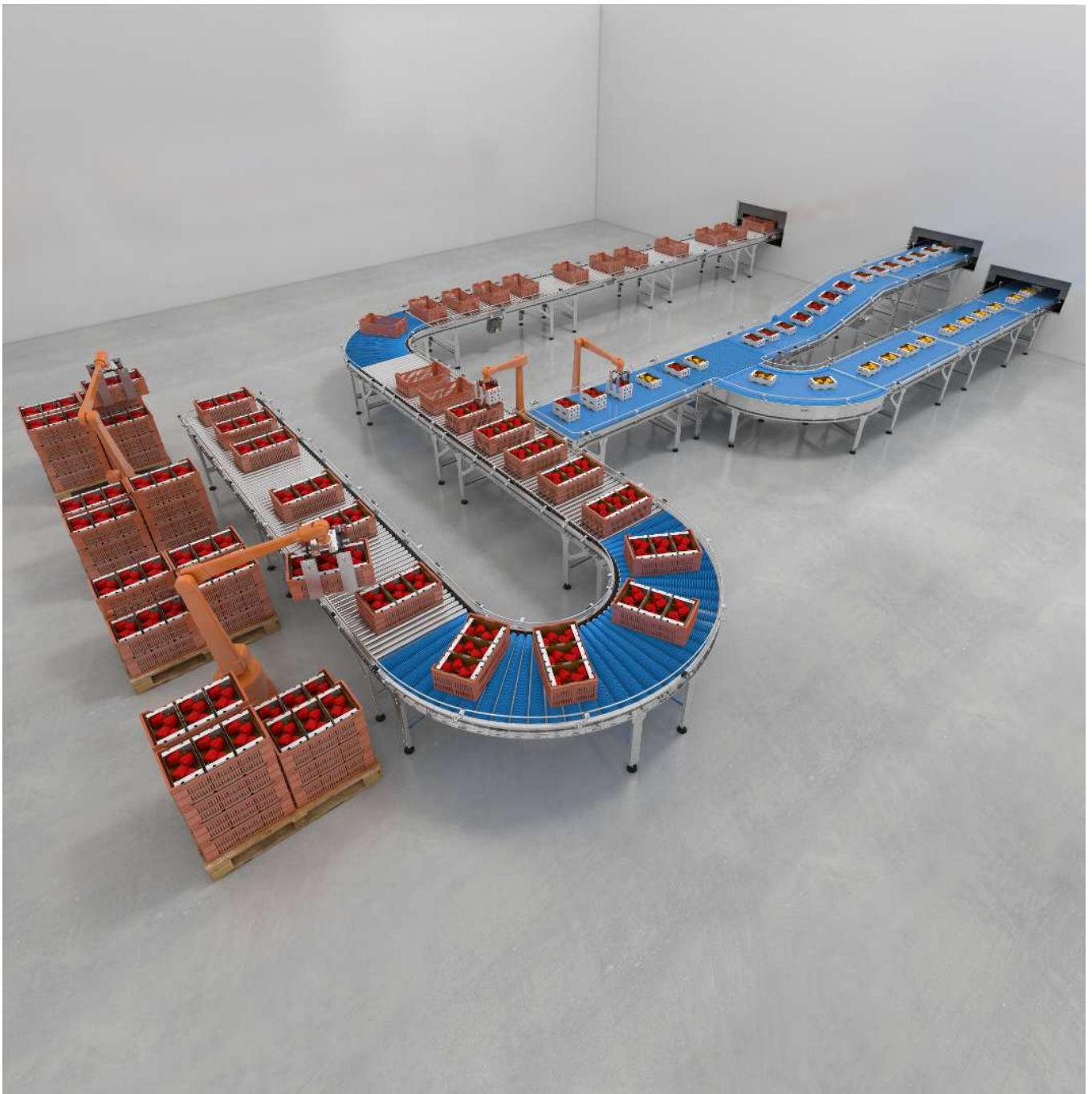


INSPIRED BY EFFICIENCY

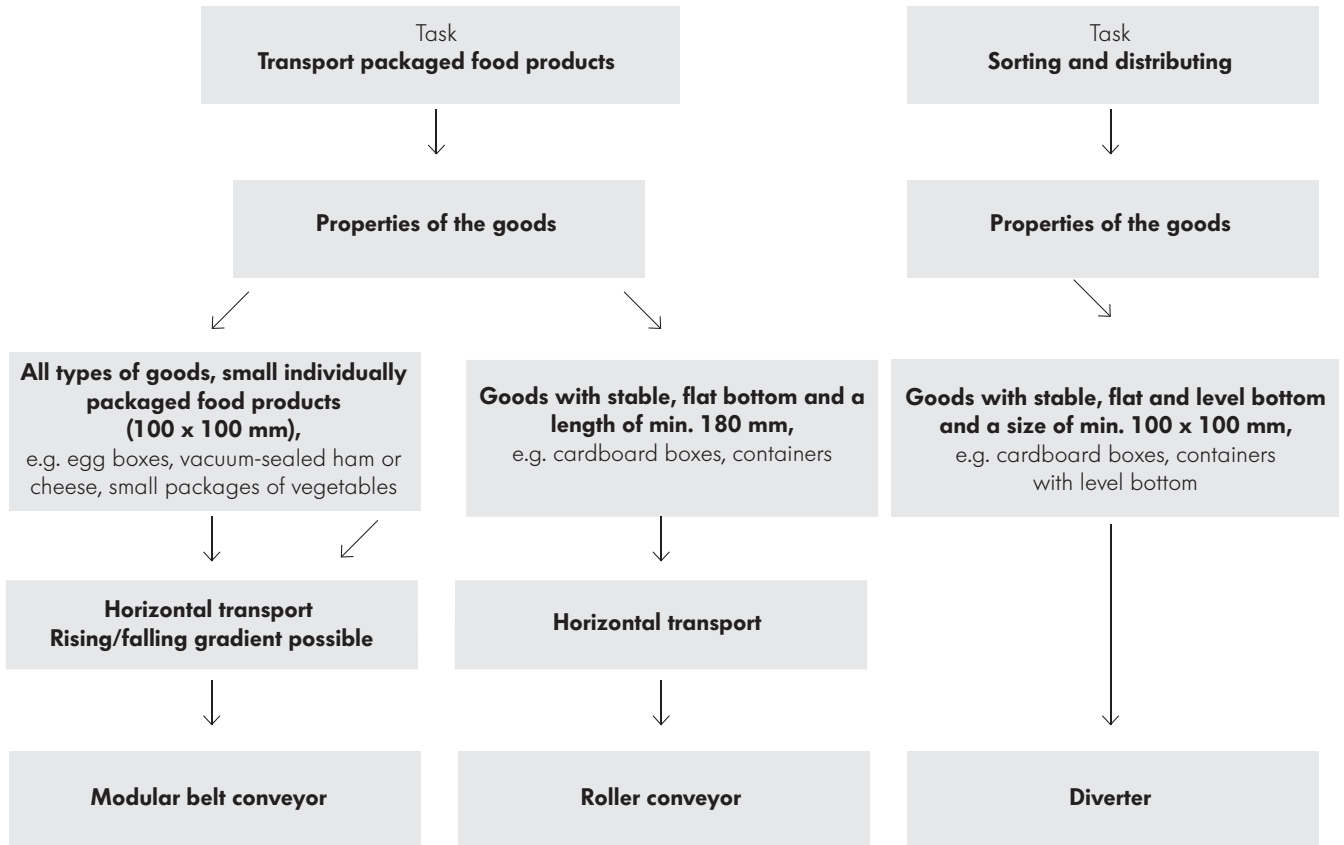


CATALOG

SPECIAL HYGIENIC CONVEYOR



PRODUCT LOCATOR



Symbols

24V	Voltage 24 V
400V	Voltage 400 V

Contents

The Interroll Group	4
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www.interroll.com

THE INTERROLL GROUP

The Interroll Group is a globally leading supplier of high-quality key products and services for internal logistics. The company, which is listed on the stock exchange and has its headquarters in Switzerland, employs some 2,600 people (in 2021) in 35 companies (in 2021) around the globe.

The solutions for our customers' daily logistical challenges are based on Interroll key products that are built on a worldwide common platform.



Conveyor Rollers

Interroll is the worldwide leading provider of conveyor rollers that can be found in a multitude of applications in internal logistics. For the roller production, we merge quality, flexibility and speed. More than 13 million rollers in 60,000 variants leave our plants worldwide every year. Our production is always order-driven, even for the smallest order quantities and, if desired, even with a delivery time of 24 hours. Proven.



Drives and Controls

Interroll is a leading manufacturer in the segment of DC motor rollers and drum motors.

Interroll RollerDrive and their controls are used in automated conveyor technology. Energy-efficient DC drives are installed in decentralized conveyor systems and, as a result, optimize energy demand and material handling. The bus interface enables integrating the zero pressure accumulation conveyor technology into Industry 4.0 systems.

Interroll Drum Motors are designed for use in belt conveyors and conveyor systems. These robust, high-quality belt drives enable the construction of maintenance-free, energy-efficient conveyor belt systems for the majority of industrial applications as well as for food processing, baggage handling and supermarket checkouts.



Conveyors & Sorters

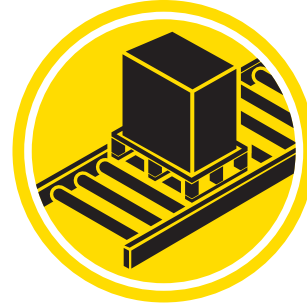
The Modular Conveyor Platform (MCP) from Interroll offers highest flexibility: a broad spectrum of modules, consisting of roller conveyors, belt conveyors as well as key products such as transfer, high-performance diverts or spiral lifts, covers all requirements of the material handling.

The Interroll Crossbelt Sorters were developed with an eye on precision for fast and precise sorting of goods of all types from 50 g to 35 kg. More than 400 Interroll sorters are used every day by the largest CEP players and E-commerce enterprises worldwide.

The modular pallet conveyor platform (MPP) offers roller and chain conveyors as well as special conveyors such as transfers and turntables to create a fully integrated, robust, space-saving and energy-saving solution for high throughput handling of pallets.

With the Special Hygienic Conveyor (SHC), Interroll offers a proven modular platform specifically for packaged food applications - an easy to integrate platform made of stainless steel for which basic required hygienic standards have been taken into account.

The Light Conveyor Platform (LCP) is synonymous with quickly available and flexible predefined modules. It is primarily used in the production and manufacturing industry as well as in the area of assembly and automation.



Pallet & Carton Flow

Interroll Pallet Flow and Carton Flow are the first choice when it comes to rapid turnarounds and optimizing the storage and commissioning process.

Thanks to its efficiency and robustness, Pallet Flow ensures long-term availability and more flexibility for peaks in orders. The compact design reduces space requirements by up to 50 percent compared to conventional solutions. The integrated TimePlus Separator as well as the Magnetic Speed Controller increase the safety of the work environment and significantly reduce the risk of damages to goods.

The Interroll Carton Flow solutions are efficient as well as ergonomic, and were developed to improve the commissioning output.

INTERROLL PLATFORM FOR SPECIAL HYGIENIC CONVEYOR MODULES

The new generation of modules sets the standard for the efficient and state-of-the-art conveyor technology of the future.

The platform was developed by using an holistic approach to designing each process level – whether the ordering process, the planning of the conveyor system or its installation – as efficiently as possible. The modules themselves set a high standard for reliable and solid technical performance.

Standardized modules

With the new modules in three standard widths, all common conveying goods can be transported reliably. This keeps the expenses for combining different modules into a conveyor solution low and reduces the customer's stocking of spare parts to a minimum.

Efficient drive solutions

Customer needs, conditions on site, and type of conveying goods define the requirements for a system. The platform of the Interroll Special Hygienic Conveyor modules can be designed for the most efficient solution for each task. Zero pressure accumulation conveying can be implemented with proven 24-V RollerDrive. For higher performance, efficient 24-V drives that enable efficient and future-proof zero pressure accumulation conveying are used. Modular belt conveyors are powered by highly efficient 400-V/460-V drum motors that are designed according to the latest EHEDG guidelines.

Flexible and modular concept

Refined technical details and solutions offer lots of room for the flexibility of our customers. If changes to or expansions of the system should be necessary, the planning is simple. Thanks to the modular concept, the individual modules are perfectly matched and can be easily combined with each other.

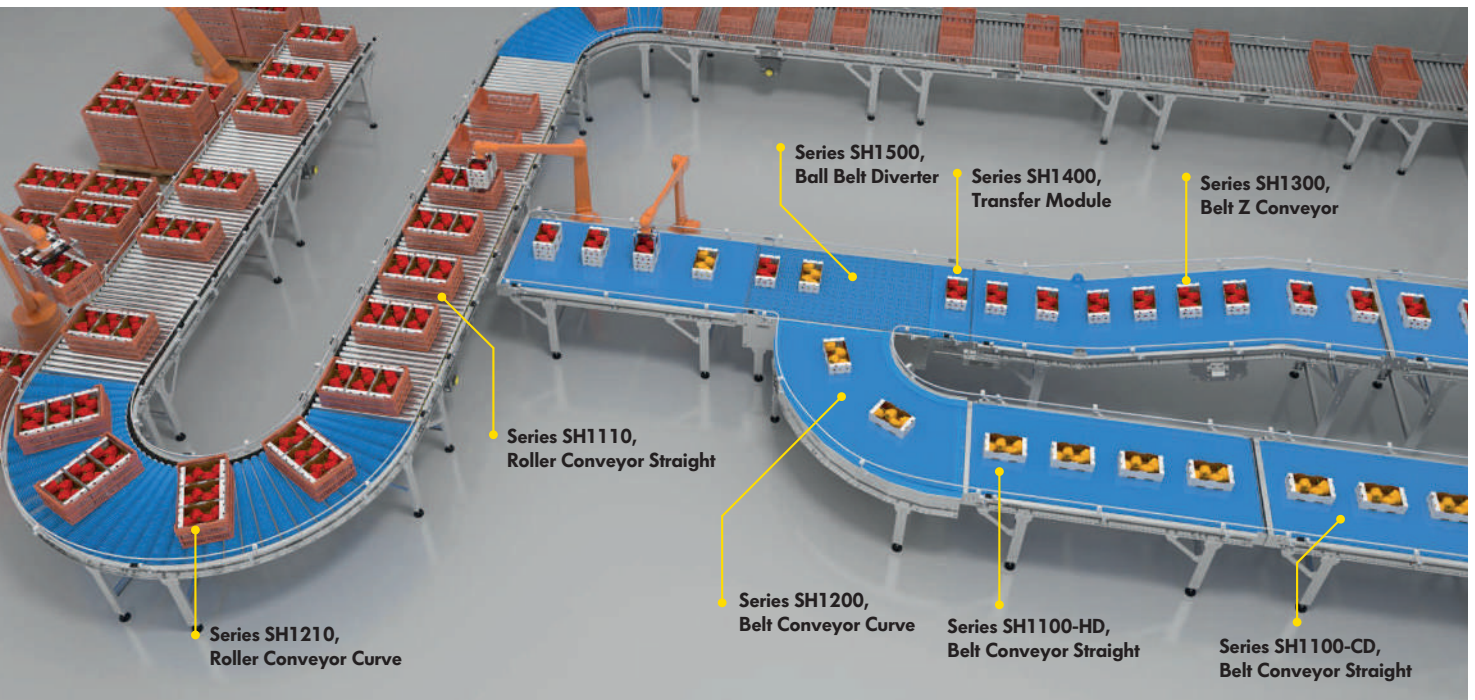
Simplest layout creation

The Interroll Layouter gives you a menu-driven tool that provides professional support in planning a conveyor system. Operating the software is very intuitive and makes it possible to compile an extensive 3D layout in DWG format from all Interroll conveyor modules.

The new platform offers a wide selection of modules and key elements so that the flow of conveying goods can be planned efficiently. Everything from a single source and with expert consultation.

The entire Special Hygienic Conveyor platform is designed for use at ambient temperatures between -5 and $+40$ °C. Modular belt conveyors intended for use at ambient temperatures from $+25$ to $+40$ °C should be selected with synchronous motors. Hence, it is possible to use a continual material flow solution at different ambient temperatures in a modular and flexible way.

INTERROLL PLATFORM FOR SPECIAL HYGIENIC CONVEYOR MODULES



Quick installation

Largely pre-assembled modules accelerate the installation on site. Independently adjustable side guides, infinitely adjustable supports, integrated electrical conduits and an universally applicable master gauge for holes to attach add-on components are only a few of the details that reduce the installation effort.

Reliable operation

The robust and extensively tested design of the new modules reduces the maintenance effort and ensures the reliable operation of a conveyor system.

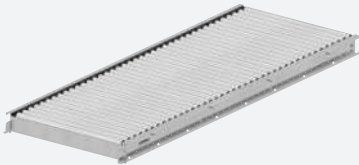
- Flexible and modular concept
- Energy-efficient 24-V conveyor technology
- High throughput
- Quick and easy installation
- Extremely quiet operation
- Easy maintenance
- Straightforward planning

Roller conveyor see page 12
Modular belt conveyor see page 28
Transfer module see page 20
Diverter see page 24
Accessories see page 44
Application notes see page 62

INTERROLL PLATFORM FOR SPECIAL HYGIENIC CONVEYOR MODULES

Performance in detail

Energy-efficient 24-V conveyor technology



The most efficient solution is selected for each conveyor task.

- Zero pressure accumulation conveying with 24 V drives
- Variant with 400-V/460-V main drive for high-performance applications
- Modular belt conveyor with Interroll drum motors
- No pneumatics required

High throughput



Powerful conveyor technology.

- Transport speed up to 0.8 m/s (160 fpm)
- Distribution output up to 1400 units/h possible
- Diverting without interrupting the material flow

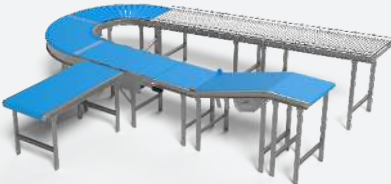
Scalability



Simple planning, implementation and expansion of conveyor systems.

- Modular concept
- Standard interfaces
- Quick and easy installation

Ergonomics



Well thought-out solutions for convenient and safe work.

- Quiet operation (< 70 db (A))
- Safety due to 24 V technology
- Minimized tool demand for the entire platform

Control



Future-oriented 24 V control concept for every need.

- Open interfaces with high-speed fieldbus
- Internal logic for reduced control effort

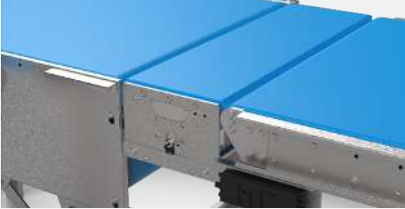
Continuous side profile design



A side profile for all modules for flexible routing.

- AISI304 stainless steel profile
- A multitude of fastening options on the profile
- Can be used as an electrical conduit

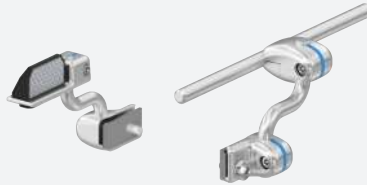
Flexible user interface



Micropitch modular belt transfer module

- For merger and diverter conveyor
- Very small gaps between conveyor and transfer module
- For objects from 100 x 100 mm

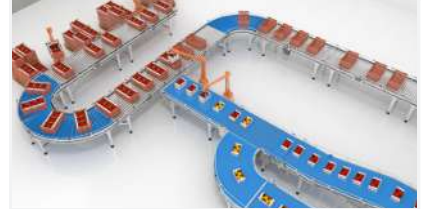
Universal supports and sensor holders



For quick, flexible installation and exact positioning of side guides, sensors and reflectors for efficient flow of conveying goods.

- Fixed and flexible universal supports
- Reliable installation and protection of sensors using sensor holders
- Switching state always visible
- Fast repositioning

Flexible side guides



Flexible and safe guidance of products.

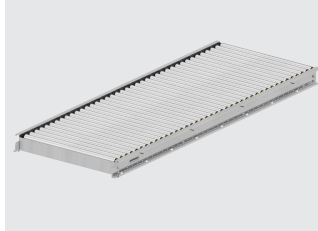
- Simple conversion to other conveying good dimensions
- Flexible forming

PRODUCT OVERVIEW

Roller conveyor

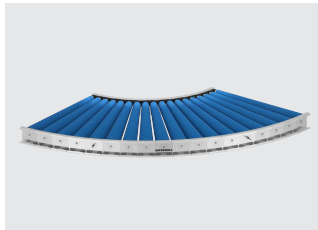
Straight

24-V drive



SH 1110 | page 12

Curve

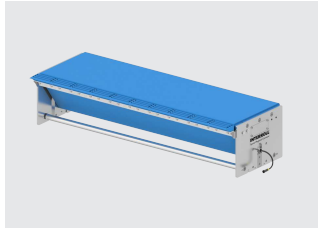


SH 1210 | page 16

Transfer module

Straight

24-V drive

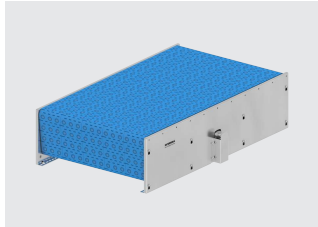


SH 1400 | page 20

Diverter

Straight

400-V/460-V drive

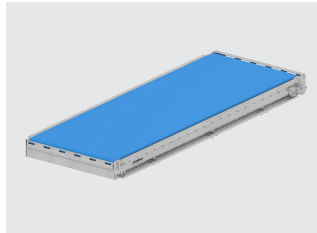


SH 1500 | page 24

Modular belt conveyor

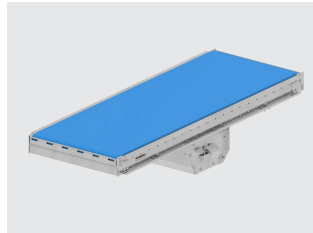
Straight

400-V/460-V head drive

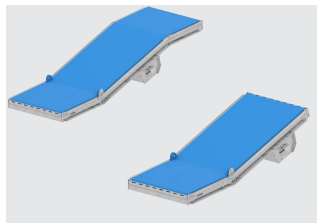


SH 1100 HD | page 28

400-V/460-V center drive

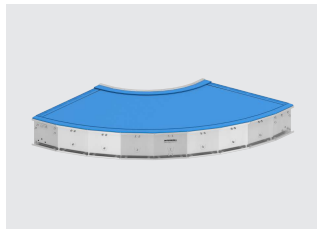


SH 1100 CD | page 32



SH 1300 | page 36

Curve



SH 1200 | page 40

Accessories



Switching power supply
HP5424 | page 44



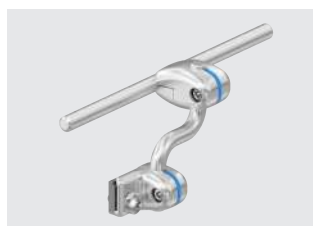
MultiControl BI | page 48



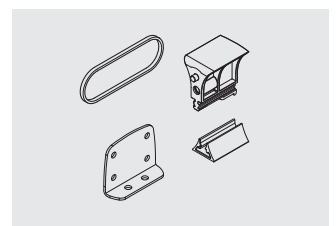
Frequency inverter FC 1000 |
page 52



Sensor and reflector kit |
page 58



Side guide | page 59



Components and connector sets
| page 60

ROLLER CONVEYOR SH 1110

Straight
Powered

24V

400V

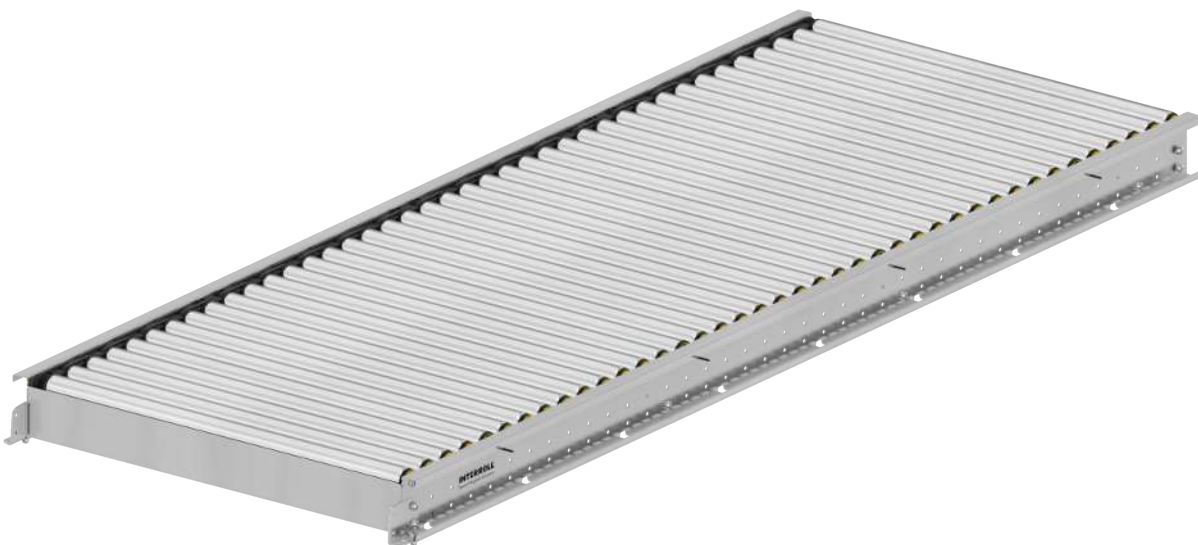
Product description

The 24-V driven straight roller conveyor enables zero-pressure accumulation conveying of unit handling with the help of a control. Every zone is driven by a RollerDrive that is connected with a fixed number of rollers via PolyVee belts running from roller to roller.

All materials are of stainless steel and the rollers as well as the RollerDrive, MultiControl and voltage supply feature a degree of protection of at least IPX5, which allows occasional cleaning with water and mild cleaning agents.

Scope of delivery

- 1 sensor kit per conveyor/zone
- 1 reflector kit per conveyor/zone
- Bus (communication) cables



ROLLER CONVEYOR

SH 1110

Straight
Powered

Technical data

General technical data	
Max. load capacity	35 kg/m (greater loads upon request)
Conveyor speed	0.1 – 0.8 m/s
Max. electrical power per zone	35 W
Incline/decline	-4 to +4°
Ambient temperature	-5 to +40 °C
Roller	
Roller type	IP55 roller
Roller diameter	50 mm
Roller material	Stainless steel
Max. number of rollers per zone	18 rollers
Drive	
Rated voltage	24 V
Motor type	RollerDrive EC5000
Drive medium	PolyVee belt
Torque transmission	Roller-to-roller
Control	MultiControl Bus Interface (IPX5 housing)

Roller conveyor

Transfer module

Diverter

Modular belt conveyor

ROLLER CONVEYOR

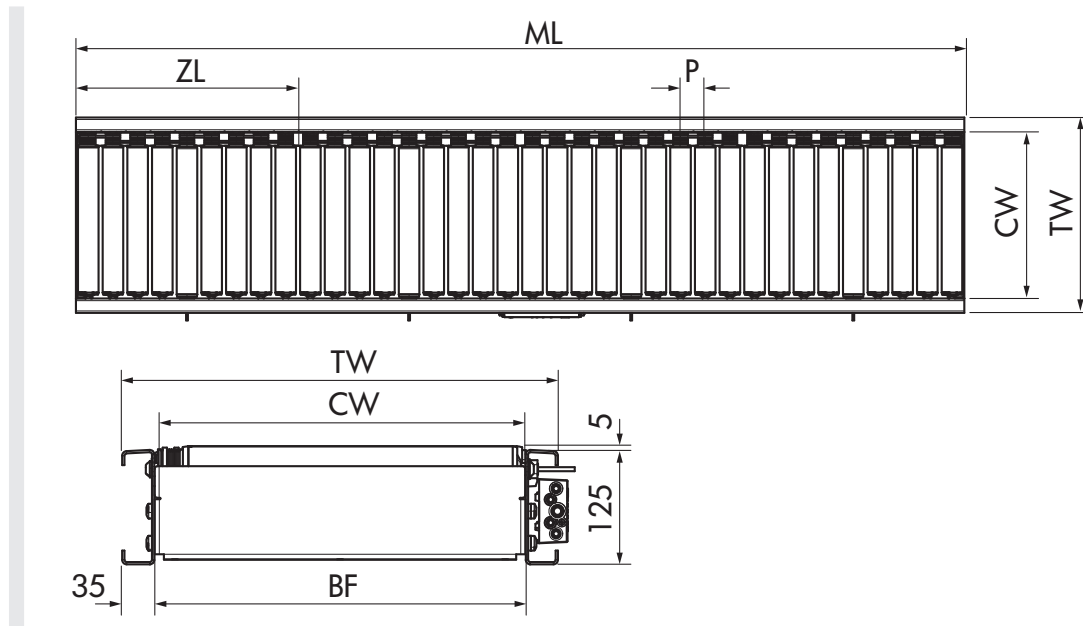
SH 1110

Straight
Powered

24V

400V

Dimensions



BF	Rated width	405 mm (S), 710 mm (M), 862 mm (L)
CW	Module conveying width	< 405 mm (S), < 710 mm (M), < 862 mm (L)
	Size of conveying goods	Min. 180 x 180 mm; max. 700 x 800 mm
ML	Module length	420 mm to 2160 mm in 60-mm increments
ZL	Zone length	Number of rollers x P (incl. RollerDrive)
TW	Module width	BF + 70 mm
P	Roller pitch	60/120 mm

ROLLER CONVEYOR SH 1110

Straight
Powered



Roller conveyor

Transfer module

Diverter

Modular belt conveyor

ROLLER CONVEYOR SH 1210

Curve
Powered

24V

400V

Product description

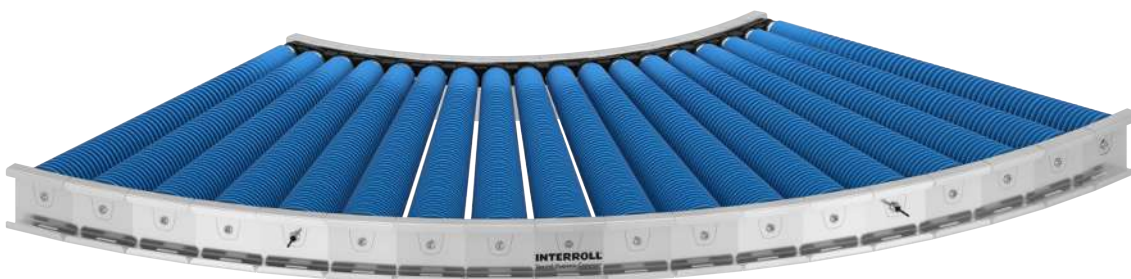
The 24-V driven roller curve changes the direction of transport of roller conveyor-capable conveying goods. The tapered rollers retain the alignment of the conveying goods between the side frames. A control enables zero-pressure accumulation conveying. Every zone is driven by a RollerDrive that is connected with a fixed number of rollers via PolyVee belts running from roller to roller.

All materials are of stainless steel and the rollers as well as the RollerDrive, MultiControl and voltage supply feature a degree of protection of at least IPX5, which allows occasional cleaning with water and mild cleaning agents.

The tapered rollers are designed so that liquids can run off between the rollers and onto the floor. Water cannot enter the rollers.

Scope of delivery

- 1 sensor kit per conveyor/zone
- 1 reflector kit per conveyor/zone
- Bus (communication) cables



ROLLER CONVEYOR SH 1210

Curve
Powered

Technical data

General technical data	
Max. load capacity	35 kg/m (greater loads upon request)
Conveyor speed	0.1 – 0.8 m/s
Max. electrical power per zone	35 W
Incline/decline	Not suitable
Ambient temperature	-5 to +40 °C
Roller	
Roller type	IP55 roller
Roller diameter	50 mm
Roller material	Stainless steel with tapered tube sleeves made of blue techno-polymer (FDA-certified)
Max. number of rollers	6 for 30° 9 for 45° 12 for 60° 18 for 90°
Drive	
Rated voltage	24 V
Motor type	RollerDrive EC5000
Drive medium	PolyVee belt
Torque transmission	Roller-to-roller
Control variants	MultiControl Bus Interface (IPX5 housing)

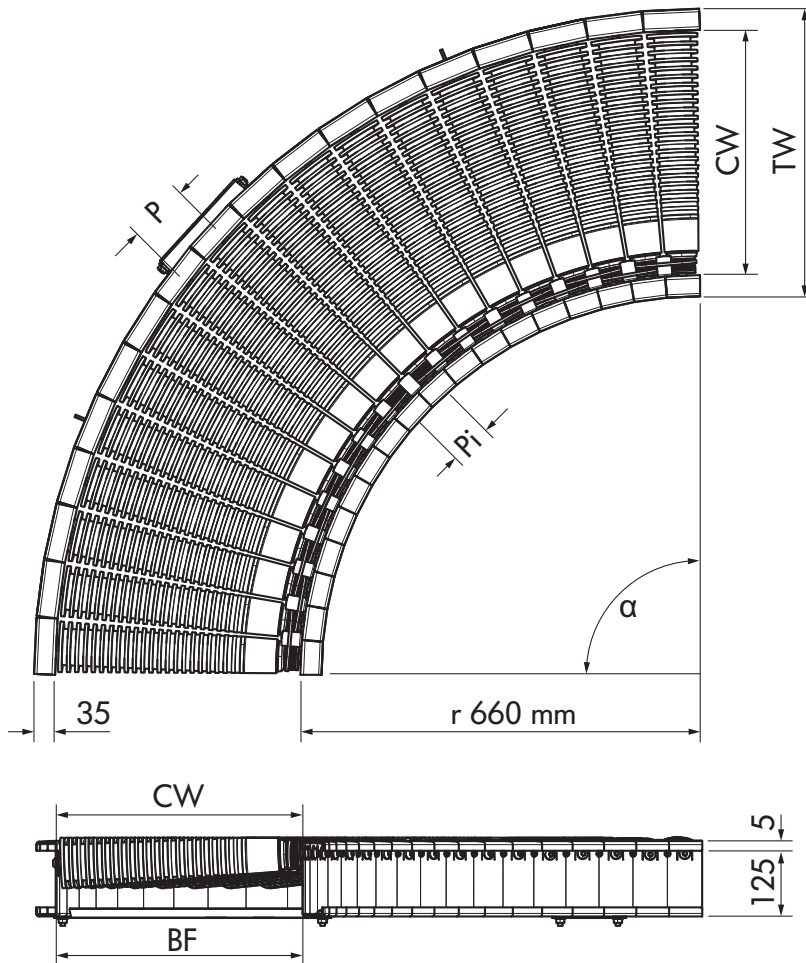
ROLLER CONVEYOR SH 1210

Curve
Powered

24V

400V

Dimensions



BF	Rated width	405 mm (S), 710 mm (M), 862 mm (L)
CW	Module conveying width	< 405 mm (S), < 710 mm (M), < 862 mm (L)
	Size of conveying goods	Min. 180 x 180 mm; max. 700 x 800 mm
α	Bracket	30°/45°/60°/90°
TW	Module width	BF + 70 mm
Pi	Roller pitch; inside	~ 72 mm
P	Roller pitch; outside	S = 93 mm, M = 118 mm, L = 133 mm

ROLLER CONVEYOR
SH 1210
Curve
Powered

Roller conveyor

Transfer module

Diverter

Modular belt conveyor

TRANSFER MODULE

SH 1400

Straight
Powered

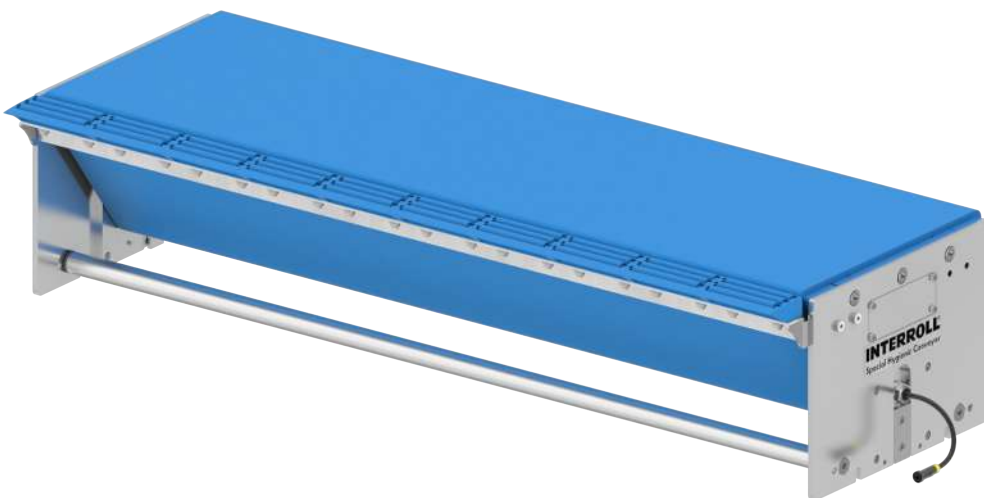
24V

400V

Product description

The transfer module driven with 24 V DC is a multi-flexible interface to connect the SHC platform with a third conveyor.

The transfer module reduces the gap between two conveyors. This is especially required if small, packaged food items should be transferred from or to a conveyor. Packaged goods up to a size of 100 x 100 mm can be transferred in an easy way.



TRANSFER MODULE SH 1400

Straight
Powered

Technical data

General technical data	
Max. load capacity	35 kg/m (greater loads upon request)
Conveyor speed	0.1 to 0.8 m/s
Incline/decline	Not suitable
Ambient temperature	-5 to +40 °C
Drive	
Rated voltage	24 V
Electrical power	35 W
Motor type	RollerDrive EC5000
Protection rating	IP 66
Torque transmission	Via sprockets
Materials	
Modular belt	Movex 510FT
Slider bed	Slider rails made of polymer
Stainless steel parts	Stainless steel AISI 304
Control	MultiControl Bus Interface (IPX5 housing)

Roller conveyor

Transfer module

Diverter

Modular belt conveyor

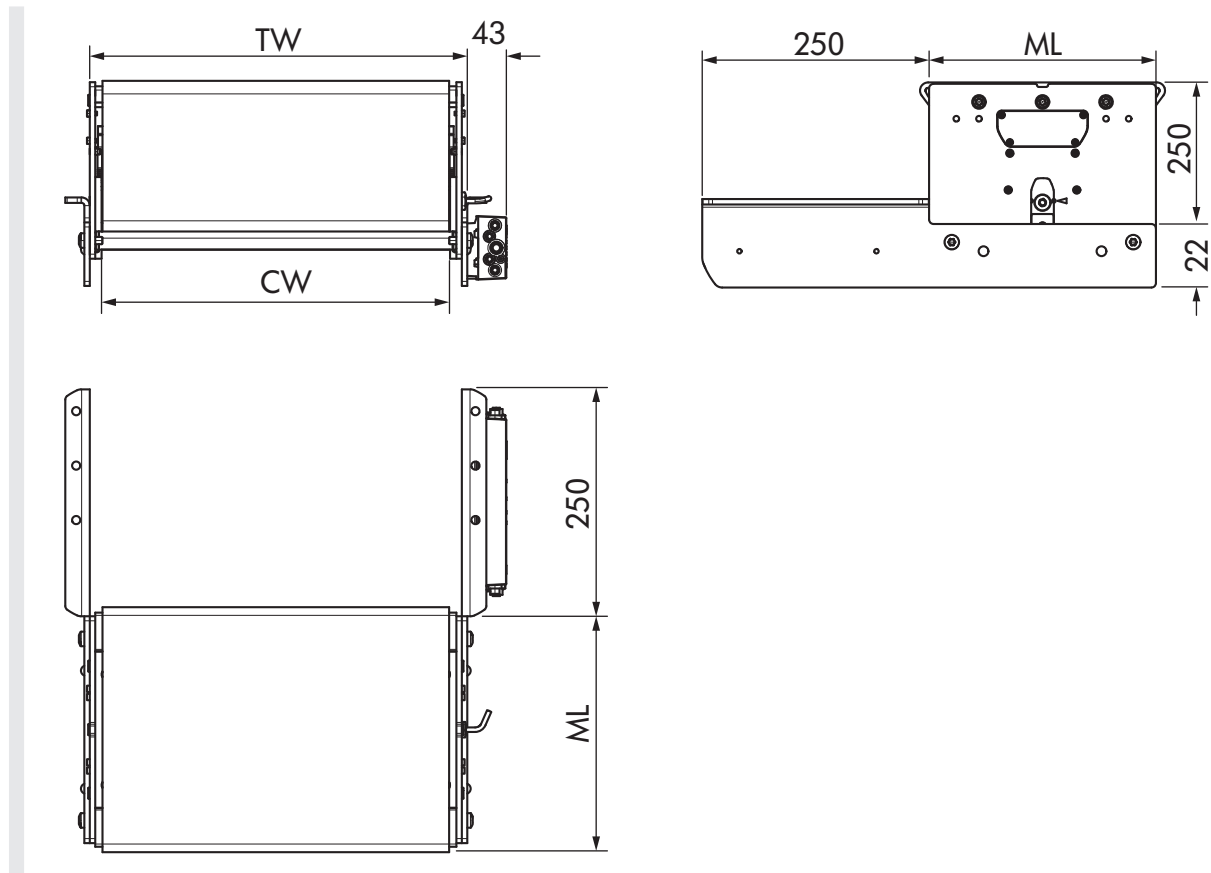
TRANSFER MODULE SH 1400

Straight
Powered

24V

400V

Dimensions



BF	Rated width	398 mm (S), 703 mm (M), 855 mm (L)
CW	Module conveying width	< 398 mm (S), < 703 mm (M), < 855 mm (L)
	Size of conveying goods	Min. 100 x 100 mm; max. 700 x 800 mm
ML	Module length	310 mm
TW	Module width	410 mm (S), 715 mm (M), 867 mm (L)

TRANSFER MODULE SH 1400

Straight
Powered



Roller conveyor

Transfer module

Diverter

Modular belt conveyor

DIVERTER SH 1500

Straight
Powered

24V

400V

Product description

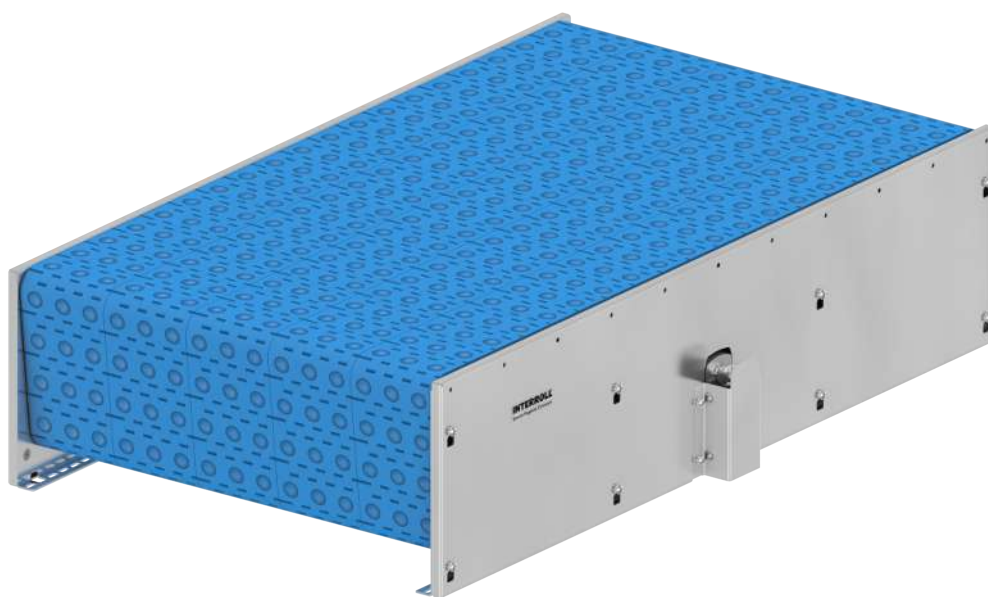
The diverter SH 1500 is used for diverting conveying goods, preferably with smooth bottom surfaces, at different angles to the right or to the left.

The module is equipped with two powerful drum motors. One drum motor drives the ball belt Ammeraal Uni QNB-Ball and the second drum motor turns a control belt, which is installed in the upper area and at a 90° angle under the ball belt.

By starting the control belt, the direction and speed of the balls of the ball belt can be manipulated.

By changing the speed of the control belt, the diverting angle can be individually adjusted as required.

The diverter can also be used for small sorting tasks.



DIVERTER SH 1500

Straight
Powered

Technical data

General technical data	
Max. load capacity	35 kg/m (greater loads upon request)
Control belt conveying speed	1 m/s
Ball belt conveying speed	0.4 m/s
Ball circumferential speed	0.8 m/s (matches the product speed on the ball belt)
Max. conveying speed for conveying goods in 45° angles	1.18 m/s
Max. conveying speed for conveying goods in 90° angles	0.8 m/s
Incline/decline	Not suitable
Pass-through	Approx. 1400 goods per hour
Ambient temperature	-5 to +40 °C
Drive	
Rated voltage	230/400 V 50 Hz 230/460 V 60 Hz
Electrical power	2 x 550 W
Motor type	Synchronous/asynchronous drum motor DM 0080
Protection rating	IP 66 / IP 69K
Torque transmission	Via sprockets and friction
Materials	
Ball belt	Ammeraal M-QNB-C
Modular belt	Ammeraal Ropanyl
Stainless steel parts	Stainless steel AISI 304
Frequency inverter	Standard: FC1000 Interroll/Getriebbau Nord

Roller conveyor

Transfer module

Diverter

Modular belt conveyor

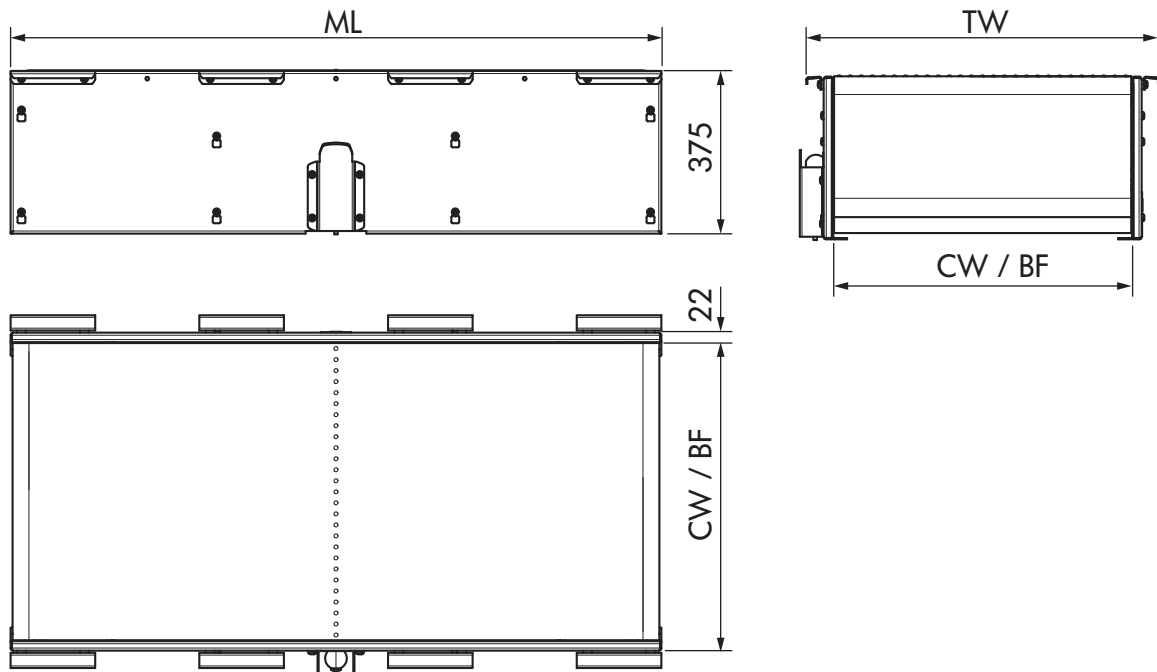
DIVERTER SH 1500

Straight
Powered

24V

400V

Dimensions



BF	Rated width	< 690 mm (M), < 842 mm (L)
CW	Module conveying width	
	Size of conveying goods	Min. 100 x 100 mm; max. 700 x 800 mm
ML	Module length	1500 mm
TW	Module width	813 mm (M), 965 mm (L)

DIVERTER
SH 1500
Straight
Powered



Roller conveyor

Transfer module

Diverter

Modular belt conveyor

MODULAR BELT CONVEYOR SH 1100 HD

Straight
Head drive

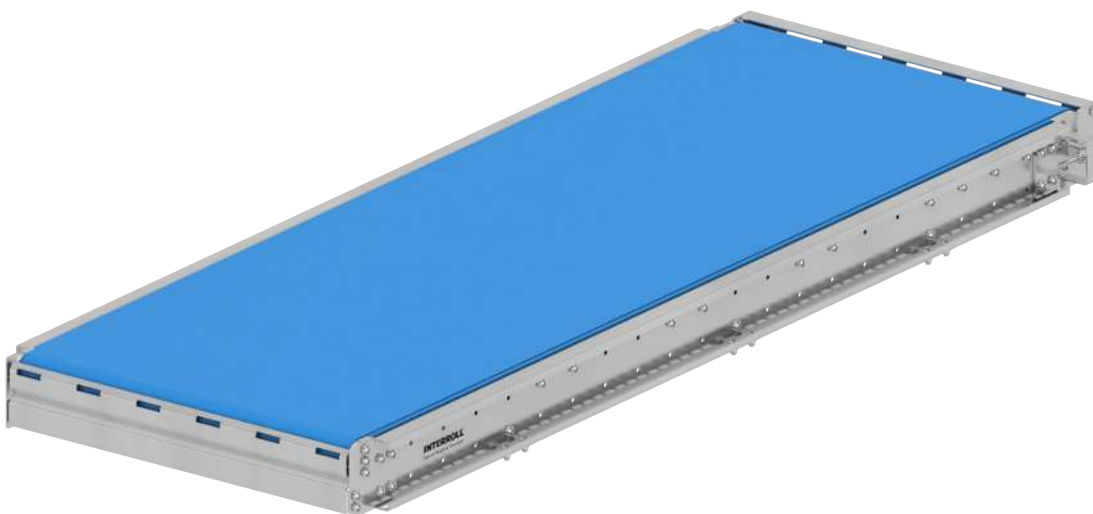
24V

400V

Product description

The modular belt conveyor is used for the transport of packaged small items or goods transported in small boxes that are not suitable for roller tracks, and for all types of goods on inclines and declines.

The modular belt conveyor with head drive uses a powerful 550-W drum motor DM0080.



MODULAR BELT CONVEYOR SH 1100 HD

Straight
Head drive

Technical data

General technical data	
Max. load capacity	35 kg/m (greater loads upon request)
Conveyor speed	0.1 to 0.8 m/s
Incline/decline	-6 to 18°, +6 to +18°, in increments of 3°
Ambient temperature	-5 to +40 °C
Drive	
Rated voltage	230/400 V 50 Hz 230/460 V 60 Hz
Electrical power	Max. 550 W
Motor type	Synchronous drum motor DM 0080
Protection rating	Drum motor: IP 69 K Frequency inverter: central (IP 20) or decentral (IP 66)
Torque transmission	Via sprockets
Materials	
Modular belt	Ammeraal M-QNB-C
Slider bed	Slider rails made of polymer
Stainless steel parts	Stainless steel AISI 304
Frequency inverter	Standard: FC1000 Interroll/Getriebbau Nord

Roller conveyor

Transfer module

Diverter

Modular belt conveyor

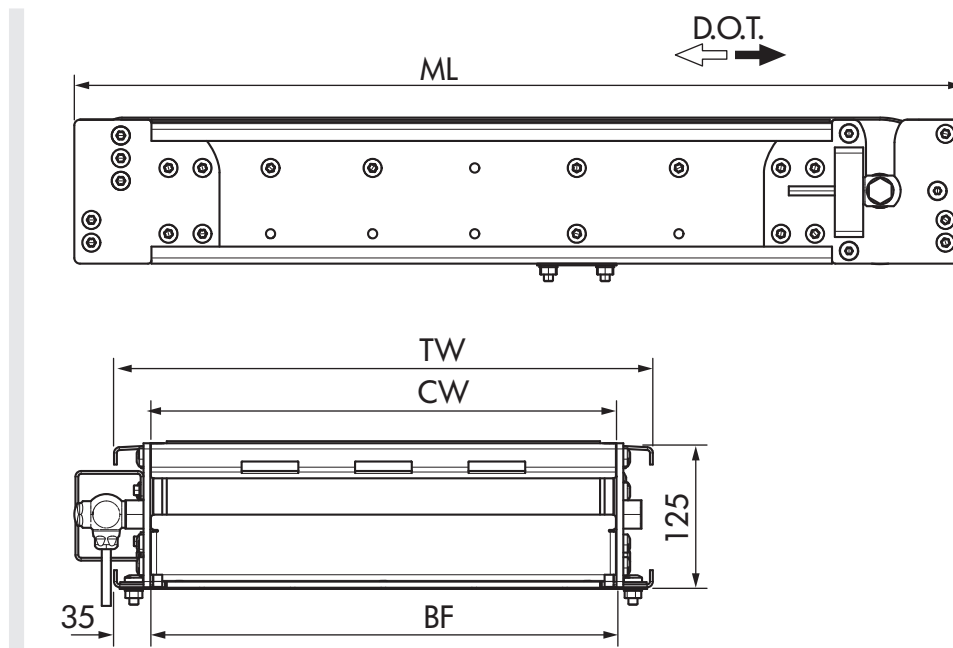
MODULAR BELT CONVEYOR SH 1100 HD

Straight
Head drive

24V

400V

Dimensions



BF	Rated width	405 mm (S), 710 mm (M), 862 mm (L)
CW	Module conveying width	< 405 mm (S), < 710 mm (M), < 862 mm (L)
	Size of conveying goods	Min. 100 x 100 mm; max. 700 x 800 mm
ML	Module length	Min. 1173 mm to 6783 mm in 30-mm increments
TW	Module width	BF + 70 mm

MODULAR BELT CONVEYOR SH 1100 HD

Straight
Head drive



Roller conveyor

Transfer module

Diverter

Modular belt conveyor

MODULAR BELT CONVEYOR SH 1100 CD

Straight
Center drive

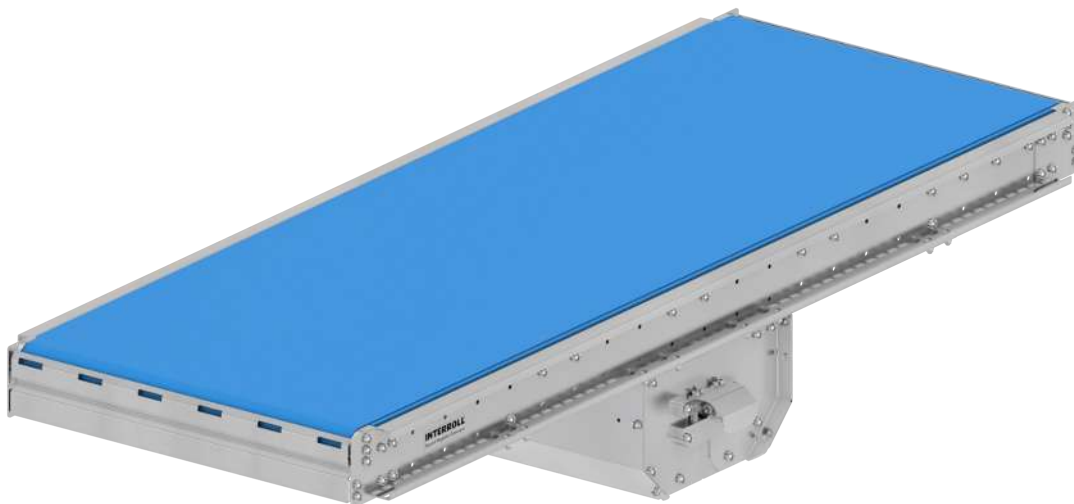
24V

400V

Product description

The modular belt conveyor is used for the transport of packaged small items or goods transported in small boxes that are not suitable for roller tracks, and for all types of goods on inclines and declines.

The modular belt conveyor with center drive can be equipped with any drum motor between DM0080 and DM0165, which allows for a power range of 550 W to 1818 W.



MODULAR BELT CONVEYOR SH 1100 CD

Straight
Center drive

Technical data

General technical data	
Max. load capacity	35 kg/m (greater loads upon request)
Conveyor speed	0.1 to 0.8 m/s
Incline/decline	-6 to -18°; +6 to +18°, in increments of 3°
Ambient temperature	-5 to +40 °C
Drive	
Rated voltage	400 V 50 Hz 460 V 60 Hz 230 V upon request
Electrical power	Max. 1818 W
Motor type	Synchronous/asynchronous drum motor DM 0080, DM 0113, DM 0138, DM 0165
Protection rating	Drum motor: IP 69K Frequency inverter: central (IP 20) or decentral (IP 66)
Torque transmission	Via sprockets
Materials	
Modular belt	Ammeraal M-QNB-C
Slider bed	Slider rails made of polymer
Stainless steel parts	Stainless steel AISI 304
Frequency inverter	Standard: FC1000 Interroll/Getriebebau Nord

Roller conveyor

Transfer module

Diverter

Modular belt conveyor

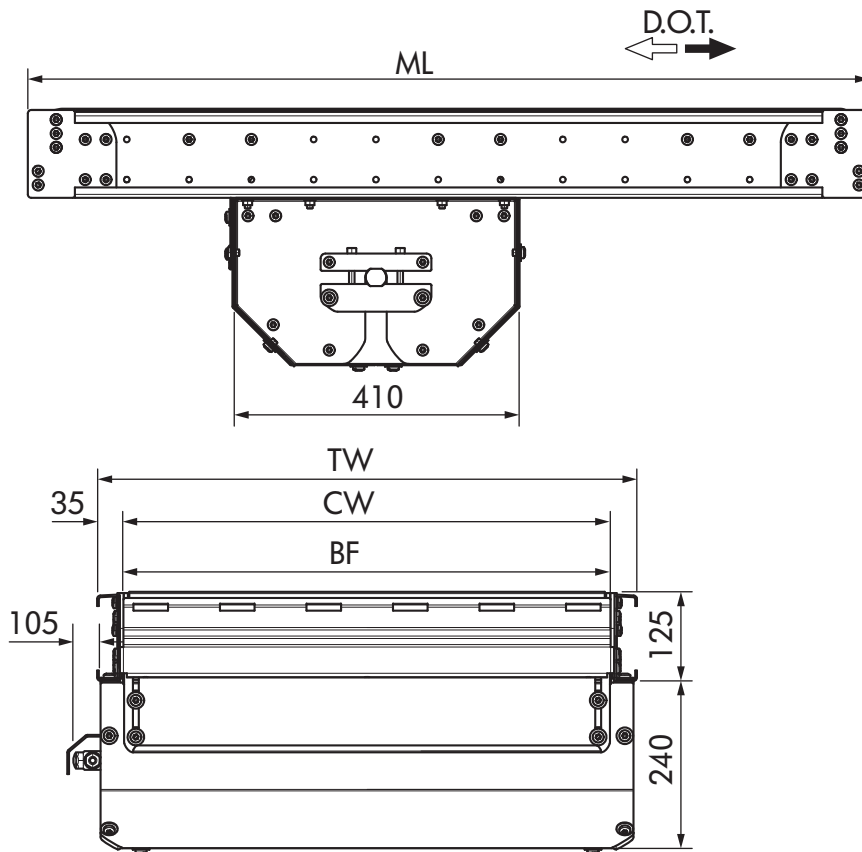
MODULAR BELT CONVEYOR SH 1100 CD

Straight
Center drive

24V

400V

Dimensions



BF	Rated width	405 mm (S), 710 mm (M), 862 mm (L)
CW	Module conveying width	< 405 mm (S), < 710 mm (M), < 862 mm (L)
	Size of conveying goods	Min. 100 x 100 mm; max. 700 x 800 mm
ML	Module length	Min. 1173 mm to 9993 mm in 30-mm increments
TW	Module width	BF + 70 mm

MODULAR BELT CONVEYOR
SH 1100 CD
Straight
Center drive

Roller conveyor

Transfer module

Diverter

Modular belt conveyor

MODULAR BELT CONVEYOR SH 1300

Straight

Center drive + upper arch

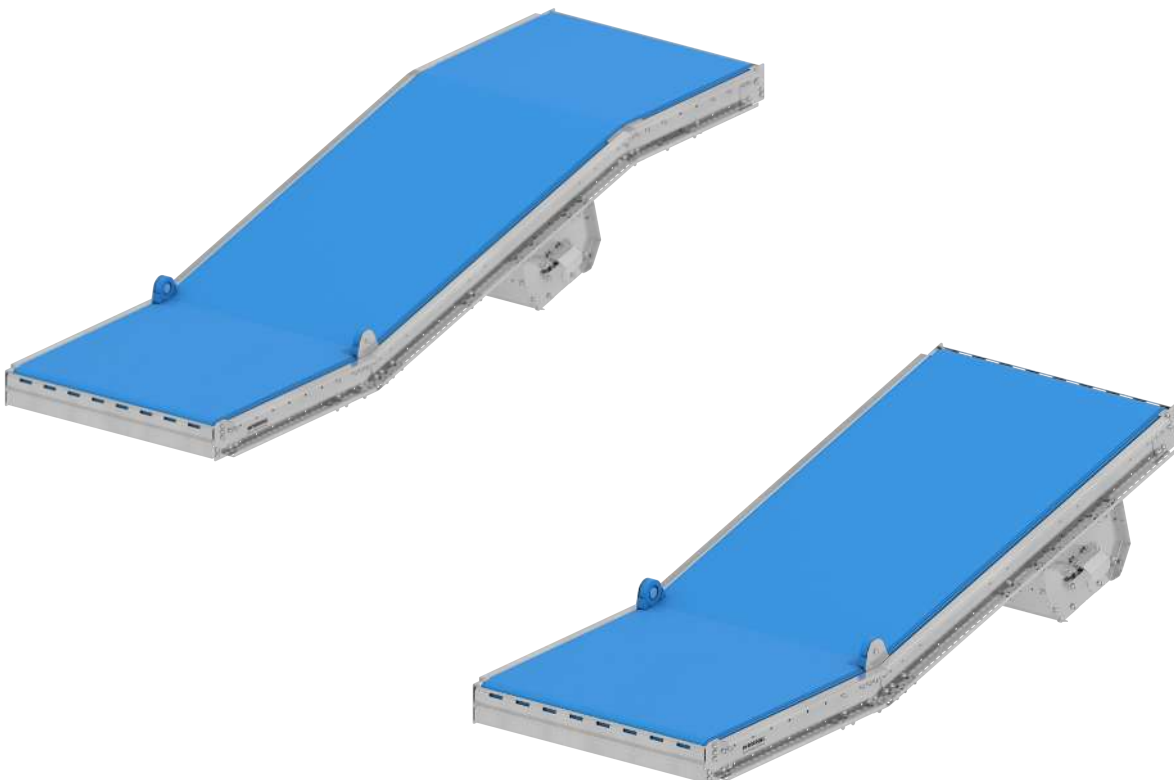
24V

400V

Product description

The modular belt Z conveyor with arch is used for the transport of packaged small items or goods transported in small boxes that are not suitable for roller tracks, and can be used for all types of goods on inclines and declines.

The modular belt Z conveyor with center drive can be equipped with any drum motor between DM0080 and DM0165, which allows for a power range of 550 W to 1818 W.



MODULAR BELT CONVEYOR SH 1300

Straight
Center drive + upper arch

Technical data

General technical data	
Max. load capacity	35 kg/m (greater loads upon request)
Conveyor speed	0.1 to 0.8 m/s
Incline/decline	-6 to -18°; +6 to +18°, in increments of 3°
Ambient temperature	-5 to +40 °C
Drive	
Rated voltage	230/400 V 50 Hz 230/460 V 60 Hz
Electrical power	Max. 1818 W
Motor type	Synchronous/asynchronous drum motor DM 0080, DM 0113, DM 0138, DM 0165
Protection rating	IP 66 / IP 69K
Torque transmission	Via sprockets
Materials	
Modular belt	Ammeraal M-QNB-C
Slider bed	Slider rails made of polymer
Stainless steel parts	Stainless steel AISI 304
Frequency inverter	Standard: FC1000 Interroll/Getriebebau Nord

Roller conveyor

Transfer module

Diverter

Modular belt conveyor

MODULAR BELT CONVEYOR SH 1300

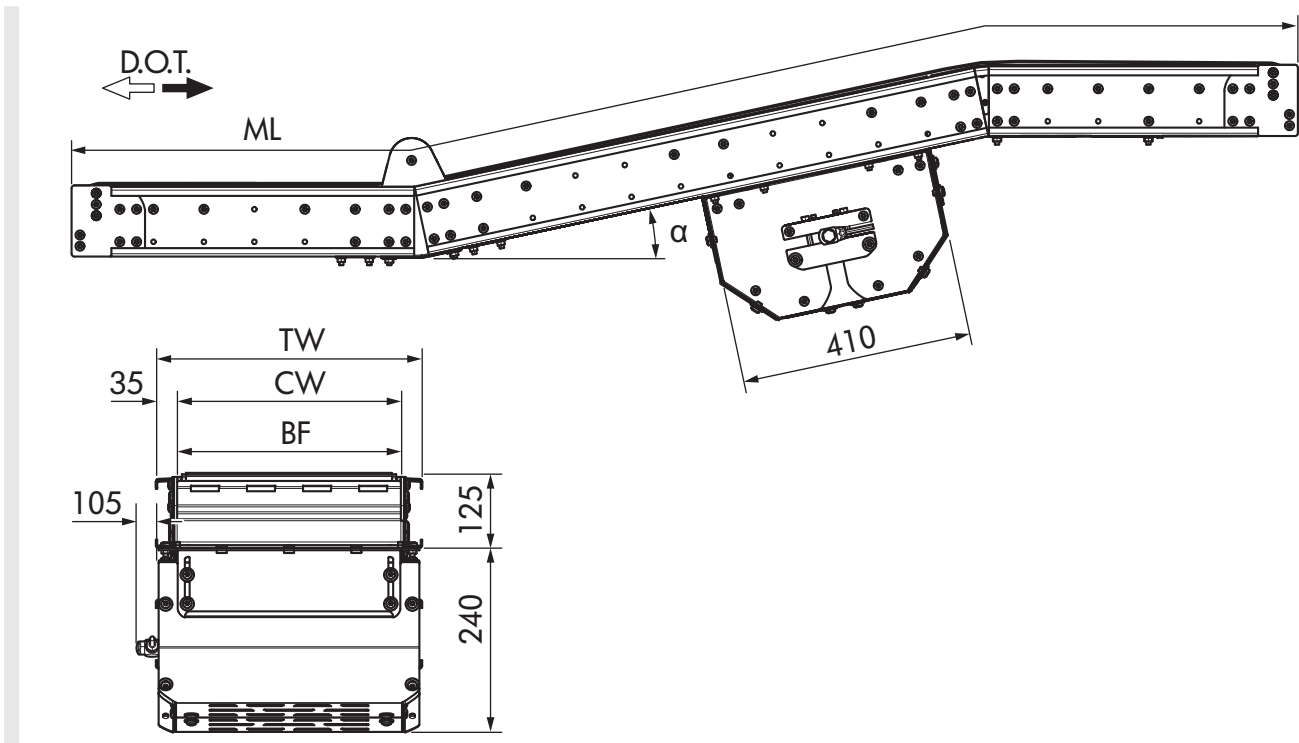
Straight

Center drive + upper arch

24V

400V

Dimensions



BF	Rated width	405 mm (S), 710 mm (M), 862 mm (L)
CW	Module conveying width	< 405 mm (S), < 710 mm (M), < 862 mm (L)
	Size of conveying goods	Min. 100 x 100 mm; max. 700 x 800 mm
ML	Module length	Min. 1173 mm to 9993 mm in 30-mm increments
TW	Module width	BF + 70 mm

MODULAR BELT CONVEYOR SH 1300

Straight
Center drive + upper arch

Roller conveyor

Transfer module

Diverter

Modular belt conveyor

MODULAR BELT CONVEYOR SH 1200

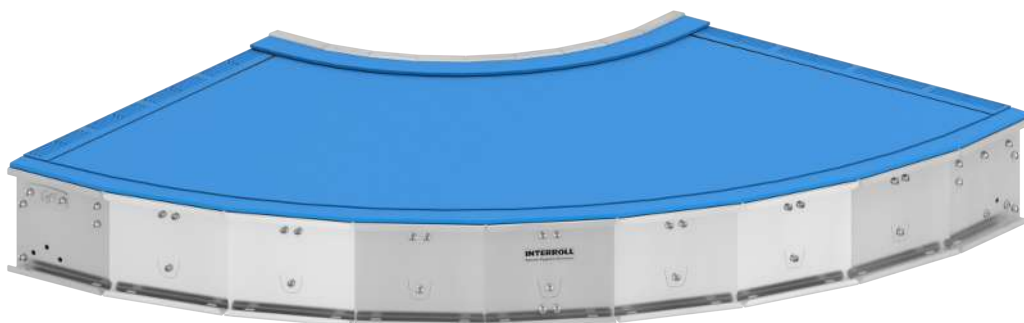
Curve
Powered

24V

400V

Product description

The modular belt curve is used for the transport of packaged small items or goods transported in small boxes that are not suitable for roller tracks. It is the first modular belt curve driven by a drum motor on the market and, as such, perfectly matches the smooth silhouette of the other SHC modules.



MODULAR BELT CONVEYOR SH 1200

Curve
Powered

Technical data

General technical data	
Max. load capacity	35 kg/m (greater loads upon request)
Conveyor speed	0.1 to 0.8 m/s
Incline/decline	Not suitable
Ambient temperature	-5 to +40 °C
Drive	
Rated voltage	230/400 V 50 Hz 230/460 V 60 Hz
Electrical power	Max. 700 W
Motor type	Synchronous drum motor DM 0113
Protection rating	IP 66 / IP 69K
Torque transmission	Via toothed belts and sprockets
Materials	
Module conveyor	Movex 510FT
Slider bed	Slider rails made of polymer
Stainless steel parts	Stainless steel AISI 304
Control	Standard: FC1000 Interroll/Getriebebau Nord

Roller conveyor

Transfer module

Diverter

Modular belt conveyor

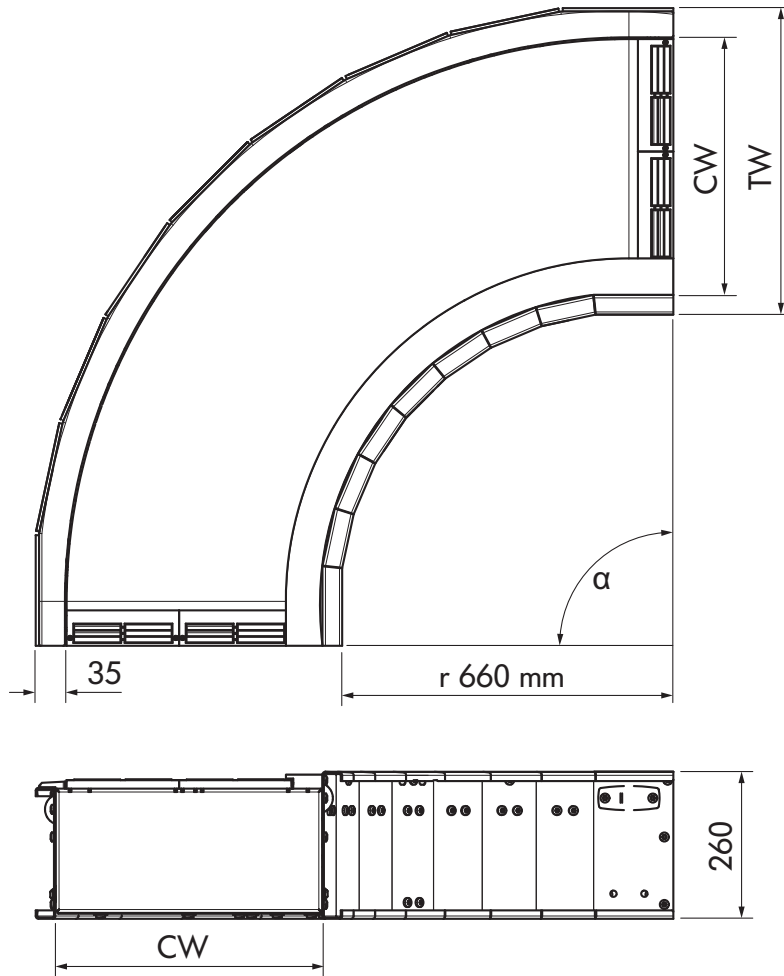
MODULAR BELT CONVEYOR SH 1200

Curve
Powered

24V

400V

Dimensions



BF	Rated width	380 mm (S), 580 mm (M), 780 mm (L)
CW	Module conveying width	< 380 mm (S), < 580 mm (M), < 780 mm (L)
r	inside radius	Always 600 mm
	Size of conveying goods	Min. 100 x 100 mm; max. 700 x 800 mm
α	Bracket	30°: 520 mm 45°: 780 mm 60°: 1040 mm 90°: 1560 mm
TW	Module width	450 mm (S), 650 mm (M), 850 mm (L)

MODULAR BELT CONVEYOR SH 1200

Curve
Powered



Roller conveyor

Transfer module

Diverter

Modular belt conveyor

ACCESSORIES

SWITCHING POWER SUPPLY HP5424

IP55

24V

400V

Application area

Voltage supply of MultiControl via flat cable. Basic voltage supply of 24-V DC products. Suitable for a moist environment (IP55) with occasional cleaning using mild cleaning agents.

Product description

The Interroll switching power supply HP5424 IP55 is a three-phase power supply for providing 24-V DC voltage. The robust housing achieves a protection rating of IP55. This allows placement in the immediate vicinity of the products to be supplied with 24 V DC, such as Interroll MultiControl. The central voltage supply saves costs for control cabinets and allows very short lines which, in turn, lead to cost savings and error reduction with respect to voltage drops on the line.

The HP5424 IP55 is immediately operational, all required functions, such as circuit protection or maintenance switches, are already present. Given its high level of overload capability, the power supply is perfectly adjusted to the current requirements of the RollerDrive EC5000. This ensures the power supply of several RollerDrive starting at the same time.

Properties

- No installation in switch cabinet required
- Compact design using heat dissipation element
- Very high peak output (150 %)
- Adjustable circuit protection (jumper)
- Overcurrent protection with resettable fuse
- Status signal
- LED status display
- 400 V AC can be looped through
- 4 24-V DC outputs are available
- Multiple terminal points, no special and expensive connectors required
- Brake chopper for limiting feedback voltage – resulting in feedback capability
- Lockable maintenance switch against reactivation
- Screw for connecting/disconnecting ground potential of primary side with ground of secondary side
- Maintenance-free
- No power reduction (derating) over the entire operating temperature range



ACCESSORIES

SWITCHING POWER SUPPLY HP5424

IP55

Technical data

Electrical data	
Rated supply voltage	400 V AC, 3 phases
Supply system voltage range	380 to 480 V AC \pm 10 %
Supply system frequency	50 to 60 Hz \pm 6 %
Supply system power consumption	Typical 1.6 A per phase at 3 x 400 V AC
Rated output voltage	24 V DC
Rated output power	960 W
Rated peak power	Max. 1440 W at 24 V DC for 4 s, repetition rate depends on duration and actual peak load
Maximum output current	60 A at 24 V DC for 4 s
Current limitation for each output	10, 16, 25 A
Efficiency	Min. 92%
Feedback resistance	\leq 35 V DC
Brake chopper	30 W (briefly 200 W)
Ambient conditions	
Protection rate	IP55
Ambient temperature in operation	-30 to +40 °C
Ambient temperature during transport and storage	-40 to +85 °C
Max. installation height above sea level	1000 m*
Miscellaneous data	
Weight	4 kg
Color	RAL9005 (black)

* The installation in systems at an altitude above 1000 m is possible. However, this can lead to a reduction of the performance values.

ACCESSORIES

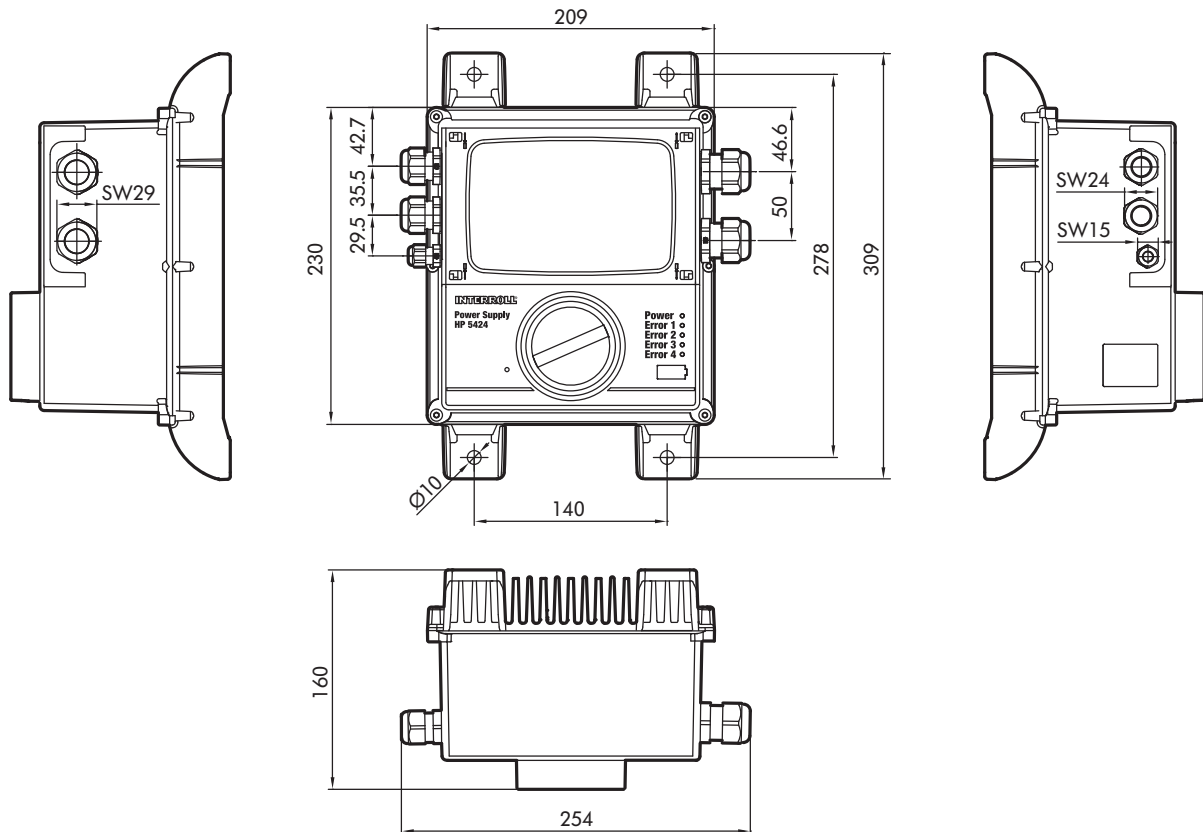
SWITCHING POWER SUPPLY HP5424

IP55

24V

400V

Dimensions



Accessories

Set of rubber seals for all cable screw connections

- 24-V DC output for one flat cable, article number: S-1115406
- 24-V DC output for two flat cables, article number: S-1115407

Scope of delivery

- Fit all cable screw connections (in the screwed-on condition) with dummy plugs. Jumper for current limitation of all cables.

ACCESSORIES

SWITCHING POWER SUPPLY HP5424

IP55



Roller conveyor

Transfer module

Diverter

Modular belt conveyor

ACCESSORIES

MULTICONTROL BI

For EC5000 24 V
35 W, 50 W, with bus interface (CANopen)

24V
400V

Application area

Zero-pressure accumulation conveying (ZPA) for systems with medium to high number of conveyor zones. Control of RollerDrive EC5000 BI in applications with positioning demand.

Product description

The MultiControl is a four-zone control. This means that up to four RollerDrive EC5000 BI and four zone sensors can be connected. The use of Y-cables enables connecting four additional inputs or outputs. The connections can be configured individually.

MultiControl is multi-protocol-capable. PROFINET, EtherNet/IP and EtherCat can be used via simple switching.

With help of the MultiControl, sensors and RollerDrive are directly integrated into the field bus level. An additional sensor/actuator level and, as a result, additional communication lines or a gateway become redundant. A standard flat cable is used for power supply. They can simply be cut to the desired length and can be connected very quickly using the piercing technology of MultiControl.

The separate voltage supply allows a safe power-off of the RollerDrive while the bus communication and sensors can continue to be used.

Addressing and naming is done over PLC software, a web user interface, or with the Interroll Teach-In method. With the Teach-In method, automatic addressing and configuration of all MultiControl is possible. In addition, the sequence of all MultiControls in the conveyor line can be determined. This saves time during the commissioning on site.



ACCESSORIES MULTICONTROL BI

For EC5000 24 V

35 W, 50 W, with bus interface (CANopen)

Functions

- Easy handling – One control card for PROFINET, EtherNet/IP and EtherCat (simple toggling of bus protocols)
- Independent power supply for RollerDrive
- Plug & Play in case of replacements – no addressing or configuration required
- Status display with LEDs for all functions and I/Os
- Integrated logic for zero-pressure accumulation conveying incl. initialization
- Secure communication with the use of certificates: PROFINET Conformance Class B, EtherNet/IP ODVA Conformance, EtherCat Conformance
- Configuration via PLC, web browser menu and via teach-In method of:
 - Speed, direction of rotation, start and stop ramp of RollerDrive
 - Sensor properties
 - Timer
 - Error handling
 - Logic (single/train release)
- UL-listed
- Voltage limitation via brake chopper
- Variable process images for optimizing the data volumes transferred between MultiControl and PLC
- Functional ground connection for shield of communication line
- Polarity reversal protection of voltage supply
- Short circuit-proof design of voltage supply of inputs and outputs
- Precise error diagnostics of EC5000 – Analysis via web browser menu and PLC
- Automatic addressing of all connected EC5000s
- Test operation without previous configuration or connection of a PLC
- Positioning the connected EC5000 together with a PLC
- Analysis of various RollerDrive data via web browser menu and PLC:
 - Operating hours
 - Throughput
 - Temperature of EC5000
 - System status indicators
 - Life cycle indicator (allows preventive maintenance, resulting in increased availability)

Possible applications

Use of a PLC	Function of a PLC	Function of MultiControl
No	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • Implementation of ZPA logic • Visualization of EC5000 data
Yes	<ul style="list-style-type: none"> • Influencing the ZPA logic • Tracking of conveying goods • Error diagnostics 	<ul style="list-style-type: none"> • Implementation of ZPA logic • Implementation of PLC specifications
Yes	<ul style="list-style-type: none"> • The PLC must be programmed and controls all connected RollerDrive via this program • Tracking of conveying goods and error diagnostics • Specification of target position in positioning mode 	<ul style="list-style-type: none"> • Function as input/output card • Transmits the status of all sensors, RollerDrive and, if necessary, error information to the PLC

ACCESSORIES

MULTICONTROL BI

For EC5000 24 V
35 W, 50 W, with bus interface (CANopen)

24V
400V

Technical data

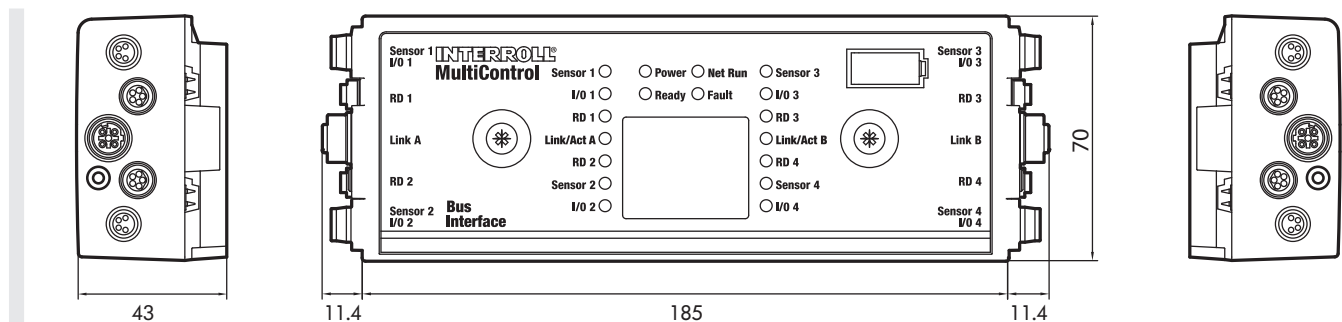
Electrical data	
Rated voltage	24 V DC
Voltage range	24 V DC: 22 to 27.5 V DC (voltage supply of RollerDrive only)
Current consumption	Logic supply voltage: MultiControl: max. 0.2 A + connected sensors/actuators = max. 1.6 A + current of RollerDrive EC5000*
Fuses	- For logic - For RollerDrive - For sensors and I/Os, can be reset
Protection rate	IP55
Ambient temperature in operation	-30 °C to +40 °C
Ambient temperature during transport and storage	-40 °C to +80 °C
Max. installation height above sea level	1000 m**

* The power of EC5000 depends on the application, e.g., conveying good weight, conveying speed, acceleration ramp, and on the EC5000 used (refer to the corresponding chapter).

** The installation in systems at an altitude above 1000 m is possible. However, this can lead to a reduction of the performance values.

Dimensions

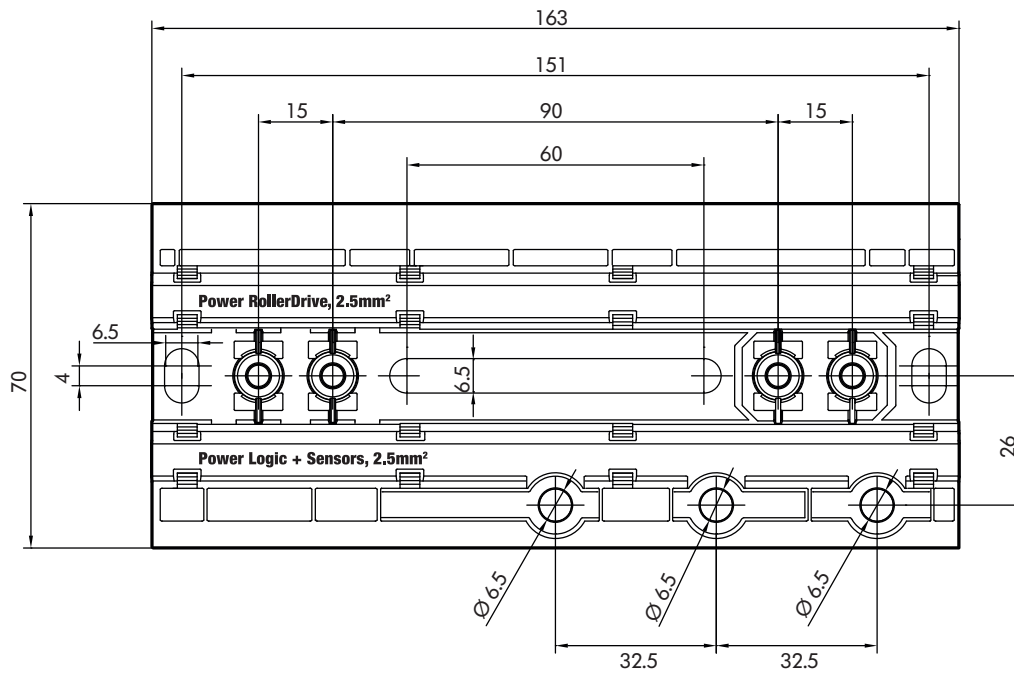
MultiControl



ACCESSORIES MULTICONTROL BI

For EC5000 24 V
35 W, 50 W, with bus interface (CANopen)

Base plate



To be able to position the magnetic key, the distance from the top edge of MultiControl to adjacent components must be at least 10 mm.

Accessories

- Flat cable for voltage (2 x 2.5 mm², 25 m), S-1004030
- Magnetic key, S-64100210
- MultiControl EtherNet cable M12 (3 m), S-1104438
- MultiControl Y-cable M8 (0.3 m), S-1104460
- Switching power supply HP5424 IP55, page 44

Ordering information

- Article number: S-1103564
- Scope of supply: Base plate

ACCESSORIES

FREQUENCY INVERTER FC 1000

24V

400V

The Interroll FC 1000 is a state-of-the-art decentral frequency inverter and can be used, among other things, for controlling Interroll drum motors in logistics applications, food processing, beverage industry and packaging applications.

It is suitable for synchronous and asynchronous motors and commands the sensorless control as well as operation with encoder feedback for positioning tasks.

The housing consists of aluminum; a version with special surface finishing is available for the food and beverage industry.

The frequency inverter is available in two installation versions: on the side frame of a conveyor or installed directly on the shaft of a drum motor.

Thanks to the exclusive use of plug connections, cabling according to the daisy chain principle, and the integrated Interroll motor database, the installation and startup is quick and simple. As a rule, the frequency inverter never has to be opened.

It features digital inputs and outputs, status LEDs, and an encoder interface. The FC 1000 is available in two sizes, and the design in size 2 is capable of controlling electromagnetic brakes without additional hardware.

The fieldbus protocols Profinet, Ethernet/IP, and EtherCAT are available for communication.



Technical data

General technical data			
Output frequency	0 – 400 Hz		
Pulse frequency	3 – 16 kHz, factory setting = 6 kHz		
Typical overload capacity	150 % tor 60 s, 200 % tor 3.5 s		
Efficiency	>95 %, depending on size		
Operating / ambient temperature	–30 to +40 °C (S1 - 100 % ED)		
Protection rate	IP55 or IP66 (nsd tUpH)		
Protective measures against	Overtemperature of the frequency inverter, overvoltage and undervoltage, short circuit, ground fault, overload		
Motor temperature monitoring	I ² t motor, PTC / bi-metal switch		
Control	Sensorless current vector control (ISD), linear V/f characteristics, VFC open-loop, CFC open-loop, CFC closed-loop		
Interfaces	4 digital inputs, 2 digital outputs (size 2) Encoder interface, RS232/485 programming interface		
Encoder system	Incremental TTL encoder SSI absolute value encoder		
Brake control (size 2)	PWM, brake rated voltage 100 – 300 V DC		
PLC	Integrated PLC for smaller control tasks		
Electrical data			
Version	450	370	950
Size	1	2	2
Rated power	0.45 kW	0.37 kW	0.95 kW
Supply voltage	3 AC 400 V –20 %...480 V +10 %, 47 – 63 Hz		
Input current	1.7 A	1.2 A	2.6 A
Output current	1.5 A	1.1 A	2.7 A

ACCESSORIES

FREQUENCY INVERTER FC 1000

24V

400V

Dimensions

Installation on the side profile

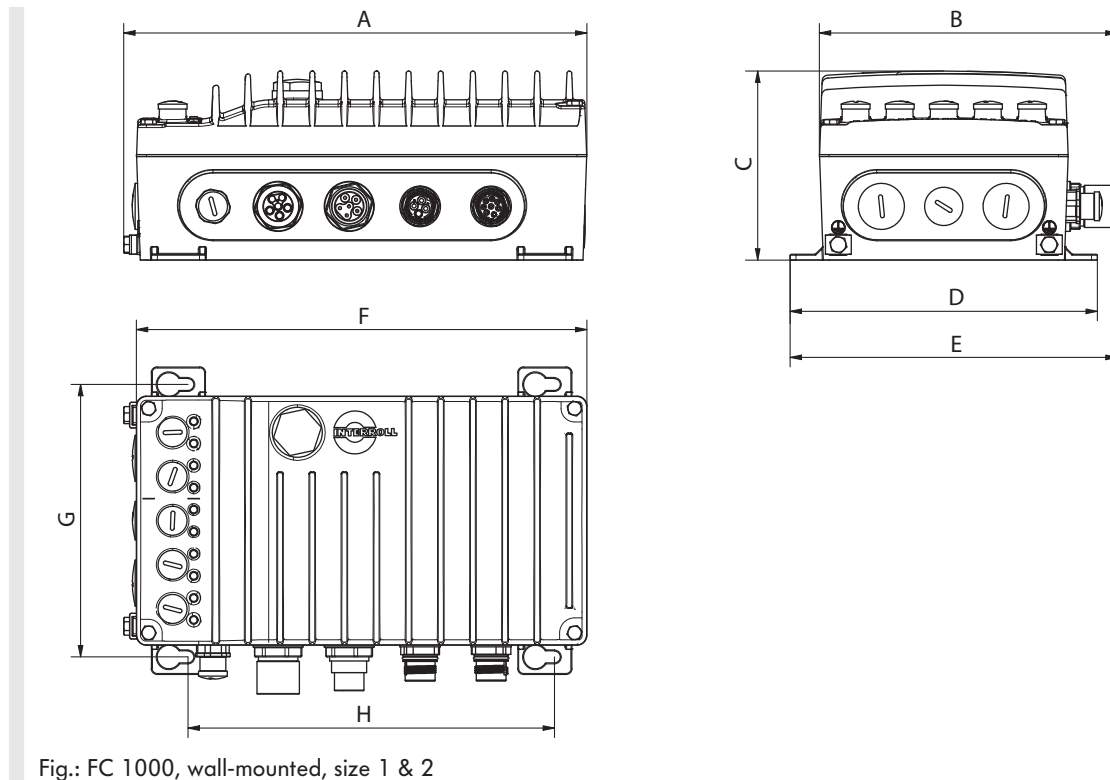


Fig.: FC 1000, wall-mounted, size 1 & 2

Device type	Size	Box dimensions								Weight [kg]
		A [mm]	B [mm]	C [mm]	D [mm]	S [mm]	F [mm]	G [mm]	H [mm]	
FC 1000	1	211	146	83	150	160	205	132	161	1.65
FC 1000	2	244	155	98	160	170	235	142	191	2.10

Installation on the motor

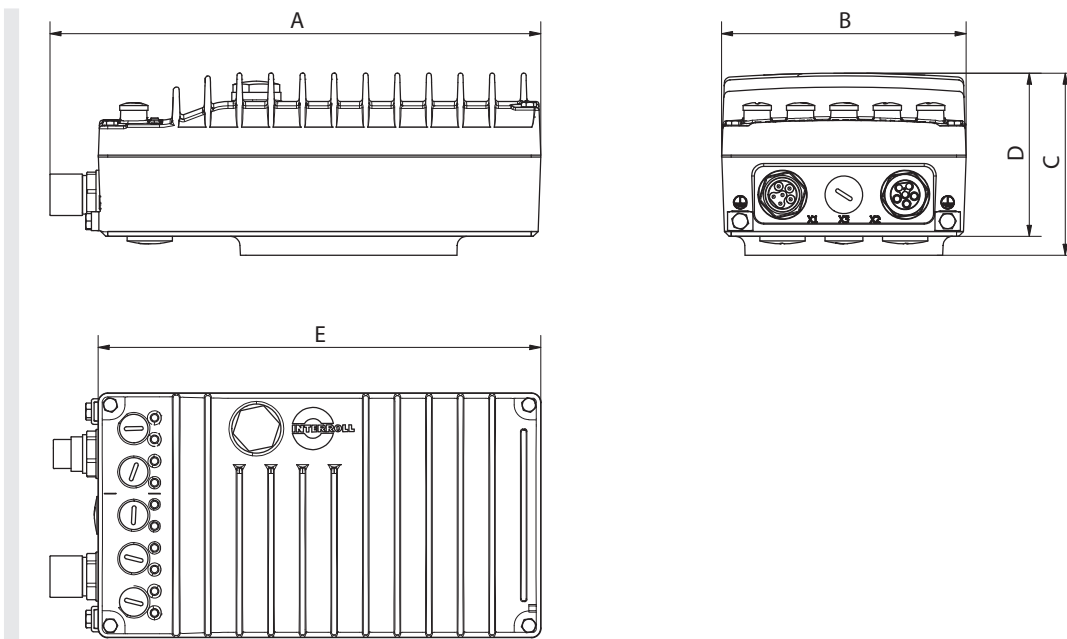


Fig.: FC 1000, motor-mounted, size 1 & 2

Device type	Size	Box dimensions					Weight [kg]
		A [mm]	B [mm]	C [mm]	D [mm]	S [mm]	
FC 1000	1	230	120	89	82	205	1.65
FC 1000	2	260	13	97	87	235	2.10

Accessories

Designation	Article number
Power cable 1.5 m	1129475
Power cable 3 m	1129476
Power cable 5 m	1129477
Power cable 10 m	1129478
Daisy chain cable 1.5 m	1129479
Daisy chain cable 3 m	1129480
Daisy chain cable 5 m	1129481
Daisy chain cable 10 m	1129482
Bluetooth adapter	1129483
USB adapter	1129484

ACCESSORIES

SUPPORT

24V

400V

Product description

The support is intended for fastening the modules to the floor or lift floor. The support foot is infinitely adjustable. A simple height adjustment via threaded spindle can be ordered as an add-on.

Scope of delivery

- Infinite height adjustment with optional threaded spindle
- Support fully assembled



Technical data

General technical data

Max. load capacity 35 kg/m

Dimensions

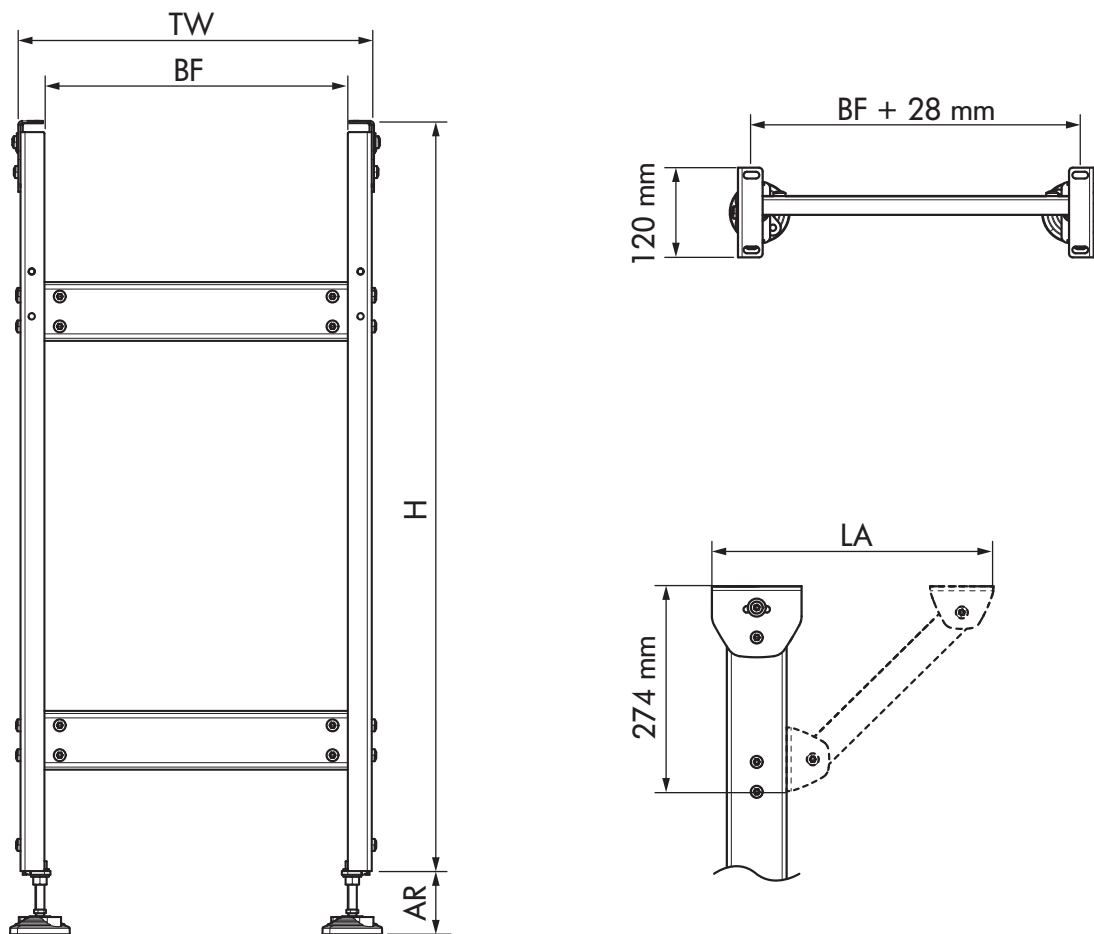


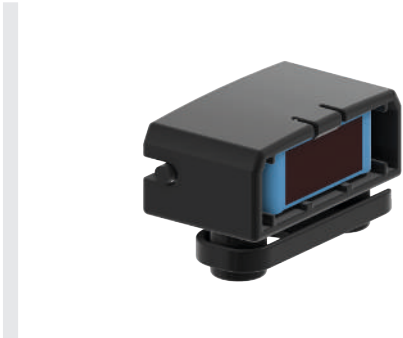
Fig.: Support without and with arm

TW	Module width	Depending on the module ordered
H	Height	50 mm (min. H1) up to 1200 mm (max. H7)
AR	Adjustment range	H1 - H3 = 68 mm, H4 - H7 = 98 mm
BF	Rated width	S, M, L
LA	Arm length measure	Flexibly adjustable depending on module

ACCESSORIES

24V
400V

Sensor kit



Sensors detect materials on the conveyors and determine their position. Reflex light barriers are used, which require a reflecting mirror (reflector) on the opposite side of the light barrier in order to return the light beam.

The sensor kit consists of the sensor and the matching plastic housing, including fastening clip. The housing can be attached directly to the roller conveyor or to a universal support.

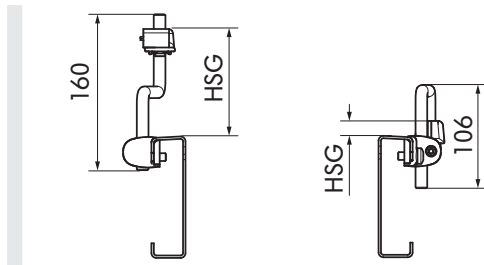
Designation	Dimensions	Reference number
Sensor kit, 3 m cable	43 x 26 x 18 mm (L x W x H) (H 26 mm with studs)	63104071
Sensor kit, 1 m cable		63104072

Reflector kit



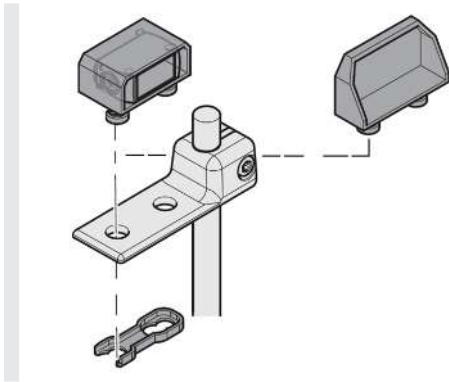
The reflector kit returns the light beam back to the sensor. The kit includes a fastening clip and can be attached directly to the roller conveyor or to an universal support.

Designation	Dimensions	Reference number
Reflector kit	54 x 18 x 30 mm (L x W x H) (H 39 mm with studs)	64000905




HSG	Height of reflector/ sensor	Z-bracket: 20 to 140 mm U-bracket: 10 to 86 mm
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Sensor holder



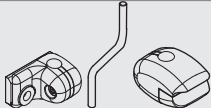
Holder for sensor and reflector set.
Suitable for standard SHC mounting bracket Z or U.
Material: Stainless steel AISI 304

Designation	Reference number	
Sensor holder	63172679	

Side guide kit



The side guide kit consists of a universal support, a mounting bracket Z, and a side guide bracket.
Material: Stainless steel AISI 304

Designation	Reference number	
Side guide kit	63183369	

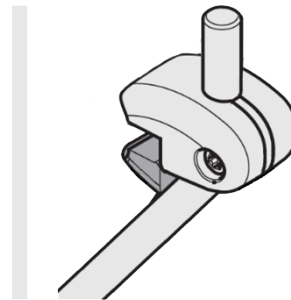
Side guide




Side guides are used to reliably guide the product on the roller conveyors and modular belt conveyors.
The side guides are available in stainless steel design as 12-mm rod.
Material: Stainless steel AISI 304

Designation	Dimensions	Reference number
Side guide	12-mm rod	1129435

Side guide bracket

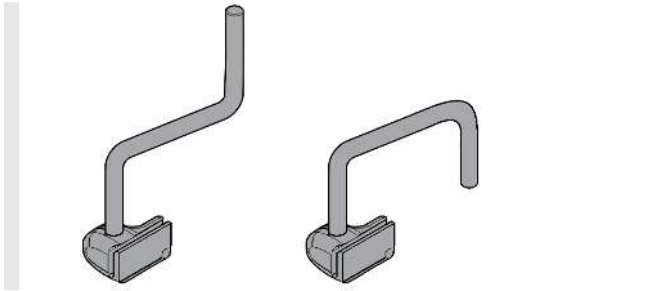


The side guide bracket supports the 12-mm stainless steel rod.
Suitable for standard SHC mounting bracket Z or U.
Material: Stainless steel AISI 304




Designation	Reference number	
Side guide bracket	63172677	

24V
400V

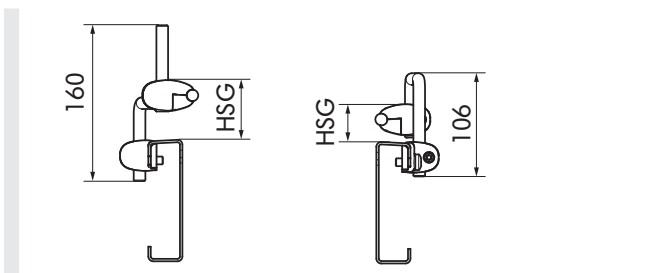
Universal support with mounting bracket Z and U PolyVee belt



Side guides, sensors and reflectors can be installed on the universal supports.
The mounting brackets are available in Z and U shape.
Material: Stainless steel AISI 304

Designation	Reference number	
Universal support	63172654	
Mounting bracket Z	63172672	
Mounting bracket U	63172696	

Dimensions



HSG	Side guide height	Z-bracket: 20 to 140 mm U-bracket: 10 to 86 mm



A PolyVee belt is used for the drive from roller to roller or RollerDrive for straight sections and for curves.

Designation	Version	Reference number
PolyVee belt	2 ribs, 60-mm roller pitch	1001108
PolyVee belt	2 ribs, 120-mm roller pitch	1001111

Product description

- Elastic standard belt, 1 to 3 % pretension, for fixed shaft distances
- Significantly longer service life than round belts
- Up to 300 % higher torque transmission than with comparable round belts
- Much better efficiency compared to toothed belts since much less flexing work is required
- Curve application: Use of 2-rib or 3-rib belts
- Suitable for normal and deep freeze temperatures
- Belts are antistatic

Technical data

- Temperature range: -30 to +40 °C
- Color: Black
- Belt acc. to Type PJ; ISO 9982; DIN 7867

Connector set

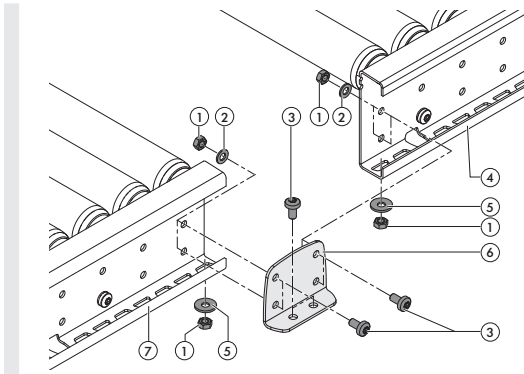
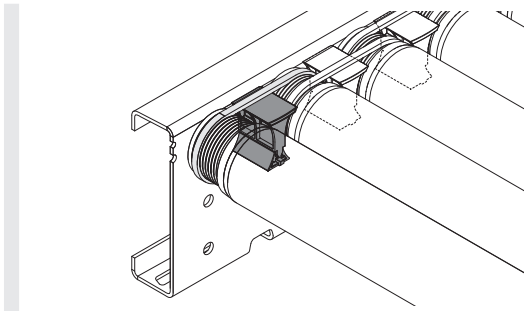


Fig.: Sample figure


The connector sets are used to connect two modules with each other. They are supplied as set together with the required screws, nuts and washers. Depending on the module, there are different sets.

The different connector sets are matched to all available conveyor modules and include static connectors as well as safety-relevant protective devices.

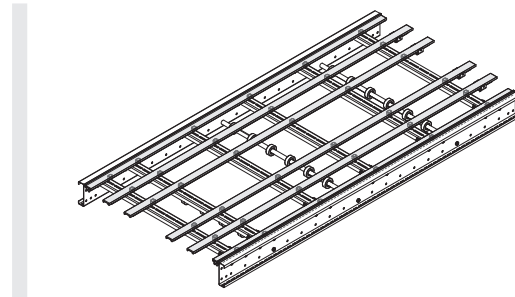
PolyVee finger guard



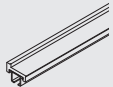
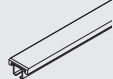
The PolyVee finger guard safely protects against inadvertently reaching between PolyVee belt and roller drive head.

Designation	Reference number	
Finger guard (top part + bottom part)	64101223	

Sliding guides of the modular belt



Sliding guides support the modular belt. The outer sliding guide, which has an additional edge that guides the modular belt, is used on the left and right side. Otherwise, the inner sliding guides are used.

Designation	Reference number	
Outside sliding guide (incl. fastening profiles and securing blocks)	63170821	
Inside sliding guide (incl. fastening profiles and securing blocks)	63170820	

APPLICATION NOTES

WHAT ARE APPLICATION NOTES USED FOR?

What are application notes used for?

The application notes support you during the planning and dimensioning of conveyor systems, as well as during the selection of Interroll Conveyor Modules.

The application notes offer the following:

- Basic rules for trouble-free transport
- Decision-making aids for product selection
- Calculation examples for the dimensioning of the conveyor modules and drive performances

In addition, your Interroll customer representative will be happy to assist you in the selection of conveyor modules, especially if you require specific measures due to special conveying goods or environmental conditions.

You should answer three questions before selecting a conveyor module:

Which tasks should the conveyor technology handle?

- Transporting and/or storing
- Sorting and/or distributing

What properties does your conveying good have?

- Length, width and height: Minimum and maximum dimensions of the transport materials which are conveyed together on one line
- Weight: Minimum and maximum weight of unit loads; ideally assigned to the dimensions
- Condition of the pallet underside: The bottom determines, e.g., the suitability of roller conveyors

Does the condition of your conveying good or the surroundings require special measures?

- For example, are there extreme temperatures, high humidity or chemical influences?
- Does electrostatic charging pose a problem?
- Is the conveying good fragile or problematic in any way?

Transport material

The platform is suitable for transporting unit loads. These are characterized by the following general specifications:

- Suitable bottom for transport on roller conveyors:
The bottom must be suitable for transport on roller conveyors. In particular, this means that it is smooth, perfectly closed or at least homogeneously ribbed, or in similar conditions. Indentations (e.g. with surrounding edges at the bottom, ribs, stacking aids) complicate the transport, particularly on transfers, HPD, ball transfer units, and must be tested for

transportability. Bent bottoms, especially hollow or pot-bellied bottoms (concave/convex), have negative effects on the transport.

- The stability of the bottom must be sufficient for the loading.
- The material must be uniformly and continuously closed above the rollers on at least one long side up to a height of 5 cm. This helps optical sensors to detect the product. When transferring at 90°, detection must be possible on two sides (length and width).
- The weight of the materials must not exceed 35 kg/m or 35 kg per accumulation zone.
- The smallest product for transporting:
On straights: 180 mm long. If the product changes its orientation (e.g., with 90° diverting), then length and width are at least 180 mm
In curves: The roller pitch is greater at the outside radius than at the inside radius. We will be happy to test your product on a curve.
- The largest product for transporting:
On straights: 800 mm width
In curves: The formula applies to Lane width in curves
- Typical products:
 - Plastic containers with the usual dimensions for internal goods and warehouse transport, such as cardboard boxes, e.g., in the sizes 200 x 300 mm, 300 x 400 mm, 400 x 600 mm, 600 x 800 mm
 - Cardboard boxes with stable bottoms suitable for roller conveyors
 - Other trays with corresponding properties
- The ratio of base area to height, particularly the position of the center of gravity, affects the secure standing of the product, especially on inclines. The center of gravity should be no higher than 1/3rd of the length of a product.

Product selection

The task that the conveyor technology is to meet in your case, leads directly to the three main sections of this catalog via the chart on p. 2: Roller conveyor, modular belt conveyor as well as diverter.

Approved cleaning agents

The conveyor platform consists of various parts. Some parts are more resistant to cleaning agents than others. Drum motors and plastic modular belts can be cleaned, e.g. with certain cleaning agents.

Chemical resistance of the plastic modular belts

Polyoxymethylene (POM), polypropylene (PP) and polyamide (PA):

- Acidic acid, aqueous solution 5 %
- Calcium chloride, aqueous solution 10 %
- Dimethylformamide
- Dioctylphthalate
- Ethyl ether
- Isopropanol
- Soap solution, aqueous solution
- Sodium carbonate, aqueous solution 10 %
- Sodium chloride, aqueous solution 10 %
- Sodium nitrate, aqueous solution 10 %
- Sodium thiosulphate, aqueous solution 10 %
- Water, cold

The resistance of the polymers is affected by temperature, exposure to force, UV exposure, and the duration of exposure and concentration of the medium.

A thorough suitability test of the polymer to be used by the user is indispensable.



The Interroll Competence Center in Baal (near Düsseldorf) concentrates on drum motors that are employed as drive solutions in belt conveyors in food processing and other systems of internal logistics as well as various branches of industry. In this product sector, the company is responsible within the global Interroll Group for all technical concerns ranging from development and application engineering to production and support for local Interroll companies. The production area also includes the Coating Center for rubber-coated drum motors, which are intended for the hygienic production lines of the food industry.

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About Interroll

The Interroll Group is a globally leading provider of solutions for material handling. The company was founded in 1959 and has been listed on the SIX Swiss Exchange since 1997. Interroll supplies system integrators and machine builders with a broad product range of platform-based products and services in the categories "Rollers" (conveyor rollers), "Drives" (motors and drives for conveyor systems), "Conveyors & Sorters" as well as "Pallet & Carton Flow" (flow storage systems). Solutions from Interroll are used by express and postal services, in e-commerce, in airports and in the areas of food & beverage, fashion, automotive and other industries. The company counts leading brands, such as Amazon, Bosch, Coca-Cola, DHL, Nestlé, Procter & Gamble, Siemens, Walmart, or Zalando, among its users. With its headquarters in Switzerland, Interroll features a worldwide network of 35 companies with roughly 2,600 employees (2021).

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