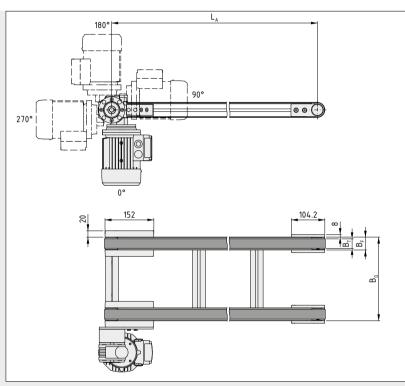


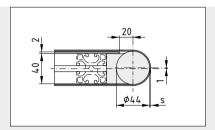


Double Flat Belt Conveyor 8 40 D

- Two synchronised belts
- Total conveying width up to 2400 mm
- Maximum total line load 25 kg/m





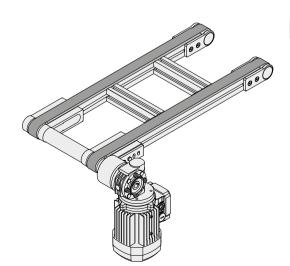


Flat Belt Conveyor	S
Accumulating (black)	1.8 mm
Non-accumulating (petrol blue)	2.0 mm



item does the planning for you!

Use our practical configuration tool.



Double Flat Belt Conveyor 8 40 D

Length of axle spacing L_A
Total width of conveyor B_G
Conveyor belt width B_T
Width of conveyor B_F
Conveyor belt speed
Max. total load (non-accumulating)
Max. total load (accumulating)
Max. line load
Drive arrangement
Drive position

500-6000 mm 172-2400 mm $B_F 5 \text{ mm}$ 40, 80 mm 2.5-28.9 m/min 55 kg 17 kg 25 kg/m

Output side left/right 0°; 90°; 180°; 270°



■ 41



Overview of Timing Belt Conveyor

- Available in two widths
- For transporting heavier loads
- Low-maintenance and forgiving design

Timing Belt Conveyor 8 40 D is available in two belt widths and in lengths up to 6000 mm. The durable Timing Belt with integrated steel wires ensures non-slip transport of even heavy objects.

Low-friction side guides help the Timing Belt cope with lateral forces and improve occupational health and safety. Depending on the type of belt used, Timing Belt Conveyor $8\,40\,D$ can either have reduced static friction to enable accumulation or be designed for continuous conveying on an incline of up to 20° .

The stable load-bearing frame with two freely accessible Line 8 grooves makes it easier to attach accessories, connect stands and integrate machines.



All the benefits are series-standard:

- Slip-free operation thanks to Timing Belt
- Precise control for cyclical operation
- Easily integrated into systems
- Durable and low-maintenance
- Fast, ready-to-install delivery





Conveying system	Conveyor belt speed	Max. total load (non-accumulating)	Max. total load (accumulating)
Timing Belt Conveyor 8 40 D -40	2.3-30.9 m/min	90 kg	45 kg
Timing Belt Conveyor 8 40 D -80	2.3-30.9 m/min	100 kg	50 kg

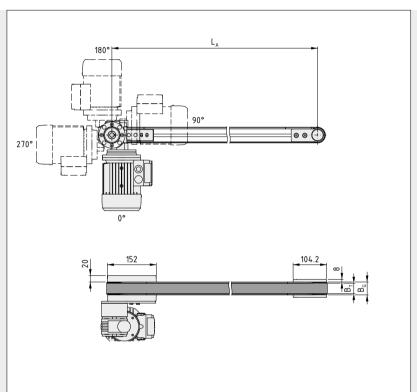


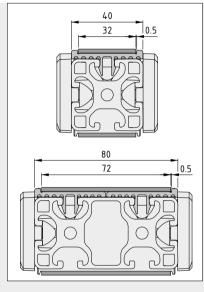


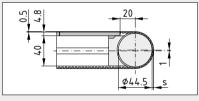
Timing Belt Conveyor 8 40 D

- One continuous Timing Belt
- Total conveying width of 40 mm or 80 mm
- Maximum total line load 25 kg/m







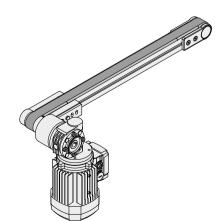




item does the planning for you!

Use our practical configuration tool.

Timing belt	S
Accumulating (black)	2.2 mm
Non-accumulating (black)	3.4 mm



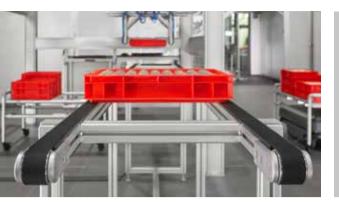
Timing Belt Conveyor 8 40 D

Length of axle spacing L_A
Total width of conveyor B_G
Conveyor belt width B_T
Conveyor belt speed
Max. total load (non-accumulating)
Max. total load (accumulating)
Max. line load
Drive arrangement
Drive position

500-6000 mm 40, 80 B_c-8 mm 2.3-30.9 m/min 100 kg 50 kg 25 kg/m Output side left/right 0°; 90°; 180°; 270°



■ 41



Overview of Double Timing Belt Conveyor

- Belt spacing up to 2400 mm
- For transporting heavy loads
- Runs true even under lateral forces

Double Timing Belt Conveyor 8 40 D is available with two belt widths and in lengths of up to 6000 mm. The gap between the synchronised belts can be anything up to 2400 mm. This ensures heavy, inherently stable products can be efficiently transported.

Side guides help the durable Timing Belt with integrated steel wires cope with lateral forces and improve occupational health and safety. Depending on the type of belt used, Double Timing Belt Conveyor 8 40 D can either have reduced static friction to enable accumulation or be designed for continuous conveying on an incline of up to 20°.

The stable load-bearing frame with four freely accessible Line 8 grooves makes it easier to attach accessories, connect stands and integrate machines. The gap between the two belts provides space for installing sensors and actuators below the conveyed loads.



All the benefits are series-standard:

- Two synchronised Timing Belts
- Torsion-resistant load-bearing frame
- Suitable for workpiece carriers
- Reliable operation thanks to side guides
- Elastomer coupling compensates for misalignments





Conveying system	Conveyor belt speed	Max. total load (non-accumulating)	Max. total load (accumulating)
Double Timing Belt Conveyor 8 40 D -40	2.3-30.9 m/min	90 kg	45 kg
Double Timing Belt Conveyor 8 40 D -80	2.3-30.9 m/min	100 kg	50 kg

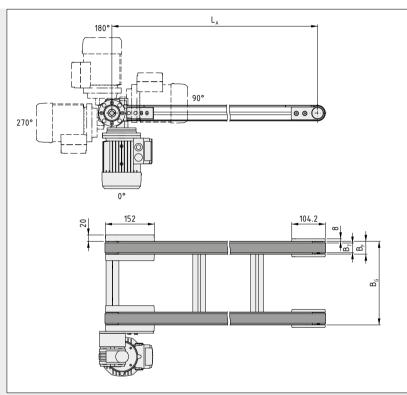


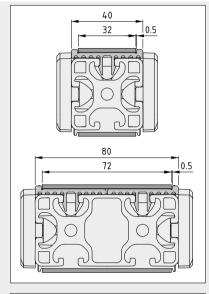


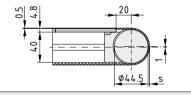
Double Timing Belt Conveyor 8 40 D

- Two synchronised Timing Belts
- Total conveying width up to 2400 mm
- Maximum total line load 25 kg/m







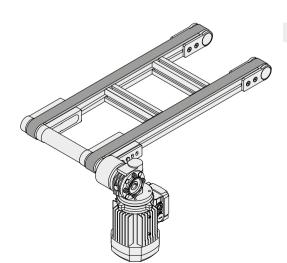




item does the planning for you!

Use our practical configuration tool.

Timing belt	S
Accumulating (black)	2.2 mm
Non-accumulating (black)	3.4 mm

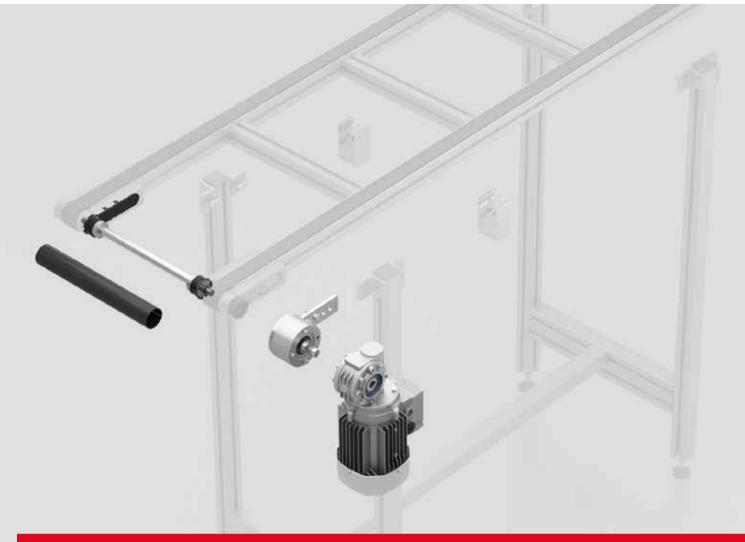


Double Timing Belt Conveyor 8 40 D

Length of axle spacing L_A
Total width of conveyor B_G
Conveyor belt width B_T
Width of conveyor B_F
Conveyor belt speed
Max. total load (non-accumulating)
Max. total load (accumulating)
Max. line load
Drive arrangement
Drive position

500-6000 mm 172-2400 mm B_r-8 mm 40, 80 2.3-30.9 m/min 100 kg 50 kg 25 kg/m Output side left/right 0°; 90°; 180°; 270°





Drive elements

The perfect combination for your application: Motor and gearbox together determine the speed of the belt. The item Conveyor Belt System gives you the choice of two concepts.

The following two motor and gearbox combinations are available as direct

- Motor AC D16 with integrated bevel gearbox (six gear ratios)
- Motor AC D11 with separate Gearbox (six gear ratios)

Electric motors with an integrated gearbox are especially energy efficient and more straightforward to install. By contrast, using a separate Motor and Gearbox gives you more flexibility and enables you to swap out the Gearbox and therefore run the same belt at different speeds.

No matter which option you choose, the relevant Motor Fastening Set ensures that both variants can be used as a plug-and-play solution with all item conveyor belts.

Thanks to their modular design, all the drive variants offer the same benefits:

- The drive unit can be connected on the right or left of the conveyor belt.
- The position of the motor can be switched quickly without having to disassemble the conveyor belt.
- The Gearbox can be fitted in four different orientations at 90° increments.
- The Fastening Set's expanding hub coupling compensates for slight misalignments on the Drive Pulley.
- Two or more belts can be synchronised with ease even after installation.
- A cover for the synchroniser shaft protects staff.
- The three-phase AC motor can be fine-tuned using an optional frequency converter.





Motors AC D16

- Electric motor with integrated bevel gearbox
- Quiet and energy efficient
- Six gear ratios available

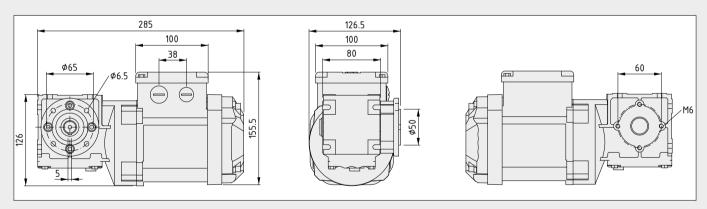
Motor AC D16 is a high-quality electric motor with integrated Spiroplan® gearbox. This bevel gearbox is available in six fixed gear ratios for different belt speeds. Adding an optional frequency converter enables precise adjustment of the conveyor belt's speed.

The unit comprising an asynchronous machine and integral bevel gearbox makes installation easier. What's more, the aluminium housing is very light, quiet and durable. Motor AC D16 has a high efficiency rating of IE3 to DIN EN 60034-30:2009.

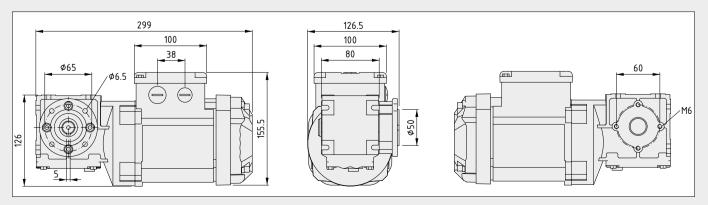
The drive unit is connected to the conveyor belt on the right or left. Motor Fastening Set 8 40 D16 is used to install it. The position and orientation can also be changed in just a few steps.

To ensure safe operation, a safety cap covers over the Motor's hollow shaft at the side where it is not being used.

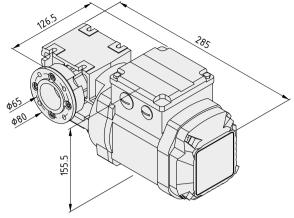




Connection dimensions for Motors AC D16-120W



Connection dimensions for Motors AC D16-180W

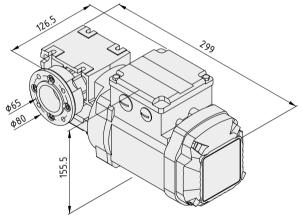


1 pce.

	Motor AC D16-120W-i32	
	Nominal power	120 W
	Gear ratio	32.5
	Nominal speed 50 Hz	42 rpm
	Nominal torque	17 Nm
	Nominal frequency	50/60 Hz
-	Nominal voltage	230/400 V
	Nominal current	0.71/0.41 A
	Efficiency class	IE3
	Protection class	IP 54
	Thermal class	130 °C
		m = 6.1 kg

Motor AC D16-120W-i75		
Nominal power	120 W	
Gear ratio	75	
Nominal speed 50 Hz	18 rpm	
Nominal torque	25 Nm	
Nominal frequency	50/60 Hz	
Nominal voltage	230/400 V	
Nominal current	0.71/0.41 A	
Efficiency class	IE3	
Protection class	IP 54	
Thermal class	130 °C	
	m = 6.1 kg	
1 pce.	•	0.0.705.49
· poo.		0.0

0.0.705.48



Motor AC D16-180W-i6 Nominal power 180 W Gear ratio 6.57 Nominal speed 50 Hz 209 rpm Nominal torque 7 Nm Nominal frequency 50/60 Hz Nominal voltage 230/400 V Nominal current 0.99/0.56 A IE3 Efficiency class Protection class IP 54 Thermal class 130 °C m = 6.9 kg0.0.705.44 1 pce.

	0.0.705.45
m = 6.9 kg	
130 °C	
IP 54	
IE3	
0.99/0.56 A	
230/400 V	
50/60 Hz	
11 Nm	
10.3	
180 W	
	10.3 134 rpm 11 Nm 50/60 Hz 230/400 V 0.99/0.56 A IE3 IP 54 130 °C



Motor AC D16-180W-i14		
Nominal power Gear ratio Nominal speed 50 Hz Nominal torque Nominal frequency	180 W 14.3 96 rpm 14 Nm 50/60 Hz	
Nominal voltage Nominal current Efficiency class	230/400 V 0.99/0.56 A IE3	
Protection class Thermal class	IP 54 130 °C m = 6.9 kg	
1 pce.		0.0.705.46
Motor AC D16-180W-i19		
Nominal power Gear ratio Nominal speed 50 Hz Nominal torque Nominal frequency Nominal voltage Nominal current Efficiency class Protection class Thermal class	180 W 19.5 71 rpm 18 Nm 50/60 Hz 230/400 V 0.99/0.56 A IE3 IP 54 130 °C m = 6.9 kg	
1 pce.	_	0.0.705.47



Motor AC D11

- Electric motor with separate Bevel Gearbox
- Gearbox can be swapped out easily
- Lightweight and quiet

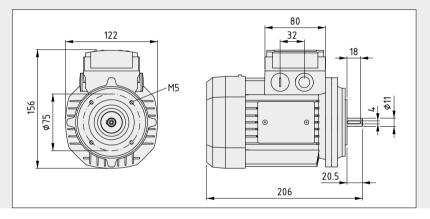
item Motor AC D11 is a reliable three-phase AC motor for conveyor belts. When combining it with a Bevel Gearbox D14/ D11 in the appropriate gear ratio and an optional frequency converter, you can specify a system's speed very precisely.

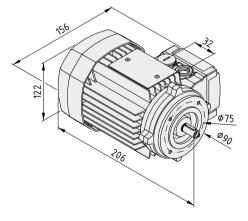
The asynchronous machine and the Bevel Gearbox are separate units, so Motor AC D11 can be combined with various Gearboxes. The modular design makes it easier to convert a conveyor line to different speeds and use the same Motor on various systems.

As a plug-and-play solution, Motor AC D11-180W can be screw-fastened to a Bevel Gearbox without the need for any machining. Motor Fastening Set 8 40 D14 is used to fasten it to the Drive Pulley, allowing users to install the drive unit on the right or left of the conveyor belt. The orientation of the drive can be adjusted in 90° increments.

To ensure safe operation, a safety cap covers over the Motor's hollow shaft at the side where it is not being used.







m = 3.9 kg	
155 °C	
IP 54	
IE2	
0.64/1.1 A	
230/400 V	
50/60 Hz	
1.25 Nm	
1370 rpm	
180 W	
	1370 rpm 1.25 Nm 50/60 Hz 230/400 V 0.64/1.1 A IE2 IP 54 155 °C





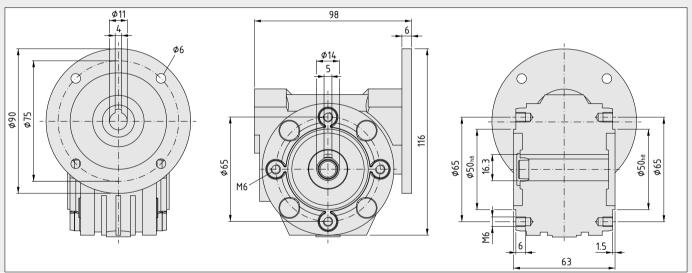
Bevel Gearboxes D14/D11

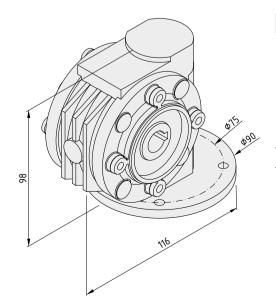
- For Motor AC D11
- Compact and lightweight Gearbox
- Six gear ratios to choose from

Bevel Gearboxes D14/D11 for item Motor AC D11 are available in six gear ratios to ensure users can adjust the speed of their conveyor belt.

As a plug-and-play solution, the Gearbox is screw-fastened to the Motor without any need for additional machining. Using Motor Fastening Set 8 40 D14, you can fit the Gearbox and Motor on the right or left of the conveyor belt.







Bevel Gearbox D14/D11-i7

Gear ratio 7
Efficiency 0.84
Output speed at drive speed of 1370 rpm 195.7 rpm
Output torque at motor output of 0.18 kW 7.66 Nm
Nominal output torque 16 Nm
Max. output torque 48 Nm
Protection class IP 56
m = 1.1 kg

1 pce. 0.0.710.75

Bevel Gearbox D14/D11-i10		
Gear ratio Efficiency Output speed at drive speed of 1370 rpm Output torque at motor output of 0.18 kW Nominal output torque Max. output torque Protection class	10 0.81 137 rpm 10.55 Nm 16 Nm 48 Nm IP 56	
	m = 1.1 kg	
1 pce.		0.0.710.76
Bevel Gearbox D14/D11-i15		
Gear ratio Efficiency Output speed at drive speed of 1370 rpm Output torque at motor output of 0.18 kW Nominal output torque Max. output torque Protection class	15 0.76 91.3 rpm 14.85 Nm 18 Nm 54 Nm IP 56 m = 1.1 kg	
1 pce.		0.0.710.77
Devial On address D44/D44 (00		
Bevel Gearbox D14/D11-i20 Gear ratio Efficiency Output speed at drive speed of 1370 rpm Output torque at motor output of 0.18 kW Nominal output torque Max. output torque Protection class	20 0.73 68.5 rpm 19.01 Nm 18 Nm 54 Nm IP 56 m = 1.1 kg	
1 pce.	···· ·································	0.0.710.78
5 10 1 51/51/15		
Bevel Gearbox D14/D11-i30 Gear ratio Efficiency Output speed at drive speed of 1370 rpm Output torque at motor output of 0.18 kW Nominal output torque Max. output torque Protection class	30 0.65 45.7 rpm 25.39 Nm 20 Nm 60 Nm IP 56 m = 1.1 kg	
1 pce.		0.0.710.79
Bevel Gearbox D14/D11-i60		
Gear ratio Efficiency Output speed at drive speed of 1370 rpm Output torque at motor output of 0.18 kW Nominal output torque Max. output torque Protection class	60 0.51 22.8 rpm 39.85 Nm 19 Nm 57 Nm IP 56 m = 1.1 kg	0.0.710.80
ι μου.		0.0.7 10.00





Motor Fastening Set 8 40 D16

- For item Motors AC D16
- Attaches to the right or left of the conveyor belt
- Compensates for axle misalignment on the Drive Pulley

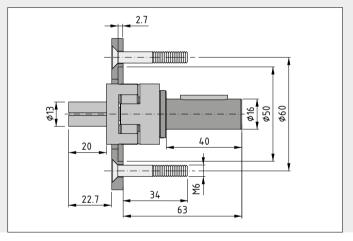


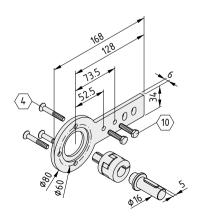
Motor Fastening Set 8 40 D16 is a universal solution for connecting item Motors AC D16 to a conveyor belt. It transfers torque to the Drive Pulley.

The Fastening Set is fitted on the right or left of the conveyor belt, on the housing of the drive assembly. The Motor with integrated gearbox is screw-fastened to the torque brace. The drive's orientation can be adjusted in 90° increments.

The drive shaft is pressed into the Motor's hollow shaft without the need for any additional machining. The expanding hub coupling compensates for misalignment on the Drive Pulley.







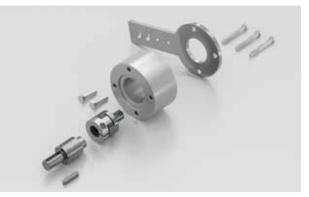
Motor Fastening Set 8 40 D16

8

Expanding hub coupling D16/d13, Al/plastic
Torque brace 8 40, St, bright zinc-plated
3 Countersunk Screws DIN 7991 M6x40, St, bright zinc-plated
Drive shaft D16, St, black
2 hexagon screws ISO 4017 M6x25, St, bright zinc-plated
Parallel key DIN 6885-A-5x5x25, St

m = 522.0 g

1 set 0.0.703.11



Motor Fastening Set 8 40 D14

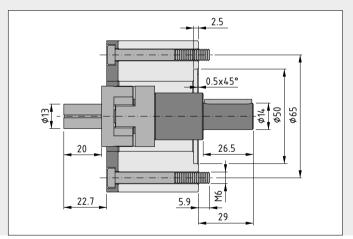
- For item Motor AC D11 with Bevel Gearbox D14/D11
- Integrated expanding hub coupling with housing
- Attaches to the right or left of the conveyor belt

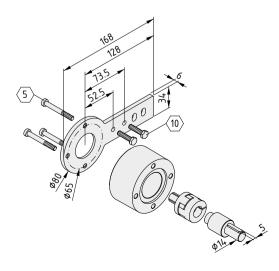


Motor Fastening Set 8 40 D14 connects together Bevel Gearbox D14/D11 and the Drive Pulley of a Flat Belt Conveyor or a Timing Belt Conveyor. It is fitted on the right or left of the conveyor belt, on the housing of the drive assembly.

The Gearbox is screw-fastened to the coupling housing and can be positioned in 90° increments. The drive shaft is pressed into the hollow shaft on the Gearbox without the need for any additional machining. The expanding hub coupling compensates for axle misalignment on the Drive Pulley.







Motor Fastening Set 8 40 D14



Expanding hub coupling D16/d13, Al/plastic Torque brace 8 40, St, bright zinc-plated Coupling housing D80/d50 BON, Al

3 Hexagon Socket Head Cap Screws DIN 6912-M6x50, St, bright zinc-plated Drive shaft D14, St

2 hexagon screws ISO 4017 M6x25, St, bright zinc-plated

Parallel key DIN 6885-A-5x5x25, St

 $m = 954.0 \, q$

1 set 0.0.705.73





Synchronising Set BFT 8 40

- Transmits torque to other Drive Pulleys
- Suitable for retrofitting
- Supports variable belt spacings

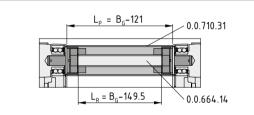


Synchronising Set BFT 8 40 is used to synchronise two or more conveyor belts. It can also be retrofitted.

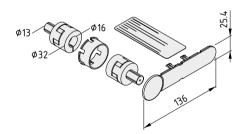
Note: In the case of Double Flat Belt Conveyors and Double Timing Belt Conveyors, the Synchronising Set is included in the scope of supply.



The Synchronising Set connects the two Drive Pulleys and transmits torque from one drive assembly to the next. The expanding hub couplings are easy to fit into the hollow shafts of the pulleys. Tube D16x1.5 St (0.0.664.14) is used as the synchroniser shaft. Synchroniser Shaft Cover Profile 8 40 (0.0.710.31) covers over the rotating shaft.



Calculating the length of the tube (L_R) and Synchroniser Shaft Cover Profile (L_P) in relation to the belt width (B₆)



Synchronising Set BFT 8 40

1 set

Positioning ring, conveyor belt 8 40, PA6, ESD Cap BFT 8 40, PA6, ESD 2 expanding hub couplings D16/d13, Al/plastic Safety Seal, Warning Notice for Rotating Components m = 248.0 g

0.0.703.07

-⁸-



Synchroniser Shaft Cover Profile 8 40 K

- Protects staff from the rotating shaft
- Can be retrofitted
- Simple and fast to fit

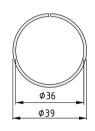


To protect staff, the Synchroniser Shaft is covered with Synchroniser Shaft Cover Profile 8 40 K. This can also be clipped on after installation. The positioning ring in Synchronising Set BFT 8 40 (0.0.703.07) ensures that it sits correctly.

To prevent improper opening of the Synchroniser Shaft Cover Profile, the Safety Seal for Rotating Components (0.0.710.81) should be fitted. This seal is broken when the cover is removed.

Note: In the case of Double Flat Belt Conveyors and Double Timing Belt Conveyors, the Synchroniser Shaft Cover Profile is included in the scope of supply.





Synchroniser Shaft Cover Profile 8 40 K	8
PA m = 195 g/m	
black, cut-off max. 3000 mm	0.0.710.31
black, 1 pce., length 3000 mm	0.0.707.72



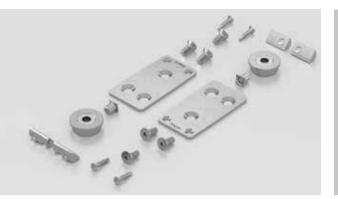


The item Conveyor Belt System is compatible with the item Building Kit System. That means there are over 4000 components that can be used to integrate conveyor belts into other systems and build custom attachments. It's all possible thanks to the Line 8 system grooves on the outside of the load-bearing frame.

In the case of Double Flat Belt Conveyors and Double Timing Belt Conveyors, the Line 8 grooves are on the inside as well as the outside, offering a means of attaching sensors and actuators.

Thanks to modular design principles you can:

- Select custom supports in the shape and height you need
- Tailor the stand structure to the width of the conveyor belt and the load it will carry
- Boost safety for long transport lines by incorporating belt supports



Belt Support Set BFT 8

- Improves safety for staff
- Supports the conveyor belt on its return run
- Mechanical entanglement prevention for long conveyor lines



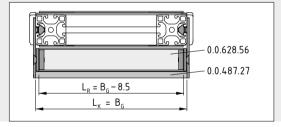
Belt Support Set BFT 8 prevents the conveyor belt from sagging under its own weight. This improves safety for staff by eliminating drawing-in or entrapment points.

Note: One belt support should be incorporated every 2000 mm along the return run of a belt.



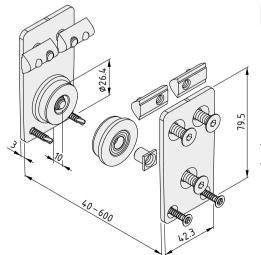


A belt support consists of two bearings for a Tube D30 (0.0.628.56) that acts as a supporting roller for the return run. The support also serves as a fixing for Conduit Profile U 40x40 SE (0.0.487.27), which is fitted as a guard to prevent entanglement.



Calculating the length of the tube (L_R) and Conduit Profile (L_K) in relation to the belt width (B_G)

- ⁸ -



Belt Support Set BFT 8



2 threaded bushes M6 for bearing insert, Profile Tube D30-d16 Al, St, bright zinc-plated

2 bearing inserts, Profile Tube D30-D16 Al

2 deep groove ball bearings DIN 625-1 628/8 - 2RS, St

4 T-Slot Nuts V 8 St M6, St, bright zinc-plated

6 Countersunk Screws DIN 7991 M6x14, St, bright zinc-plated 4 Countersunk Screws DIN 7504 3.9x19, St, bright zinc-plated m = 337.0 g

1 set 0.0.709.55







Stand structures

- Stable supports for conveyor lines in any width
- Wide selection of feet and castors
- Basic models that can be easily adapted



Thanks to modular design principles, you can always get the perfect stands for any item conveyor belt. Two basic designs can be adapted to specific requirements and fitted out with the desired floor elements. Line 8 grooves on the side are used to make connections.

T-shaped supports with extended cantilever feet are recommended for systems up to 160 mm wide. Height and width can be customised to ensure heavy goods – which can affect the system's centre of gravity – can also be moved from A to B without any danger of tipping.

H-shaped supports are usually used on conveyor belts that are more than 160 mm wide. These stands only marginally extend the total width of the conveyor line.

Since everything is based on the item Building Kit System, you can make the most of the entire range of profiles, floor elements and accessories available. All stand variants can be combined with adjustable feet, castors and floor fasteners. What's more, you can also use additional profiles to boost rigidity or integrate cable conduits into the supporting structure. This ensures your item conveyor belt will slot neatly into your working environment.

Note: To help with load distribution and rigidity, item recommends using profiles to connect stands at floor level.

The rapid route to your load-bearing structure

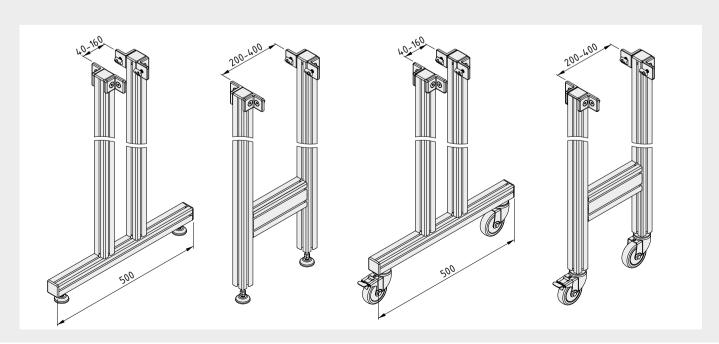
Stands are manufactured to your specifications. You can integrate your desired supporting structure into your project enquiry. Alternatively, you can use the item Engineeringtool to design bespoke stands yourself. The basic T and H-shaped models are archived in the Engineeringtool.

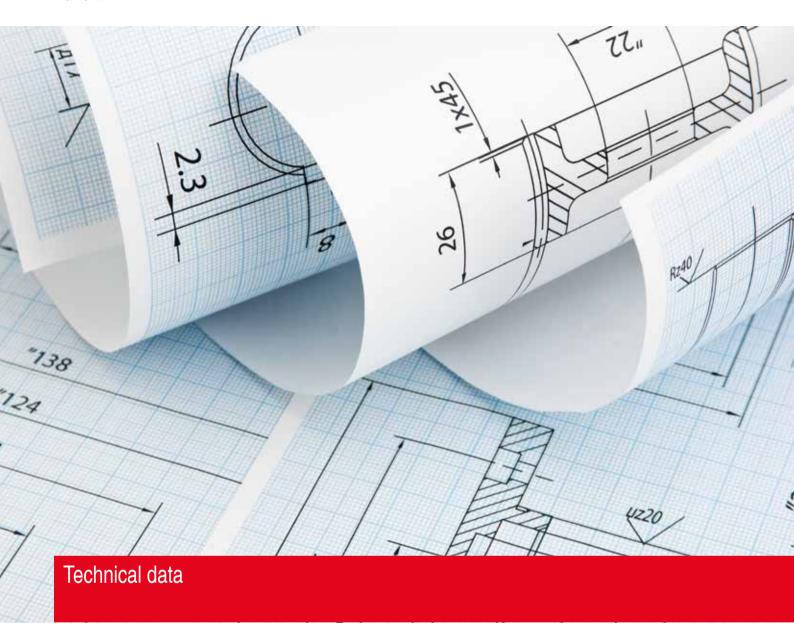
You will find the following in the item Engineeringtool:

- T-shaped stands with feet
- T-shaped stands with castors
- H-shaped stands with feet
- H-shaped stands with castors

You can specify width and height directly in the engineering work area. All profile lengths will be adapted automatically. Next, you can simply drag and drop the floor elements you require onto the design. After that, all you have to do is copy and paste as many stands as you need and connect them together with crossmembers. Job done!

After just a few minutes, you can add everything to your shopping cart and place your order.







Nomenclature for product names

Nomenclature for belt conveyors

Conveyor type	Line	Profile height	Drive variant	Nominal width
Flat Belt Conveyor	8	40	D	40
Flat Belt Conveyor	8	40	D	80
Flat Belt Conveyor	8	40	D	120
Flat Belt Conveyor	8	40	D	160
Flat Belt Conveyor	8	40	D	200
Flat Belt Conveyor	8	40	D	240
Flat Belt Conveyor	8	40	D	320
Flat Belt Conveyor	8	40	D	400
Double Flat Belt Conveyor	8	40	D	40
Double Flat Belt Conveyor	8	40	D	80
Timing Belt Conveyor	8	40	D	40
Timing Belt Conveyor	8	40	D	80
Double Timing Belt Conveyor	8	40	D	40
Double Timing Belt Conveyor	8	40	D	80

D = direct

Nomenclature for Motors

Name	Voltage type	Output shaft diameter	Nominal power	Gear ratio [1 : n]
Motor	AC	D11	180W	-
Motor	AC	D16	180W	6
Motor	AC	D16	180W	10
Motor	AC	D16	180W	14
Motor	AC	D16	180W	19
Motor	AC	D16	120W	32
Motor	AC	D16	120W	75

Nomenclature for Bevel Gearboxes

Name	Hollow shaft diameter, output	Hollow shaft diameter, input	Gear ratio [1 : n]	
Bevel Gearbox	D14	D11	7	
Bevel Gearbox	D14	D11	10	
Bevel Gearbox	D14	D11	15	
Bevel Gearbox	D14	D11	20	
Bevel Gearbox	D14	D11	30	
Bevel Gearbox	D14	D11	60	



An overview of speeds – Motor/gearbox combinations

Art. No.	0.0.705.44	0.0.705.45	0.0.705.46	0.0.705.47	0.0.705.48	0.0.705.49
Product name	Motor AC D16-180W-i6	Motor AC D16-180W-i10	Motor AC D16-180W-i14	Motor AC D16-180W-i19	Motor AC D16-120W-i32	Motor AC D16-120W-i75
Efficiency class	IE3	IE3	IE3	IE3	IE3	IE3
Gear ratio	6.57	10.3	14.3	19.5	32.5	75
Conveyor belt speed, Flat Belt Conveyor [m/min]	28.9	18.5	13.3	9.7	5.9	2.5
Conveyor belt speed, Timing Belt Conveyor [m/min]	31.4	20.1	14.4	10.6	6.4	2.8

An overview of speeds – Bevel Gearboxes

Art. No.	0.0.710.75	0.0.710.76	0.0.710.77	0.0.710.78	0.0.710.79	0.0.710.80
Product name	Bevel Gearbox D14/D11-i7	Bevel Gearbox D14/D11-i10	Bevel Gearbox D14/D11-i15	Bevel Gearbox D14/D11-i20	Bevel Gearbox D14/D11-i30	Bevel Gearbox D14/D11-i60
Gear ratio	7	10	15	20	30	60
Conveyor belt speed, Flat Belt Conveyor [m/min]	26.1	18.2	12.2	9.1	6.1	3.0
Conveyor belt speed, Timing Belt Conveyor [m/min]	28.3	19.8	13.2	9.9	6.6	3.3

Alphabetical Register

36
29
29
29
29
29
29
19
23
17
28
25
25
25
25
25
25
32
3
34
33
2



The item product catalogues



Work Bench System Manual production is more productive with the ergonomic work benches of the item Work

item24.de/en/epaper-wbs

Bench System.



Lean Production Building Kit System

The Lean Production Building Kit System: The simple way to build what modern lean production needs.

item24.de/en/epaper-lp



Automation System

Automation perfectly coordinated: Linear Units, Motors and Controllers combine to form ready-to-install turnkey systems.

item24.de/en/epaper-au



MB Building Kit System

The MB Building Kit System is the solution for all design and construction tasks involving mechanical and factory equipment engineering.

item24.de/en/epaper-mb



Line XMS

Complete machine modules help you build machine enclosures in record time.

item24.de/en/epaper-xm



Stairway/Platform System

The Stairway/Platform System produces bridges and maintenance platforms in one uniform look.

item24.de/en/epaper-tp



All the information you need at your fingertips

item product catalogues are available online as clearly laid out and convenient e-papers. Take your pick and get browsing!

Patents

Many of the components and products contained in this catalogue are subject to industrial property rights. Any copying of protected products is a violation of these rights and, as such, shall be liable to compensation. Data and illustrations in this catalogue do not discharge the users from the obligation to carry out their own checks to determine whether the industrial property rights of third parties are infringed.

Product liability

item shall be liable, within the framework of the applicable legal provisions, for the promised characteristics of the products shown in this catalogue. Any claims for liability above and beyond such – in particular relating to products created by third parties using products included in this catalogue – are expressly excluded.

Conditions of use

The products in the item MB Building Kit System are suitable for use in dry conditions and over the temperature range -20° C to $+70^{\circ}$ C. item must be consulted where products are to be used for applications outside these limits.

Conformity with Directive 2011/65/EU ("RoHS")

item has made a voluntary undertaking to refrain from using hazardous substances as defined in Directive 2011/65/EU in the products it sells, irrespective of their subsequent purpose which, in the majority of cases, does not fall under this Directive. As a result, apart from a few well-founded exceptions, the products listed in this catalogue comply with Directive 2011/65/EU. The products to which these exceptions relate are set out in an up-to-date list that is available to customers on request.

Concept, design and realisation

item Industrietechnik GmbH

Photographs

item Industrietechnik GmbH

Technical modifications and errors reserved.

All rights reserved. Use of texts and illustrations or reprints of any kind only permitted with prior written consent from item. This applies in particular to reproduction, translation or use in electronic systems.

item and the item claim are a registered trademark of item Industrietechnik GmbH.

© item Industrietechnik GmbH 2022



Always there for you.

Always up to date: Our website at item24.com offers further information on all the products and technologies that item supplies.

Your distribution and service partner

Your ideas are worth it.®

item Industrietechnik GmbH Friedenstrasse 107-109 42699 Solingen Germany

Telephone +49 212 6580 0 Fax +49 212 6580 310

info@item24.com item24.com