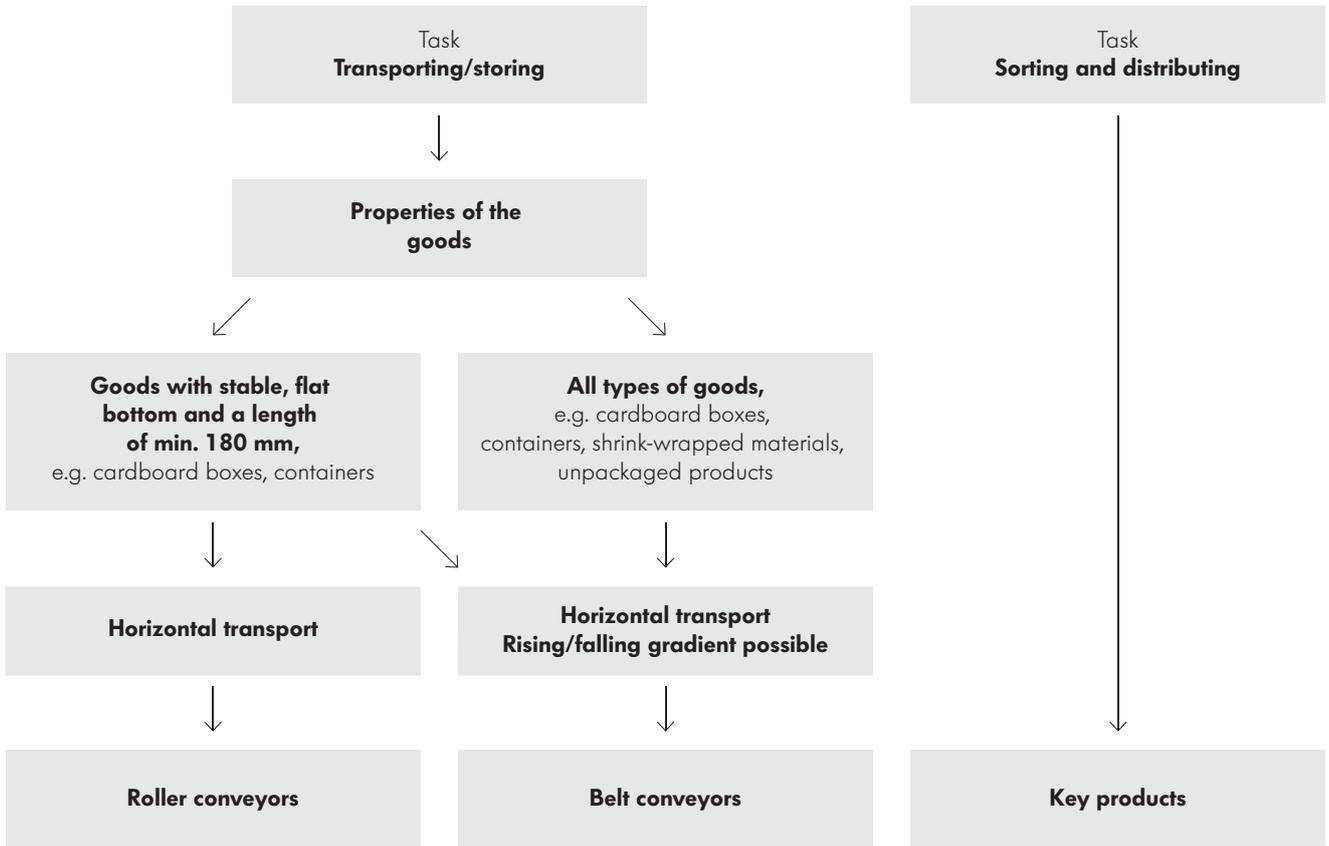


# CATALOG

# CONVEYOR MODULES





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## Symbols

 24V	Voltage 24 V
 48V	Voltage 48 V
 400V	Voltage 400 V
	Suitable for deep freeze and chill area
	Optional safety equipment (to increase safety in accessible areas)

## Contents

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# 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 2400 people (in 2023) in 35 companies (in 2023) 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.



**Holding**



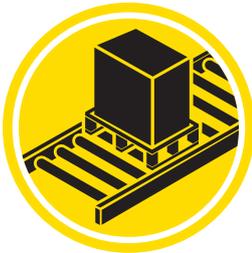
**Sales, Production & Service**



**Global Competence Centers**



**Regional Competence Centers**



## 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.



## 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.



## 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.



## Conveyors & Sorters

The Modular Conveyor Platform (MCP) from Interroll offers maximum flexibility: A wide spectrum of modules, consisting of roller conveyors, belt conveyors and key products such as diverters, high-performance deflection stations and spiral lifts, covers all material handling requirements. The Interroll Crossbelt Sorters were developed precisely for fast and accurate sorting of goods of all types from 50 g to 50 kg. More than 500 Interroll sorters are used every day by the largest CEP players and E-commerce enterprises worldwide.

The High Performance Conveyor Platform (HPP) now makes the advantages of a flexible modular system of conveyor modules available to system integrators and end users in the courier, express and parcel services industry as well. This is our perfect answer to applications requiring high throughput, reliability and robustness.

The Modular Pallet Conveyor Platform (MPP) offers roller and chain conveyors as well as special conveyors such as diverters 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 that takes into account fundamental required hygiene standards.

The Light Conveyor Platform (LCP) stands for 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.

In addition, we now offer the LCP AMR Top module as a seamless extension for autonomous mobile robots. This solution is frequently used for automating tasks of a repetitive nature that still require flexibility or with the goal of avoiding heavy work for humans. This platform family was primarily designed for manufacturing and assembly applications.

# INTERROLL PLATFORM FOR CONVEYOR MODULES

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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. This platform was designed for flexibility, modularity, attractive industrial design, simple handling during assembly and expansions.

## **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 Interroll conveyor modules can be designed for the most efficient solution for each task. Zero pressure accumulation conveying can be implemented with proven 24/48-V RollerDrive. For higher performance, efficient 24/48-V drives that enable efficient and future-proof zero pressure accumulation conveying are used together with roller conveyors with 400/460 V flat belt drives. Pneumatics, which creates high operating costs, is completely omitted here.

## **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**

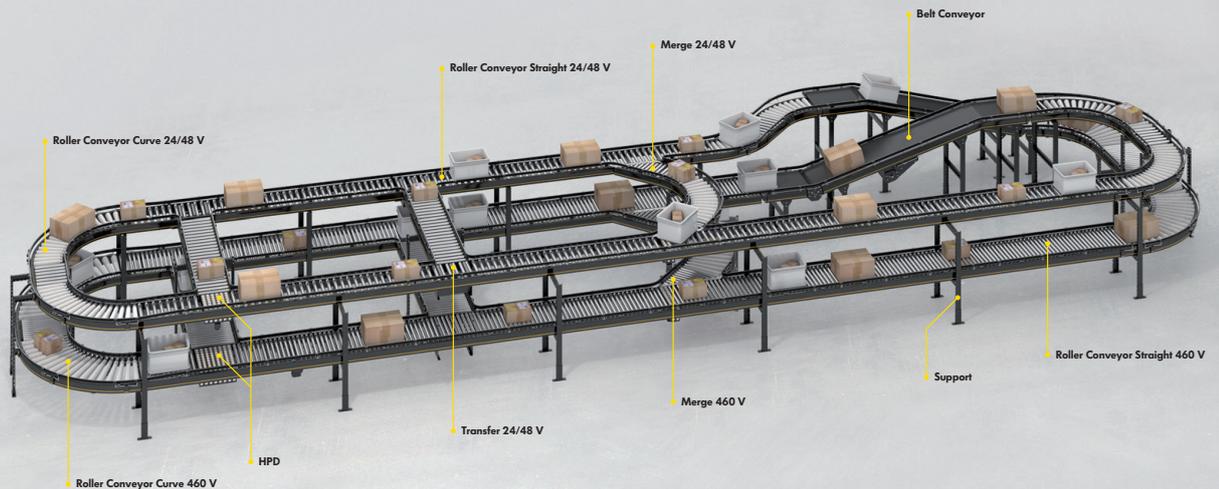
The Interroll Layouter gives you a menu-driven tool that provides professional support in planning a conveyor system. Operating the software is very intuitive and makes it possible to compile an extensive 3D layout in DWG format from all Interroll conveyor modules.

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

## **Application in deep freeze and chill area**

The deep freeze logistics with up to  $-30\text{ }^{\circ}\text{C}$  poses special challenges for material flow solutions. The 24/48-V roller conveyors and diverters enable an efficient zero pressure accumulation operation, even under these ambient conditions. Not only does this increase the work productivity, but it also facilitates installation and maintenance.

# INTERROLL PLATFORM FOR CONVEYOR MODULES



Belt conveyors are also being used for the chill area, which is usually between 0 °C and +5 °C. Hence, it is possible to use a continual material flow solution at different ambient temperatures in a modular and flexible way.

## 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 24/48-V conveyor technology
- High throughput
- Quick and easy installation
- Extremely quiet operation
- Easy maintenance
- Straightforward planning

Roller conveyors, see page 14

Belt conveyors, see page 50

Key products, see page 74

Accessories, see page 100

Application notes, see page 116

# INTERROLL PLATFORM FOR CONVEYOR MODULES

## Performance in detail

### Energy-efficient 24/48-V conveyor technology



The most efficient solution is selected for each conveyor task.

- Zero pressure accumulation conveying with 24/48-V drives
- Variant with 400/460 V main drive for high-performance applications
- Belt conveyor with Interroll Drum Motors
- No pneumatics required

### High throughput



Powerful conveyor technology.

- Transport speed up to 2.5 m/s (400 fpm)
- Distribution output up to 3600 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 (< 60 dBA without conveyor belt)
- Safety due to 24/48-V technology
- Minimized tool demand for the entire platform

### Control system



Future-oriented 24/48-V control concept for every need.

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

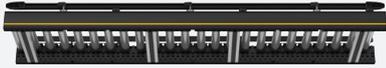
### Continuous side profile design



A side profile for all modules for flexible routing.

- High-quality powder-coated steel profile
- A multitude of fastening options on the profile
- Can be used as an electrical conduit

### Crossbar



Rigid connection of side profiles, which also serves as an electrical conduit.

- As an electrical conduit, usable for up to ten cables

### Plastic clip for roller fixing



Simple and quick roller assembly and maintenance.

- Assembly and disassembly of rollers from the top
- Multi-use clip
- Simple subsequent adjustment of the roller pitch

### Application in deep freeze area



Interroll conveyor modules enable the modular and flexible use of a continual material handling solution at different ambient temperatures.

- Use of 24/48-V roller conveyors and diverters in the deep freeze area of up to  $-30\text{ }^{\circ}\text{C}$
- Additional use of belt conveyors in the chill area from  $0$  to  $+5\text{ }^{\circ}\text{C}$

### Assembly from the top



Assembly and maintenance of all modules with little effort.

- Maintenance of roller and belt conveyors from the top
- Easily accessible components and connections
- Tool-free roller assembly with roller clips

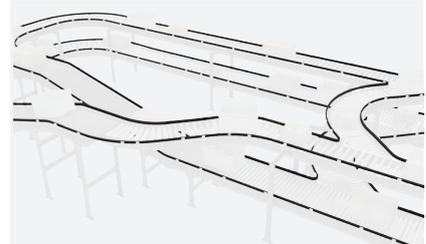
### Universal supports and sensor holders



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
- Continuous height adjustment

# PRODUCT OVERVIEW

## Roller conveyor

### Straight

#### Non-powered



RM 8110 | page 14

#### 24/48-V drive



RM 8310 | page 22

#### 400 V drive



RM 8210 | page 38

### Curve



RM 8120 | page 16



RM 8320 | page 26



RM 8220 | page 42

### Merge

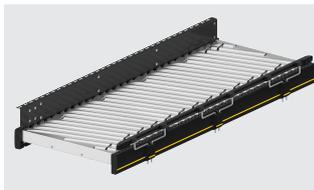


RM 8330 | page 30



RM 8230 | page 44

### Alignment conveyor

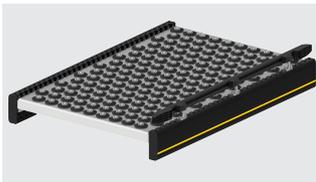


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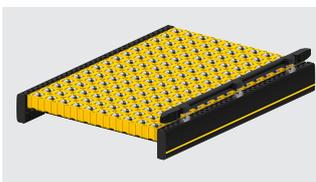


RM 8240 | page 48

### Ball table



RM 8130 | page 18

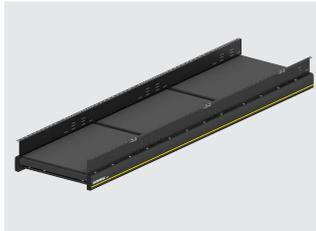


RM 8140 | page 20

## Belt Conveyors

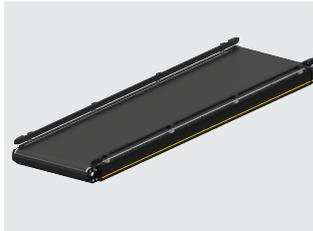
### Straight

24/48-V drive



BM 8350 | page 50

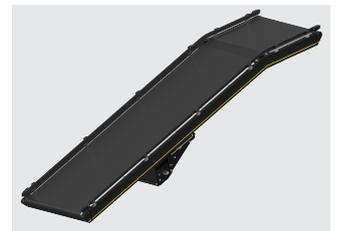
400 V drive



BM 8410/8420 | page 54



BM 8411/8421 | page 56



BM 8432/8442 | page 58



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BM 8434/8444 | page 66

### Curve

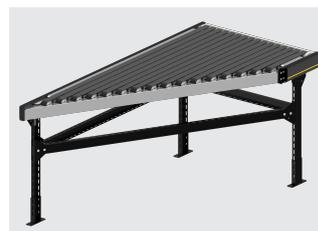


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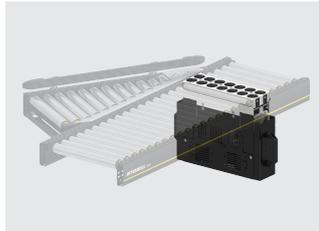
### Merge



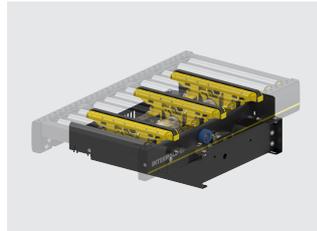
BM 8455/8465 | page 72

# PRODUCT OVERVIEW

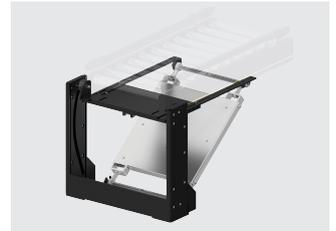
## Key Products



RM 8711/8712 | page 74



RM 8731 | page 76



RM 8830 | page 78



RM 6006 | page 80



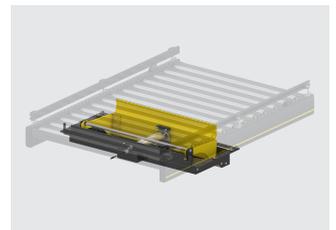
RM 6008 | page 82



Spiral Lift | page 84



RM 8811 | page 88



RM 8812 | page 90



MultiControl AI | page 92



MultiControl BI | page 96

## Accessories



**RM 8841** | page 100



**RM 8842** | page 104



**HP5424** | page 106



**HP5448** | page 110



**Sensor kit** | page 113



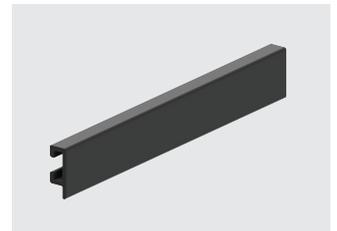
**Reflector kit** | page 113



**Universal support, fixed** |  
page 113



**Universal support, flexible** |  
page 113



**Side guide** | page 114



**Side guide holder** | page 114



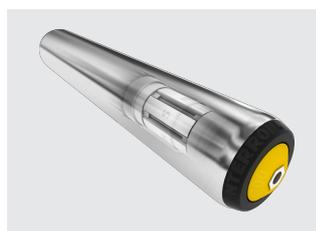
**Side guide connector** | page 114



**End cap for side guide profile** |  
page 114



**End cap for side profile** |  
page 115



**Magnetic Speed Controller 50** |  
page 115



**Safety equipment** | page 115

# ROLLER CONVEYORS

## RM 8110

Straight

Not powered



24V

48V

400V



### Product description

The non-powered straight roller conveyor transports conveying goods either manually or via gravity down a slope and is used as an assembly and picking line.

The magnetic speed controller MSC 50 can be installed for controlled speed regulation. These gearless, mechanical eddy current brakes reliably decelerate conveying goods from 0.5 kg up to 35 kg, and increase functionality and safety in the workplace. For more information, please contact your Interroll contact person.

### Scope of delivery

- Please order the magnetic speed controller MSC 50 separately
- The module is partially assembled; the side guides are enclosed separately
- Please order supports and end caps separately



# ROLLER CONVEYORS

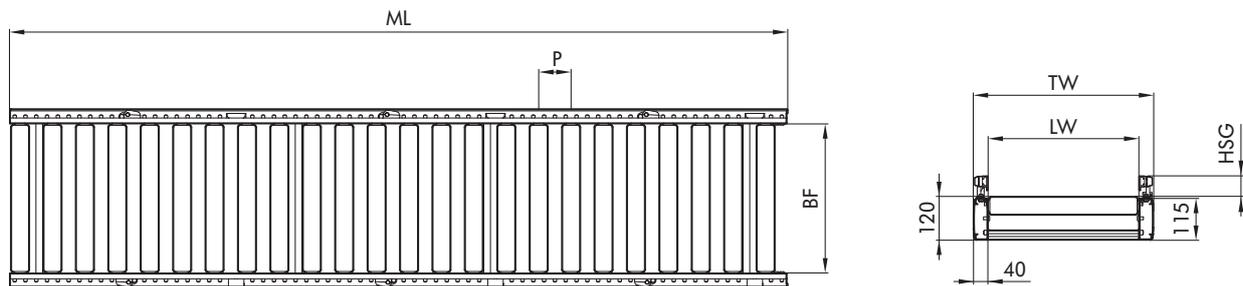
## RM 8110

Straight  
Not powered

### Technical data

General technical data	
Max. load capacity	100 kg/m (standard)
Incline/decline	Suitable for declines, but will have to be tested for the respective material weight
Ambient temperature	-5 °C to +40 °C normal range -30 to 0 °C deep freeze area
Roller	
Roller type	Interroll Series 1100 and Interroll Series 1700
Roller diameter	50 mm
Roller material	Zinc-plated steel, PVC

### Dimensions



BF	Rated width	420, 620, 840 mm (others on request)
LW	Clear width	BF (+120/-90 mm per side with flexible side guide)
ML	Module length	Max. 4320 mm
TW	Module width	BF + 80 mm
P	Roller pitch	60/90/120/150 mm
HSG	Side guide height	68 mm (standard), adjustable from 35 – 80 mm with fixed holders

# ROLLER CONVEYORS

## RM 8120

Curve

Not powered



24V

48V

400V



### Product description

The non-powered roller conveyor curve changes the transport direction of materials. Material is manually pushed around the curve. The alignment of the material is maintained within the side frames by tapered rollers.

### Scope of delivery

- The module is partially assembled; the side guides are enclosed separately
- Please order supports and end caps separately



# ROLLER CONVEYORS

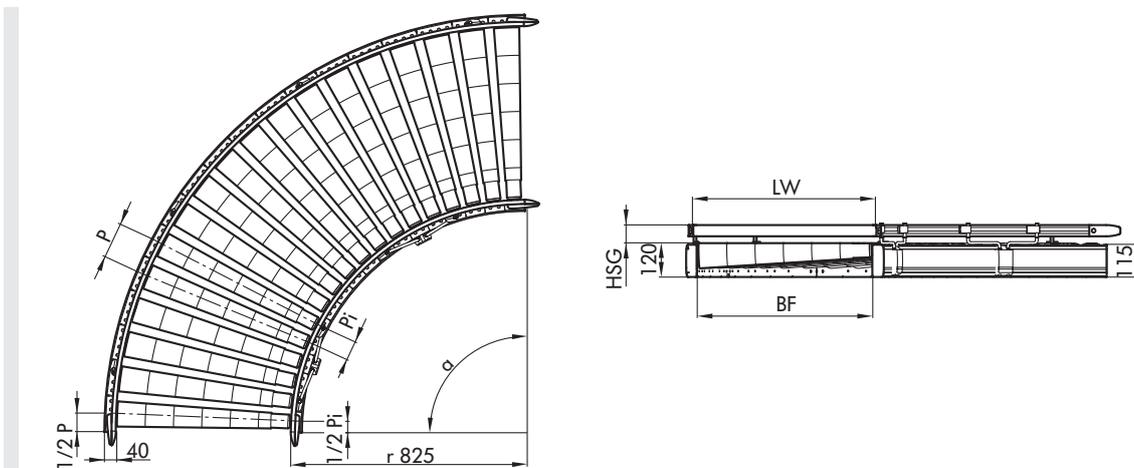
## RM 8120

Curve  
Not powered

### Technical data

General technical data	
Max. load capacity	100 kg/m (standard)
Incline/decline	Not suitable
Ambient temperature	0 to +40 °C normal range -30 to 0 °C deep freeze area
Roller	
Roller type	Interroll Series 1700KXO
Roller diameter	50 mm
Roller material	Steel 1.5 mm, with gray tapered polypropylene sleeves
Max. number of rollers per zone	6 for 30°, 9 for 45°, 12 for 60°, 18 for 90°

### Dimensions



BF	Rated width	420, 620, 840 mm (others on request)
LW	Clear width	BF (+120/-90 mm per side with flexible side guide)
$\alpha$	Angle	30°/45°/60°/90°
TW	Module width	BF + 80 mm
Pi	Roller pitch, inside	~72 mm
P	Roller pitch, outside	~(0.087 x BF) + Pi mm
HSG	Side guide height	68 mm (standard), adjustable from 35 – 80 mm with fixed holders

# ROLLER CONVEYORS

## RM 8130

Ball table

Not powered



24V

48V

400V

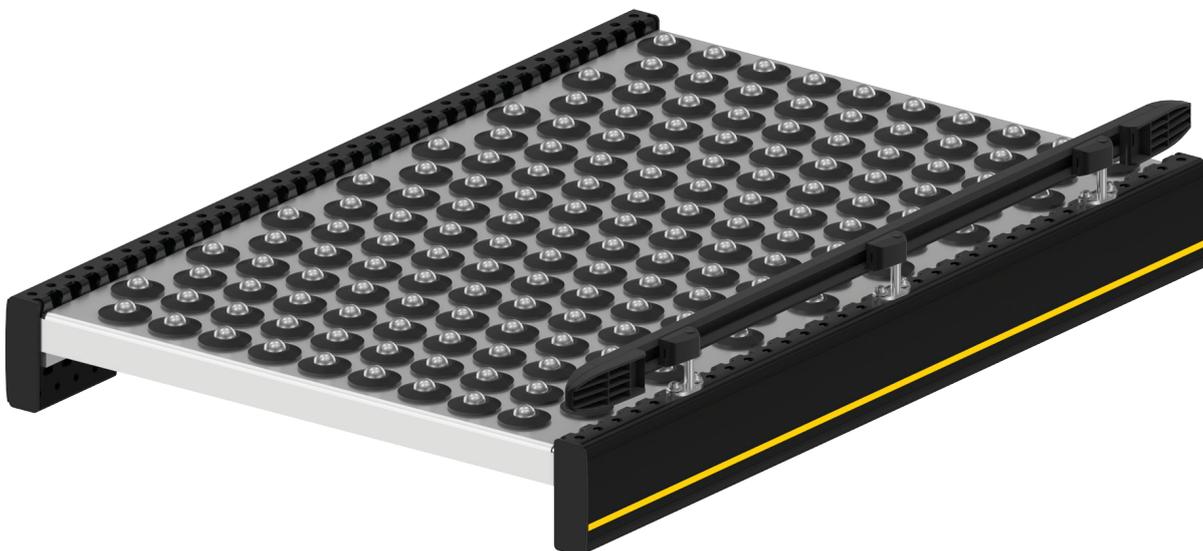


### Product description

The ball table transports materials with a solid bottom in any direction using very little force. It is especially suitable for workstation & inspection areas. So that a ball table can be combined with other conveyors, it is installed in a standard side profile.

### Scope of delivery

- The module is partially assembled; the side guides are enclosed separately
- Please order supports and end caps separately



# ROLLER CONVEYORS

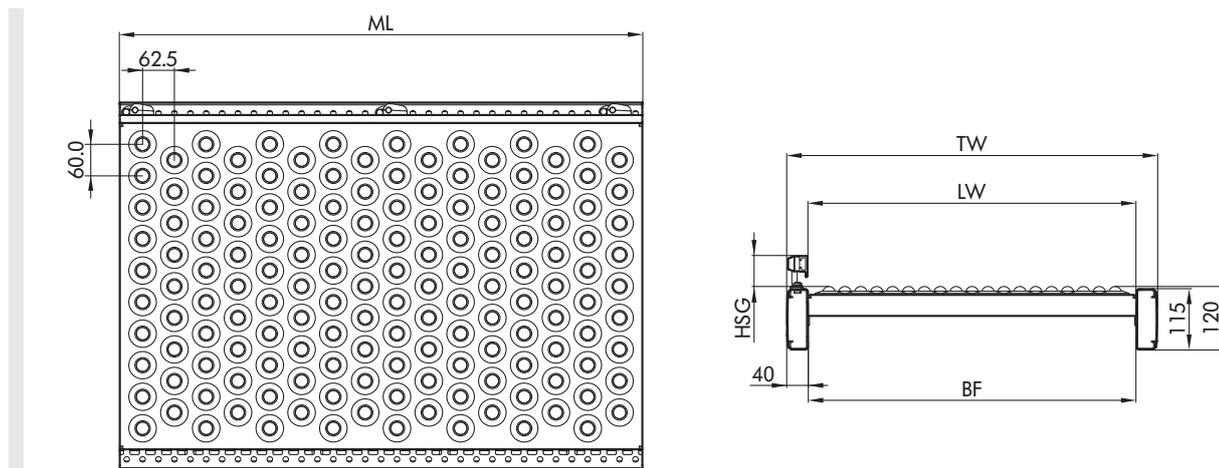
## RM 8130

Ball table  
Not powered

### Technical data

General technical data	
Max. load capacity	100 kg/m
Incline/decline	Not suitable
Ambient temperature	-5 to +40 °C
Ball	
Ball type	Interroll Series 5500
Ball diameter	25.4 mm

### Dimensions



BF	Rated width	420, 620, 840 mm (others on request)
LW	Clear width	BF (+120/-90 mm per side with flexible side guide)
ML	Module length	Max. 2160 mm
TW	Module width	BF + 80 mm
P	Pitch	60 mm
HSG	Side guide height	68 mm (standard), adjustable from 35 – 80 mm with fixed holders

# ROLLER CONVEYORS

## RM 8140

Omni-wheel table

Not powered



24V

48V

400V



### Product description

The omni-wheel table with multi-directional wheels is particularly well suited for workstation and inspection areas and for materials with soft bottoms that can be moved in all directions with very little force.

### Scope of delivery

- The module is partially assembled; the side guides are enclosed separately
- Please order supports and end caps separately



# ROLLER CONVEYORS

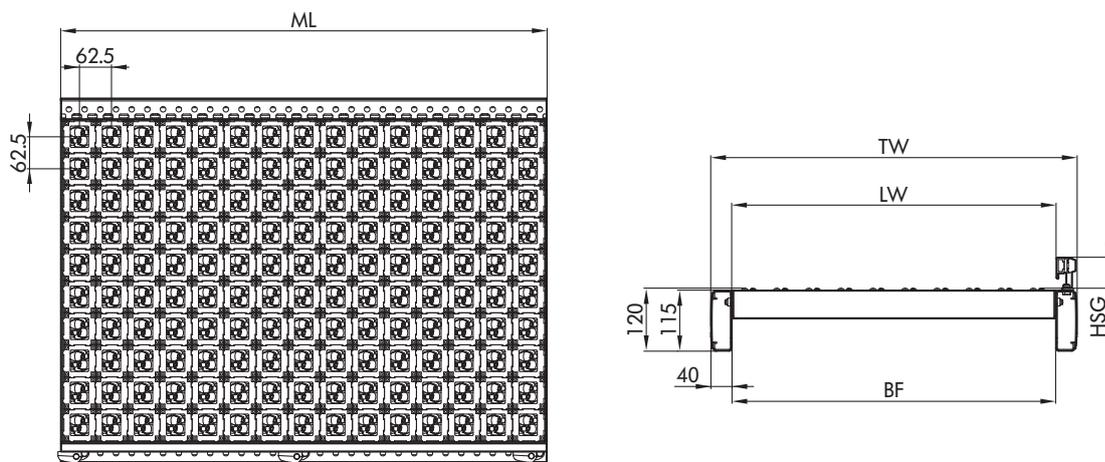
## RM 8140

Omni-wheel table  
Not powered

### Technical data

General technical data	
Max. load capacity	60 kg/m
Incline/decline	Not suitable
Ambient temperature	-5 to +40 °C
Roller	
Roller type	Interroll Series 2800
Roller diameter	48 mm
Roller material	Polyamide, polypropylene housing

### Dimensions



BF	Rated width	420, 620, 840 mm (others on request)
LW	Clear width	BF (+120/-90 mm per side with flexible side guide)
ML	Module length	Max. 2160 mm
TW	Module width	BF + 80 mm
P	Pitch	62.5 mm
HSG	Side guide height	68 mm (standard), adjustable from 35 – 80 mm with fixed holders

# ROLLER CONVEYORS

## RM 8310

Straight  
Powered



24V

48V

400V



### Product description

The DC roller conveyor enables zero pressure accumulation transport of goods with the help of a control system. Each zone is driven by a RollerDrive that is connected to a fixed number of idlers via PolyVee belts.

RM 8310 can also be used in the chill area.

### Scope of delivery

- Supply incl. 1 sensor per conveyor/zone
- Supply incl. bus (communication) cable
- The module is partially assembled and pre-wired; the side guides are enclosed separately
- Please order supports and end caps separately



# ROLLER CONVEYORS

## RM 8310

Straight  
Powered

### Technical data

General technical data	
Max. load capacity*	50 kg/zone
Conveyor speed*	0.1 to 1.0 m/s (up to 50 kg) 1.01 to 1.39 m/s (at 35 kg, 48 V, 50 W, BI, max. 10 starts/stops per minute and minimum conveying good length of 450 mm)
Max. electrical power per zone	50 W
Incline/decline	Max. 4° (standard)
Ambient temperature	0 to +40 °C normal range -30 to 0 °C deep freeze area
Roller	
Roller type	Interroll Series 3500
Roller diameter	50 mm
Roller material	Steel 1.5 mm, zinc-plated
Max. number of rollers per zone	18
Drive	
Rated voltage	24/48 V
Motor type	Interroll RollerDrive EC5000
Drive medium	PolyVee belts
Torque transmission	Roller-to-Roller
Control	MultiControl

\*The combination of maximum values is not always possible.

# ROLLER CONVEYORS

## RM 8310

Straight  
Powered



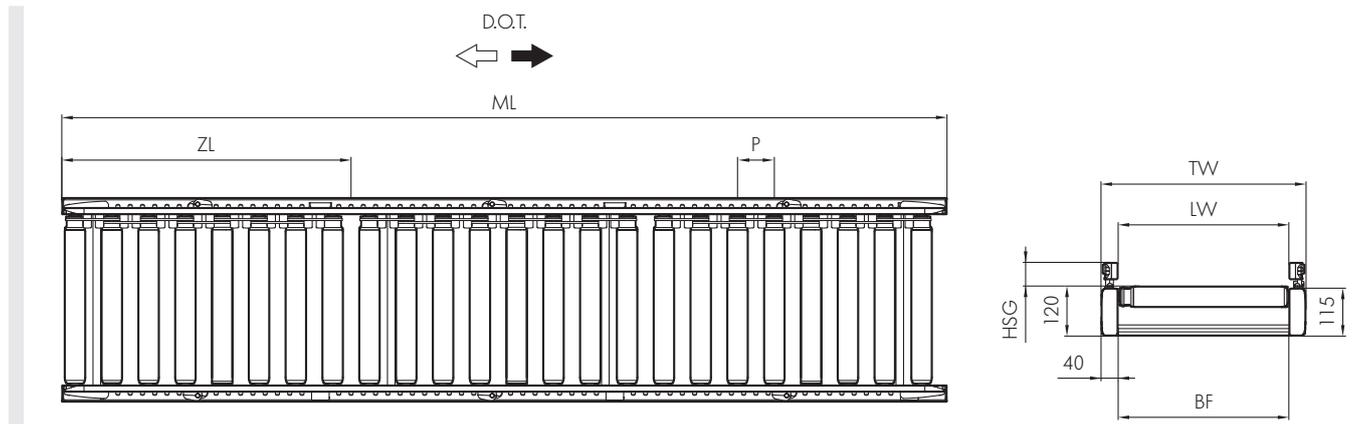
24V

48V

400V



### Dimensions



BF	Rated width	420, 620, 840 mm (others on request)
LW	Clear width	BF (+120/-90 mm per side with flexible side guide)
ML	Module length	ZL x number of zones, max. 4320 mm
ZL	Zone length	Number of rollers x P
TW	Module width	BF + 80 mm
P	Roller pitch	60/90/120/150 mm
HSG	Side guide height	68 mm (standard), adjustable from 35 – 80 mm with fixed holders

# ROLLER CONVEYORS

## RM 8310

Straight  
Powered

---

Roller conveyors

Belt conveyors

Key products

Accessories

# ROLLER CONVEYORS

## RM 8320

Curve  
Powered



24V

48V

400V



### Product description

The DC roller conveyor curves change the direction of transport of conveying goods. The tapered rollers retain the alignment of the conveying goods between the side frames. A control system enables zero pressure accumulation transport. Each zone is driven by a DC RollerDrive that is connected to a fixed number of idlers via round belts.

RM 8320 can also be used in the chill area.

### Scope of delivery

- Supply incl. 1 sensor per conveyor/zone
- Supply incl. bus (communication) cable
- The module is partially assembled and pre-wired; the side guides are enclosed separately
- Please order supports and end caps separately



# ROLLER CONVEYORS

## RM 8320

Curve  
Powered

### Technical data

General technical data	
Max. load capacity*	50 kg/zone
Conveyor speed*	0.1 to 1.0 m/s (up to 50 kg) 1.01 to 1.39 m/s (at 35 kg, 48 V, 50 W, BI, max. 10 starts/stops per minute and minimum conveying good length of 450 mm)
Max. electrical power per zone	50 W
Incline/decline	Not suitable
Ambient temperature	0 to +40 °C normal range -30 to 0 °C deep freeze area
Roller	
Roller type	Interroll Series 1700KXO
Roller diameter	50 mm
Roller material	Steel 1.5 mm, with gray tapered polypropylene sleeves
Max. number of rollers per zone	6 for 30°, 9 for 45°, 12 for 60°, 18 for 90°
Drive	
Rated voltage	24/48 V
Motor type	Interroll RollerDrive EC5000
Drive medium	Round belt in normal range PolyVee belts in deep freeze area
Torque transmission	Roller-to-Roller
Control	MultiControl

\*The combination of maximum values is not always possible.

# ROLLER CONVEYORS

## RM 8320

Curve  
Powered



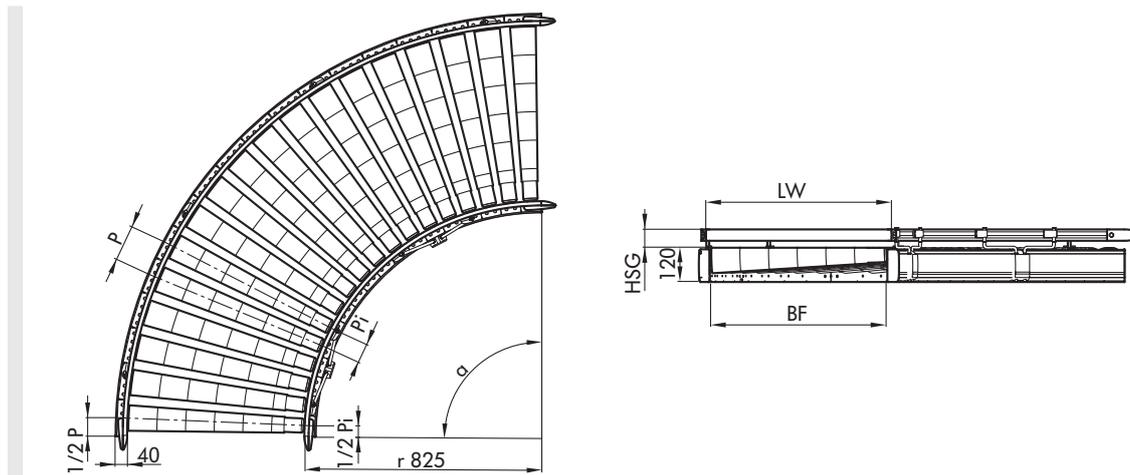
24V

48V

400V



### Dimensions



BF	Rated width	420, 620, 840 mm (others on request)
LW	Clear width	BF (+120/-90 mm per side with flexible side guide)
r	Inside radius	825 mm in normal range 791 mm in deep freeze area
$\alpha$	Angle	30°/45°/60°/90°
TW	Module width	BF + 80 mm
Pi	Roller pitch, inside	~72 mm
P	Roller pitch, outside	~(0.087 x BF) + Pi mm
HSG	Side guide height	68 mm (standard), adjustable from 35 – 80 mm with fixed holders

**ROLLER CONVEYORS**  
**RM 8320**  
Curve  
Powered

---

Roller conveyors

Belt conveyors

Key products

Accessories

# ROLLER CONVEYORS

## RM 8330

Merge

Powered



24V

48V

400V



### Product description

The merge merges two conveyor lines by placing products in the gaps in the flow of conveying goods. Alternatively, the merge diverts products from a straight conveyor, e.g., by using an HPD (High Performance Divert).

RM 8330 can also be used in the chill area.

### Scope of delivery

- Supply incl. 1 sensor per conveyor/zone
- Supply incl. bus (communication) cable
- The module is partially assembled and pre-wired; the side guides are enclosed separately
- Please order supports and end caps separately



# ROLLER CONVEYORS

## RM 8330

Merge  
Powered

### Technical data

General technical data	
Max. load capacity*	50 kg/m
Conveyor speed*	0.1 to 1.0 m/s (up to 50 kg) 1.01 to 1.39 m/s (at 35 kg, 48 V, 50 W, BI, max. 10 starts/stops per minute and minimum conveying good length of 450 mm)
Max. electrical power per zone	50 W
Incline/decline	Not suitable
Ambient temperature	0 to +40 °C normal range -30 to 0 °C deep freeze area
Roller	
Roller type	Interroll Series 3500
Roller diameter	50 mm
Roller material	Steel 1.5 mm, zinc-plated
Drive	
Rated voltage	24/48 V
Motor type	Interroll RollerDrive EC5000
Drive medium	PolyVee belts
Torque transmission	Roller-to-Roller
Control	MultiControl

\*The combination of maximum values is not always possible.

# ROLLER CONVEYORS

## RM 8330

Merge  
Powered



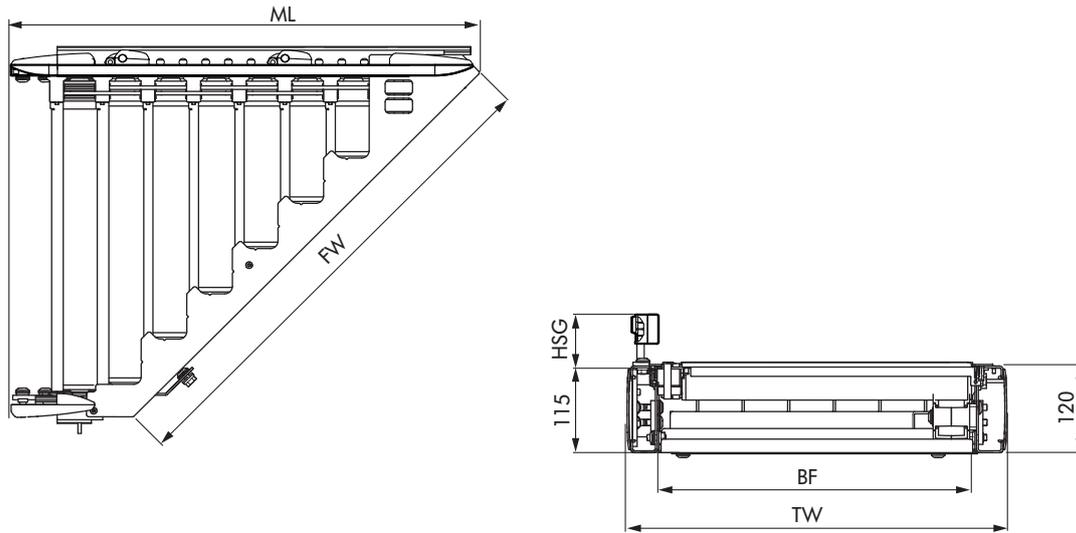
24V

48V

400V



### Dimensions



BF	Rated width	420, 620, 840 mm (others on request)
LW	Clear width	BF (+120/-90 mm per side with flexible side guide)
ML	Module length	561 to 1675 mm
TW	Module width	BF + 80 mm
FW	Opening width	594 to 1680 mm
$\alpha$	Angle	30°/45°
P	Roller pitch	60 mm
HSG	Side guide height	68 mm (standard), adjustable from 35 – 80 mm with fixed holders

The angle and clear width of a merge or diverter module define the dimensions of the module.

The following table shows the standard dimensions of the merge/diverter modules (merges).

BF [mm]	Angle $\alpha = 45^\circ$		Angle $\alpha = 30^\circ$	
	ML [mm]	FW [mm]	ML [mm]	FW [mm]
420	561	594	955	840
620	561	877	1256	1240
840	981	1188	1675	1680

# ROLLER CONVEYORS

## RM 8330

Merge  
Powered

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Roller conveyors

Belt conveyors

Key products

Accessories

# ROLLER CONVEYORS

## RM 8340

Alignment conveyor  
Powered



24V

48V

400V



### Product description

The 24/48-V alignment conveyor guides products diagonally to the transport direction to a side frame, and aligns them to the side guide if necessary. The side guide must be suitable for this purpose.

### Scope of delivery

- Supply incl. 1 sensor per conveyor/zone
- Supply incl. bus (communication) cable
- Supply incl. rolling or gliding side guides on one side
- The module is partially assembled and pre-wired; the side guides are enclosed separately
- Please order supports and end caps separately



# ROLLER CONVEYORS RM 8340

Alignment conveyor  
Powered

## Technical data

<b>General technical data</b>	
Max. load capacity*	50 kg/m
Conveyor speed*	0.1 to 1.0 m/s (up to 50 kg) 1.01 to 1.39 m/s (at 35 kg, 48 V, 50 W, BI, max. 10 starts/stops per minute and minimum conveying good length of 450 mm)
Max. electrical power per zone	50 W
Incline/decline	Not suitable
Ambient temperature	+5 to +40 °C
<b>Roller</b>	
Roller type	Interroll Series 3500
Roller diameter	50 mm
Roller material	Steel 1.5 mm, zinc-plated
<b>Drive</b>	
Rated voltage	24/48 V
Motor type	Interroll RollerDrive EC5000
Drive medium	Round belt
Torque transmission	Roller-to-roller
Control	MultiControl

\*The combination of maximum values is not always possible.

# ROLLER CONVEYORS

## RM 8340

Alignment conveyor  
Powered



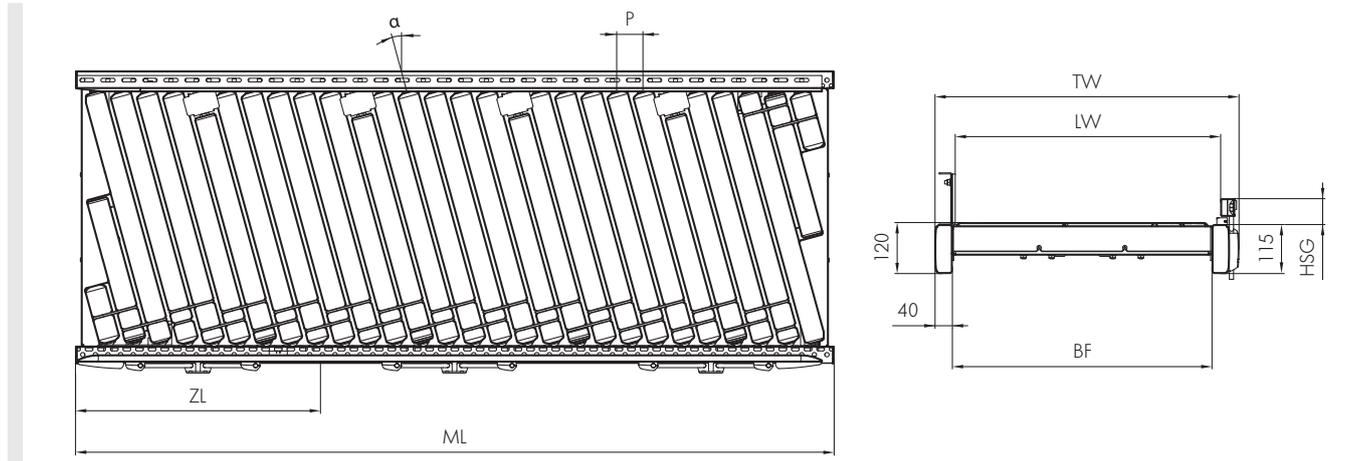
24V

48V

400V



### Dimensions



BF	Rated width	420, 620, 840 mm (others on request)
LW	Clear width	BF (+ 120/-90 mm on one side)
ML	Module length	ZL x number of zones
ZL	Zone length	Depending on angle and rated width
TW	Module width	BF + 80 mm
P	Roller pitch	60 mm
$\alpha$	Angle of rollers	7°/15.2°
HSG	Side guide height	68 mm (standard), adjustable from 35 – 80 mm with fixed holders
	Side guide height on the alignment side	120 mm as gliding or rolling version

# ROLLER CONVEYORS RM 8340

Alignment conveyor  
Powered

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Roller conveyors

Belt conveyors

Key products

Accessories

# ROLLER CONVEYORS

## RM 8210

Straight  
Powered



24V

48V

400V

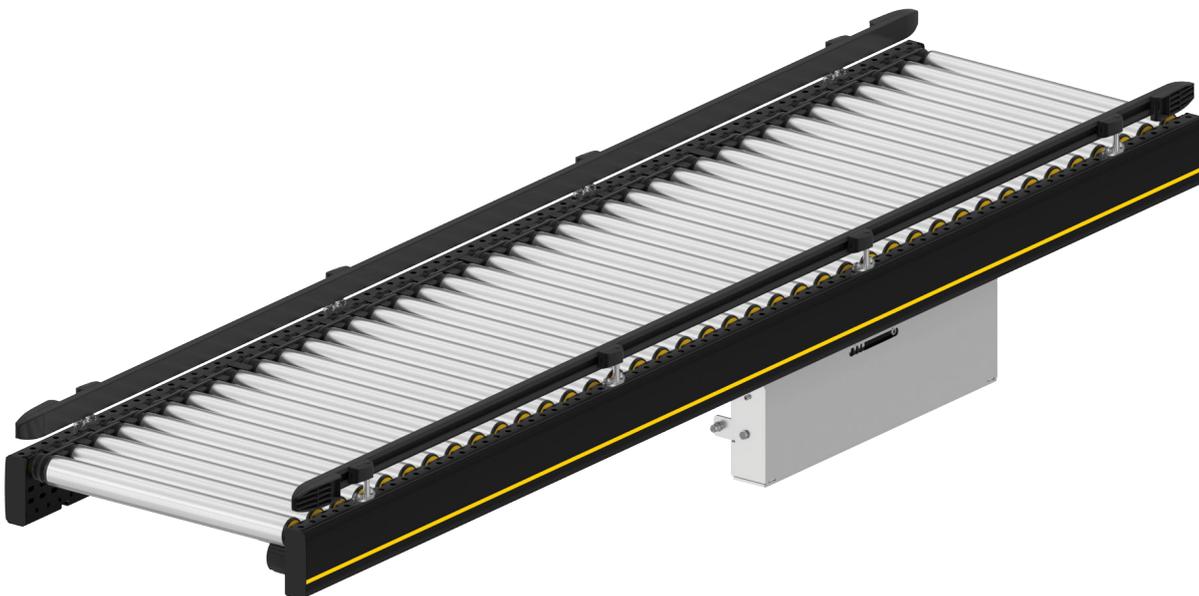


### Product description

The permanently powered flat belt conveyor RM 8210 serves as a transport conveyor that requires only one 400/460-V drive for long distances up to 12 m.

### Scope of delivery

- Supply incl. 1 sensor per conveyor
- The module is partially assembled; the side guides and flat belts are enclosed separately
- Please order supports and end caps separately



# ROLLER CONVEYORS

## RM 8210

Straight  
Powered

### Technical data

General technical data	
Max. load capacity*	50 kg/m
Transport conveyor speed*	0.1 to 2.0 m/s
Incline/decline	Not suitable
Ambient temperature	+5 to +40 °C
Roller	
Roller type	Interroll Series 1700
Roller diameter	50 mm
Roller material	Steel 1.5 mm, zinc-plated
Drive	
Rated voltage	400 V
Drive medium	Flat belt (transport)

\*The combination of maximum values is not always possible.

# ROLLER CONVEYORS

## RM 8210

Straight  
Powered



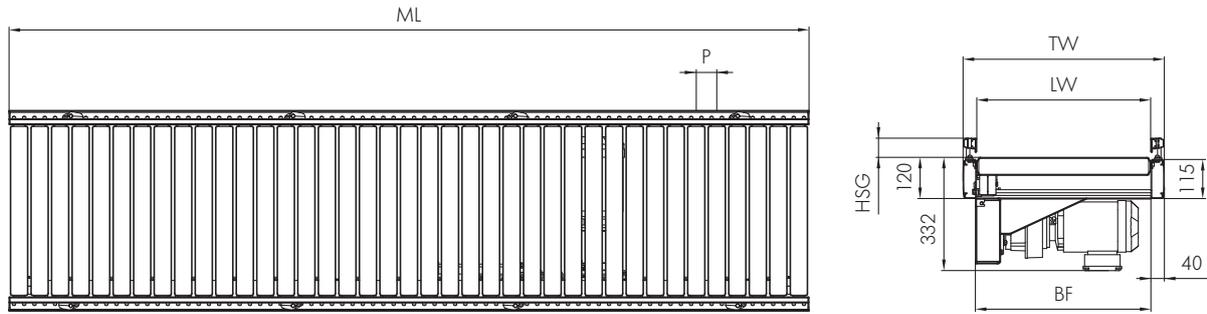
24V

48V

400V



### Dimensions



BF	Rated width	420, 620, 840 mm (others on request)
LW	Clear width	BF (+120/-90 mm per side with flexible side guide)
ML*	Transport module length	Max. 12000 mm
TW	Module width	BF + 80 mm
P	Roller pitch	60/90/120 mm
HSG	Side guide height	68 mm (standard), adjustable from 35 – 80 mm with fixed holders

\*If a slave curve is driven by a straight conveyor, the max. module length is reduced by 3000 mm, for 2 curves by 6000 mm.

# ROLLER CONVEYORS

## RM 8210

Straight  
Powered

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Roller conveyors

Belt conveyors

Key products

Accessories

# ROLLER CONVEYORS

## RM 8220

Curve

Powered



24V

48V

400V



### Product description

The roller conveyor curves change the direction of transport of the material. The alignment of the material is maintained within the side frames by tapered rollers. The flat belt-driven curve is driven either by an adjacent straight module or by a separate head drive. Accumulation mode is not possible in powered 400/460-V curves.

### Scope of delivery

- Supply incl. 1 sensor
- The module is partially assembled; the side guides and flat belts are enclosed separately
- Please order supports and end caps separately



# ROLLER CONVEYORS

## RM 8220

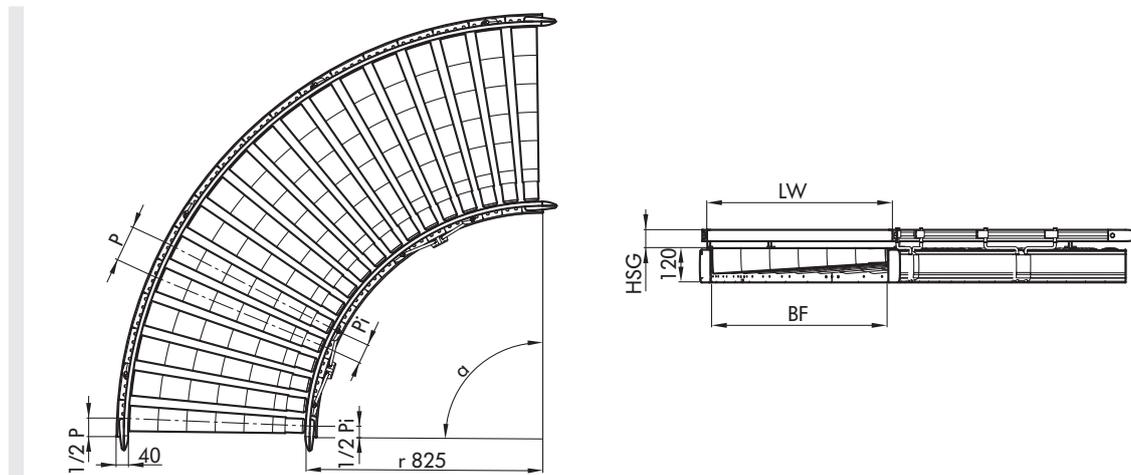
Curve  
Powered

### Technical data

General technical data	
Max. load capacity*	50 kg/m
Conveyor speed*	0.1 to 2.0 m/s
Incline/decline	Not suitable
Ambient temperature	+5 to +40 °C
Roller	
Roller type	Interroll Series 1700
Roller diameter	50 mm
Roller material	Steel 1.5 mm, zinc-plated
Max. number of rollers per zone	6 for 30°, 9 for 45°, 12 for 60°, 18 for 90°

\*The combination of maximum values is not always possible.

### Dimensions



BF	Rated width	420, 620, 840 mm (others on request)
LW	Clear width	BF (+120/-90 mm per side with flexible side guide)
$\alpha$	Angle	30°/45°/60°/90°
TW	Module width	BF + 80 mm
Pi	Roller pitch, inside	~72 mm
P	Roller pitch, outside	~(0.087 x BF) + Pi mm
HSG	Side guide height	68 mm (standard), adjustable from 35 – 80 mm with fixed holders

# ROLLER CONVEYORS

## RM 8230

Merge

Powered



24V

48V

400V



### Product description

The merge is used for connecting lateral roller tracks at an angle (30° or 45°) to the main track. This can be used for moving material off the track (e.g. with HPD (High Performance Divert)) or onto the track.

### Scope of delivery

- Supply incl. 1 sensor
- Supply without bus (communication) cable
- The module is partially assembled; the side guides and flat belts are enclosed separately
- Please order supports and end caps separately



## Technical data

General technical data	
Max. load capacity*	50 kg/m
Conveyor speed*	0.1 to 2.0 m/s
Incline/decline	Not suitable
Ambient temperature	+5 to +40 °C
Roller	
Roller type	Interroll Series 1700 and Interroll Series 3500
Roller diameter	50 mm
Roller material	Steel 1.5 mm, zinc-plated

\*The combination of maximum values is not always possible.

# ROLLER CONVEYORS

## RM 8230

Merge  
Powered



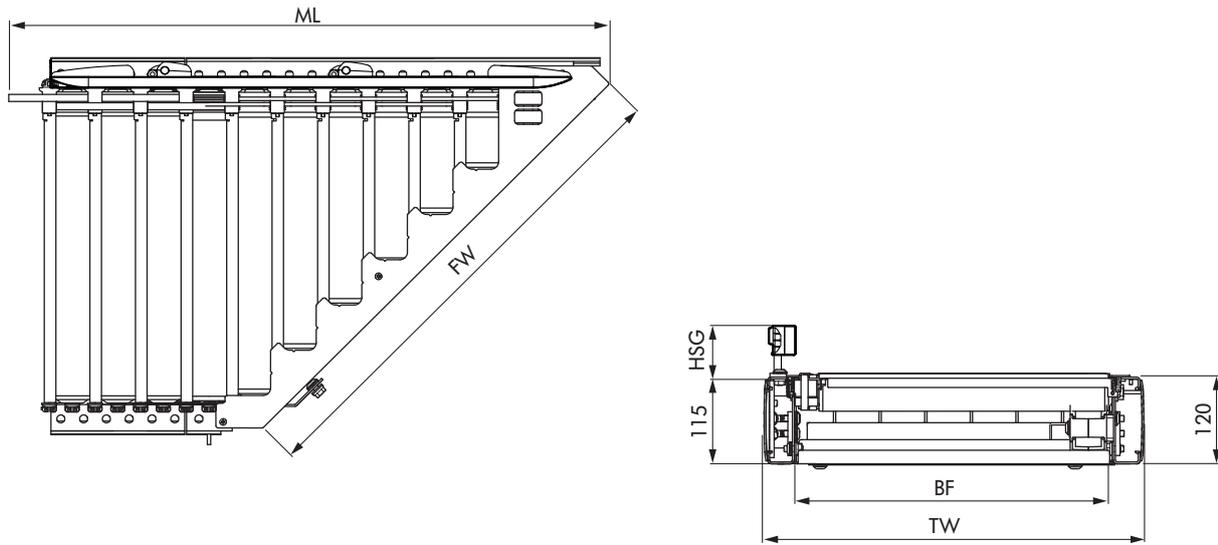
24V

48V

400V



### Dimensions



BF	Rated width	420, 620, 840 mm (others on request)
LW	Clear width	BF (+120/-90 mm per side with flexible side guide)
ML	Module length	741 to 1855 mm
TW	Module width	BF + 80 mm
FW	Opening width	594 to 1680 mm
$\alpha$	Angle	30°/45°
P	Roller pitch	60 mm
HSG	Side guide height	68 mm (standard), adjustable from 35 – 80 mm with fixed holders

The angle and clear width of a merge or diverter module define the dimensions of the module.

The following table shows the standard dimensions of the merge/diverter modules (merges).

BF [mm]	Angle $\alpha = 45^\circ$		Angle $\alpha = 30^\circ$	
	ML [mm]	FW [mm]	ML [mm]	FW [mm]
420	741	594	1135	840
620	921	877	1437	1240
840	1161	1188	1855	1680

# ROLLER CONVEYORS

## RM 8230

Merge  
Powered

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Roller conveyors

Belt conveyors

Key products

Accessories

# ROLLER CONVEYORS

## RM 8240

Alignment conveyor  
Powered



24V

48V

400V



### Product description

The alignment conveyor guides products diagonally to the transport direction to a side frame and aligns them to the side guide, if necessary. The side guide must be suitable for this purpose.

### Scope of delivery

- Supply incl. 1 sensor
- The module is partially assembled; the side guides and flat belts are enclosed separately
- Please order supports and end caps separately



# ROLLER CONVEYORS

## RM 8240

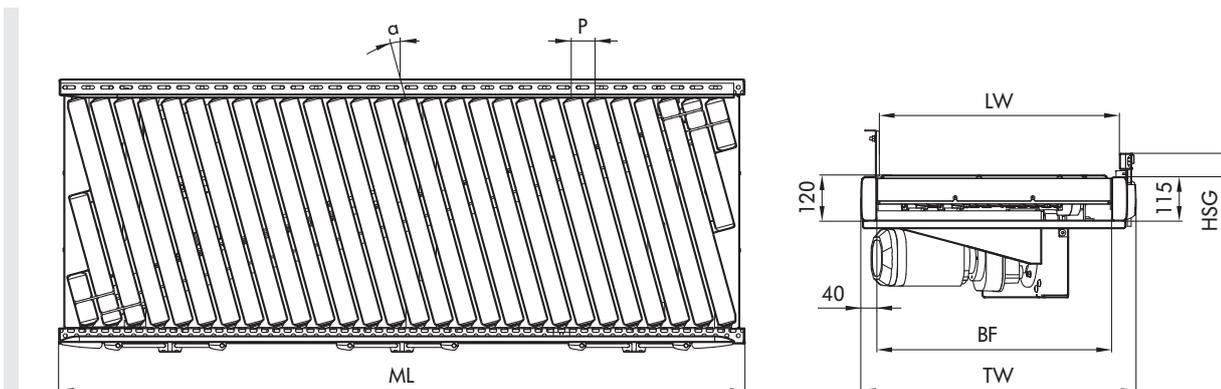
Alignment conveyor  
Powered

### Technical data

General technical data	
Max. load capacity*	50 kg/m
Conveyor speed*	0.1 to 1.4 m/s (at 50 kg)
Incline/decline	Not suitable
Ambient temperature	+5 to +40 °C
Roller	
Roller type	Interroll Series 1700 and Interroll Series 3500
Roller diameter	50 mm
Roller material	Steel, zinc-plated
Drive	
Rated voltage	400 V
Drive medium	Flat belt

\*The combination of maximum values is not always possible.

### Dimensions



BF	Rated width	420, 620, 840 mm (others on request)
LW	Clear width	BF (+ 120/-90 mm per side with flexible side guide)
ML	Module length	Max. 4080 mm
TW	Module width	BF + 80 mm
P	Roller pitch	60 mm
$\alpha$	Angle of rollers	7°/15.2°
HSG	Side guide height	68 mm (standard), adjustable from 35 – 80 mm with fixed holders
	Side guide height on the alignment side	120 mm as gliding or rolling version

# BELT CONVEYORS

## BM 8350

Straight  
Powered



24V

48V

400V

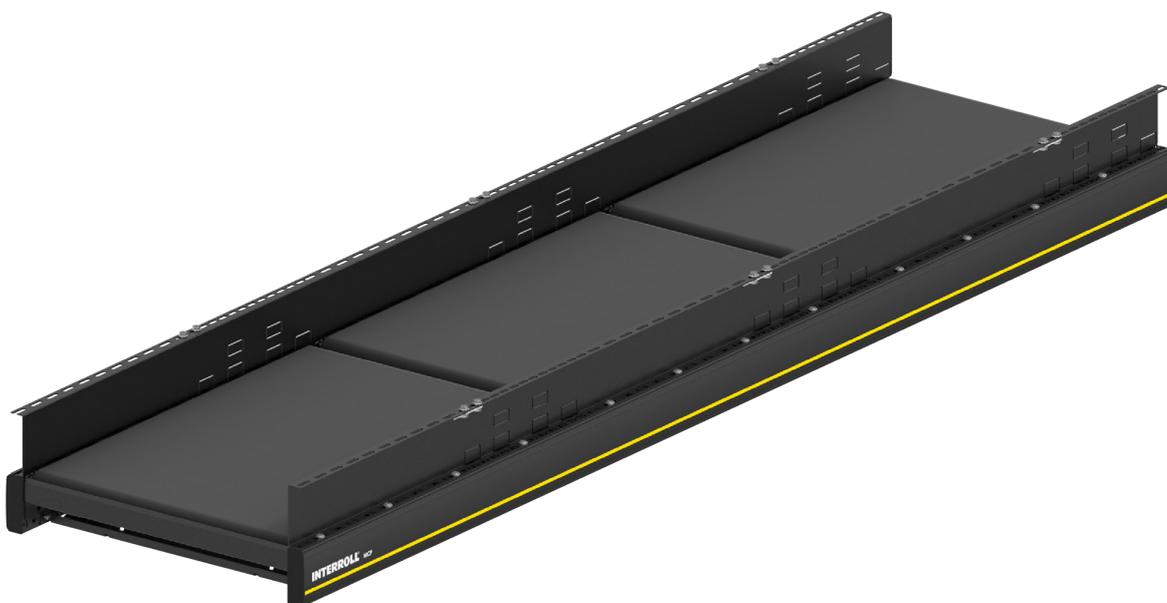


### Product description

The Belt Conveyor Light is a belt conveyor that is divided into zones and operates with zero pressure accumulation; its drive is based on the Interroll RollerDrive. It is possible to transport and accumulate small products, as well as products not suitable for roller tracks. Not suitable for reversing operation.

### Scope of delivery

- Supply incl. 1 sensor per zone
- The module is partially assembled and pre-wired; the side guides are enclosed separately
- Please order supports and end caps separately



# BELT CONVEYORS

## BM 8350

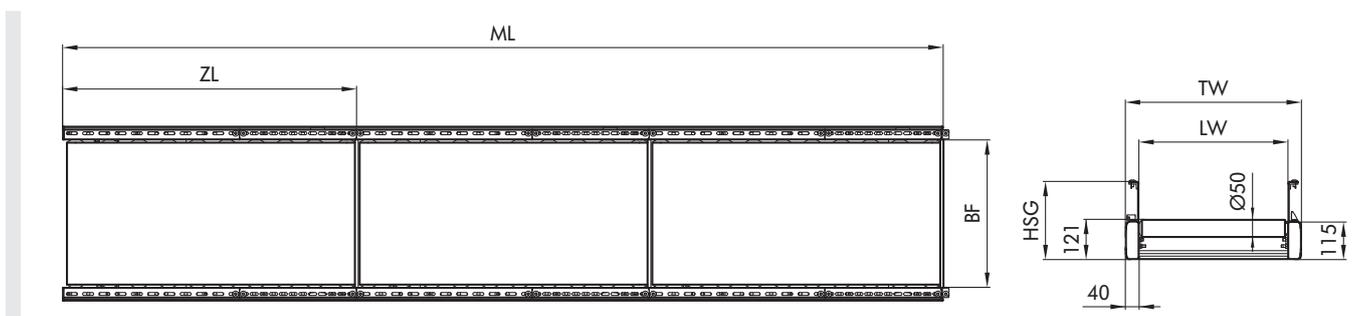
Straight  
Powered

### Technical data

General technical data	
Max. load capacity per zone*	50 kg
Conveyor speed*	Max. 0.8 m/s
Incline/decline*	Max. 4°
Ambient temperature	+5 bis +40 °C
Drive	
Rated voltage	24/48 V
Motor type	Interroll RollerDrive EC5000
Diameter of drive roller	50 mm
Control	MultiControl
Material	
Conveyor belt	Polyester with PVC coating
Slider bed	Rollers, Interroll Series 1700

\*The combination of maximum values is not always possible.

### Dimensions



BF	Rated width	420, 620, 840 mm (max. 840 mm) (others on request)
LW	Clear width	BF
ML	Module length	ZL x number of zones, max. 4320 mm
ZL	Zone length	Max. 1080 mm
TW	Module width	BF + 80 mm
P	Roller pitch	90 mm under the belt, 60 mm between the zones
HSG	Side guide height	120 mm

# BELT CONVEYORS

## BM 8360

Curve

Powered



24V

48V

400V

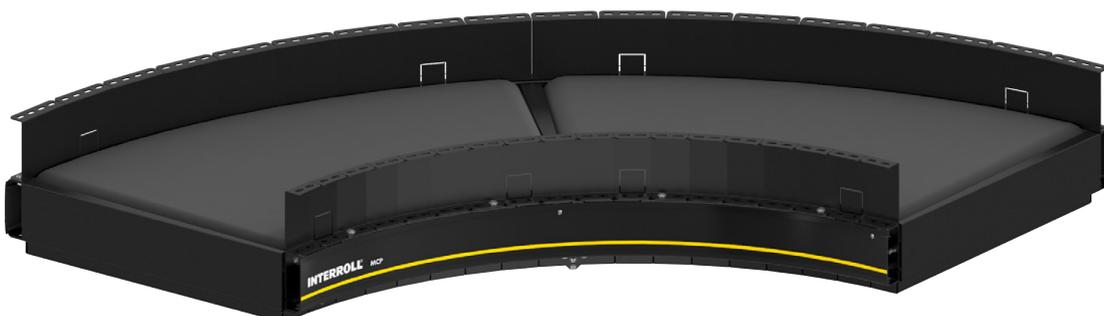


### Product description

The Belt Curve Light is a belt curve that is divided into zones and operates with zero pressure accumulation; its drive is based on the Interroll RollerDrive. It is possible to transport and store small products, as well as products not suitable for roller tracks. Not suitable for reversing operation.

### Scope of delivery

- Supply incl. 1 sensor per zone
- The module is partially assembled and pre-wired; the side guides are enclosed separately
- Please order supports and end caps separately

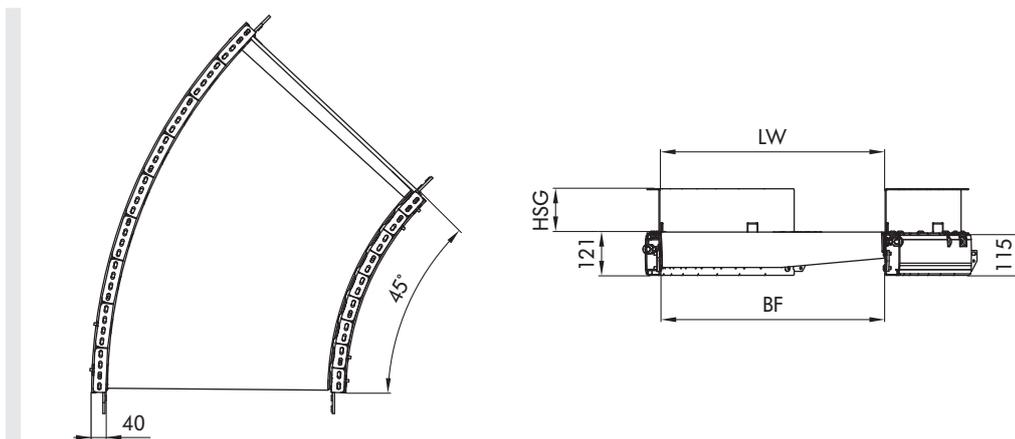


### Technical data

General technical data	
Max. load capacity per zone*	20 kg
Conveyor speed*	Max. 0.44 m/s
Incline/decline	Not suitable
Ambient temperature	+5 to +40 °C
Drive	
Rated voltage	24/48 V
Motor type	Interroll RollerDrive EC5000
Number of zones (N)	1 at 45°, 2 at 90°
Control	MultiControl
Material	
Conveyor belt	Polyester with PVC coating
Slider bed	Rollers, Interroll Series 1700

\*The combination of maximum values is not always possible.

### Dimensions



BF	Rated width	420, 620 mm (others on request)
LW	Lane width	BF
$\alpha$	Angle	1 x 45°/90° (2 x 45°)
TW	Module width	BF + 80 mm
HSG	Side guide height	120 mm

# BELT CONVEYORS

## BM 8410/8420

Straight  
Head drive



24V

48V

400V



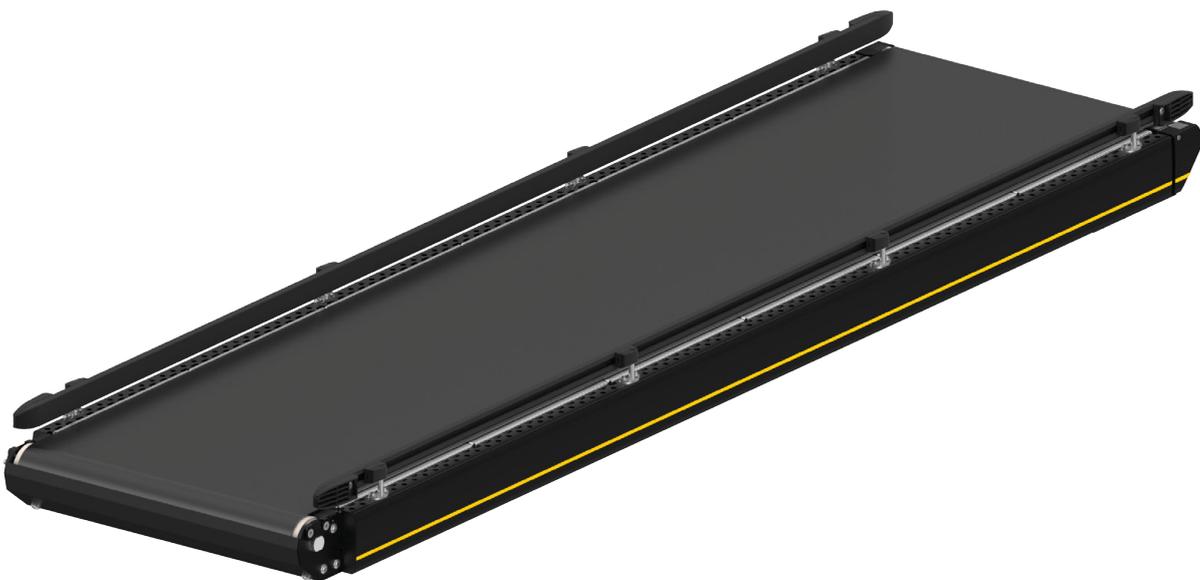
### Product description

The belt conveyor is used for the transport of goods that are not suitable for roller tracks, and for all types of goods on inclines and declines.

The belt conveyor is available with a gear motor (BM 8410) or drum motor (BM 8420).

### Scope of delivery

- Supply incl. 1 sensor
- The module is partially assembled; the side guides are enclosed separately
- Please order supports separately



# BELT CONVEYORS BM 8410/8420

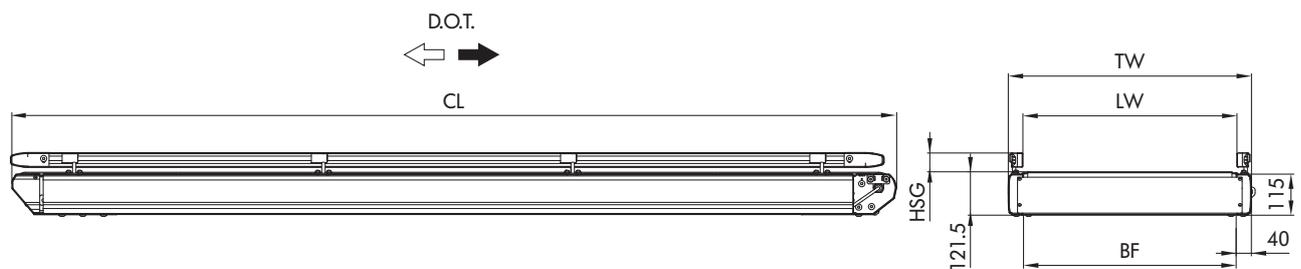
Straight  
Head drive

## Technical data

General technical data	
Max. load capacity*	50 kg/m (standard)
Max. load capacity per module*	220 kg
Conveyor speed*	0.1 to 2.5 m/s
Incline/decline	Max. 6°
Ambient temperature	+5 bis +40 °C
Drive	
Rated voltage	400 V
Electrical power	Max. 1.1 kW
Motor type	Drum motor/gear motor
Materials	
Conveyor belt	Level: smooth, 2-layer, PVC; rising/falling gradient: grooved longitudinally
Slider bed	Zinc-plated sheet steel 2.5 mm; zinc-plated sheet steel 3 mm (from measure between frames = 840 mm)

\*The combination of maximum values is not always possible.

## Dimensions



BF	Rated width	420, 620, 840 mm (others on request)
LW	Clear width	BF (+120/-90 mm per side with flexible side guide)
CL	Module length	650 – 3000 mm
TW	Module width	BF + 80 mm
HSG	Side guide height	68 mm (standard), adjustable from 35 – 80 mm with fixed holders

# BELT CONVEYORS

## BM 8411/8421

Straight

Center drive



24V

48V

400V



### Product description

The belt conveyor is used for the transport of goods that are not suitable for roller tracks, and for all types of goods on inclines and declines.

The belt conveyor is available with a gear motor and torque transmission (BM 8411) and with a drum motor (BM 8421).

### Scope of delivery

- Supply incl. 1 sensor
- The module is partially assembled and possibly broken down into sections; the side guides are enclosed separately
- Please order supports and end caps separately



# BELT CONVEYORS BM 8411/8421

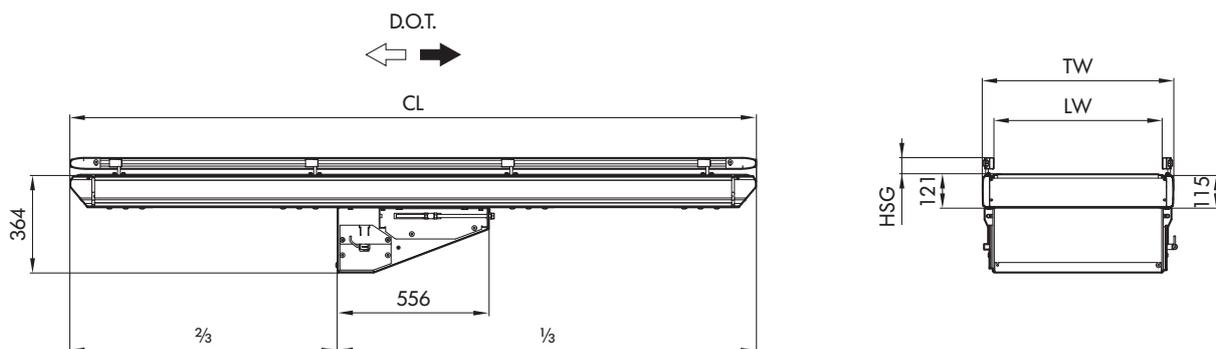
Straight  
Center drive

## Technical data

General technical data	
Max. load capacity*	50 kg/m (standard)
Max. load capacity per module*	550 kg
Conveyor speed*	0.1 to 2.5 m/s
Incline/decline	Max. 18°
Ambient temperature	+5 bis +40 °C
Drive	
Rated voltage	400 V
Electrical power	Max. 3 kW
Motor type	Drum motor/gear motor
Materials	
Conveyor belt	Level: smooth, 2-layer, PVC; rising/falling gradient: grooved longitudinally, 2-layer, PVC
Slider bed	Zinc-plated sheet steel 2.5 mm; zinc-plated sheet steel 3 mm (from BF = 840 mm)

\*The combination of maximum values is not always possible.

## Dimensions



BF	Rated width	420, 620, 840 mm (others on request)
LW	Clear width	BF (+120/-90 mm per side with flexible side guide)
CL	Module length	1500 to 20010 mm
TW	Module width	BF + 80 mm
HSG	Side guide height	68 mm (standard), adjustable from 35 – 80 mm with fixed holders

# BELT CONVEYORS

## BM 8432/8442

Straight

Center drive + upper arch



24V

48V

400V



### Product description

The belt conveyor with top arch is used for transporting all types of goods on inclines or declines. The arch reduces noise and the impact of the conveyed goods as they pass over the arch.

The belt conveyor is available with a gear motor and torque transmission (BM 8432) and with a drum motor (BM 8442).

### Scope of delivery

- Supply incl. 1 sensor
- The module is partially assembled and possibly broken down into sections; the side guides are enclosed separately
- Please order supports and end caps separately



# BELT CONVEYORS

## BM 8432/8442

Straight  
Center drive + upper arch

### Technical data

<b>General technical data</b>	
Max. load capacity*	50 kg/m (standard)
Max. load capacity per module*	550 kg
Conveyor speed*	0.1 to 2.5 m/s (at 50 kg)
Incline/decline	Max. 18°
Ambient temperature	+5 bis +40 °C
<b>Drive</b>	
Rated voltage	400 V
Electrical power	Max. 3 kW
Motor type	Drum motor/gear motor
<b>Materials</b>	
Conveyor belt	2-layer, PVC, grooved longitudinally
Slider bed	Zinc-plated sheet steel 2.5 mm Zinc-plated sheet steel 3 mm (from BF = 840 mm)

\*The combination of maximum values is not always possible.

# BELT CONVEYORS

## BM 8432/8442

Straight

Center drive + upper arch



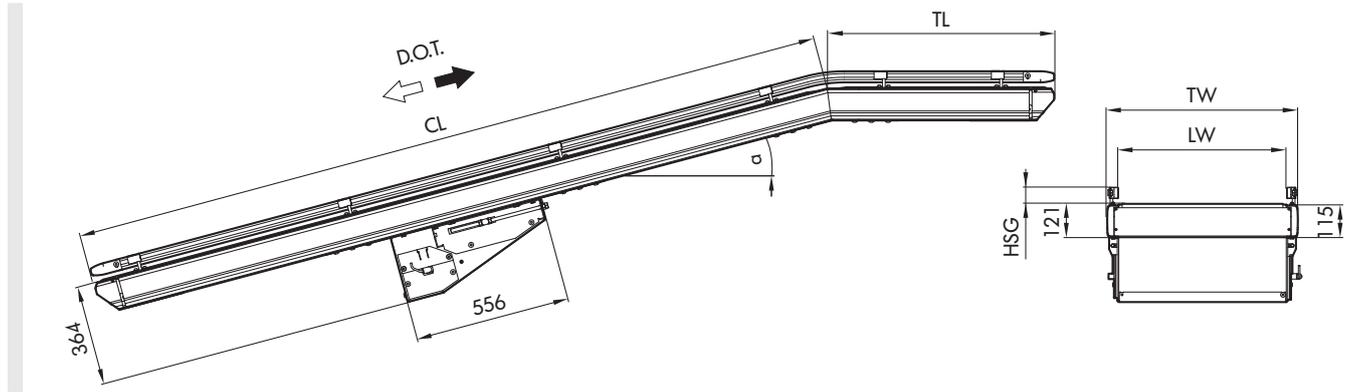
24V

48V

400V



### Dimensions



BF	Rated width	420, 620, 840 mm (others on request)
LW	Clear width	BF (+120/-90 mm per side with flexible side guide)
ML	Module length	1500 to 20010 mm
CL	Length of incline or decline section	ML - TL
TL	Top length	736 to 2146 mm
TW	Module width	BF + 80 mm
$\alpha$	Incline/decline angle	6°/9°/12°/15°/18°
HSG	Side guide height	68 mm (standard), adjustable from 35 - 80 mm with fixed holders

# **BELT CONVEYORS** **BM 8432/8442**

Straight  
Center drive + upper arch

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Roller conveyors

**Belt conveyors**

Key products

Accessories

# BELT CONVEYORS

## BM 8433/8443

Straight  
Center drive + feed



24V

48V

400V



### Product description

The belt conveyor with feed is used for transporting all types of goods on inclines or declines. The feed enables a smooth transition at the lower kink of the belt conveyor, e.g., at the interface with a roller conveyor.

The belt conveyor is available with a gear motor and torque transmission (BM 8433) and with a drum motor (BM 8443).

### Scope of delivery

- Supply incl. 1 sensor
- The module is partially assembled and possibly broken down into sections; the side guides are enclosed separately
- Please order supports and end caps separately



# BELT CONVEYORS

## BM 8433/8443

Straight  
Center drive + feed

### Technical data

<b>General technical data</b>	
Max. load capacity*	50 kg/m (standard)
Max. load capacity per module*	550 kg
Conveyor speed*	0.1 to 2.5 m/s (at 50 kg)
Incline/decline	Max. 18°
Ambient temperature	+5 bis +40 °C
<b>Drive</b>	
Rated voltage	400 V
Electrical power	Max. 3 kW
Motor type	Drum motor/gear motor
<b>Materials</b>	
Conveyor belt	2-layer, PVC, grooved longitudinally
Slider bed	Zinc-plated sheet steel 2.5 mm Zinc-plated sheet steel 3 mm (from BF = 840 mm)

\*The combination of maximum values is not always possible.

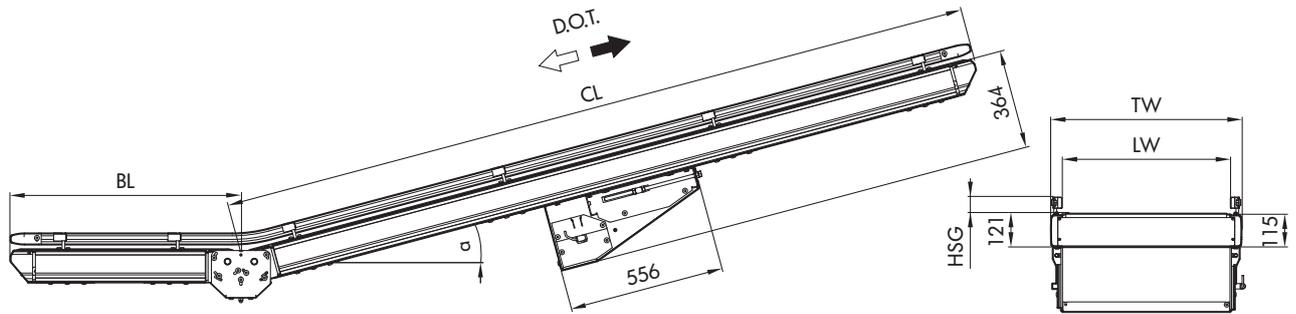
# BELT CONVEYORS

## BM 8433/8443

Straight  
Center drive + feed

- ☼
- 24V
- 48V
- 400V
- ⚙️

### Dimensions



BF	Rated width	420, 620, 840 mm (others on request)
LW	Clear width	BF (+120/-90 mm per side with flexible side guide)
ML	Module length	1500 to 20010 mm
CL	Length of incline or decline section	ML - BL
BL	Bottom length	736 to 2146 mm
TW	Module width	BF + 80 mm
$\alpha$	Incline/decline angle	6°/9°/12°/15°/18°
HSG	Side guide height	68 mm (standard), adjustable from 35 - 80 mm with fixed holders

**BELT CONVEYORS**  
**BM 8433/8443**  
Straight  
Center drive + feed

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Roller conveyors

**Belt conveyors**

Key products

Accessories

# BELT CONVEYORS

## BM 8434/8444

Straight

Center drive + upper arch + feed



24V

48V

400V



### Product description

The belt conveyor is used for transporting all types of goods on inclines and declines. Arch and feed allow a smooth and more quiet transition at the upper and lower kink. The belt conveyor is available with a gear motor and torque transmission (BM 8434) and with a drum motor (BM 8444).

### Scope of delivery

- Supply incl. 1 sensor
- The module is partially assembled and possibly broken down into sections; the side guides are enclosed separately
- Please order supports and end caps separately



# BELT CONVEYORS BM 8434/8444

Straight  
Center drive + upper arch + feed

## Technical data

<b>General technical data</b>	
Max. load capacity*	50 kg/m (standard)
Max. load capacity per module*	550 kg
Conveyor speed*	0.1 to 2.5 m/s (at 50 kg)
Incline/decline	Max. 18°
Ambient temperature	+5 bis +40 °C
<b>Drive</b>	
Rated voltage	400 V
Electrical power	Max. 3 kW
Motor type	Drum motor/gear motor
<b>Materials</b>	
Conveyor belt	2-layer, PVC, grooved longitudinally
Slider bed	Zinc-plated sheet steel 2.5 mm Zinc-plated sheet steel 3 mm (from BF = 840 mm)

\*The combination of maximum values is not always possible.

# BELT CONVEYORS

## BM 8434/8444

Straight

Center drive + upper arch + feed



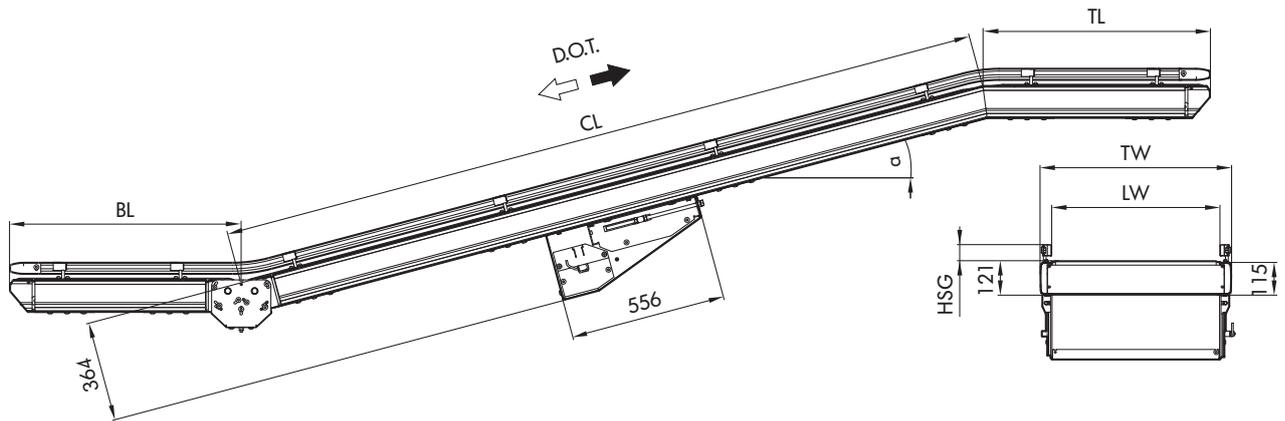
24V

48V

400V



### Dimensions



BF	Rated width	420, 620, 840 mm (others on request)
LW	Clear width	BF (+120/-90 mm per side with flexible side guide)
ML	Module length	1500 to 20010 mm
CL	Length of incline or decline section	ML - TL - BL
TL	Top length	736 to 2146 mm
BL	Bottom length	724 to 1024 mm
TW	Module width	BF + 80 mm
α	Incline/decline angle	6°/9°/12°/15°/18°
HSG	Side guide height	68 mm (standard), adjustable from 35 - 80 mm with fixed holders

# **BELT CONVEYORS** **BM 8434/8444**

Straight  
Center drive + upper arch + feed

---

Roller conveyors

**Belt conveyors**

Key products

Accessories

# BELT CONVEYORS

## BC 4727

Curve



24V

48V

400V



### Product description

With a conveyor speed of 2.85 m/s, the belt curve is designed for high performance and trouble-free operation in different applications. The curves are available in several widths, angles and weight classes.

The belt curves can be operated in higher and lower temperature ranges, which represents a significant advantage compared to common solutions, such as friction-driven conveyors. Another advantage is the fast belt change. Thanks to the sophisticated construction, the drive station does not have to be removed for the belt change, thereby saving time.

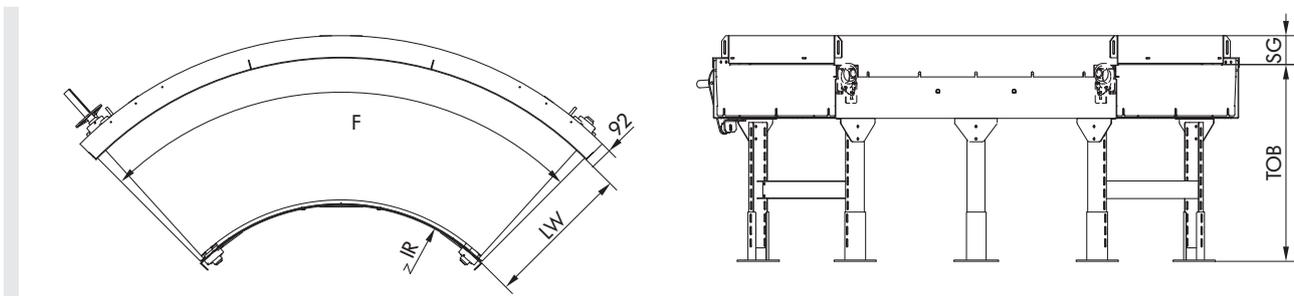


### Technical data

General technical data	
Max. load capacity*	75 kg/m
Rated voltage	400 V
Conveyor speed*	2.8 m/s
Ambient temperature	-15 °C to 55 °C
Material	
Conveyor belt	FLEXAM EF 10/2 0+A22 BLACK AS FR others upon request
Slider bed	2.5 mm sheet steel
Color	All RAL colors are possible.

\*The combination of maximum values is not always possible.

### Dimensions



F	Angle	30° – 180°, 15° increments
IR	Inside radius	400 – 1500 mm, 50 mm increments
LW	Clear width	400 – 1500 mm, 50 mm increments
T.O.B.	Conveying height	600 – 3000 mm
SG	Side guide height	120 – 400 mm
	Other sizes on request.	

# BELT CONVEYORS

## BM 8455/8465

Strip merge



24V

48V

400V



### Product description

Strip merge is a belt conveyor with a connecting side angled by 30° or 45°. This conveyor unit allows for merging two conveyor lines at the corresponding angle. By using additional sorting elements, strip merge also allows for separating the conveying flow. The conveyor belts are available in widths of 50 mm for very small goods. The strip merge has a particularly low overall height of 150 mm.

The belt conveyor is currently available with a drum motor (BM 8465) and eventually also with a gear motor (BM 8455).

### Scope of delivery

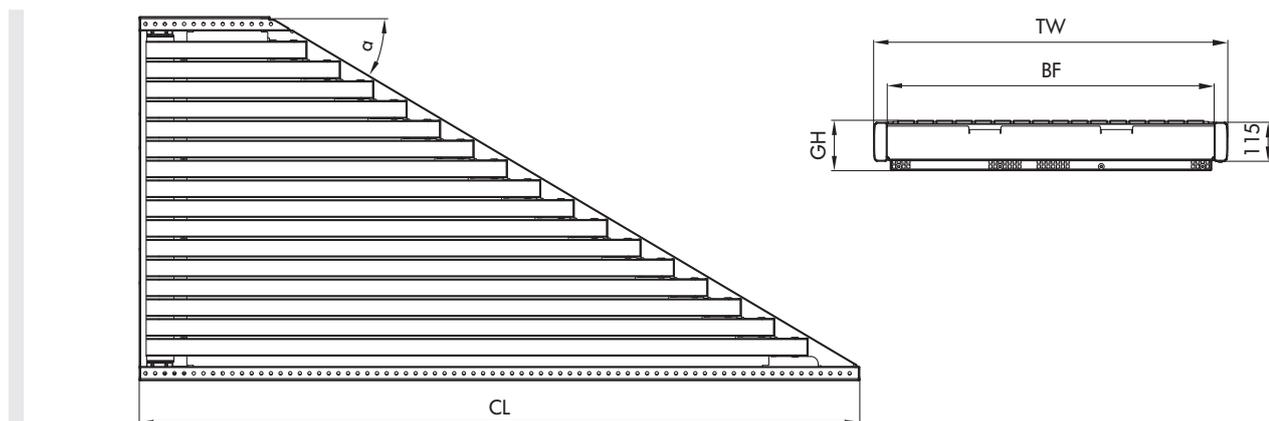
- The module is fully assembled
- Please order support stands, side guides and sensors separately



## Technical data

General technical data	
Max. load capacity	50 kg
Conveyor speed	0.1 to 2.5 m/s
Incline/decline	Not suitable
Ambient temperature	+5 to +40 °C
Drive	
Rated voltage	400 V/50 Hz/3 phases
Electrical power	425 W
Motor type	Interroll Synchronous Drum Motor
Diameter of drive roller	101 mm with keyways
Diameter of idler pulley	70 mm with keyways
Materials	
Conveyor belt	Elastic belt, structured surface, flame-resistant in compliance with DIN EN 20340, belt width 50 mm
Slider bed	Zinc-plated sheet steel

## Dimensions



$\alpha$	Angle	30°/45°
BF	Rated width	420, 620, 840, 1020, 1220 mm
GH	Overall height	150 mm
	Medium length	See application notes, page 129
TW	Module width	BF + 80 mm

## KEY PRODUCTS

### RM 8711 HIGH PERFORMANCE DIVERT (HPD) 24/48-V MASTER

### RM 8712 HIGH PERFORMANCE DIVERT (HPD) 400-V MASTER



24V

48V

400V



#### Product description

The High Performance Divert (HPD) is used for diverting unit loads, preferably with smooth bottom surfaces, at different angles onto a lateral track to the right or to the left. The HPD is available in two drive variants:

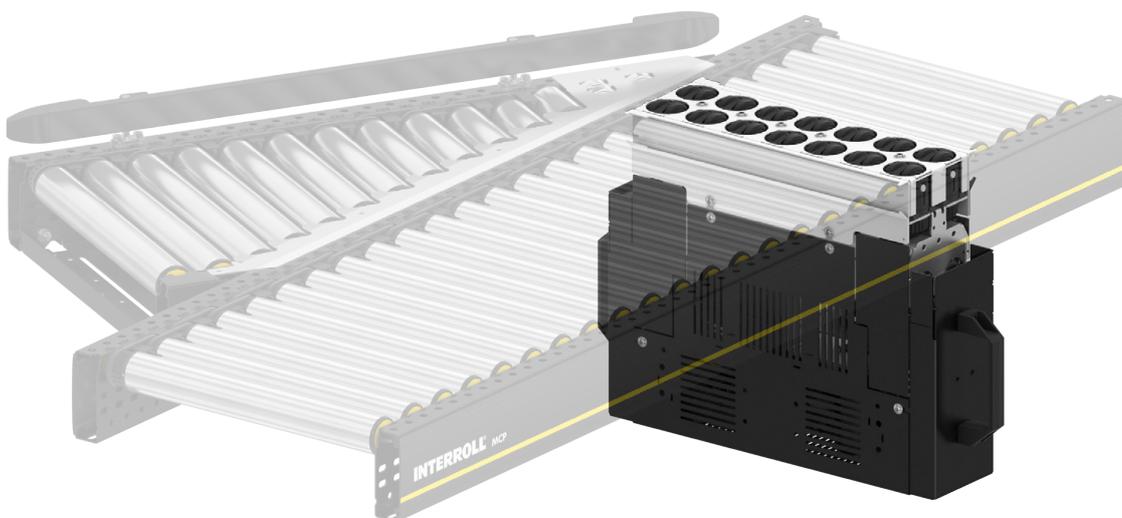
HPD 24/48-V master, for which 24/48-V motors are used as travel and swivel drives

HPD 400/460-V master, for which the travel drive from the flat belt conveyor is used, and the swivel drive is powered by a separate 24/48-V motor

One HPD module can consist of several cassettes, each 120 mm long, depending on the size of the product.

#### Scope of delivery

- When used in zone conveyor, supply incl. sensor kit and cable set
- Supply incl. fastening set, side guide kit and control card
- Supply without roller conveyor



# KEY PRODUCTS

## RM 8711 HIGH PERFORMANCE DIVERT (HPD) 24/48-V MASTER

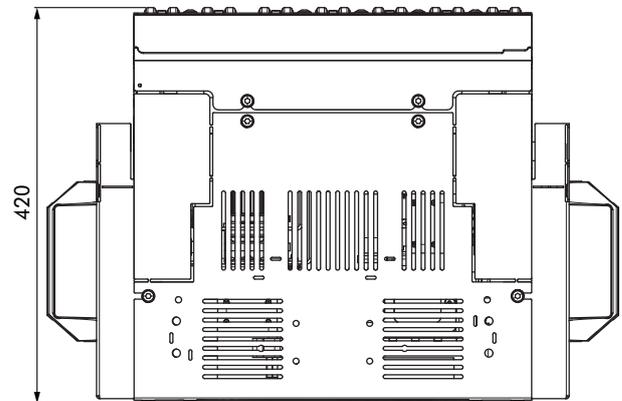
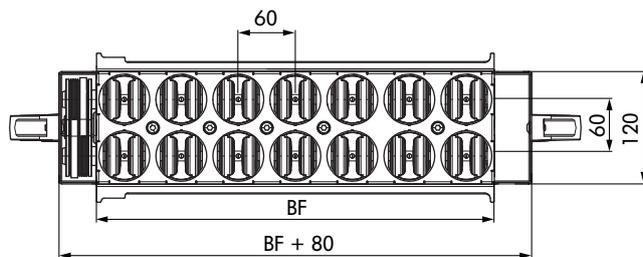
## RM 8712 HIGH PERFORMANCE DIVERT (HPD) 400-V MASTER

### Technical data

	RM 8711	RM 8712
<b>General technical data</b>		
Max. load capacity*	50 kg	50 kg
Max. swivel roller speed*	1.4 m/s	Same as roller conveyor
Swiveling time	0.3 s per 90°	0.3 s per 90°
Diverting angle	30°/45°/90°	30°/45°/90°
Ambient temperature	+5 to +40 °C	+5 to +40 °C
<b>Swivel motor drive</b>		
Rated voltage	24/48 V	24/48 V
<b>Travel motor drive</b>		
Rated voltage of travel motor	24/48 V	Via the 400-V flat belt conveyor
Control variants	MultiControl	MultiControl

\*The combination of maximum values is not always possible.

### Dimensions



BF	Rated width	420, 620, 840 mm (others on request)
ML	Module length	120 mm x load-dependent number of cassettes

# KEY PRODUCTS

## TRANSFER RM 8731



24V

48V

400V



### Product description

The 24/48-V transfer is used for diverting or merging suitable conveying goods onto a roller track at a 90° angle. In the process, the unit load changes direction and orientation, i.e. the side of the product becomes the leading edge or that orientation is reversed.

### Scope of delivery

- When used in zone conveyor, supply incl. sensor kit and cable set
- Supply incl. fastening set, side guide kit and control card
- Supply without roller conveyor

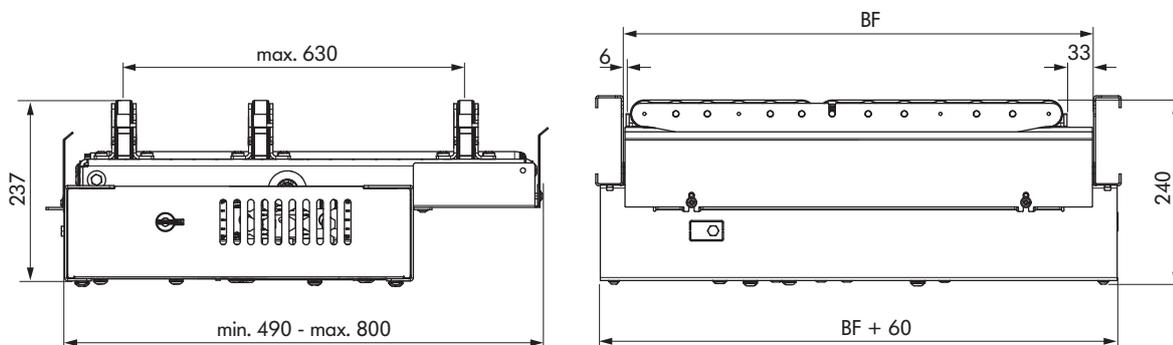


## Technical data

General technical data	
Max. load capacity*	50 kg (standard) 25 kg (chill)
Belt speed	1.0 m/s
Lifting time	0.3 s
Incline/decline	Not suitable
Ambient temperature	+5 to +40 °C
Stroke and belt drive	
Rated voltage	24 V/48 V (drive motor and lift motor)
Control	MultiControl

\*The combination of maximum values is not always possible.

## Dimensions



BF	Rated width	420, 620, 840 mm (others on request)
C1 to C5	Blade distance	Flexible distances in multiples of 90 mm
	Number of blades	Max. 5

## KEY PRODUCTS

### RM 8830

Lift-Up Gate



24V

48V

400V



#### Product description

The lift-up gate swivels upward to provide a walkway, or access from one side of the conveyor to the other. This allows access to the rear of the conveyor, and the ability to plan quicker escape routes, in case of an emergency. The pivoting movement is operated by an innovative rotary mechanism.

#### Scope of delivery

- Please order fitted conveyor module separately
- The module is fully assembled

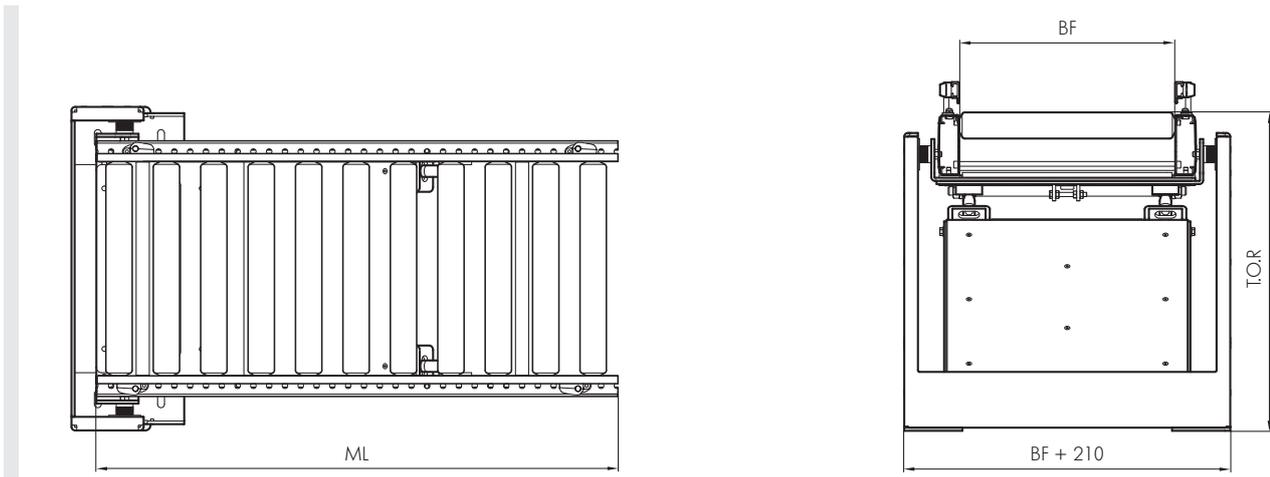


## Technical data

General technical data	
Max. load capacity*	100 kg (incl. fitted module)
Ambient temperature	-5 to +40 °C
Incline/decline	Not suitable

\*The combination of maximum values is not always possible.

## Dimensions



BF	Rated width	420, 620, 840 mm (others on request)
T.O.R.	Min. height of top edge of roller	645 mm
ML	Module length	1020 to 1680 mm
	Channel width	ML - 240 mm

# KEY PRODUCTS

## RM 6006

Lift



24V

48V

400V



### Product description

The lifting station consists of a column construction and a carriage upon which a roller conveyor is mounted. A worm gear motor with brake is used as a drive unit to raise and lower the carriage via a belt.

### Scope of delivery

- The module is fully assembled, including sensor system, but is not electrically cabled.
- Energy chain is pre-installed
- Please request protective grid and safety elements separately
- Without conveyor system component

**Note:** The upper part of the lifting station must be supported on site above an overall height of 4000 mm.

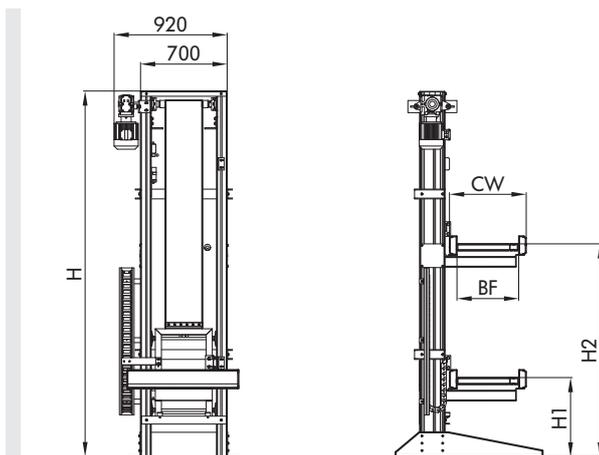


## Technical data

General technical data	
Max. load capacity*	260 kg
Lifting speed	0.1 to 1.0 m/s
Ambient temperature	+5 bis +40 °C
Max. stroke height	7225 mm (BF 420) 7025 mm (BF 620) 6805 mm (BF 840) 6625 mm (BF 1020)
Startup position	Min. 2
Lifting column	200 x 80 mm (aluminum profile)
Drive	
Motor type	Worm gear motor with brake, frequency regulation on site
Rated voltage	400 V/50 Hz/3 phases
Max. electrical power	4.0 kW
Drive medium	Belt

\*The combination of maximum values is not always possible.

## Dimensions



BF	Rated width	420, 620, 840 mm (when using Interroll modules)
H1	Lower startup dimension	Min. 300 mm
H2	Upper startup dimension	H1 + stroke height
H	Overall height	H2 + 775 mm (BF 420) / 975 mm (BF 620) / 1195 mm (BF 840)
CW	Width of mounted conveyors	Max. 1300 mm

**Note:** The upper part of the lifting station must be supported on site above an overall height of 4000 mm.

# KEY PRODUCTS

## RM 6008

Lift



24V

48V

400V



### Product description

This vertical conveyor consists of a column construction and a carriage upon which conveyor components can be mounted. Lifting motion is performed by two toothed belts. The planned drive is located at the top. Integrating an encoder is possible. This lift can optionally be used at higher speeds and in several approach positions.

### Scope of delivery

- The module is fully assembled, including sensor system, but is not electrically cabled.
- Energy chain is pre-installed
- Please request protective grid and safety elements separately
- Without conveyor system component

**Note:** The upper part of the lifting station must be supported on site above an overall height of 4000 mm.

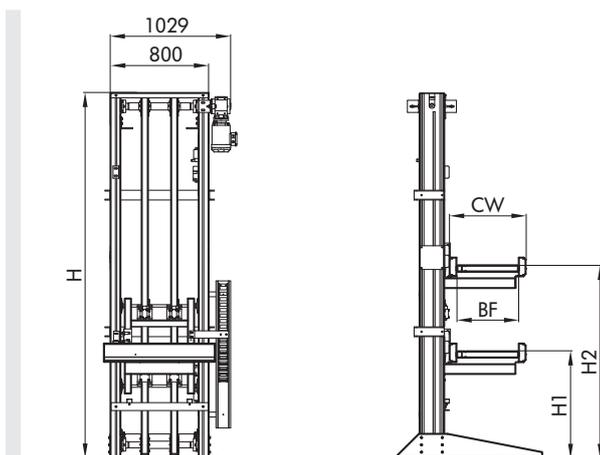


## Technical data

General technical data	
Max. load capacity*	260 kg
Lifting speed	0.1 to 1.0 m/s
Ambient temperature	+5 bis +40 °C
Max. stroke height	11325 mm (BF 420) 11125 mm (BF 620) 10905 mm (BF 840) 10525 mm (BF 1020)
Startup position	Min. 2
Lifting column	200 x 80 mm (aluminum profile)
Drive	
Motor type	Worm gear motor with brake, frequency regulation on site
Rated voltage	400 V/50 Hz/3 phases
Max. electrical power	3.0 kW
Drive medium	Toothed belt

\*The combination of maximum values is not always possible.

## Dimensions



BF	Rated width	420, 620, 840 mm (when using Interroll modules)
H1	Lower startup dimension	Min. 500 mm
H2	Upper startup dimension	H1 + stroke height
H	Overall height	H2 + 675 mm (BF 420) / 875 mm (BF 620) / 1095 mm (BF 840)
CW	Width of mounted conveyors	Max. 1300 mm

**Note:** The upper part of the lifting station must be supported on site above an overall height of 4000 mm.

# KEY PRODUCTS

## SPIRAL LIFT



24V

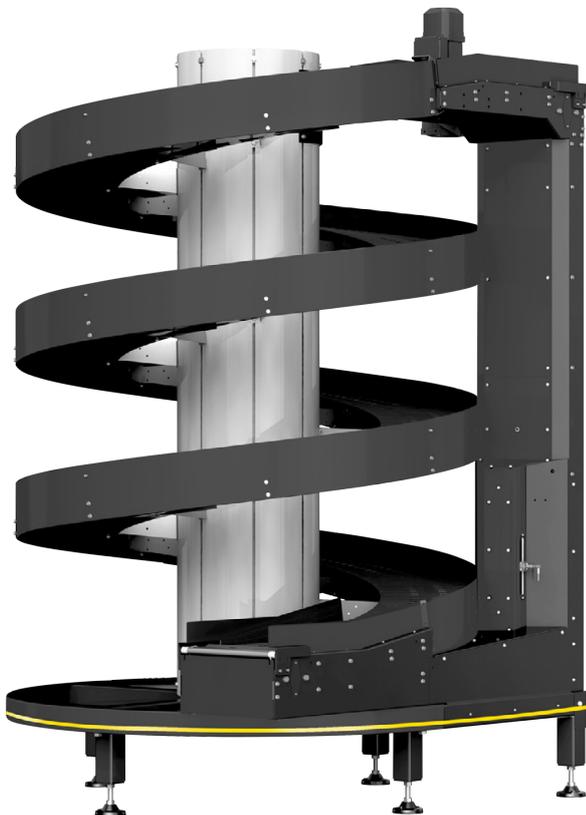
48V

400V



### Product description

The Interroll Spiral Lift transports boxes, containers and goods in all shapes and sizes for a variety of industries. It is the best choice for continuous vertical transport with high throughput. The Spiral Lift is available in many configurations, is extremely quiet during operation and features a small footprint, which allows for an optimal utilization of space. The overlapping slats offer additional safety for the operator. The proven construction with rolling removal ensures less friction, which can lead to significant savings in energy. Thanks to its self-tensioning chain drive, the new Spiral Lift is extremely low in maintenance. Access to the chain mechanism is very easy so that the downtime can be reduced to a minimum.



## Technical data

<b>General technical data</b>	
Speed	0.17 to 1 m/s
Max. load capacity	Up to 100 kg/m depending on the model
	400 + 600 mm = max. 50 kg
	760 + 900 mm = max. 100 kg
<b>Drive</b>	
Motor type	Gear motor
Rated voltage	400 V
Ambient temperature	-15 to +50 °C

# KEY PRODUCTS

## SPIRAL LIFT



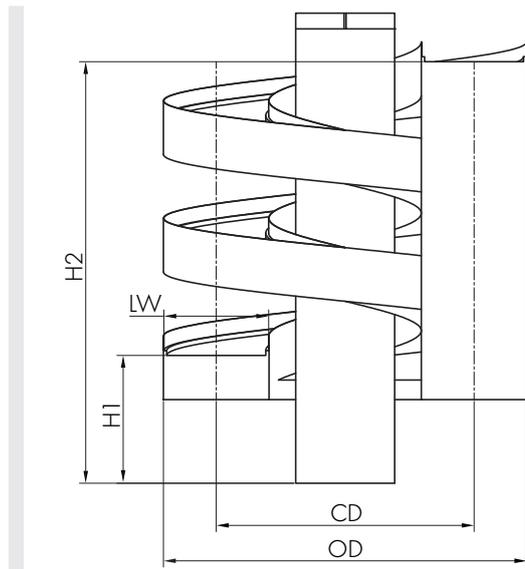
24V

48V

400V



### Dimensions



LW	Clear width	
H1	Height 1	Min. 367.5 mm (narrow design) Min. 450 mm (wide design)
H2	Height 2	Depending on type*
CD	Center diameter	Depending on plate width*
OD	Outside diameter	

\*See table below

Plate width	Center diameter	Outside diameter	Max. H2 declining*	Max. H2 inclining*	Comment
400 mm for LW = 420 mm	1500 mm	2000 mm	H1 + 13357 mm	H1 + 10275 mm	
600 mm for LW = 620 mm	1700 mm	2400 mm	H1 + 15138 mm	H1 + 11645 mm	
760 mm for LW = 840 mm	2200 mm	3000 mm	H1 + 19590 mm	H1 + 15070 mm	For firm products
900 mm for LW = 840 mm	3000 mm	4000 mm	H1 + 26714 mm	H1 + 20549 mm	For soft products

\*Max. 13 windings, \*\*Max. 10 windings

# KEY PRODUCTS SPIRAL LIFT

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Roller conveyors

Belt conveyors

**Key products**

Accessories

# KEY PRODUCTS

## END STOP RM 8811



24V

48V

400V

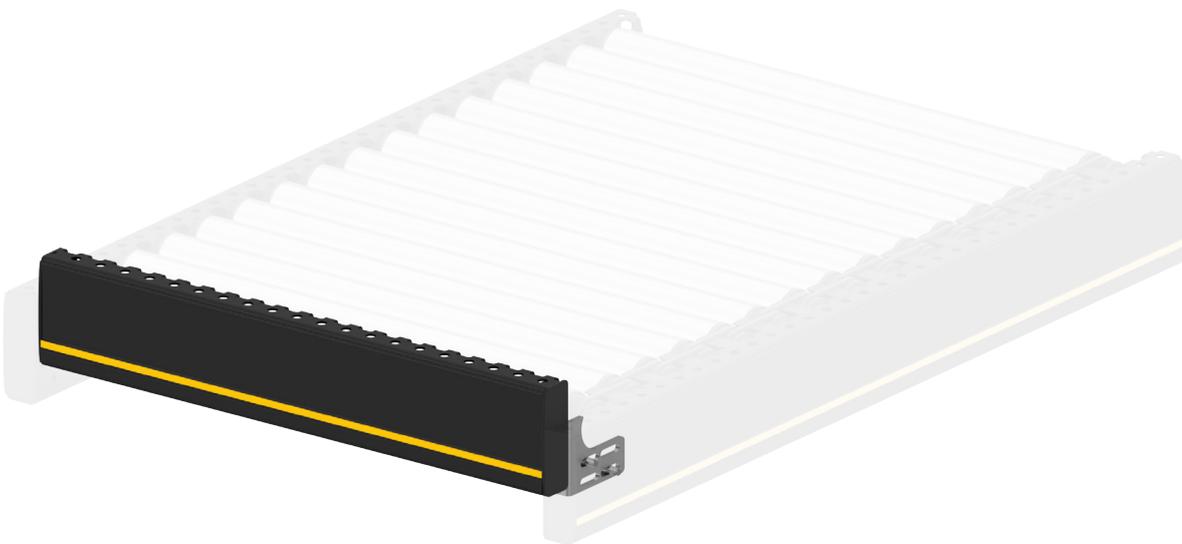


### Product description

The end stop is a permanently mounted attachment, for stopping and accumulating of approaching material. The end stop is used at the end of sloped or friction roller conveyors, or as a secure termination of all other conveyor lines.

### Scope of delivery

- End stop, incl. fastening material

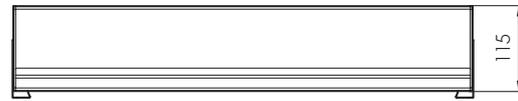
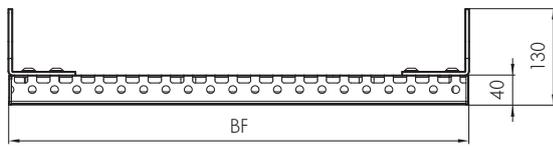


## Technical data

### General technical data

Maximum accumulation pressure 300 N

## Dimensions



BF	Rated width	420, 620, 840 mm (others on request)
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# KEY PRODUCTS

## BLADE STOP RM 8812



24V

48V

400V

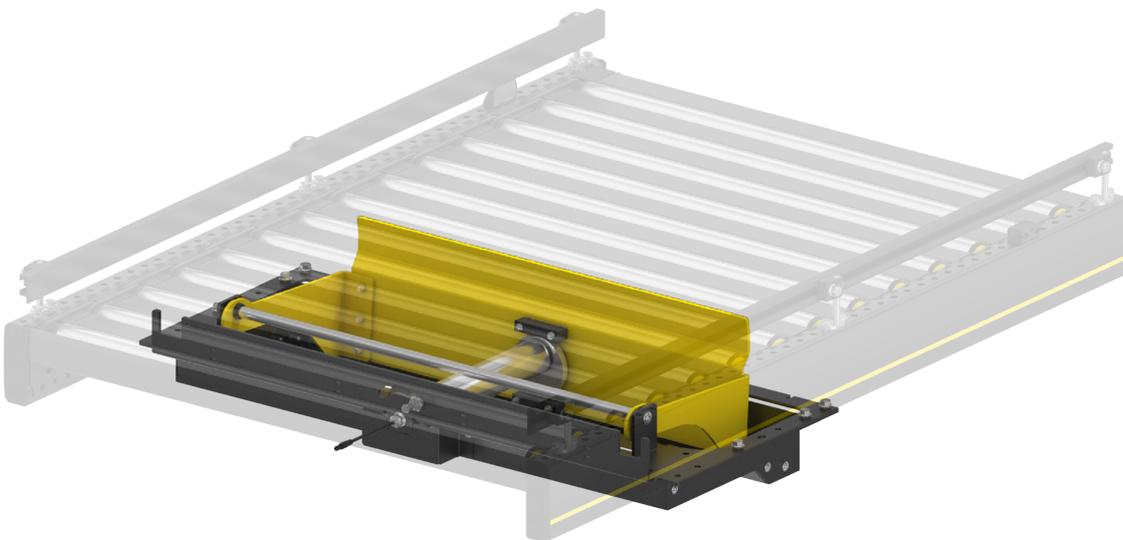


### Product description

The Interroll blade stop is an electrically operated stop that is raised between the roller pitches in order to stop or accumulate material. Stops are often used in conjunction with conveyor components, such as transfers and pushers, to align products or coordinate processes.

### Scope of delivery

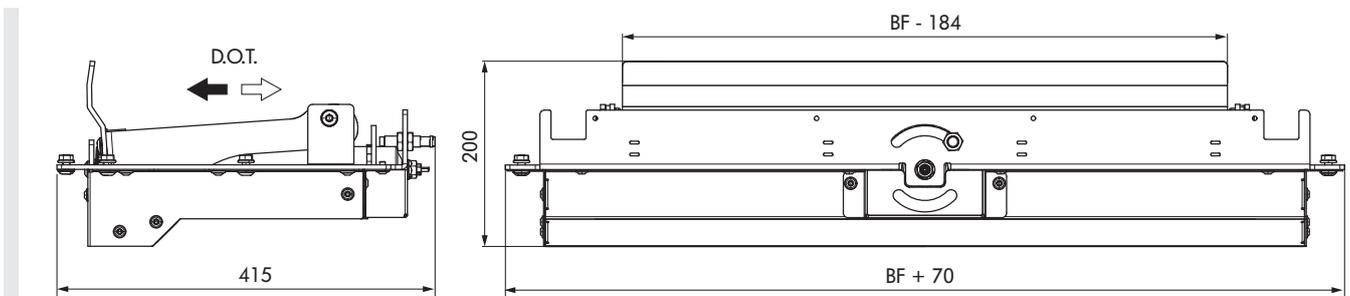
- Module is fully assembled, incl. sensor system and control card



### Technical data

General technical data	
Maximum accumulation pressure	100 N
Ambient temperature	+5 to +40 °C
Drive	
Rated voltage	24/48 V

### Dimensions



BF	Rated width	420, 620, 840 mm (others on request)
P	Min. roller pitch	90 mm
$\Delta H$	Stroke	25 mm (5 mm below top edge of roller up to 20 mm above top of roller)

# KEY PRODUCTS

## MULTICONTROL AI

For EC5000 24 V  
35 W, with analog interface



24V

48V

400V



### Application area

Zero-pressure accumulation conveying (ZPA) for systems with medium to high number of conveyor zones. Control of the Interroll Transfer and High Performance Divert as well as Interroll Pallet Drive (via Pallet Control).

### Product description

The MultiControl is a four-zone control. This means that up to four drives 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 + ASi can be used via simple switching.

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.



# KEY PRODUCTS

## MULTICONTROL AI

For EC5000 24 V  
35 W, with analog interface

### Functions

- Easy handling – one control card for PROFINET, EtherNet/IP and EtherCat (simple toggling of bus protocols) or ASi
- 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

### Possible applications

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

# KEY PRODUCTS

## MULTICONTROL AI

For EC5000 24 V  
35 W, with analog interface



24V

48V

400V



### Technical data

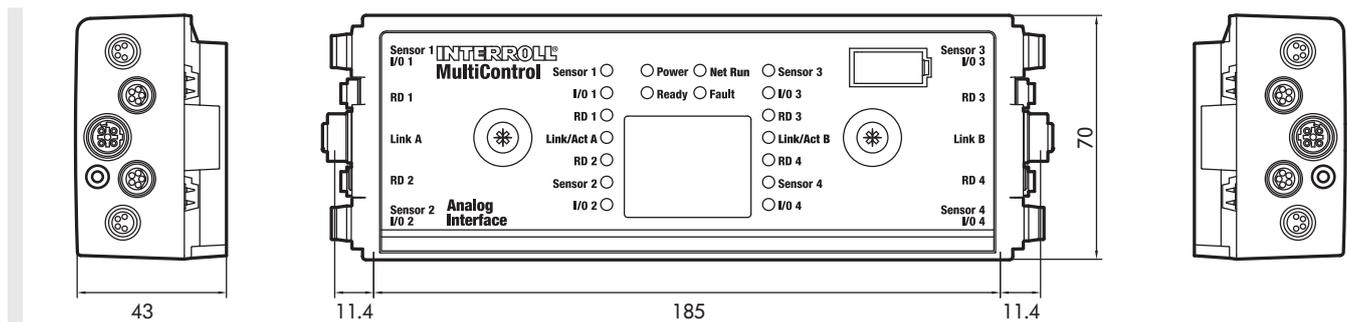
Electrical data	
Rated voltage	24 V DC
Voltage range	24 V DC: 22 to 28 V DC (voltage supply of RollerDrive only)
Current consumption	Logic supply voltage: MultiControl: max. 0.2 A + connected sensors/actuators = max. 1.6 A + current of RollerDrive EC5000*
Fuses	– For logic – For RollerDrive – For sensors and I/Os, can be reset
Protection rate	IP54
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

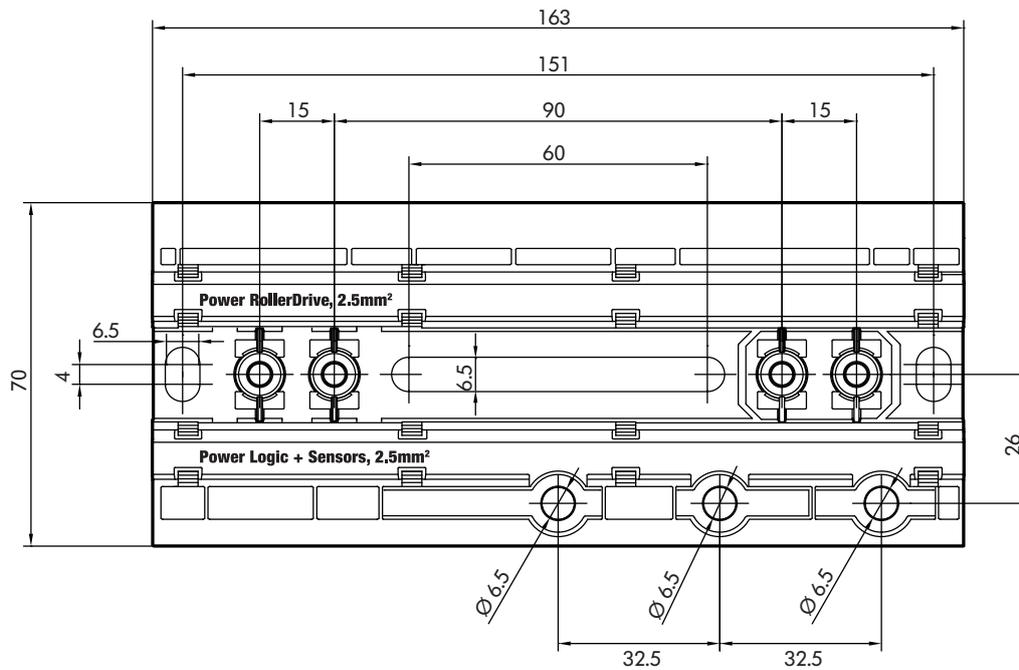
#### MultiControl



# KEY PRODUCTS MULTICONTROL AI

For EC5000 24 V  
35 W, with analog interface

## 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.

## Ordering information

- Article number: S-1132251
- Scope of supply: Base plate

# KEY PRODUCTS

## MULTICONTROL BI

For EC5000 48 V  
35 W, 50 W, with bus interface (CANopen)



24V

48V

400V



### Application area

Zero-pressure accumulation conveying (ZPA) for systems with medium to high number of conveyor zones. Control of the Interroll Transfer and High Performance Divert as well as Interroll Pallet Drive (via Pallet Control). 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.



# KEY PRODUCTS MULTICONTROL BI

For EC5000 48 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"> <li>• None</li> </ul>	<ul style="list-style-type: none"> <li>• Implementation of ZPA logic</li> <li>• Visualization of EC5000 data</li> </ul>
Yes	<ul style="list-style-type: none"> <li>• Influencing the ZPA logic</li> <li>• Tracking of conveying goods</li> <li>• Error diagnostics</li> </ul>	<ul style="list-style-type: none"> <li>• Implementation of ZPA logic</li> <li>• Implementation of PLC specifications</li> </ul>
Yes	<ul style="list-style-type: none"> <li>• The PLC must be programmed and controls all connected RollerDrive via this program</li> <li>• Tracking of conveying goods and error diagnostics</li> <li>• Specification of target position in positioning mode</li> </ul>	<ul style="list-style-type: none"> <li>• Function as input/output card</li> <li>• Transmits the status of all sensors, RollerDrive and, if necessary, error information to the PLC</li> </ul>

# KEY PRODUCTS

## MULTICONTROL BI

For EC5000 48 V  
35 W, 50 W, with bus interface (CANopen)



24V

48V

400V



### Technical data

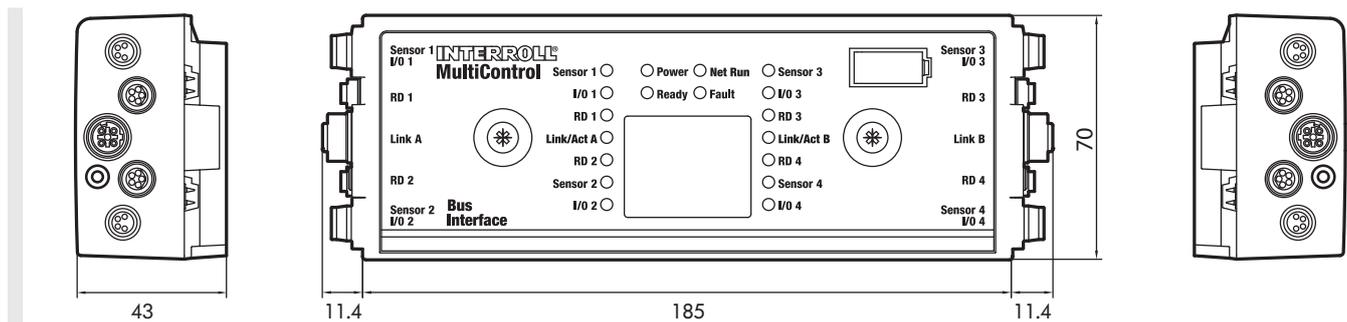
Electrical data	
Rated voltage	48 V DC
Voltage range	48 V DC: 44 to 56 V DC (voltage supply of RollerDrive only)
Current consumption	Logic supply voltage: MultiControl: max. 0.2 A + connected sensors/actuators = max. 1.6 A + current of RollerDrive EC5000*
Fuses	– For logic – For RollerDrive – For sensors and I/Os, can be reset
Protection rate	IP54
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

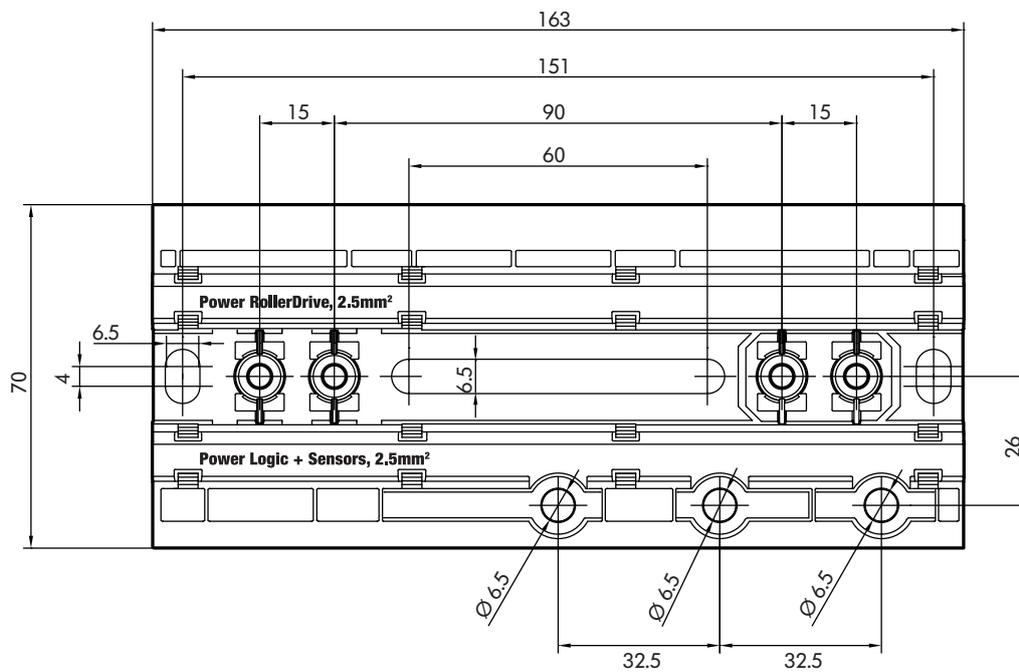
#### MultiControl



# KEY PRODUCTS MULTICONTROL BI

For EC5000 48 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.

## Ordering information

- Article number: S-1132252
- Scope of supply: Base plate

# ACCESSORIES

## SUPPORT RM 8841



24V

48V

400V



### Product description

The support is intended for fastening the conveyors 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	200 kg
Side profile	
Dimensions	77 x 32 mm
Number of crossbars Standard design	1 for 475 to 849 mm height of roller top edge 2 for 850 to 1449 mm height of roller top edge 3 for 1450 to 2000 mm height of roller top edge The number of crossbars increases to 4 to 6, depending on the desired height of the top edge of the roller (max. 3500 mm) and the design used.

# ACCESSORIES

## SUPPORT RM 8841



24V

48V

400V



### Dimensions

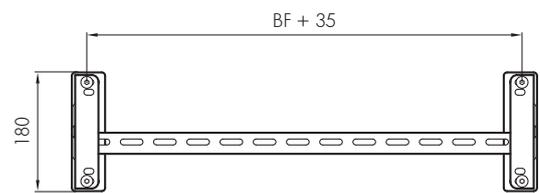
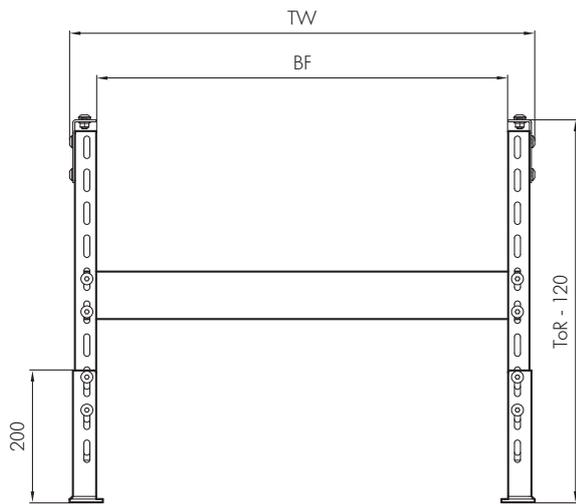


Fig.: Standard design

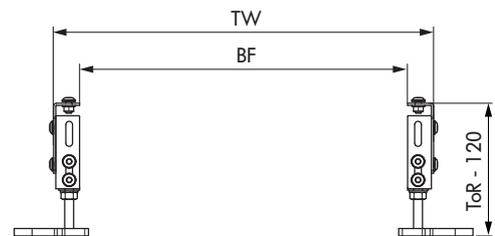
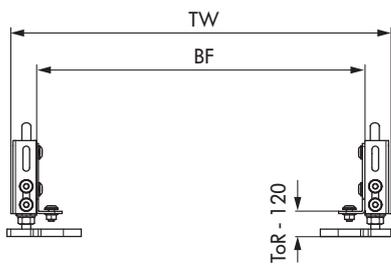


Fig.: Macro and micro design

BF	Rated width	420, 620, 840 mm (others on request)
TW	Module width	BF + 80 mm
T.O.R.	Min. support height to Max. support height	Standard: 475 mm (top edge of roller) to 2000 mm (top edge of roller) Tall: 2001 mm (top edge of roller) to 3500 mm (top edge of roller) Two conveyor levels: 850 mm (top edge of roller) to 3500 mm (top edge of roller) Mini: 400 mm (top edge of roller) to 474 mm (top edge of roller) Micro: 300 mm (top edge of roller) to 399 mm (top edge of roller) Macro: 150 mm (top edge of roller) to 299 mm (top edge of roller)
	Adjustment range	+/-50 mm

# ACCESSORIES SUPPORT RM 8841



Roller conveyors

Belt conveyors

Key products

Accessories

# ACCESSORIES

## RM 8842 CEILING HANGER



24V

48V

400V

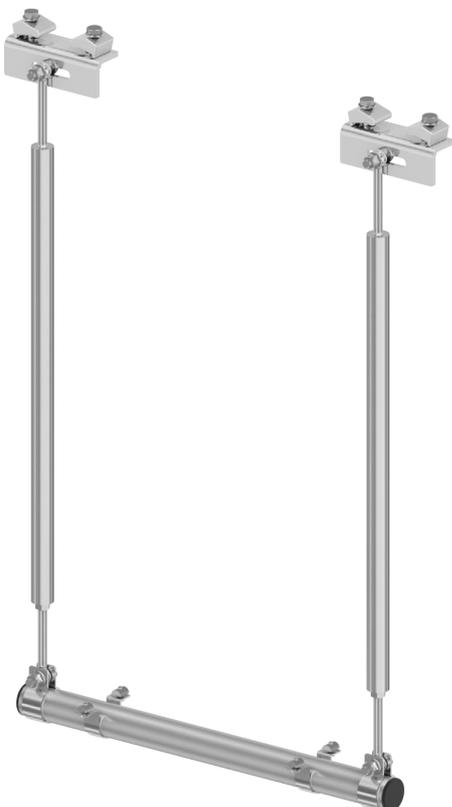


### Product description

The ceiling hanger is used to fasten the conveyor system to ceilings or platform structures from above. The ceiling hanger consists of the fastening elements on the ceiling, sturdy threaded steel rods, including the screws required for hanging at flexible lengths, and a cross tie for supporting the conveyor system. Depending on the ceiling or platform structure, various fastening elements must be used, and a structural analysis must be carried out. These are not included in the scope of delivery. Reinforcing elements (e.g. cross bracing) are also offered.

### Scope of delivery

- Ceiling hanger is partially assembled



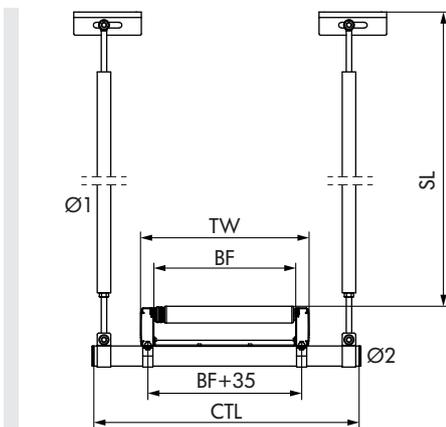
# ACCESSORIES

## RM 8842 CEILING HANGER

### Technical data

General technical data	
Max. load capacity	200 kg
Ambient temperature	-30 bis +50 °C
Max. relative humidity	Max. 90 %, non-condensing

### Dimensions



BF	Rated width	420, 620, 840 mm (others on request)
TW	Module width	BF + 80 mm
SL	Min. suspension length	620 mm
	Max. suspension length	5000 mm
$\varnothing 1$	Diameter of hanger tube	40 x 1.5 mm
CTL	Cross tube length	Max. 1800 mm
$\varnothing 2$	Diameter of cross tube	60 x 3 mm
	Adjustment range	+/-200 mm

# ACCESSORIES

## SWITCHING POWER SUPPLY HP5424



24V

48V

400V



### Application area

Voltage supply of MultiControl via flat cable. Voltage supply of DriveControl or ZoneControl via round cable. Basic voltage supply of 24-V DC products.

### Product description

The Interroll switching power supply HP5424 is a three-phase power supply for providing 24-V DC voltage. The robust housing achieves a protection rating of IP54. 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 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

### Technical data

<b>Electrical data</b>	
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	Typically 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)
<b>Ambient conditions</b>	
Protection rate	IP54
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*
<b>Miscellaneous data</b>	
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



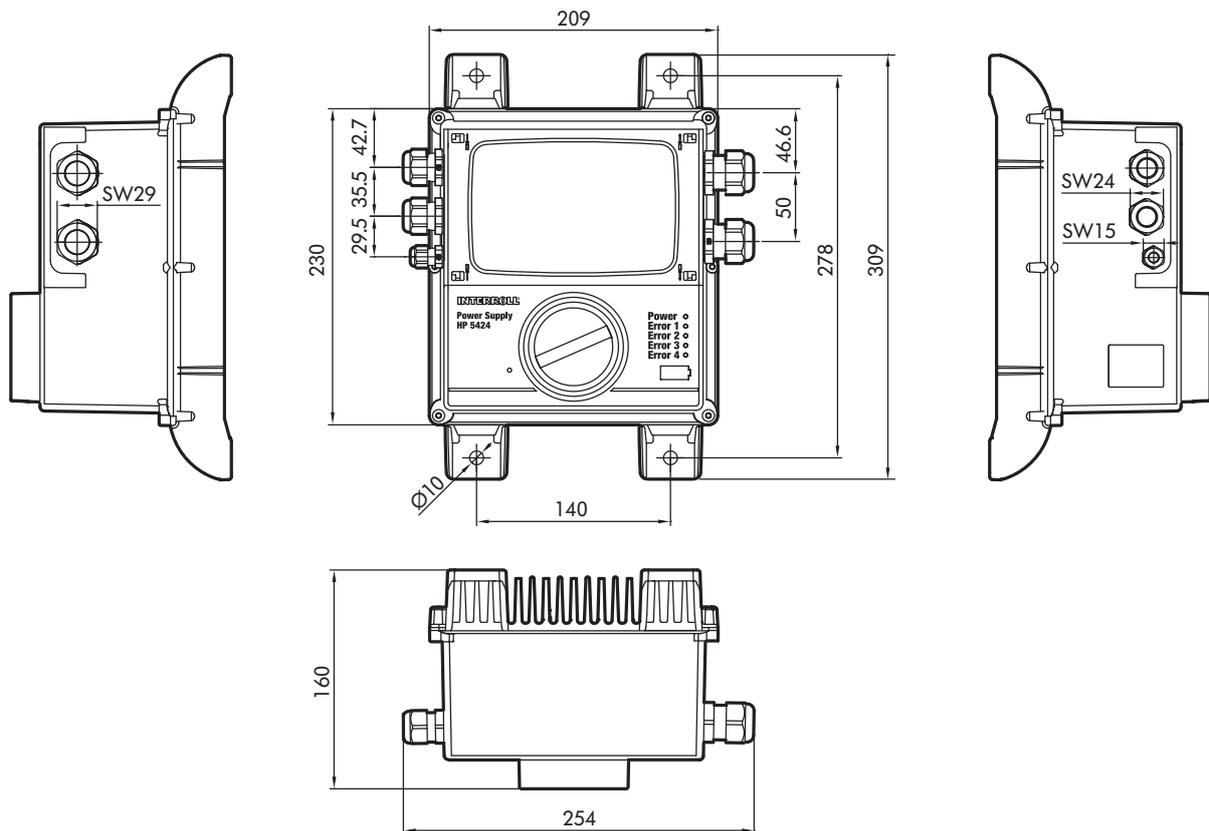
24V

48V

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
- 24-V DC output for a round cable ( $\varnothing$  5 up to 13 mm), article number: S-1115405

### 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

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Roller conveyors

Belt conveyors

Key products

Accessories

# ACCESSORIES

## SWITCHING POWER SUPPLY HP5448



24V

48V

400V



### Application area

Voltage supply of MultiControl via flat cable. Voltage supply of DriveControl via round cable. Basic voltage supply of 48-V DC products.

### Product description

The Interroll switching power supply HP5448 is a three-phase power supply for providing 48-V DC voltage. The robust housing achieves a protection rating of IP54. This allows placement in the immediate vicinity of the products to be supplied with 48 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 HP5448 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
- 2 48-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 HP5448

### Technical data

<b>Electrical data</b>	
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	Typically 1.6 A per phase at 3 x 400 V AC
Rated output voltage	48 V DC
Rated output power	960 W
Rated peak power	Max. 1440 W at 48 V DC for 4 s, repetition rate depends on duration and actual peak load
Maximum output current	30 A at 48 V DC for 4 s
Current limitation for each output	10, 16, 20 A
Efficiency	Min. 92 %
Feedback resistance	$\leq$ 60 V DC
Brake chopper	30 W (briefly 200 W)
<b>Ambient conditions</b>	
Protection rate	IP54
Ambient temperature in operation	-30 to 40 °C
Ambient temperature during transport and storage	-40 to 80 °C
Max. installation height above sea level	1000 m*
<b>Miscellaneous data</b>	
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 HP5448



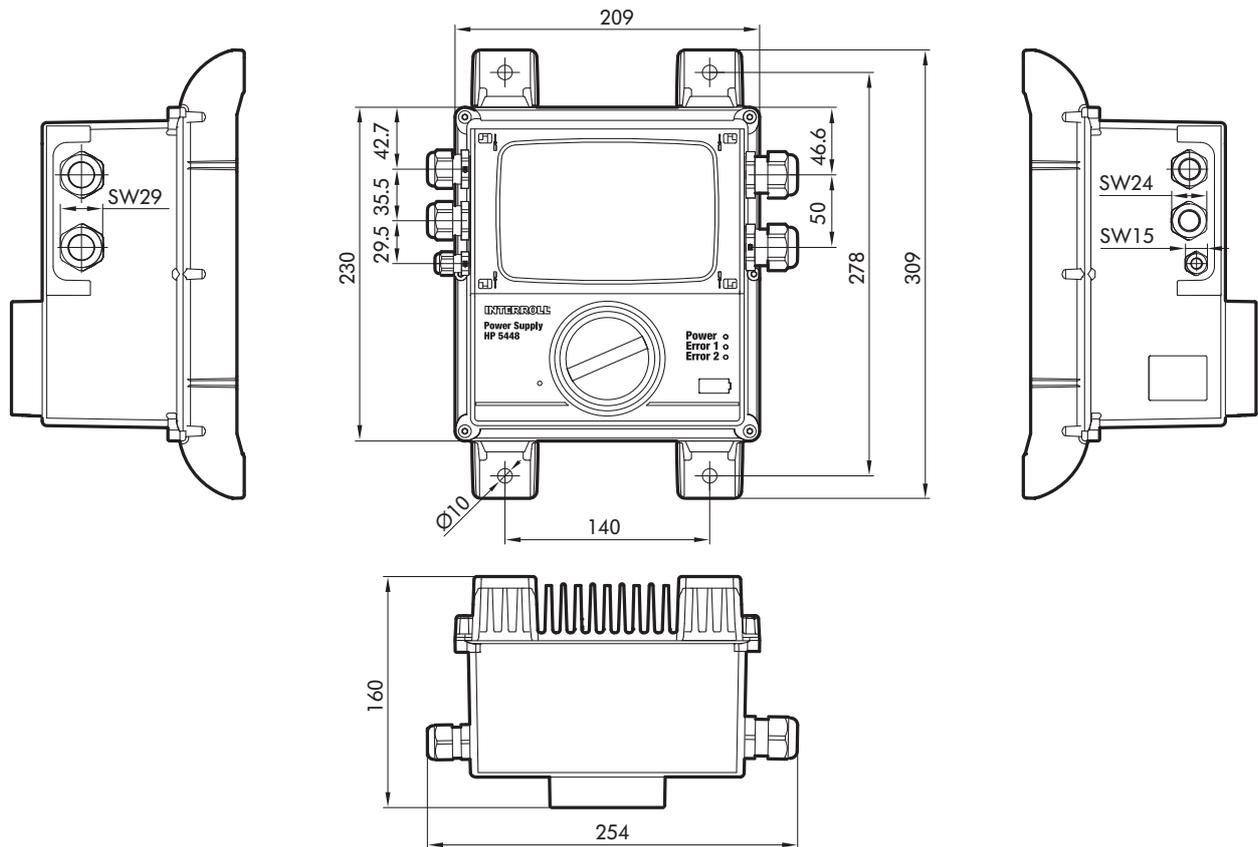
24V

48V

400V



### Dimensions



### Accessories

- Set of rubber seals for all cable screw connections
  - 48-V DC output for one flat cable, article number: S-1115406
  - 48-V DC output for two flat cables, article number: S-1115407
  - 48-V DC output for a round cable ( $\varnothing$  5 up to 13 mm), article number: S-1115405

## 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	250 x 95 x 115 mm (L x W x H)	on request

## 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

## Universal support, fixed



Side guides, sensors, reflectors and other add-on components, such as scanners, are attached to the fixed universal support. Fixed universal supports are attached directly to the side profile.

Designation	Dimensions	Reference number
Universal support, fixed	60 mm (55 mm above T.O.R.)	63161717

## Universal support, flexible



Side guides, sensors, reflectors and other add-on components, such as scanners, are attached to the flexible universal support. Flexible universal supports are attached laterally to the profile. Each of these holders can accommodate two flexible universal support brackets.

Designation	Dimensions	Reference number
Universal support, flexible	200 mm (55 mm above T.O.R.)	63161726

# ACCESSORIES

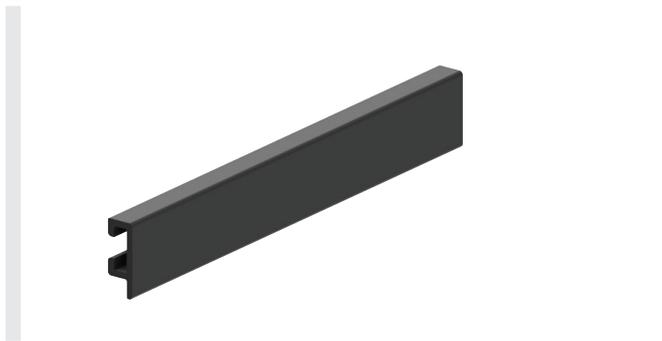


24V

48V

400V

## Side guide



Side guides are used for reliably guiding the product on roller conveyors and belt conveyors, as well as on the corresponding components. We offer the side guides in an aluminum and a polymer version. In particular, because of the flexible material, the guides can be adjusted to the material flow in curves, as well as when merging and diverting.

Designation	Dimensions	Reference number
Aluminum side guide	40 x 15 x 2000 mm	63133351
Polymer side guide	40 x 15 x 2000 mm	63010049

## Side guide holder



The side guide profile is attached to the universal support with the side guide holder.

Designation	Dimensions	Reference number
Side guide holder	38 x 34 x 26 mm	63161739

## Side guide connector



Side guides are connected to each other at the transition of two modules with the side guide connector.

Designation	Dimensions	Reference number
Side guide connector	70 x 28 mm	63010050

## End cap for side guide profile



An end cap is attached to the end of a side guide. The contour prevents products from being caught.

Designation	Dimensions	Reference number
End cap for side guide profile	100 x 40 x 40 mm	63010039

## End cap for side profile



The end cap closes a side profile at the front.

Designation	Dimensions	Reference number
End cap for side profile	115 x 35 x 3 mm	64000900

## Magnetic Speed Controller MSC 50



The magnetic speed controller MSC 50 is a purely mechanical speed controller that ensures a controlled, slow speed on gravity conveyors with materials weighing from 0.5 kg (1 lbs) to a maximum of 35 kg (77 lbs). The magnetic speed controller operates without a gear box, thus enabling startup for very lightweight containers. Heavy containers are transported at a controlled speed thanks to the consistently high braking performance.

Designation	Dimensions
Magnetic Speed Controller MSC 50	Min./max. between frames (BF): 210 – 1,400 mm Tube diameter: Steel 51 mm, steel with PU sleeve 54 mm

## Safety equipment



The safety equipment (e.g. to satisfy the requirements of the standard EN 619:2022) was specially developed for accessible areas of conveyor systems in the proximity of personnel. It is available for various conveyor modules to ensure increased contact protection (e.g. in high-traffic areas or at workstations).

- Black powder-coated steel sheets (side guide, filling panel, end plate)
- Available for straight sections, curves and merging and diverting situations
- Optional contact guard for accessible areas
- Under guard of aluminum chain link

	Designation	Dimensions
1	Filling panel	Depending on master module
2	End plate	Depending on master module
3	Under guard	Aluminum chain link Q20x13.9 – 1.5x1.5 mm, width depending on master module
4	Steel sheet side guide	Height 68 mm, suitable for standard design

# 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:

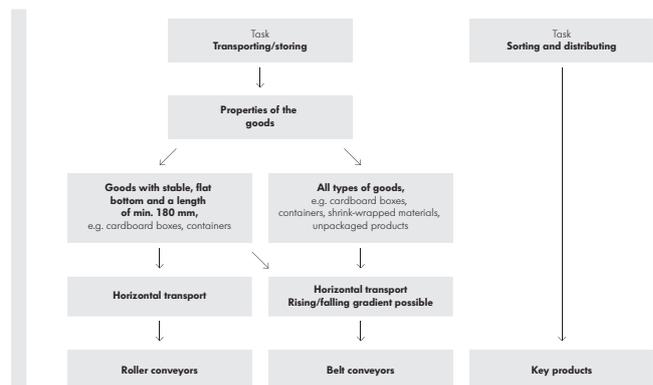
- Suitable bottom for transport on roller conveyors:  
The bottom must be suitable for transport on roller conveyors. In particular, this means that it is smooth, perfectly closed or at least homogeneously ribbed, or in similar conditions. Indentations (e.g. with surrounding edges at the bottom, ribs, 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 50 kg/m or 50 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 page 118
- 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 following chart: roller conveyors, belt conveyors and key products.



### Roller conveyors

#### Weight classes

In general, Interroll groups conveyors by the weight of the transport material into the following classes:

- Up to 35 kg: Light
- Up to 500 kg: Medium
- Up to 1500 kg: Heavy

This catalog includes materials up to 50 kg, i.e., up to part of the medium weight class.

Transport material	Cardboard cartons, plastic containers, trays, etc.
Load capacity	Up to 50 kg/m
Conveyor speed	0.1 to 2.0 m/s
Between frames (BF)	420, 620, 840 mm (special sizes on request)
Roller pitch (P)	60, 90, 120, 150 mm
Rollers	Interroll Series 1700, Interroll Series 3500 and Interroll Series 1100 in PVC or steel, zinc-plated (special types on request)
Ambient temperature	-30 to 0 °C or 0 to +5 °C or +5 to +40 °C (depending on the product)

#### Drive classes

In general, Interroll groups conveyor modules by drive technology into the following classes:

- Non-powered roller conveyors
- Powered roller conveyors at 24/48 V
- Powered roller conveyors at 400/460 V

Non-powered gravity conveyors are used as low-cost, simple solutions for many conveying areas. The transport good is moved by gravity (angle of conveyor) or manually. Optional speed controllers brake the conveying speed of the transport good on inclined roller conveyors.

Powered conveyors are used for continuous transport, or for zero pressure accumulation of transport goods whose throughput can be precisely calculated. Merging and diverting of transport goods is implemented by using our powered key products.

#### Working with maximum values

Minimum and maximum performance data are listed at many points in this catalog. These extreme values, e.g., maximum permissible weight and maximum permissible speed, cannot always be combined with each other without restrictions. If you have any doubts, please contact your Interroll customer representative.

#### Basic principles for trouble-free transport

In order to transport the conveying good flawlessly on a roller conveyor, the following basic principles must be followed:

##### Roller pitch

The roller pitch must be selected so that at least five conveyor rollers are underneath the conveying good at any given time:

$$P \leq \frac{L}{5}$$

P	Roller pitch in mm (")
L	Conveying good length in mm (")

##### Load capacity

The weight of the conveying good must be distributed onto as many conveyor rollers as necessary so that the maximum load capacity of each individual conveyor roller is not exceeded. This may mean that more than five conveyor rollers must support the conveying good.

More information about conveyor rollers is available in Interroll's Conveyor Roller Catalog.

# APPLICATION NOTES

## ROLLER CONVEYORS

### Lane width and measure between frames

The parameter (BF) is a measure between the side frames. The lane width (LW) is the measure between the side guides. With fixed side guides,  $LW = BF$ .

With flexible side guides, the LW measurement can be larger or smaller than BF in order to flexibly guide products, e.g. in curves. On each side, the use of flexible side guides can change the LW measure by  $-90/+120$  mm ( $-3.54"/+4.72"$ ).

The lane width of the conveyor for straight paths is at least the width of the transport material + 20 mm:

$$LW \geq B + 20 \text{ mm}$$

LW	Lane width in mm (") between the side guides
B	Transport material width in mm (")

In the following cases, a larger lane width, possibly deviating from the measure between the frames, must be selected:

- For conveyors into which transport material is being merged.
- For curves.

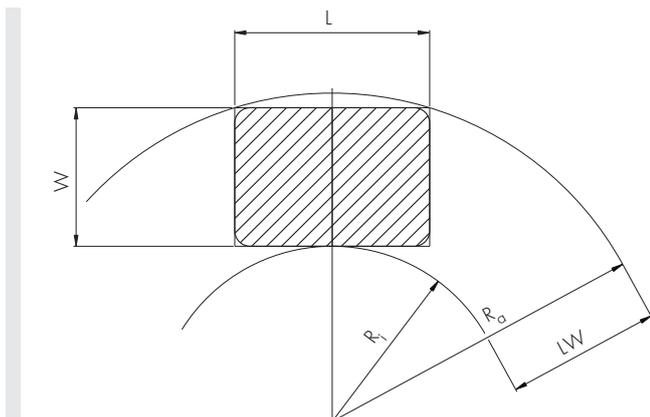
### Lane width in curves

In general, the lane width (LW) must be greater in curves than for straight conveyor paths; for this purpose, the flexible side guide is adjusted accordingly without additional components.

The minimum required outside radius of the side guide ( $R_o$ ) can be calculated as follows with a given inside radius:

$$R_o = \sqrt{(R_i + W)^2 + (L / 2)^2}$$

The inside radius for our curves is always 825 mm and is measured at the inside edge of the profile.



L	Maximum length of transport material in mm (")
W	Maximum width of transport material in mm (")
LW	Lane width in mm (")
$R_o$	Outside radius of curve for rectangular transport material in mm (")
$R_i$	Inside radius* of curve in mm (")

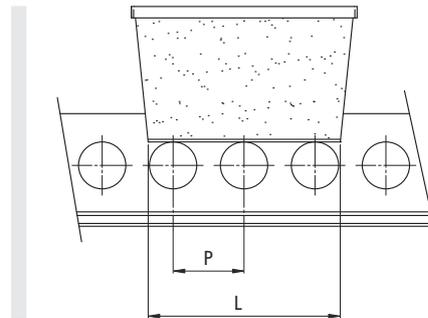
Curve modules from Interroll are available in 420, 620 and 840 mm (16.5", 24.4", 33" nom.) measure between frames (BF). A side guide is equipped with flexible mounting brackets and allows for expanding the lane width (LW) by 120 mm (+4.72") compared to the measure between frames of the rollers.

### Trouble-free transport

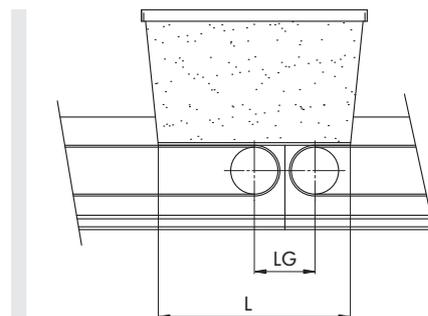
The roller pitch and the dimensions of the transition gap between two conveyors are very important for trouble-free transport.

Transport disturbances can be prevented by taking the following measures:

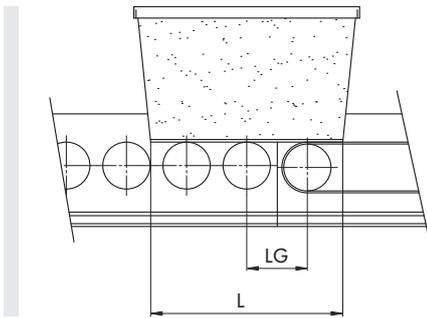
- Select roller pitch P so that at least three rollers are located below the transport material.



- Select the transition gap LG for all conveyors so that the gap measures less than one third of the transport material length.



- With a transition between belt and roller conveyors, the roller pitch  $P$  and transition gap  $LG$  should be selected so that the gap is less than one third of the transport material length, and so that at least two conveyor rollers are below the transport material when material exits a conveyor.

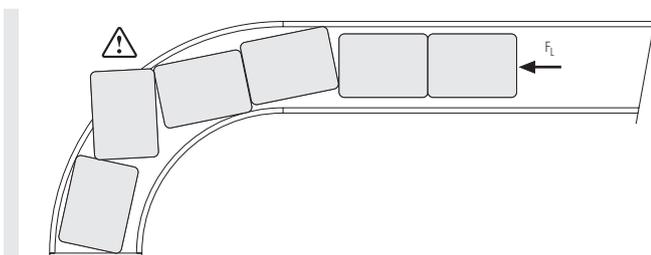


LG	Transition gap in mm (")
L	Length of transport material in mm (")
P	Roller pitch in mm (")

### Ejection of transport material in curves

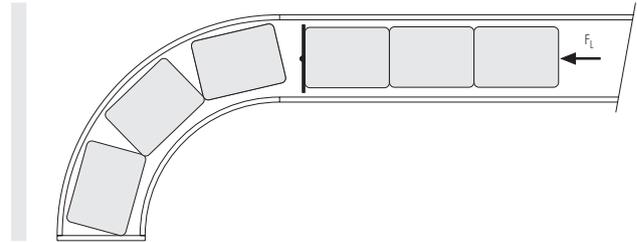
Interroll recommends not accumulating any transport materials in curves – except for zero pressure accumulation conveyor systems .

Since accumulation pressure generates externally acting forces in the curve, transport materials in the curve area could be pushed beyond the conveyor edge. This may damage transport materials and cause personal injury.



The accumulation pressure in a curve may be prevented by taking the following measure:

- An additional stop directly in front of the curve



### Calculations

#### Throughput

The throughput  $T_p$  of a conveyor system is given in units/hour and depends on the size of the conveying good, the conveying speed and the cycle times of merging and diverting units.

The window size  $T$  is required for calculating the throughput. The window size  $T$  is the distance from the front edge of a conveying good to the front edge of the following conveying good, irrespective of the actual length of the conveying good or zone length.

For the precise calculation of the power capacity  $T_p$ , please contact your Interroll customer representative.  $T_p$  for straight paths can roughly be calculated as follows:

$$T_p = \frac{3.600 \cdot v}{T}$$

$T_p$	Throughput in units/hour
$v$	Conveying speed in m/s (ft/m)
$T$	Window size in m (")

With merging and diverting, throughput is additionally influenced by the actual length and weight of the conveying good as well as the transfer cycle. Please contact your Interroll customer consultant for calculations.

# APPLICATION NOTES

## GENERAL TECHNICAL INFORMATION

### General technical information

#### General product information

##### Side profile

Interroll solves conveying tasks with only one side profile. Exceptions are belt curve and belt merge.

Steel profile 115 x 35 x 2.5 mm

- Standard profile for all straight roller and belt conveyors
- Standard profile for all roller conveyor curves and Belt Curve Light
- Roller-formed steel profile with powder coating
- The upper roller edge or the upper edge of the conveyor belt is always 5 mm higher than the upper profile edge
- Cover made of black PVC
- The space behind the cover can be used as electrical conduit and for housing controller components
- The profile has a continuous hole pattern in a grid of 30 mm for attaching all the required add-on components

##### Crossbar and electrical conduit

Side profiles are connected with crossbars at regular intervals. They also serve as electrical conduit between the two side profiles.

##### Side guide

Side guides can be attached to the side profile. They guide the product on the track and prevent products from falling off. Please take the variants of the side guide into account when ordering conveyors.

The Interroll side guides are offered in two variants:

- Fixed side guide  
The side guide profile is attached to the top side of the side profile with the help of universal supports. The guide area of the profile is aligned with the inside of the side profile.
- Flexible side guide  
The side guide profile is attached to the side of the side profile with the help of flexible universal supports. The guide area of the profile can be positioned +120/-90 mm (-3.54"/+4.72") offset parallel to the side guide with the help of a Z-shaped holder.  
This must be taken into account especially in curves for implementing the increased space requirement with the constant measure between frames of the conveying profiles. Products that are smaller as well as larger than the actual conveyor width can be guided with precision.  
With the help of the flexible side guide, materials can also be guided or aligned at an angle to the direction of transport.

Two side guide profiles can be fastened above each other on one mounting bracket. This creates a continuous closed side guide with a height of 80 mm from the upper roller edge.

Each conveyor includes two connectors for connection to the side guide of the next module.

##### Profile connectors

The side profiles of the modules are connected form-fit with a profile connector. Each conveyor module includes 2 profile connectors.

##### Sensors/Reflector

Sensors and reflectors can be installed in two ways:

- Firmly installed directly on the side profile
- Flexibly installed on a flexible universal support with additional assembly plate

In both variants, the studs of the sensor holder are fed through two adjacent holes and secured on the opposite side with the fastening clip. The clip engages noticeably through lateral movement and secures the sensor holder in place. The reflector holder is installed in the same way. Our standard sensor type is Pepperl+Fuchs ML100.

##### Interroll Layouter

The Interroll Layouter gives you a menu-driven CAD tool that provides professional support in planning a conveyor system with proven Interroll solutions.

The Interroll Layouter is based on Emulate3D from Rockwell Automation – a widely used and proven program for planning systems. The intuitive tool includes all the modules of Interroll platform solutions, such as MCP, MPP, SHC, Dynamic Storage and Sorter.

The layouts are drawn based on our design guidelines and automatically calculated using application-specific parameters. All parameters are exported to an Excel-based conveyor list which Interroll can use as the basis for creating quotations, quickly and reliably. The layouts can be saved in different common formats, such as .dwg, .dxf, .pdf, .step, .iges and others.

The layouts can be animated using 3D models, thereby providing an option for spatial viewing of their material handling.

For more information, please contact your Interroll contact person.

# APPLICATION NOTES

## 24/48-V ROLLER CONVEYOR

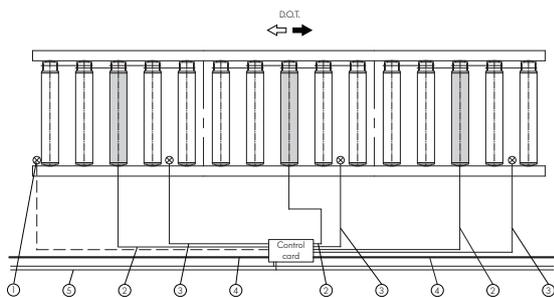
### 24/48-V roller conveyor

#### Zones

Each conveyor line is divided into zones that are matched to the maximum length of the transport good.

Each zone has:

- A RollerDrive (24/48-V motor installed in the pipe)
- Idlers driven via belts
- An internal control card that controls a maximum of four zones at the same time
- A sensor/reflector



D.O.T.	Conveyor direction
1	Start photo cell (optional)
2	RollerDrive connection
3	Photo cell connection
4	Communication cable (Ethernet)
5	24/48-V power bus

One to four zones form a pre-installed conveyor module with complete cabling which can be connected with other modules.

#### Drive

Interroll uses RollerDrive EC5000 as a drive in the 24/48-V conveyors.

RollerDrive EC5000:

- Internal commutation electronics (brushless motor)
- 9 gear stages
- Constant constant conveyor speed, dynamically controllable
- Energy recovery in braking
- Electronic holding brake
- Motor cable with 5-pole snap-in plug

Technical data:

General technical data	Mechanical power	32 W
	Noise level	55 dB (A)
Electrical data	Rated voltage	24 V DC
	Voltage range	18 to 28 V DC
	Idle current	0.4 A
	Rated current	2.0 A
	Max. start-up current	5.0 A
	Permissible voltage ripple	< 5 % recommended: < 1 %
	Protection rate	IP54
Dimensions	Tube diameter	50 mm
	Wall thickness	1.5 mm
	Max. reference length	1,500 mm
Ambient conditions	Ambient temperature in operation	0 to +40 °C
	Ambient temperature during transport and storage	-30 to +75 °C
	Max. humidity	90 %, non-condensing

Gear stages:

Gear ratio	Max. speed [m/s]	Nominal torque [Nm]	Rated braking torque [Nm]	Rated braking torque [Nm]
9:1	1.75	0.45	1.10	0.36
12:1	1.31	0.61	1.46	0.48
16:1	0.98	0.81	1.95	0.64
20:1	0.79	1.01	2.44	0.80
24:1	0.65	1.21	2.92	0.96
36:1	0.44	1.82	4.38	1.44
48:1	0.33	2.42	5.85	1.92
64:1	0.25	3.23	7.80	2.56
96:1	0.16	4.84	11.69	3.84

For further information, please use our Catalog for RollerDrive, Control System, and Power Supply.

# APPLICATION NOTES

## 24/48-V ROLLER CONVEYOR

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### Start photo cell

At the beginning of a line is an optional photo cell (accessories, page 113) that starts the system.

### MultiControl

Each control communicates with its adjacent controls via a data cable. This cable transmits signals to the start, for accumulation, for error detection, for service life or for the execution of specific control processes along the conveyor system.

A MultiControl has four additional connectors for incoming signals, e.g., for starting merging and diverting processes.

An Ethernet bus connector is available for the connection to a master control; the entire system can be controlled via this connector and status information can be read. The Ethernet/IP, PROFINET and Ethercat protocols are available.

The drive side and the electrical side with the control can be selected for the straight 24/48-V conveyor and must be specified when ordering. The control is typically located in the profile for curves at the outside radius.

## 400-V roller conveyor

### Operating modes

Driven roller conveyors with flat belt drive and 400/460-V-motor are intended as transport conveyors. For buffering of conveying goods with zero pressure accumulation, Interroll recommends using the 24 V / 48 V zone-based roller conveyor.

### Drive

The rollers are driven by a flat belt tangentially guided at the bottom. Pressure elements secure the contact between belt and roller.

### Modules

The conveyors consist of 3 different modules:

- Drive module with 400/460 V drive, once at the beginning of the conveyor, incl. belt deflection
- Intermediate module, multiple possible
- End module, once at the end of the conveyor, incl. belt deflection

### Length

The length of a flat belt-driven conveyor is limited to 12000 mm. The dimensioning of the motor output is handled by Interroll according to the speed and weight requirements.

### 400 V roller curves

Flat belt-driven curves always have a fixed drive. Accumulation on a curve is not possible.

Curves are available at 30°, 45°, 60° and 90° angles. A drive station in curves is not possible. If a conveyor section begins with a belt-driven curve, the drive station is positioned at the start of the curve as a short straight section.

Per drive, a maximum of two 90° curves in the same direction of rotation or one 90° curve with attached straight is possible.

### Drive and deflection stations

For modules with flat belt drive, the drive side (left or right in direction of transport) as well as the position of the deflection units must be specified. The following representations clarify the possible drive sides and positions of the terminals.

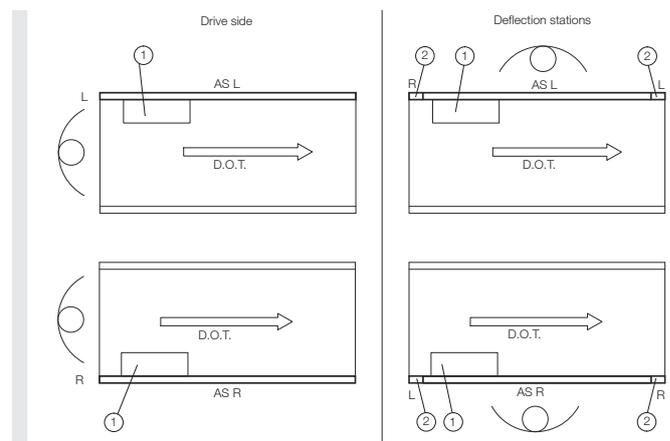


Fig.: Drive side right (R) and left (L) and terminals

D.O.T.	Conveyor direction
1	Motor
2	Deflection unit
AS R	Drive side right
AS L	Drive side left

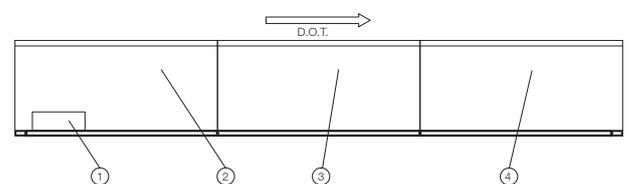


Fig.: Example of a conveyor line with three modules

D.O.T.	Conveyor direction
1	Motor
2	Drive module, terminal left: DL; drive side right: R
3	Intermediate slave module: SI; drive side right: R
4	Slave module, terminal right: SR; drive side right: R

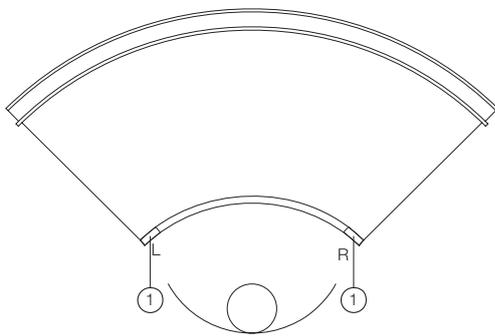
# APPLICATION NOTES

## 400-V ROLLER CONVEYOR

### Curves with flat belt drive

In principle, the drive side of the curve is at the inside radius. The position of the terminals must be specified when ordering; they are always determined viewed from the curve center.

A maximum of two curves in the same direction of rotation are possible per drive. The max. length of the straight portion of the conveyor is reduced by 3000 mm for each curve.



1	Deflection unit
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### Belt conveyors

Belt conveyors are primarily used for transport tasks that cannot be handled with roller conveyors or only under difficult conditions.

Interroll Belt Conveyors are suitable for the following applications:

- Incline and decline conveyors
- Acceleration conveyors
- Conveyors for materials with uneven bottom
- Conveyors for compact or irregularly-shaped transport material
- Conveyors for high conveyor speeds

Interroll Belt Conveyors are not suitable for outdoor operation or for the transport of bulk material.

### General technical information

#### Drive

Standard Interroll Belt Conveyors are driven by a head drive or center drive with Interroll Drum Motors.

Advantages of Interroll Drum Motors:

- **Plug and play:**  
Interroll Drum Motors are much quicker and easier to install than conventional drive systems. Fewer components mean reduced costs for conveyor design and purchasing of parts.
- **Hard-wearing:**  
Interroll Drum Motors keep operating at 100% even under aggressive environmental conditions, such as water, dust, grit, chemicals, grease, oil and even during high pressure wash-down procedures.
- **Hygienic design:**  
Due to the smooth, stainless steel finish and the hermetically sealed and totally enclosed design, Interroll Drum Motors are much easier to clean and therefore reduce the risk of contamination in food processing.
- **Energy efficient:**  
Compared with many other drives commonly used in industry today, Interroll Asynchronous Drum Motors use up to 32% less energy and when using synchronous drum motors up to 45% less energy, thus significantly reducing energy bills and the global carbon footprint.
- **Space saving:**  
Because the motor, gearbox and bearings are mounted within the drum shell, the drum motor takes up much less space.
- **Safe:**  
As a self-contained component without protruding parts and with fixed external shafts, an Interroll Drum Motor is probably the safest drive unit available for state-of-the-art material handling equipment.

- **Maintenance-free:**

The totally enclosed motors ensure that the internal parts are unaffected by external conditions and maintain trouble-free operation for all kinds of applications.

### Technical specifications of drum motors

	DM 0080	DM 0138	165i	217i
Technology	Synchronous	Asynchronous	Asynchronous	Asynchronous
Diameter	81.5 mm	138.0 mm	164.0 mm	217.5 mm
Gear material	Steel	Steel	Steel	Steel
Rated power	145 to 425 W	160 to 1000 W	0.306 to 2.200 kW	0.306 to 3.000 kW
Rated torque	2.1 to 65 Nm	15.7 to 238.3 Nm	28.1 to 365.2 Nm	28.1 to 533.6 Nm
Belt pull	1594 N	3454 N	347 to 4453 N	261 to 4907 N

For further information, please use our Drum Motor Catalog.

### Conveyor belts

2-layer polyester belts with PVC or PU coating are used as conveyor belts. Incline, decline and acceleration conveyors are equipped with laterally grooved surface structures to avoid slippage of the transport material. Others on request.

### Slider bed

Interroll Belt Conveyors are equipped with zinc-plated sheet steel as slider beds. Other slider beds are available on request.

### Classification of Interroll Belt Conveyors

Interroll Belt Conveyors are classified according to the following features:

- Use as a horizontal conveyor or incline/decline conveyor
- Conveyor length
- Lane width
- Conveyor speed
- Max. load capacity/m
- Max. overall load capacity/drive
- Not suitable for reversing operation

# APPLICATION NOTES

## BELT CONVEYORS

Transport material	Boxes, packages, plastic containers, plastic parts, trays, etc.
Load capacity	Up to 50 kg/m
Max. total load capacity	550 kg
Conveyor speed	0.1 to 2.5 m/s
Lane width	420, 620, 840 mm, others on request
Conveyor length	700 to 30000 mm
Incline/decline	Max. 18°
Ambient temperature	0 to +50 °C

### Horizontal belt conveyors

Horizontal Interroll Belt Conveyors can be supplied completely assembled up to a length of 4080 mm. Longer conveyors are always made up of several module segments. These segments must be assembled and adjusted on-site.

The required power capacity depends upon the conveyor length, the belt speed and the belt load of the conveyor. Calculation of the required power capacity is carried out by Interroll in accordance with your specifications. As a point of reference, you can calculate the power capacity with the simplified formula on page 127.

Head drive with drum or gear motor is possible for Interroll Belt Conveyor BM 8410 if the overall weight of the transport material is less than 220 kg and the conveying speed does not exceed 2.5 m/s (492 ft/m). If higher loads and/or speeds are required, a center drive is used.

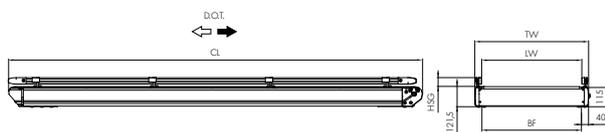


Fig.: Interroll Belt Conveyor BM 8410 (head drive)

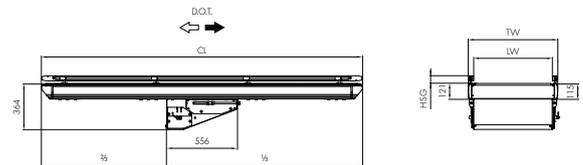


Fig.: Interroll Belt Conveyor BM 8411 (center drive)

CL	Conveyor length
D.O.T.	Direction of transport

### Incline and decline conveyors

Interroll Belt Conveyors BM 843x with incline/decline are used if height differences have to be managed. The conveyors can be equipped above with a horizontal component with a fixed angled frame as well as below with an incline power feeder or decline power feeder.

The maximum angle of incline or decline depends on the material to be conveyed. For containers and cardboard boxes, the angle should be max. 15° to ensure a trouble-free transport.

The drive type is a center drive with drum motor or shaft-mounted gear motor. The motor typically has a brake with a brake voltage of 400/460 V.

The required power capacity depends upon the conveyor length, the construction form of the belt conveyor, the belt speed and the belt load of the conveyor. The calculation of the required power capacity (in kW/HP) is performed by Interroll according to your specifications.

#### Note about support stands:

For incline and decline conveyors please use the RM 8841 steel supports (page 100). With an infeed height or discharge height T.O.B. > 2000 mm, cross bracing is provided by Interroll for stability.

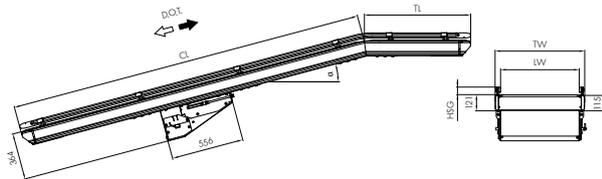


Fig.: Interroll Belt Conveyor BM 8432 center drive + top arch

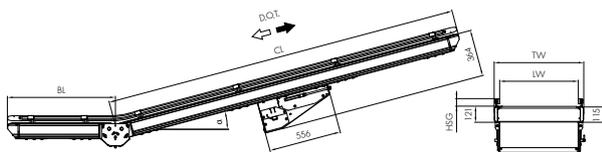


Fig.: Interroll Belt Conveyor BM 8433 center drive + incline

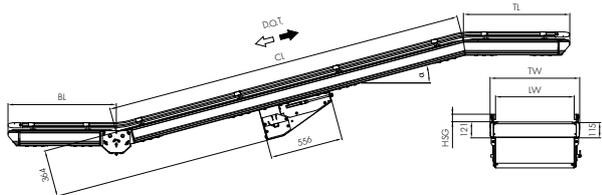


Fig.: Interroll Belt Conveyor BM 8434 center drive + top arch + incline

CL	Conveyor length
BL	Bottom length
TL	Top length
D.O.T.	Conveyor direction
T.O.B.	Onload/discharge height
$\alpha$	Angle, max. 18°

## Calculations

### Throughput

The throughput  $T_p$  of a belt conveyor is given in units/hour and depends on the transport material dimensions and conveying speed.

The window size  $T$  is required for calculating the throughput. The window size  $T$  is the distance from the front edge of a transport material to the front edge of the following transport material, irrespective of the actual length of the transport material or zone length.

For the precise calculation of the power capacity  $T_p$ , please contact your Interroll customer representative.  $T_p$  for straight paths can roughly be calculated as follows:

$$T_p = \frac{3.600 \cdot v}{T}$$

$T_p$	Throughput in units/hour
$v$	Conveying speed in m/s (ft/m)
$T$	Window size in m (ft)

With merging and diverting, throughput is additionally influenced by the actual length and weight of the transport material as well as the transfer cycle. Please contact your Interroll customer consultant for calculations.

### Power capacity

The power capacity  $P$  of an Interroll Belt Conveyor (applies only to horizontal conveyors) is specified in kW. The power capacity depends on the overall weight  $m$  of the transport material in kg and the conveying speed  $v$  in m/s.

For the precise calculation of the power capacity  $P$ , please contact your Interroll customer representative.  $P$  can be calculated with the simplified formula:

$$P = v \cdot m \cdot 0,005$$

$p$	Power capacity in kW (HP)
$v$	Conveying speed in m/s (ft/m)
$m$	Overall weight of transport material in kg (lbs)

# APPLICATION NOTES

## BELT CONVEYORS

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For example, the power capacity  $P$  at a conveying speed of 0.5 m/s and an overall weight of 200 kg is calculated as follows:

$$P = 0,5 \frac{\text{m}}{\text{s}} \cdot 200 \text{ kg} \cdot 0,005 = 0,50 \text{ kW}$$

Since the actual power capacity should always be higher than the calculated value, the selection of a power capacity of at least 0.55 kW is recommended for the example.

Interroll reserves the right to select a drive that meets the factory standard.

## Belt curves and merges

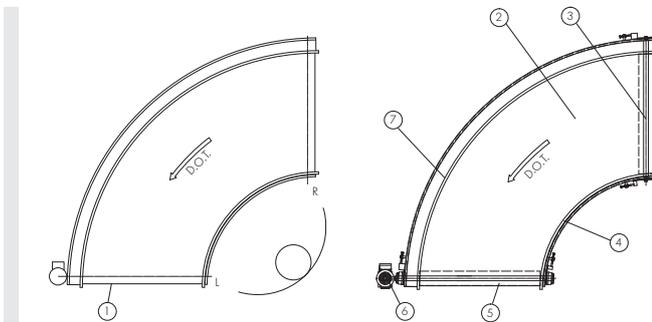
### Average length of merge BM 8455 with gear motor and BM 8465 with drum motor

30°		45°	
BF	LM	BF	LM
620	987	620	760
840	1192	840	885
1020	1348	1020	975
1220	1507	1220	1060

### Definition of the direction for an order

With belt curves, the direction is defined relative to the inside radius of the belt curve:

The left side is seen from counterclockwise direction and the right side from a clockwise direction (see the following diagram).



D.O.T.	Conveyor direction
R	Clockwise
L	Counterclockwise
1	Drive roller
2	Belt
3	Idler pulley
4	Inner side guide
5	Drive roller
6	Gear motor
7	Outer side guide

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# EXTENSIVE EXPERTISE IN CONVEYORS



The Interroll Competence Center in Mosbach (location Obrigheim, Germany) concentrates on a range of conveyors that are used in container conveying as well as pallet conveying. This includes roller and belt conveyors, such as the Modular Conveyor Platform (MCP) and the Modular Pallet Conveyor Platform (MPP).

In these product areas, the Interroll Conveyor GmbH within the Interroll Group is responsible for all technical aspects, from the development and application technology up to the production and support of the local Interroll companies.

Visit [www.interroll.com](http://www.interroll.com) to find your local contact person.

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## LEGAL NOTICES

### Contents

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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 Handling" (pallet flow and storage). 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.

From its headquarters in Switzerland, Interroll manages a global network of 35 companies with roughly 2400 employees (average staff in 2023).

**[interroll.com](https://www.interroll.com)**