ANDRZEJEWSKI™









CONVEYORS

ELEMENTS SYSTEMS SOLUTIONS

MOVLINK®

www.andrzejewski.pl

Belt conveyors



EBS 40-D1
direct drive

EBS 40-I1
indirect drive

Our company is the manufacturer of big variety of conveyor types, especially belt conveyors, modular chain conveyors or roller conveyors.

The concept of our designs benefits from our rich experience in production, development and implementation of the transport systems. Our main aim is to, basing on the gained experience, allow the clients to benefit from our products, worldwide.

The best production performance results may be achieved when the modular design of the production line is implemented and for this reason our designers are tending to apply different modules connected to each other. The most sophisticated design concepts are making use of the premade modules so that in easy way the technically advanced projects may be prepared. Moreover. on the design project stage we pay attention to the practical aspects and due to this we are able to combine technically advanced solutions with efficient production methods.



Adjustable side guides





ECDR 40 and ECDR 80 series conveyors are available with the drum motor driven version

Belt conveyors



EBS 40-M2
direct centre drive

The conveyors offered by our company are built with the use of system sub-assembly components what allows further system extension. Also the conveyors may be applied in the modernisation process of the other conveyors.

Due to the big components stock we are able to create the conveyors or supply the spare parts in a very short time.

Besides, we may offer you a modern computer aided solutions, allowing to design the conveyor of any configuration and then saving the results in any file format. No matter if you used AutoCad, Solid Works or Creo you are able to prepare your project quick and easy.



Knife edge return unit
(D=15 mm return unit)

Three belt conveyor size series are available:

ECA 30 conveyor series
- 100-400 mm standard width
- maximum capacity – 30 kg/m

EBS 40 conveyor series
- 100-800 mm standard width
- capacity range: 20 – 100 kg/m

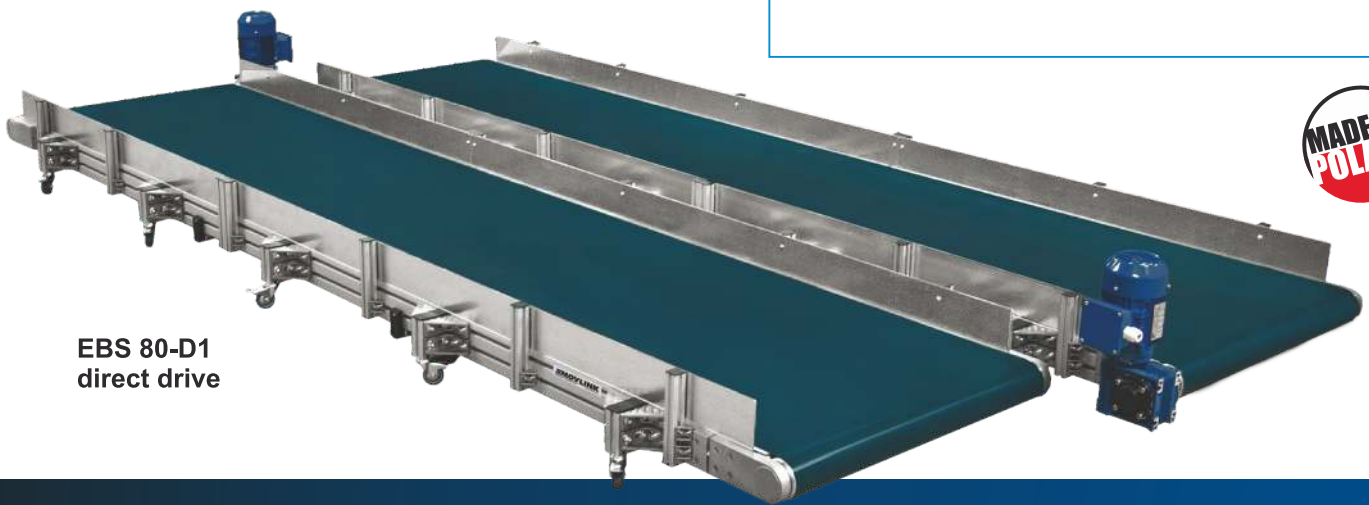
EBS 80 conveyor series
- 200-1500 mm standard width
- maximum capacity – 150 kg/m

Advantages abstract:

ECA 30 conveyor series is equipped with 35 mm return roller, what enables transport of small elements of medium load.

EBS 40 conveyor series is equipped with 15 mm or 45 mm return roller, depending on the chosen option. The maximum capacity is greater than in case of ECA 30 series, what makes the EBS 40 series the most applied type in variety of applications.

EBS 80 conveyor series is adapted for heavy loads. With width ranging up to 1500 mm and length up to 16 m the conveyors meet most heavy requirements.



EBS 80-D1
direct drive

MADE IN POLAND

Belt conveyors

We are the manufacturers of wide variety of conveyors

We provide to you belt conveyors that are perfect for transporting both light and heavy materials, as well as loose and general loads.

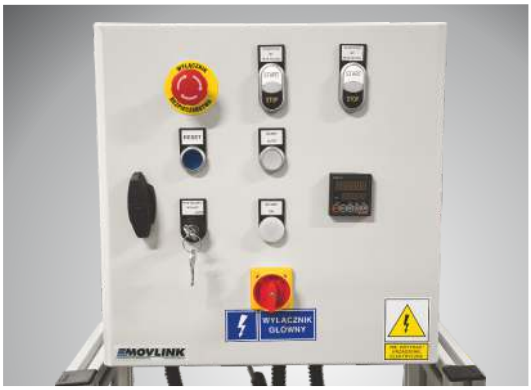
Our transporters consist of a load-bearing frame and a support structure that was created on the basis of properly selected aluminium profiles. The drive system applied in the belt conveyors and the transport belt are selected individually according to the Customer's needs. Thanks to it, we provide you with systems that are fully adjusted to your requirements.



All belt transporters in our offer are sold, depending on the recipient's requirements, as:

- lone transporter designed for further development in the device created by the recipient and controlled from this device's control system,
- as a transporter with load-bearing frame without a control and supply system,
- a complete solution equipped with load-bearing frame and control system, designed for the recipient's unaided start-up or started-up by our company's servicemen.

Task devoted control system



START/STOP control unit



The offered conveyors may be equipped with several types of control units. Most common solutions include:

- START/STOP standard control – the drive motor is in this case protected with a motor circuit breaker.
- Smooth, adjustable belt speed control – the power is supplied to the drive motor through the power inverter.
- Smooth, adjustable belt speed control with increased safety standard – the system is similar to the above described however, it is equipped with safety relay module.
- Control intended for connection with external devices – the devices may include robots, injection molding machines etc. The control systems of the external devices have to be able to exchange control signals.
- Control devoted to the particular task – control systems built on special requests, in cases where the conveyor work cycle is to fulfill the given work sequence diagram.

The above offered control systems may be expanded with diversity of different sensors, allowing to implement the necessary work cycles. The most commonly applied sensors include end stop sensors which turn the conveyor drive off in order to prevent the product falling from the conveyor. Also the sensor may be applied in front of the conveyor route in order to turn the drive on when the product is detected what has a crucial influence on the energy saving.



Straight conveyor with a power inverter equipped control unit

Straight conveyors

Straight belt conveyors are built based on each of the three series of the offered transporters. Transporter's load-bearing frame width may be from 60 to 1500mm. The load-bearing frames are executed based on dedicated structural aluminium profiles, compatible with the existing systems of the leading manufacturers.

Diameters of return and drive rollers are 35, 45 or 85mm. When transporting light products of insignificant dimensions it is possible to apply razor transporter ends with roller diameter of 15mm.



Angle conveyors

Angle belt conveyors may be understood twofold:

1. As transporters with a simple load-bearing frame structure, which due to their determined task are mounted on a frame causing inclination of the transport route in a manner that causes that the conveyor loading and unloading is carried out on different levels.

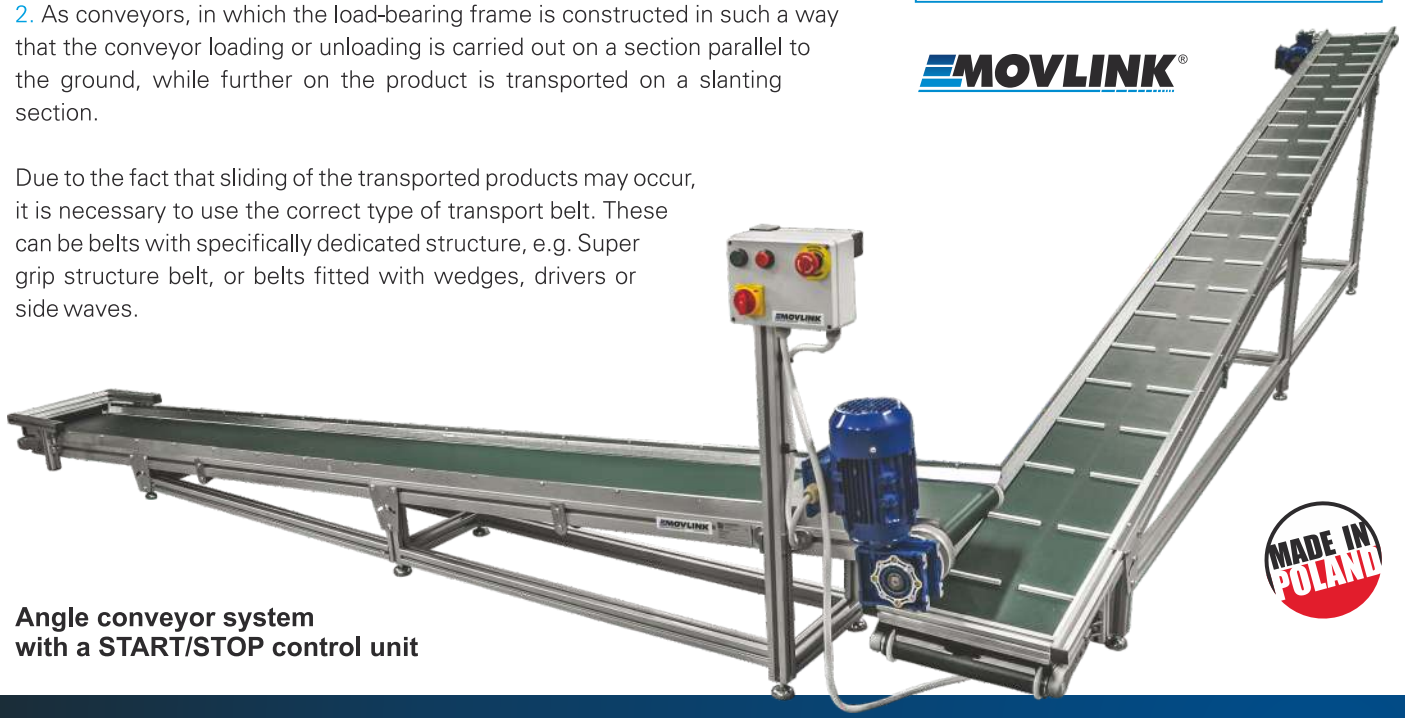
2. As conveyors, in which the load-bearing frame is constructed in such a way that the conveyor loading or unloading is carried out on a section parallel to the ground, while further on the product is transported on a slanting section.

Due to the fact that sliding of the transported products may occur, it is necessary to use the correct type of transport belt. These can be belts with specifically dedicated structure, e.g. Super grip structure belt, or belts fitted with wedges, drivers or side waves.

Depending on the chosen conveyor series the drive type include:

- direct head drive,
- indirect head drive,
- direct centre drive,
- drum motor head drive.

MOVLINK®



Angle conveyor system with a START/STOP control unit

MADE IN POLAND

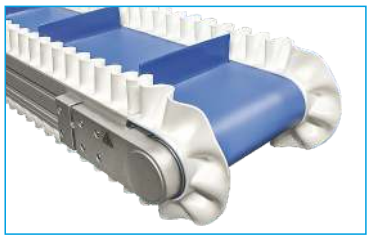
Belt conveyors



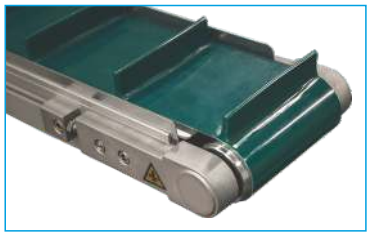
„Z" type conveyors

"Z" type belt conveyors are transporters which elevate products to a higher level or take them down to a lower level. The characteristic feature of such transporters is the fact that both the collection and feeding of the product is carried out in parallel with the ground, and a slanting section occurs between these two levels. These conveyors are built by our company based on EBS 80 series.

They have a fixed inclination angle, contained within the range from 0 to 45°.



Conveyor belt with corrugated side walls and cleats



Conveyor belt with cleats

Similarly to slanting conveyors, we select the type of transport belt appropriate for you, according to the application. These can be belts with proper outer layer structure, or such that can be fitted with appropriate wedges, drivers or side waves.

Two-level conveyors

Two-level belt conveyors are solutions often used in the case where on one side of the conveyor there is a device with a significantly lower performance than the device from which the products are placed onto the conveyor. In this case, multi-level conveyors are built in order to minimize the taken up floor space. Most often these are two-level conveyors. Many such applications co-operate with robots, and this requires designing and building an appropriate control system.

Depending on the application, these conveyors can be built on the basis of each of the offered conveyor series.



Belt conveyors

Conveyor groups

There are situations when the assumed task cannot be realized using one conveyor. In such cases it is necessary to make a group of conveyors.





Belt conveyor system (with the task required control units)

The case of the conveyor group can be viewed two-fold:

- as a group driven from a single motor reducer, whereas the drive is transmitted between consecutive conveyors using different types of belt transmissions, chain transmissions, etc.
- as many conveyors with separate drives, the co-operation of which is realized by using an appropriately designed control system.

Each and every conveyor produced by our company is supplied with the documentation which is required by applicable regulations, standards and directives.



Belt conveyor system (with the sensor end stop control)

Roller conveyors



Gravity roller conveyor section (zinc plated steel rollers)

This is a group of conveyors widely used in all branches of the industry.

Their versatility makes them a product that can be adapted to realize new tasks at any moment. One could risk saying that it will never become obsolete in any manufacturing plant.

Gravity roller conveyors

Conveyors with the simplest structure having no drive. Products may be moved here manually or using gravity, by placing the conveyor at an appropriate angle. In order to select the speed and functionality of the conveyors driven by gravitational force, one should take into account their length and the specificity of transported products, i.e. their mass, shape, dimensions etc.

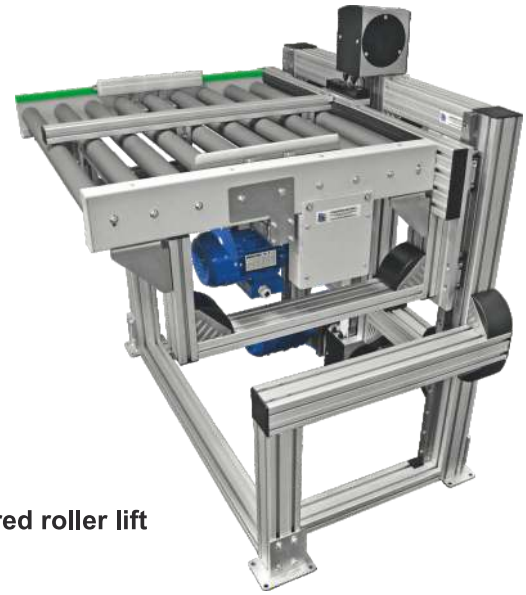
Depending on the application and requirements of the clients, we are able to manufacture this type of conveyor with a load-bearing frame made using aluminium profiles and steel profiles of an appropriate size, grade and with an appropriate protective coating applied. In this type of conveyors their structure depends mainly on the specificity of the transported products, that is their shape, weight and dimensions.

Transport rollers



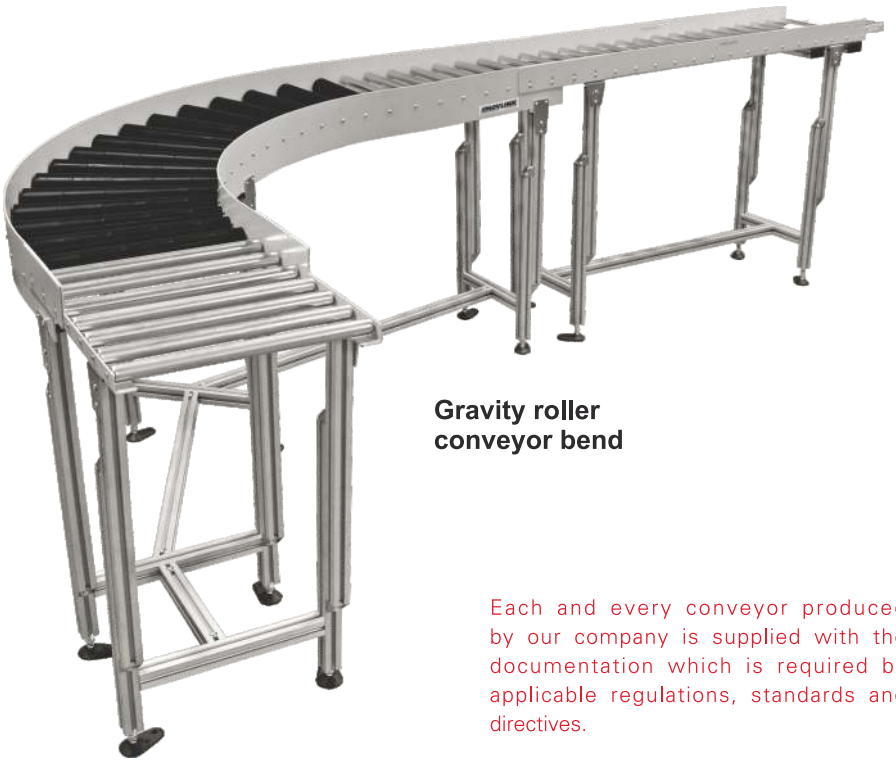
Tapered conveyor rollers





Powered roller lift

Thus, depending on the product that is to be transported, we use for their construction rollers with diameters from 20 to 89mm with flanges made from various materials and with various protective coatings. Rollers with a diameter of 50mm and larger can be equipped both with basket and machine bearings. In the case of transporters used for transporting loads with significant mass, we equip our conveyors with restraint rollers. Conveyors used for transporting EUR pallets also deserve special attention, selected in such a way as to facilitate the feeding and reception of pallets using forklifts and pallet trucks.



Gravity roller conveyor bend

Each and every conveyor produced by our company is supplied with the documentation which is required by applicable regulations, standards and directives.

Roller conveyor bends

The roller conveyor range is complemented with roller conveyor bends. Both gravity and powered conveyor versions are available. The roller conveyor bends are always supplied and designed with the use of the transported element technical parameters.

Driven conveyor rollers



Driven conveyor rollers



Driven roller conveyors of capacity up to 100kg/m

One of the most broadly used series of conveyors. Our company specializes in the construction and sales of this type of conveyors with a load bearing capacity of up to 100kg/m. These conveyors are characterized by the main load bearing part being made of powder-coated steel, whereas the supporting structure can be made from both steel, as well as structural aluminium profiles.

The drive of this conveyor group is always individually selected with the use of the client supplied parameters.



Driven roller conveyor of capacity up to 100kg/m

Roller conveyors



Driven roller conveyor of capacity up to 1000kg/m

MOVLINK®

Driven roller conveyors of capacity up to 1000kg/m

Applied mainly in the transport of elements on pallets e.g. EUR pallets. The conveyor bed consist of the 80 or 89mm rollers driven with sprockets. The drive is transmitted roller by roller (parallel connection). Both main and support frames are in this case made of the powder coated or zinc plated steel.

Due to the loads transported by conveyors of this group their construction is usually divided into sections carrying from one to three pallets at a time.



Powered pallet conveyors

Turntable conveyors for pallets

Our range of products for conveying euro-pallets is supplemented by turntable conveyors. It allows not only to design straight conveying lines but also ones of various shapes. The turntable conveyors of our range are adjusted to the loads of the conveyors for euro-pallets.

The turntables produced by our company are able to stop the pallets in intermediate position as well as to turn around for 180 degrees and come back to the initial position. The most common situation is when the conveyor stops every 90 degrees.



Euro-pallet turntable conveyors

PRODUKT POLSKI

Each and every conveyor produced by our company is supplied with the documentation which is required by applicable regulations, standards and directives.

Chain transfers

The euro-pallets handling systems are built also with the use of chain transfers. They are used when there is a need to change the direction of motion from longitudinal to perpendicular.



The characteristic feature of this solution is that the pallet is carried by two or three subsequent duplex strand chains. The chain tracks are mounted usually in the free space between rollers of the main conveyor used for longitudinal transport.



Pallet conveyor system combining turntables and chain transfers

Euro-pallet chain transfers



Chain transfer operating principle

The operating principle of the system consists of the following sequence: the pallet is transported in longitudinal manner at the main roller conveyor and then it approaches the place where it may be lifted by the chain transfer. In the next step the pallet is stopped and the transfer is actuated what enables handling the pallet on the chain tracks.

The chain tracks are driven with the electrical motor, while the lifting motion of the transfer tracks is realised by pneumatic actuator.

Wedge conveyors

Type of conveyors applied to transport loads around 1kg/pc. Most common applications includes transport of: bottles, carton boxes or cans.

Wedge conveyors are used in cases when there is a need to get access to the bottom of the packaging in order to conduct some printing, labeling or scanning processes.



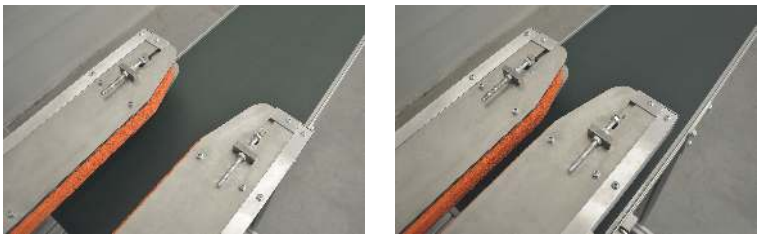
This type of conveyor consist of two parallel, electronically synchornised transport races between which the product is conveyed. In order to assure the proper friction between the conveyed elements and the races the conveyor belts are covered with a layer of foam or gum of the customised parameters.

Adjustment of the conveyor races height





The wedge conveyor functionality is widened by means of applying adjustment of the space between conveyor races so that it corresponds to the product size, as well as, customising the friction coefficient between the races top layer and conveyed elements.



Adjustment of the space between conveyor races

The other adjustment allow tuning the race level, however there is also an option to adjust the races angle of incline.

Wedge conveyors produced by our company are equipped with control cabinet with inverters, what enables continuous speed regulation within the given range.

Expandable roller conveyors

Driven expandable roller conveyor

- Available roller widths – 460 mm, 610 mm, 760 mm, 900 mm,
- Ø50 mm zinc plated rollers,
- Standard axle centre at max. length – 130 mm,
- Max. 400 on/off cycles per hour,
- Construction capacity – 250 kg/m,
- Permissible working load – 100 kg/m,
- Swivel Ø200 x 45 mm casters,
- Three pairs of casters with brakes mounted along the conveyor,
- Start/stop controls and emergency stop at both conveyor ends,
- Inverter adjustable speed with 0 – 40 m/min range,
- Single phase 240 Volt, 50 Hz power supply,
- Motion in both directions,
- Adjustable conveyor bed height with telescopic legs – 730-900 mm.



Driven roller conveyor

Conveyor type	Roller diameter (mm)	Roller length (mm)	Compact length (m)	Expanded length (m)
driven	Ø50	460, 610, 760, 900	3,51 / 4,66 / 5,82 / 6,58	8,34 / 11,09 / 13,83 / 15,66
	Ø40	300, 600,1200	0,62 / 1,80 / 2,66 / 3,33	1,5 / 5,0 / 7,5 / 9,5
	Ø50		0,74 / 2,18 / 3,22 / 4,04	
gravity	Ø48 (skate wheels)		0,51 / 1,40 / 2,07 / 2,57	

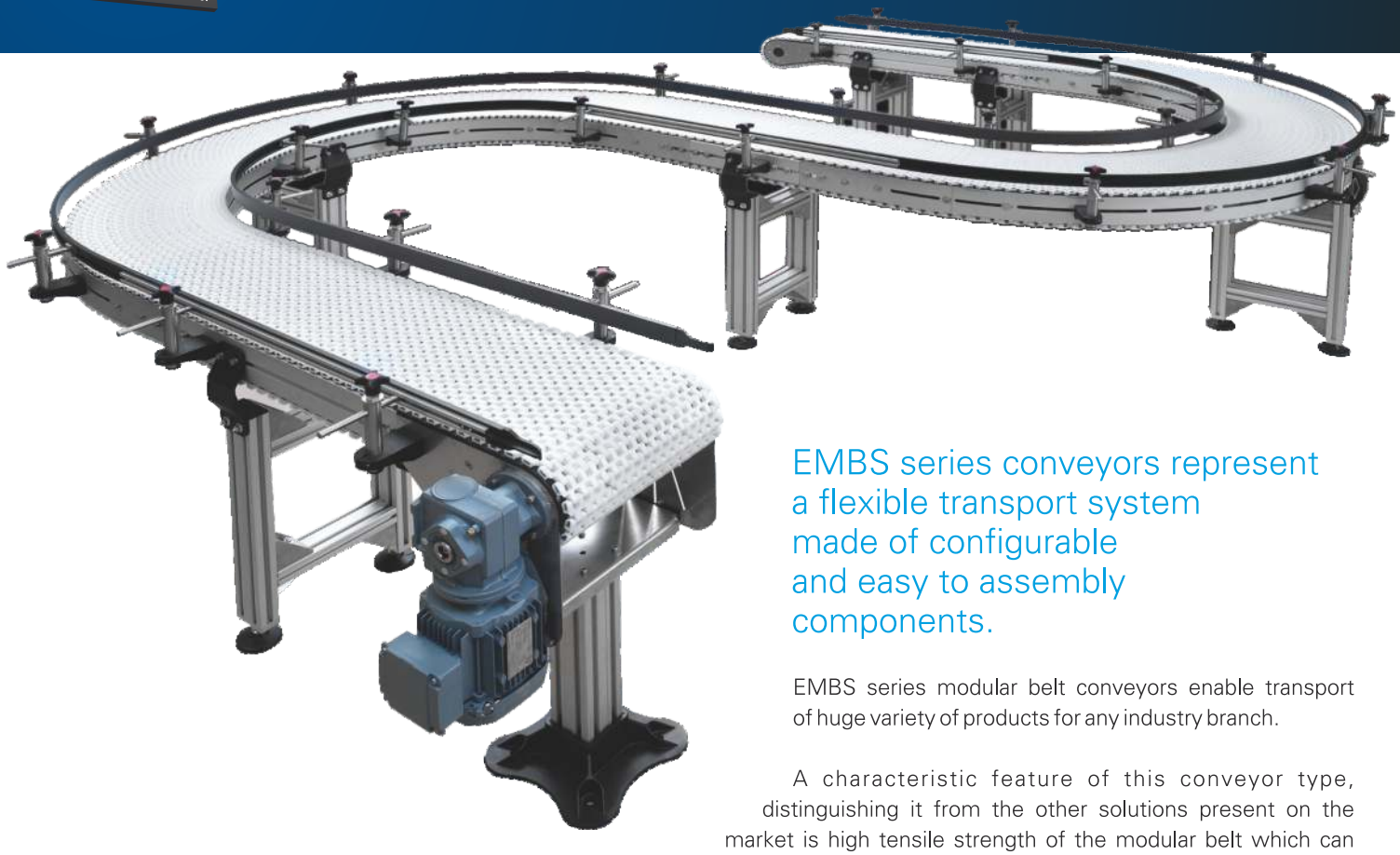
Driven conveyor performance options

- Axle centre at max. length – 67 or 102 mm,
- Connection unit,
- Permissible working load – 150 kg/m,
- Drop-down end stop,
- Impact unit – 780 mm long, equipped with dual LED lighting system,
- Lighting system with a drop-down end stop,
- Automated flow control,
- Three-phase 380 V power supply,
- No pressure accumulation,
- Size modifications on request.

Gravity expandable roller conveyor

- Ø40 and Ø50 mm roller diameter or Ø48 mm skate wheels,
- Impact resistant PVC rollers,
- Roller useful length ranging from 300 to 1200 mm (every 100 mm),
- Axle centre at max. length $St_{ø40}$ = 115 mm, $St_{ø50}$ = 100 mm,
- Permissible working load – 120 kg/m,
- Ø112 mm plastic coated swivel casters with foot brakes,
- Telescopic legs for adjustable conveyor bed height – 650-1100 mm,
- Available also heavy duty solution with enforced support frame for longer conveyor life and skate-wheel solution for smaller curves radii.

EMBS series modular belt conveyors



EMBS series conveyors represent a flexible transport system made of configurable and easy to assembly components.

EMBS series modular belt conveyors enable transport of huge variety of products for any industry branch.

A characteristic feature of this conveyor type, distinguishing it from the other solutions present on the market is high tensile strength of the modular belt which can withstand the tension of 2500N. It allows the designer to configure the conveyor route freely, depending on the requirements, even up to 20m line length, powered with a single drive. It results in possibility of creating an economical solution.

Furthermore, the EMBS modular belt conveyor is available in aluminium of stainless steel version what allows to create a unique transport system meeting the most sophisticated requirements.

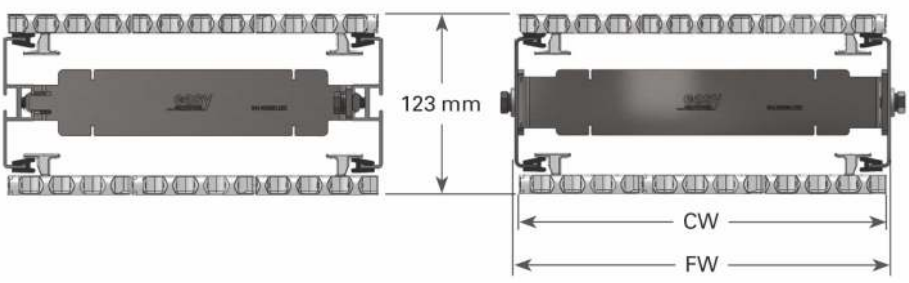
Adjustable side guides



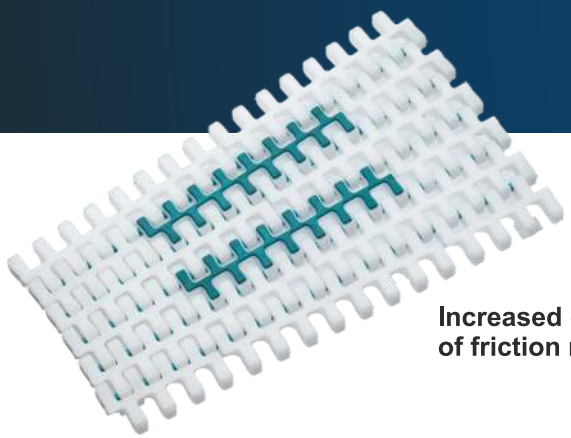
Aluminium system version

Aluminium modular belt conveyor system version allows for horizontal and vertical direction of motion change. Despite the standard belt links applied in the conveyor there are also several special belt versions available on request.

Aluminium system version **Stainless steel system version**



EMBS series modular belt conveyors



Increased coefficient of friction modular belt



Modular belt is easy to unlink along the whole conveyor length



Support bracket



Stainless steel version (for food industry applications)

Stainless steel modular belt conveyor system version is adapted to the particular food, pharmaceutical and cosmetics industries needs. The system is designed to be easily integrated with the aluminium versions. A big variety of conveyor modular belts is available for each of the standard conveyor widths. Stainless steel EMBS system has been designed to meet the EHEDG guidelines. The conveyors can be simply cleaned what facilitates withstanding the hygienic standards for the whole transport system in the entire workplace. The stainless steel conveyor version performs perfectly in inline filling systems of food or pharmaceutical industry (especially with liquid products).

* European Hygiene Engineering and Design Group, an EU machine directive for safe and hygienic machinery

EMBS series technical features	255	340	425	510
Maximum drive pulling force	1250 N	1250 N	1250 N	1250 N
Chain limit tension	2500 N	2500 N	2500 N	2500 N
Frame width (FW)	260	344	429	513
Modular belt width (CW)	255	340	425	510
Transported element width	< 400 mm	< 400 mm	< 400 mm	< 400 mm
Conveyor maximum length*	20 m	20 m	20 m	20 m

* depending on the chosen conveyor layout



Conveyor with side guides and support frame

Examples of transported products

Spray cans, liquid soap in plastic bags, soft cheese, washing powder and detergents, reels, blotting paper, food (meat, yogurt), PET bottles, beauty products, soft products in plastic bags, matches, coffee and tea bundles, wide products e.g. big carton boxes.

VARIO FLOW PLUS
modular chain conveyors



Silent and easy to assembly VarioFlow plus conveyor system

The VarioFlow plus system is optimised in order to minimise the product launch time. Modular chain conveyor system allows the users to individually configure a space saving, versatile design which perfectly fits sophisticated application needs. The VarioFlow plus conveyors performs well also in high demanding environment.

Silent operation of the conveyor

Low noise level of the modular chain conveyor contributes to the increased work comfort. Bosch Rexroth company has achieved the conveyor silent work due to the optimised chain features and application of the slide rails with the side profile groove. Such a solutions guarantee both increased wear resistance as well as quick and reliable assembly.



Features

The system consist of the elements which can be used independently of the chosen conveyor width what has an influence on the necessity of heaving big spare prats stock. The new available conveyor width equals 120mm. Very stable modular chain is resistant to tensile forces up to 1250N. A nearly closed modular chain surface enables to transport the smallest elements in safe and reliable manner.

Vario Flow plus system

VARIO FLOW PLUS
modular chain conveyors



Horizontal low-friction roller curve



The new Bosch Rexroth VarioFlow plus system meets all the requirements and needs of users from different industry branches.

Rexroth
Bosch Group

We offer you a system of standarised components featuring full interchangeability and modularity which even in basic version fulfill the applications different needs. In order to simplify the choice and proper elements configuration Bosch Rexroth company has provided MTpro software featuring the Layout Designer which aids the user in the conveyor design and element choice. Also a complex, multi-conveyor systems and workstations may be designed. The result of the design may be then exported in the CAD software format.
Even more of the precious time may be saved during the launch of the machine. A smart drive set solution enables to choice the drive space orientation even at the final destination.

Cleated modular chain



VarioFlow plus technical features

Conveyor type	65	90	120	160	240	320
Frame width (mm)	65	90	120	160	240	320
Modular chain width (mm)	62	87	117	157	237	317
Horizontal curve radius (mm)	153	165,5	180,5	500	500	500



System types

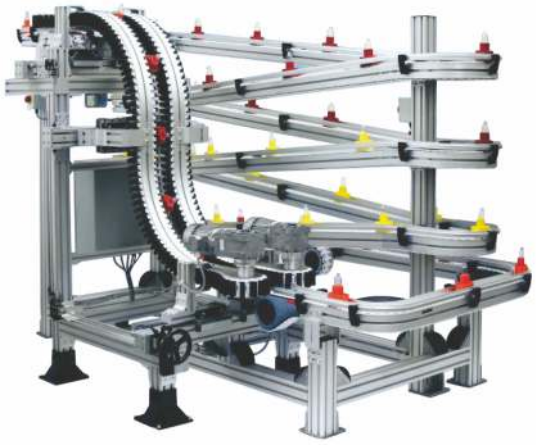
The system consist of different conveyor setups and is available in six frame widths and two material versions: basic aluminium version and stainless steel version. The latter is applied in case of higher hygienic demands e.g. in food industry. Due to this Bosch Rexroth makes use of components made of FDA-approved materials.

Transport systems

We are specialised in designing and building the conveyors and transport systems basing on all the available conveyor types.

Our rich experience, knowledge and technical background allows us to conduct variety of projects from the simplest belt conveyors to the modern, fully-automated transport systems.

The conveyor systems offer by us are successfully applied in all industry branches.



Cosmetic industry application

Rexroth
Bosch Group

Automotive industry applications



The technical capabilities combined with the gained experience lets us to design, assembly and launch a complete transport system basing on the modular chain conveyors. According to the current needs and technological assumptions the modular chain conveyors may be designed as straight, flat or inclined.

Thanks to this feature we are able to transport with this kind of transport system almost any product type, everywhere.

Hereunder some application examples are presented.

Food industry application



TS series transfer system

The transfer system conveyors offered by our company are one of the most widely used solutions worldwide, applied in almost every industry branch. The main operation principle consist in the pallet motion over two parallel tracks powered from the common drive.

The conveyor works in such a manner that the main tracks are continuously driven and in order to stop the pallet, e.g. to operate on the elements loaded on them, the stops, dampers or positioners are used. Depending on the chosen conveyor series wide range of different equipment is available. Among others one may list: curves, elevators, transfer sections. The above described equipment allows to fir the transport route into the available space.





Rexroth
Bosch Group

TS transfer system features

System type	TS 1	TS 2 PLUS	TS 4 PLUS	TS 5
Min. pallet size (mm)	80 x 80	160 x 160	443 x 443	455 x 455
Max. pallet size (mm)	160 x 160	1040 x 800	1243 x 1243	845 x 1240
Pallet maximum capacity (kg)	3	100	250	300
Pallet positioning accuracy (mm)	+/- 0,015	+/- 0,05	+/- 0,1	+/- 0,3
Pallet support element	- flat belt - toothed belt	- flat belt - toothed belt - steel chain with plastic elements - steel chain with steel or plastic rollers	- steel chain with plastic rollers	- full or split steel rollers










ANDRZEJEWSKI
Automatyzacja i Wyposażenie
Produkcji Sp. z o.o.
91-205 Łódź
ul. Aleksandrowska 67/93
Tel. +48 42 663 12 60
Fax +48 42 663 12 69
andrzejewski@andrzejewski.pl

www.andrzejewski.pl

www.movlink.pl