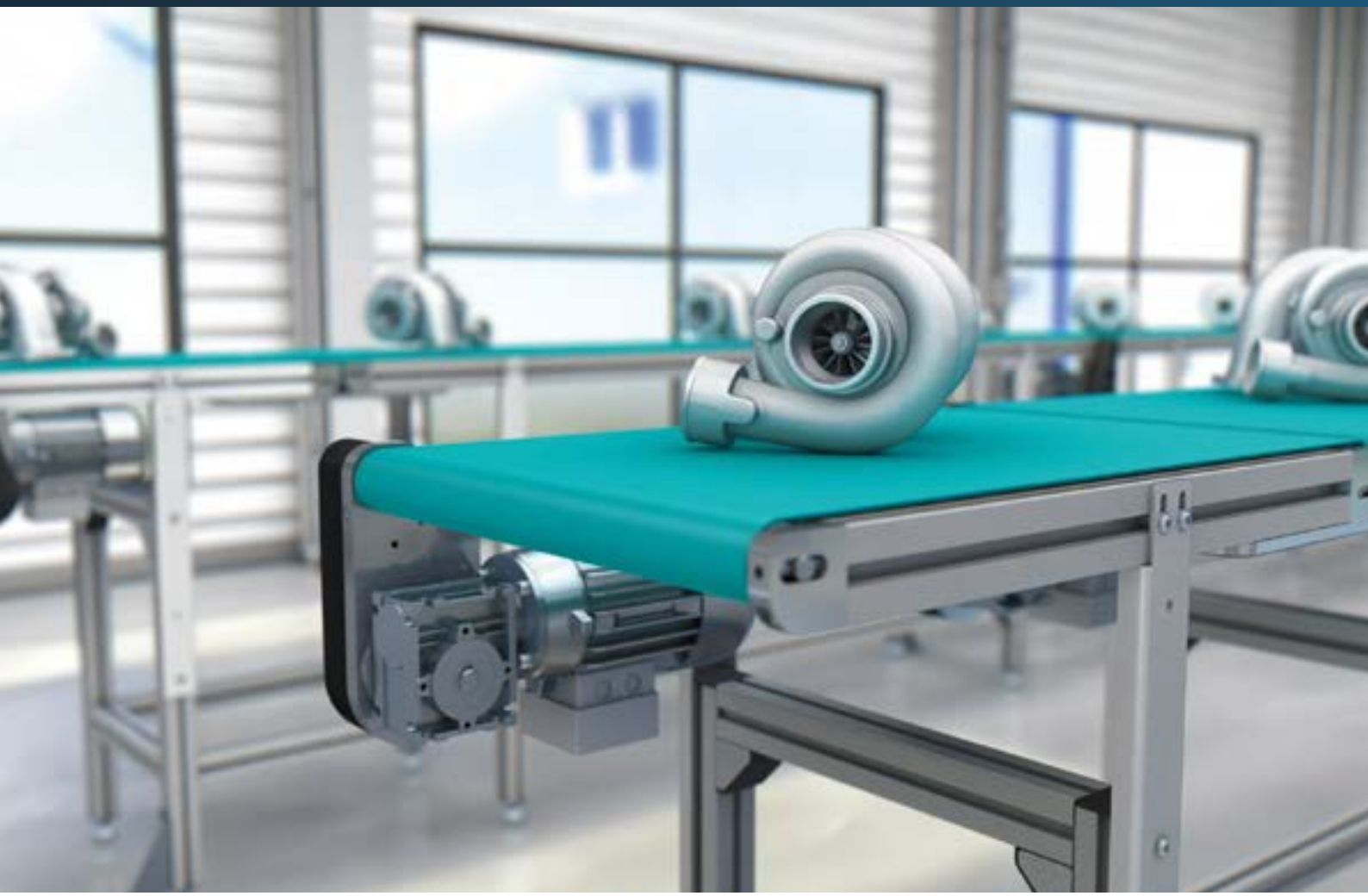
syskomp group



Belt conveyors

SB50 series

As at: June 2021

Contents

Belt conveyors
Information

Flexible solutions!

Collate, cycle & transport!

High-quality configuration!

The SG belt conveyors
Flexible solutions – efficiency, quality & safety!

Our SB50 / SB50Z belt conveyors deliver efficient transport sequences and offer maximum flexibility, safety and reliability. They have been specially developed as a practical and economical means of moving both the smallest of parts and the bulkiest of bulk goods from A to B.

We are specialists when it comes to moving and lifting components, workpieces and small load carriers (SLCs). Thanks to our range of belt conveyors, roller conveyors, transfer systems and SLC lifters, we have the ideal solution for any need.

Perfectly configured for your requirements.

Our diverse portfolio of belt conveyors makes us the specialists for top-class conveying technology.

We support you with everything from standard solutions to your own bespoke belt conveyor.

- Our speciality:
  Collating, cycling, and transporting & handling products
- Simple interlinking:
  Flexibility in terms of width and length
- Simple assembly and installation –
  fully assembled belt units and separate components

Specifications
Overview

Belt conveyor **SB50**

Belt conveyor SB50 is available with two different return designs – Ø 40 and Ø 16.

These can be combined depending on requirements regarding the returns and the installation positions of the drives.

The following criteria determine the choice of belt conveyor type:
- Design of the return
- Installation position of the drive
- Configuration of belts and desired belt material

Belts & accessories

A customised belt material provides the ideal basis for perfect goods transport. Moreover, the belts can also be fitted with profiles or sidewalls.

Our accessories can be used to optimise belt conveyors to suit customer-specific requirements.

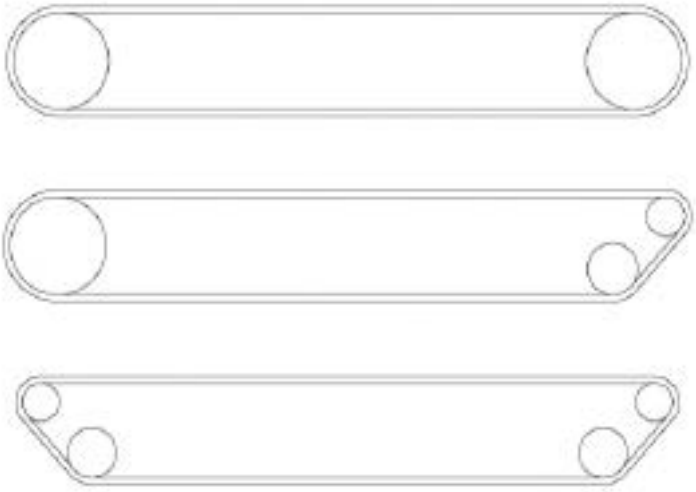
- Side guides
- Supports
- Cover profiles
- And much more besides

Your requirements – your advantages

- Rapid transport from A to B
- Bespoke production to customer requirements
- Low maintenance requirements
- Long service life
- Suitability for complex transport operations
- Belt material tailored to the goods being moved
- Cost effectiveness and enhanced productivity
- Payloads up to 75 kg (SB50)

Return pulleys

Belt conveyor SB50 is available with two different return designs – Ø 40 mm and Ø 16 mm.



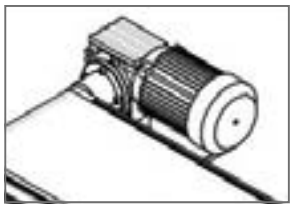
Ø 40 - Ø 40

Ø 40 - Ø 16

Ø 16 - Ø 16

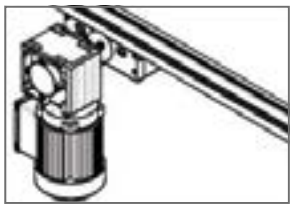
Drive installation

The SB50 belt conveyor is available in four different drive variants:

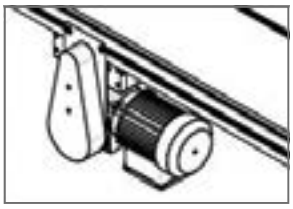


Direct
head drive

Indirect
head drive



Direct
centre drive



Indirect
centre drive

Belt material

Widely varying products and environmental conditions require an equally wide variety of transport media.

That is why we always work with you to develop a custom configuration for the belts.

Belts can be designed with longitudinal profiles, cross profiles and sidewalls.
Cross profiles are available in a range of designs.

Drive data

Our belts are fitted with 3-phase AC motors as standard. Alternative products can also be supplied to suit customer requirements, in which case the relevant manufacturer's specifications apply.

Our standard motors are designed to IEC standards and are supplied with multi-range voltage, IP55 protection and insulation class F.

Speeds:

Speed depends on the type of motor selected
and varies from 2 to 70 m/min.

Side guides

- Fixed side guidance
- Adjustable side guidance

Accessories

- Cover profiles
- T-slot nuts
- Angle brackets

Supports

- Single support
  Height adjustment using profile groove
  Belt can be inclined
- Double support
  Height adjustment of ± 150 mm
  Belt incline can be adjusted from 0° to 30°

Configurator
Find your solution fast – online

Let us guide you to your solution in just a few clicks.
Our configurator asks you about all the key parameters in a step-by-step process.

Making sure nothing is overlooked:
Cover everything from choosing the motor to selecting the belt material.

Use our online configurator to meet your specific requirements and you will have a personalised quotation in the space of just a few minutes.

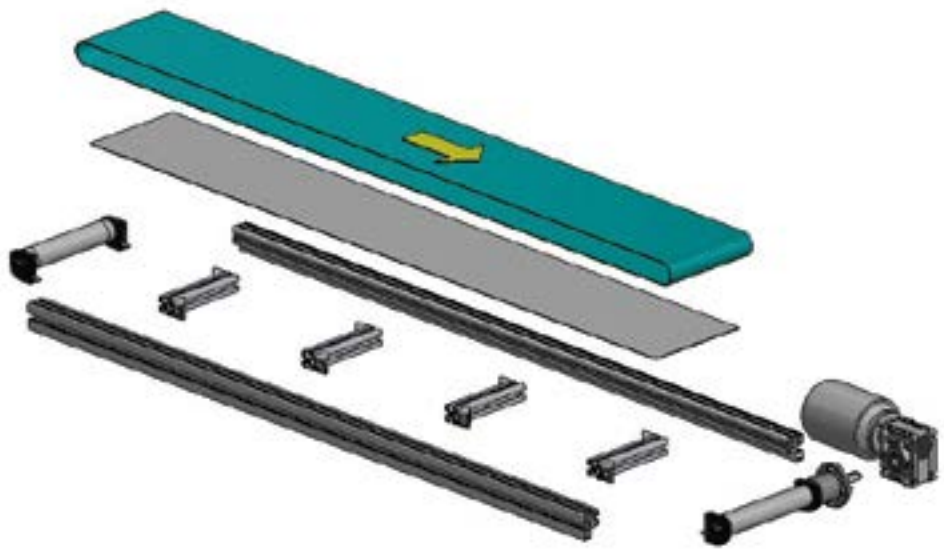
Advantages:

- Simple and easy to use
- Takes next to no time (around 2 to 3 minutes)
- Get your personal quotation by email

https://www.syskomp-group.com/de/sb50konfigurator

CAD data for your configuration

Your selection is turned into a CAD model that you can integrate into your planning.



Custom manufacturing
Make our experience work for you

Are your requirements complex?

No problem! We can plan and design demanding solutions such as Z conveyor belts, hopper conveyors, and much more besides.

The whole process is carried out in close collaboration with you.

As a result, it takes very little time to arrive at a solution that suits your needs perfectly.

What we can manufacture for you:

- Belt conveyors in custom widths
- Belt conveyors with multiple lanes
- Designs for greater loads
- Chain conveyors
- Hopper conveyors
- Timing belt conveyors
- Base frames
- Machine enclosures
- Plastic module belt conveyors
- Conveyor belts with incline
- Conveyor belts with electric control system

Figure: Custom design – hopper conveyor

SB50Z series
Advantages

Maximum flexibility

Our SB50-Z-series belt conveyor is a Z-shaped conveyor belt system that offers versatile configuration options.

Available in various heights, angles and lengths, it is the ideal solution for bridging various height differences.

It is particularly suitable for transporting unit loads.

With its motor installed on the left or right side and configured to pull, belt conveyor SB50-Z is primarily designed to move small parts upwards.
For instance, it is often used to remove parts on machinery or to fill containers, crates or cartons.

Thanks to its diverse range of configuration options, the SB50-Z is a dependable tool that makes your working processes faster and more effective.

- High lateral stability
- Fixed side guidance
- Cost-effective maintenance
- Available in various heights and lengths
- Two different angles – 30° / 45°
- Perfect for unit loads and small parts / with particle size >5 mm
- Max. conveying weight of 10 kg per metre / overall weight not exceeding 75 kg (Detailed specifications depend on belt width, speed, etc.)

Figure: SB50Z-30°

syskomp gehmeyr
A dependable partner for over 50 years

The success story behind the syskomp Group stretches back over 50 years.

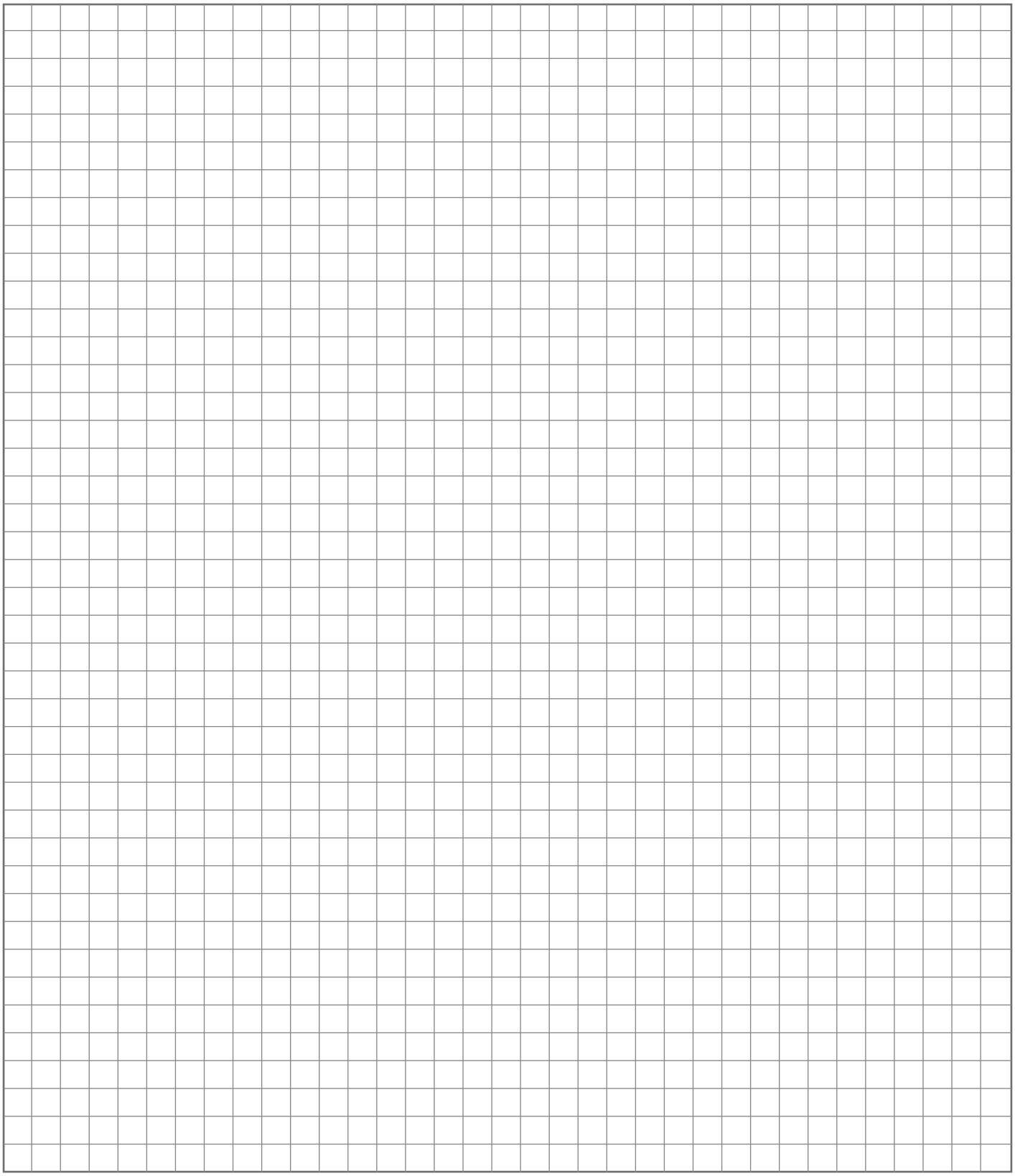
Starting out in 1960 as a straightforward trading operation, the company has developed into a specialist for flexible and customised solutions in the field of assembly technology and industrial automation.

The Group consists of syskomp gehmeyr GmbH, which is headquartered in Amberg (Germany), our sites in Regensburg and Medingen (Germany), the emico division in Amberg and bfm GmbH in Wöllersdorf (Austria).

We offer our customers the ultimate in reliability and maximum expertise. Our holistic approach to business ensures we can develop the optimum processes to suit the specific customer application. From the very start through to the handover, we are a skilled contact for our customers, covering all phases of the project, from initial consulting to successful commissioning.

The head office of the syskomp Group in Amberg (Germany).

Your notes



Belt conveyors
Technical data | order configuration

Product selection

Belt material, supports, side guidance

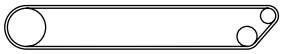
Accessories

SB50 belt conveyor – product selection

The SB50 belt conveyor is available with two different return designs – Ø 40 and Ø 16.
These can be combined depending on requirements regarding the returns and the installation positions of the drives.
Two main criteria determine the choice of belt conveyor type. Start by specifying the design of the return and then the installation position of the drive.

Selecting the return:

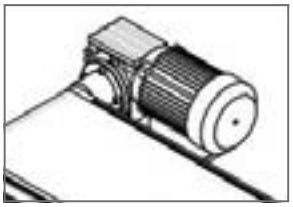
Ø 40 - Ø 16 ⇨ 1



Ø 40 - Ø 16 ⇨ 2

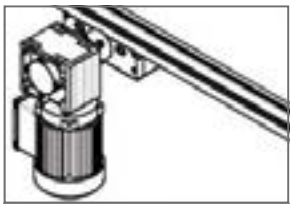
Ø 16 - Ø 16 ⇨ 3

Selecting the drive:

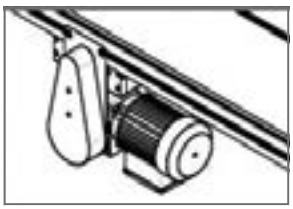


Direct drive ⇨ D

Indirect drive ⇨ I



Direct centre drive ⇨ M



Indirect centre drive ⇨ IM

Your selection:

SB50 - [ ] [ ]

SB50-D1

Direct head drive, Ø 40 return at both ends

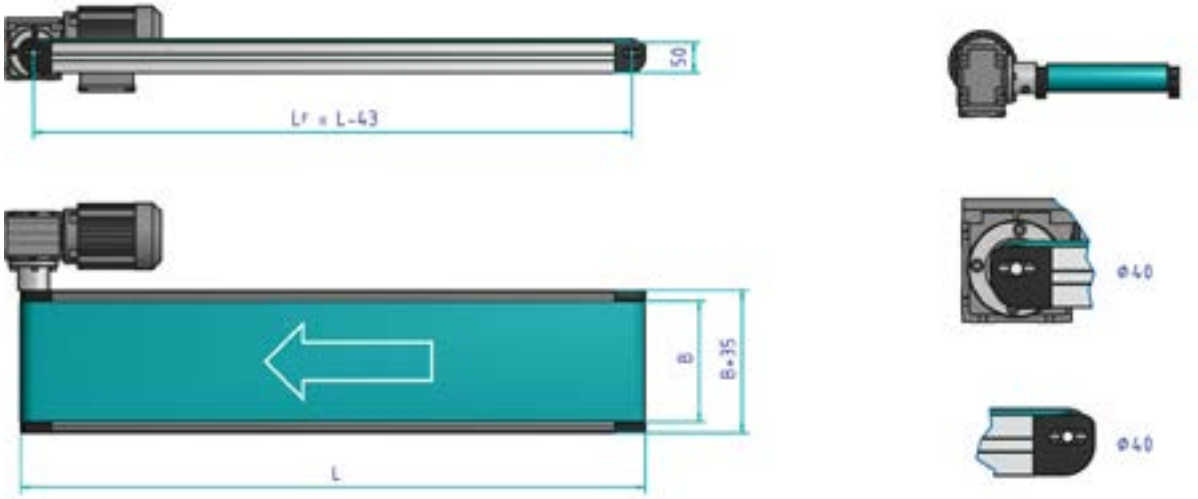


Figure shows design with direct head drive and motor installed on the right in pulling configuration.

B [mm]	L [mm]	v [m/min]	U / f [V / Hz]	Motor installation	Belt load [kg]
Width as per customer specification from 40 to 1,000	500 - 6,000	2	400 / 50	L / R	Up to 75
		3			
		4.5			
		6			
		7.5			
		9			
		12			
		15			
		18			
		23.5			
		35			
		47			
		70			

DRIVES see p. 25
BELTS see p. 26/27
SUPPORTS see p. 28
SIDE GUIDES see p. 29

SB50-D2

Direct head drive, Ø 40 – Ø 16 return

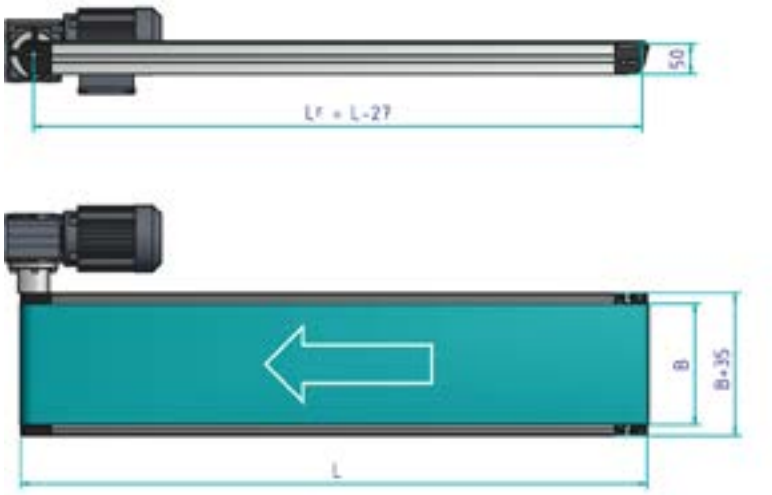


Figure shows design with direct head drive and motor installed on the right in pulling configuration.

B [mm]	L [mm]	v [m/min]	U / f [V / Hz]	Motor installation	Belt load [kg]
Width as per customer specification from 40 to 500	500 - 3,000	2	400 / 50	L / R	Up to 35
		3			
		4.5			
		6			
		7.5			
		9			
		12			
		15			
		18			
		23.5			
		35			
		47			
		70			

DRIVES see p. 25
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SIDE GUIDES see p. 29

SB50-I1

Indirect head drive, Ø 40 return at both ends

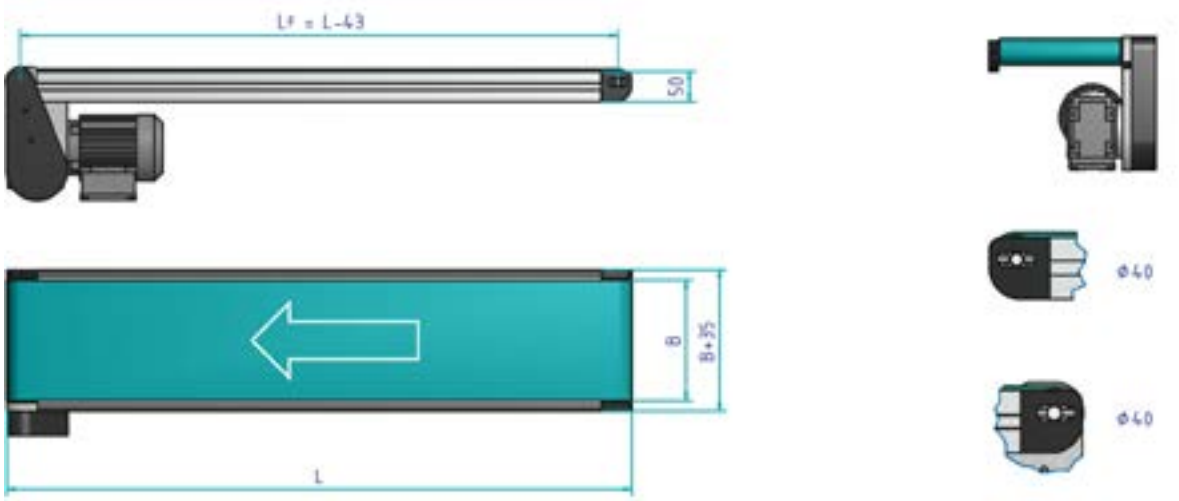

Figure shows design with indirect head drive and motor installed on the left in pulling configuration.

B [mm]	L [mm]	v [m/min]	U / f [V / Hz]	Motor installation	Belt load [kg]
Width as per customer specification from 40 to 1,000	500 - 6,000	2	400 / 50	L / R	Up to 75
		3			
		4.5			
		6			
		7.5			
		9			
		12			
		15			
		18			
		23.5			
		35			
		47			
		70			

DRIVES see p. 25
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SB50-I2

Indirect head drive, Ø 40 – Ø 16 return

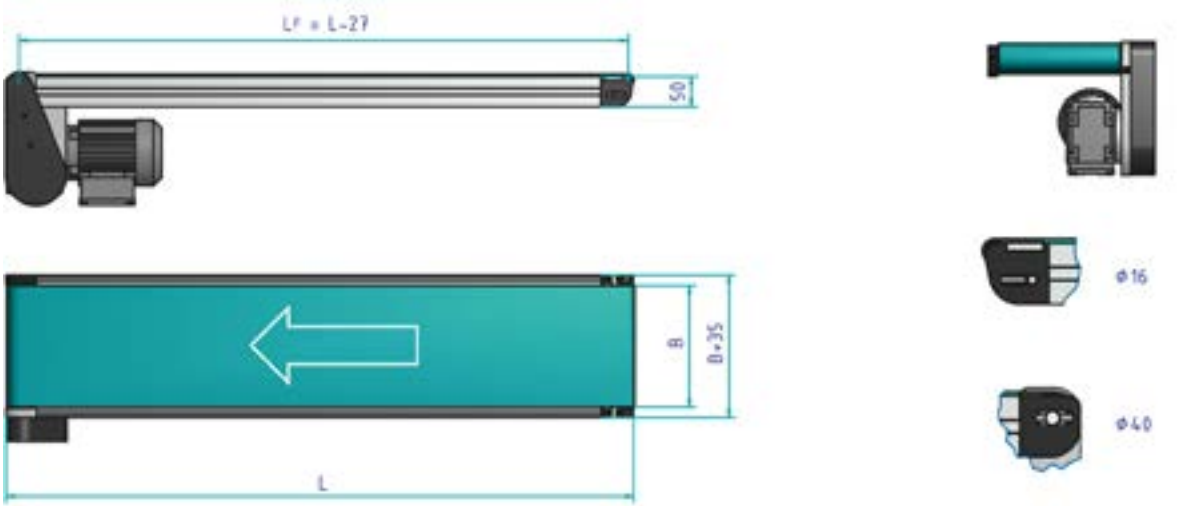

Figure shows design with indirect head drive and motor installed on the left in pulling configuration.

B [mm]	L [mm]	v [m/min]	U / f [V / Hz]	Motor installation	Belt load [kg]
Width as per customer specification from 40 to 500	500 - 3,000	2	400 / 50	L / R	Up to 35
		3			
		4.5			
		6			
		7.5			
		9			
		12			
		15			
		18			
		23.5			
		35			
		47			
		70			

DRIVES see p. 25
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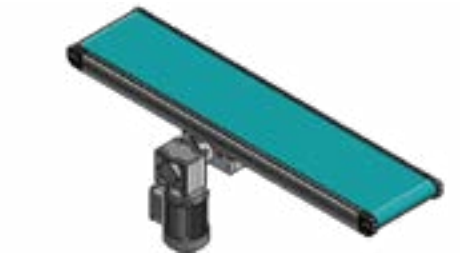
SB50-M1

Direct centre drive, Ø 40 return at both ends



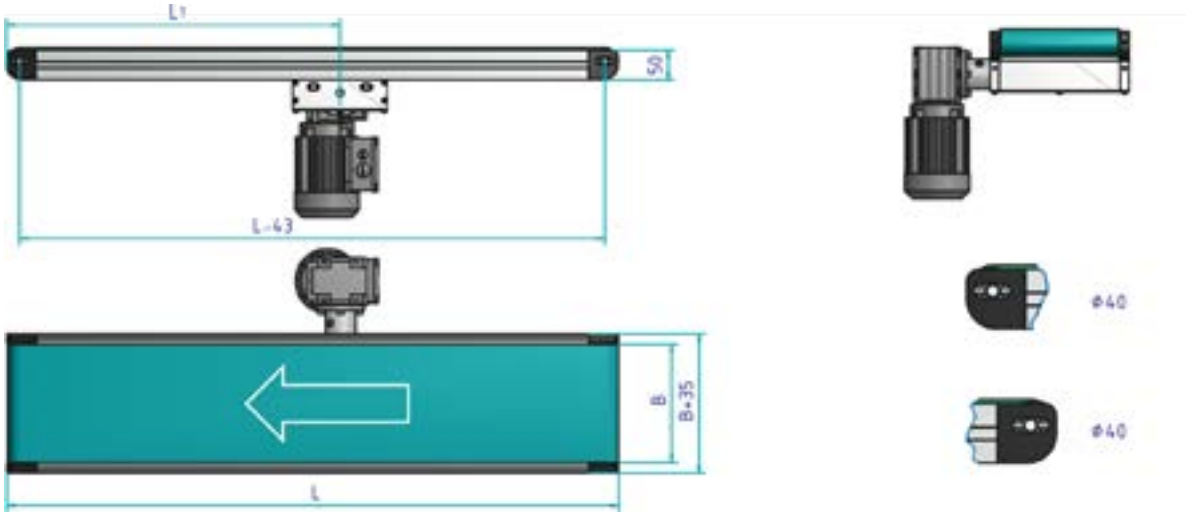


Figure shows design with direct centre drive and motor installed on the right in pulling configuration.

B [mm]	L [mm]	v [m/min]	U / f [V / Hz]	Motor installation	Belt load [kg]
Width as per customer specification from 40 to 1,000	500 - 10,000	2	400 / 50	L / R	Up to 75
		3			
		4.5			
		6			
		7.5			
		9			
		12			
		15			
		18			
		23.5			
		35			
		47			
		70			

DRIVES see p. 25
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SB50-M2

Direct centre drive, Ø 40 – Ø 16 return

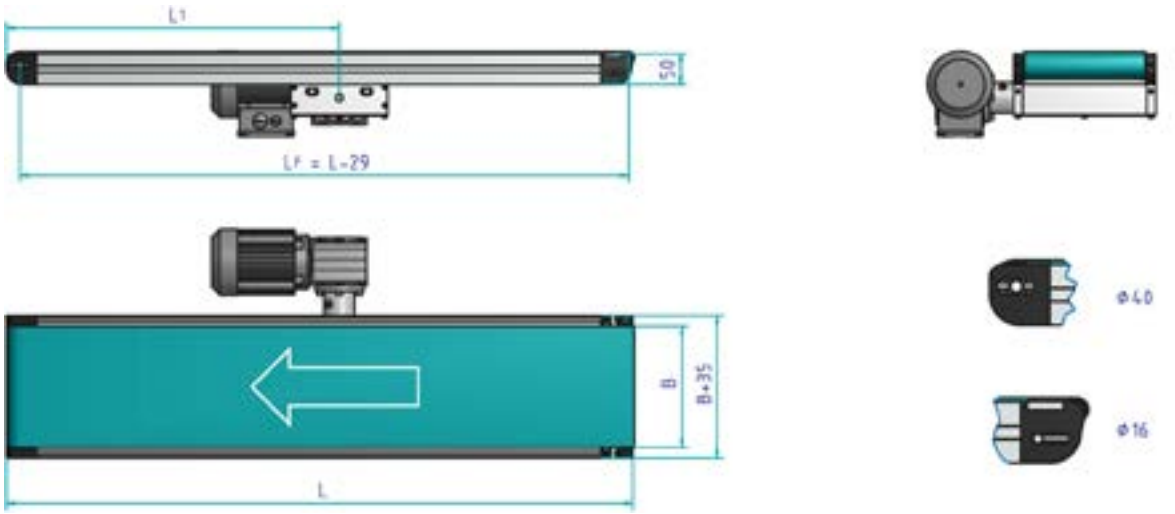

Figure shows design with direct centre drive and motor installed on the right in pulling configuration.
On conveyors with centre drives and a knife edge at one end:
Pulling configuration = Direction of travel is away from the knife edge
Pushing configuration = Direction of travel is towards the knife edge

B [mm]	L [mm]	v [m/min]	U / f [V / Hz]	Motor installation	Belt load [kg]
Width as per customer specification from 40 to 500	500 - 6,000	2	400 / 50	L / R	Up to 50
		3			
		4.5			
		6			
		7.5			
		9			
		12			
		15			
		18			
		23.5			
		35			
		47			
		70			

DRIVES see p. 25
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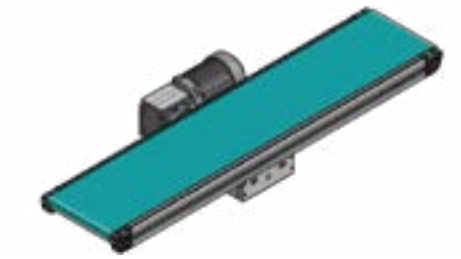
SB50-M3

Direct centre drive, Ø 16 return at both ends



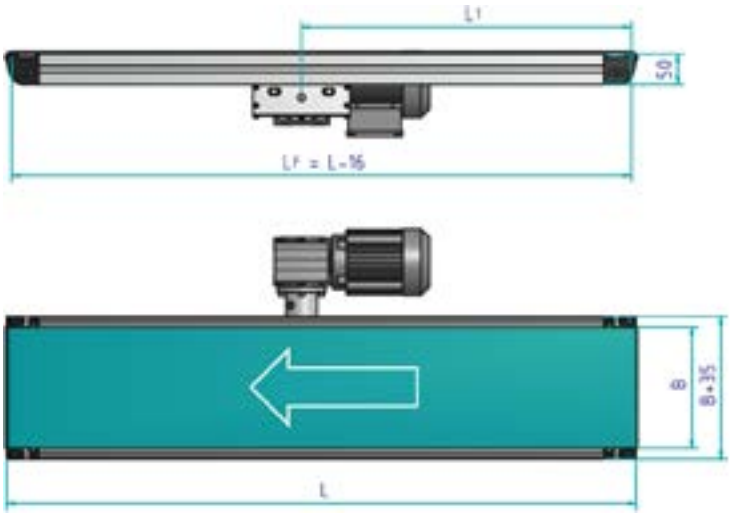


Figure shows design with direct centre drive and motor installed on the right in pulling configuration.

B [mm]	L [mm]	v [m/min]	U / f [V / Hz]	Motor installation	Belt load [kg]
Width as per customer specification from 40 to 500	500 - 6,000	2	400 / 50	L / R	Up to 50
		3			
		4.5			
		6			
		7.5			
		9			
		12			
		15			
		18			
		23.5			
		35			
		47			
		70			

DRIVES see p. 25
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SB50-IM1

Indirect centre drive, Ø 40 return at both ends

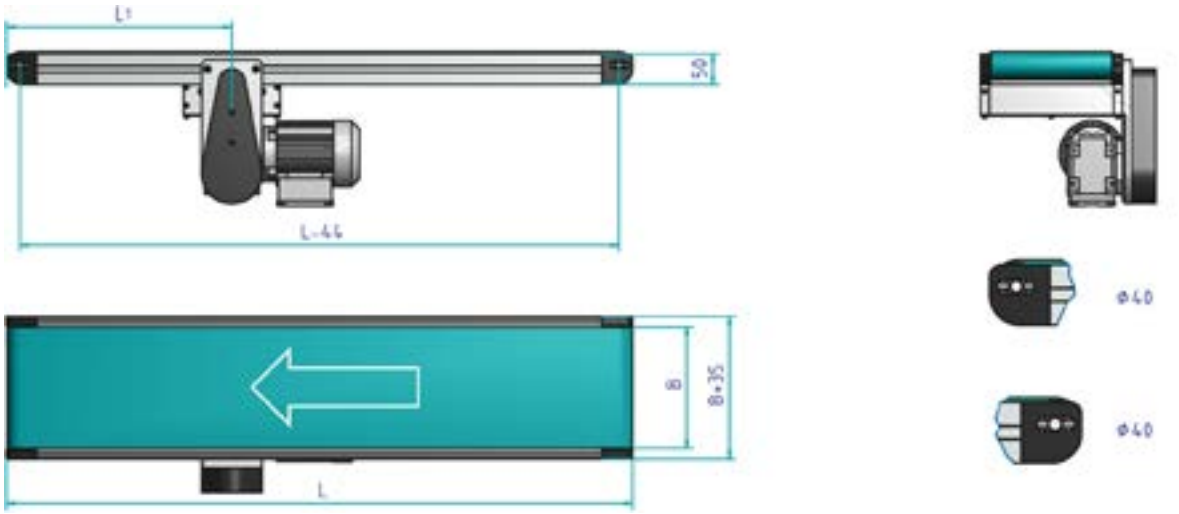

Figure shows design with indirect centre drive and motor installed on the left in pulling configuration.

B [mm]	L [mm]	v [m/min]	U / f [V / Hz]	Motor installation	Belt load [kg]
Width as per customer specification from 40 to 1,000	500 - 10,000	2	400 / 50	L / R	Up to 75
		3			
		4.5			
		6			
		7.5			
		9			
		12			
		15			
		18			
		23.5			
		35			
		47			
		70			

DRIVES see p. 25
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SB50-IM2

Indirect centre drive, Ø 40 – Ø 16 return

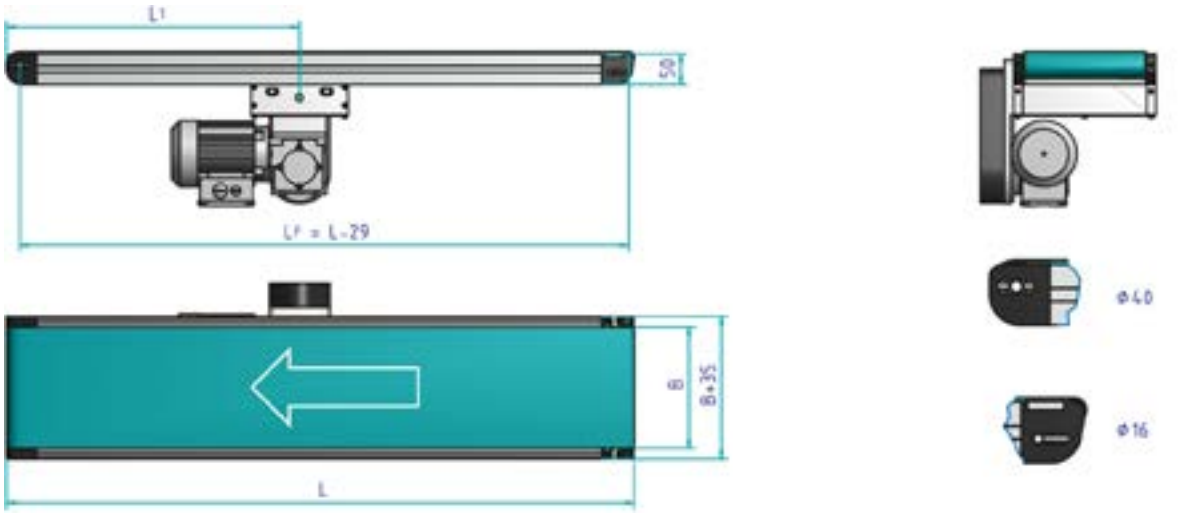

Figure shows design with indirect centre drive and motor installed on the right in pulling configuration.
On conveyors with centre drives and a knife edge at one end:
Pulling configuration = Direction of travel is away from the knife edge
Pushing configuration = Direction of travel is towards the knife edge

B [mm]	L [mm]	v [m/min]	U / f [V / Hz]	Motor installation	Belt load [kg]
Width as per customer specification from 40 to 500	500 - 6,000	2	400 / 50	L / R	Up to 50
		3			
		4.5			
		6			
		7.5			
		9			
		12			
		15			
		18			
		23.5			
		35			
		47			
		70			

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SB50-IM3

Indirect centre drive, Ø 16 return at both ends

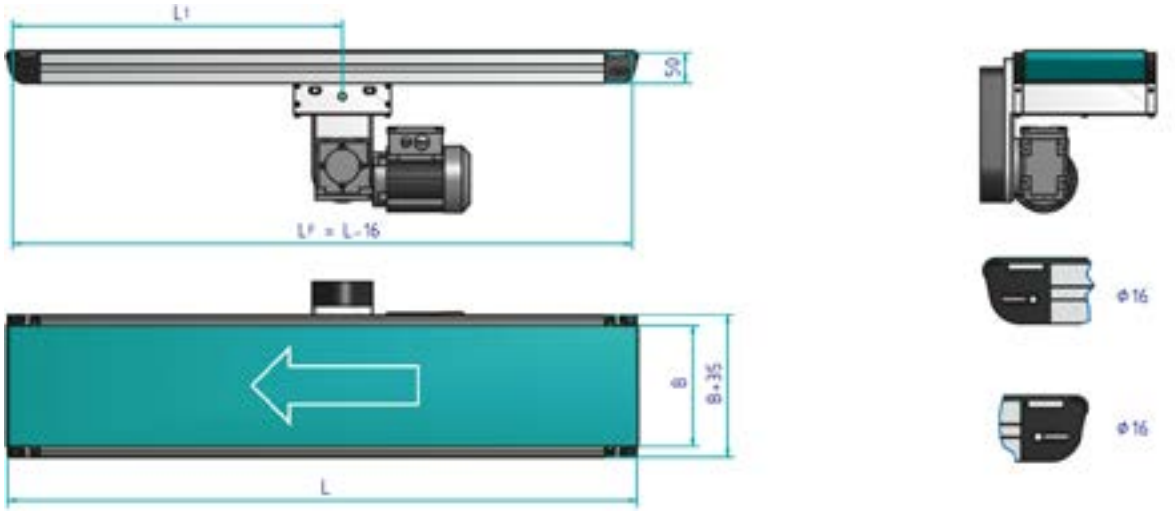

Figure shows design with indirect centre drive and motor installed on the right in pulling configuration.

B [mm]	L [mm]	v [m/min]	U / f [V / Hz]	Motor installation	Belt load [kg]
Width as per customer specification from 40 to 500	500 - 6,000	2	400 / 50	L / R	Up to 50
		3			
		4.5			
		6			
		7.5			
		9			
		12			
		15			
		18			
		23.5			
		35			
		47			
		70			

DRIVES see p. 25
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Drive data

Our belts are fitted with 3-phase AC motors as standard.
Alternative products can also be supplied to suit customer requirements, in which case the relevant manufacturer's specifications apply,

Our standard motors are designed to IEC standards and are supplied with multi-range voltage, IP55 protection and insulation class F.

The rated outputs and operating values stated in the selection tables apply to operating mode S1 to VDE 0530-1 (=IEC-34-1) at a rated frequency of 50 Hz, rated voltage of 400 V and a cooling temperature of 40°C.

The motors are suitable for cyclical operation.

In line with VDE 0530-1, a permanent exceedance of the rated output is not envisaged.

If conditions differ from these, please contact us.

Motor type	Poles	Rated speed	Rated output [kW]	Rated current at 400 V [A]	Speed [m/min]
56L	4	1,370	0.09	0.41	6 / 4.5 / 3 / 2
63L	6	880	0.12	0.6	15
63L	4	1,370	0.18	0.66	23
63S	4	1,390	0.13	0.64	18 / 12 / 9 / 7.5
63S	2	2,790	0.18	0.67	47 / 35
63L	2	2,840	0.26	0.74	70

If requested by the customer, all belts can be fitted ready to plug in with an emergency stop button or a frequency inverter for stepless speed regulation.

Belt material

Widely varying products and environmental conditions require an equally wide variety of transport media.
That is why we always work with you to develop a custom configuration for the belts.

The following factors need to be taken into consideration:

Features

- Antistatic (ISO 284) and non-antistatic properties
- FDA and HACCP suitability (in line with FDA food regulations and the HACCP concept)
- Abrasion, oil, fat and chemical resistance
- Low, medium or high coefficient of friction
- High temperature resistance
- Exceptional lateral rigidity (if products are being fed in or removed from the side)
- Low noise levels
- Smooth, matt, glossy or structured surface
- Materials: PVC, PU, silicone, elastomer
- Colour: green, black, white and blue

Belts with longitudinal profile, cross profile or sidewalls

Belts can be designed with longitudinal profiles, cross profiles and sidewalls.
Cross profiles are available in a range of designs.

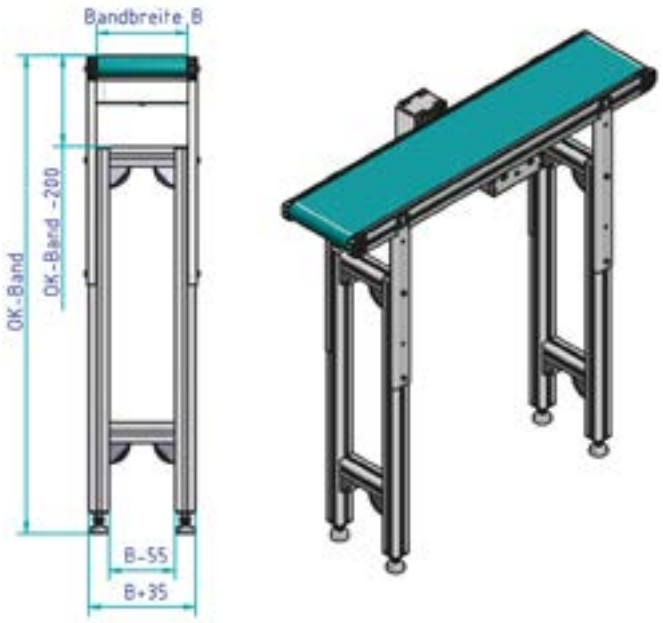
Examples for belt selection

Number	Type	Description	Price category	Usage
1	1M6 U0-V5	PVC, green, 60°C, smooth, medium friction	1	Low-cost, general transport
2	2MT5 U0-V3 N	PVC, black, 60°C, smooth, light friction	1	Low-cost, general transport
3	2M8 U0-V5 A	PVC, green, 60°C, smooth, medium friction	2	Higher quality than 1M6
4	2M8 U0-V5 FM N	PVC, black, 60°C, structured, high friction	2	Cardboard
5	2M12 U0-V7 LG	PVC, green, 60°C, longitudinally grooved, high friction	2	Cardboard
6	2M5 U0-U0 HP A	PU, white, 100°C, plain fabric, FDA, light friction	2	Packaged foods, accumulating mode
7	2M5 U0-U2 N	PU, black, 100°C, smooth, light friction	2	General transport, accumulating mode
8	Silon 25 HC	Silon, grey, 120°C, felt, light friction	2	Stamped parts
9	2M5 U0-U2 LF W A	PU, white, 100°C, smooth, FDA, light friction	3	Packaged foods, easy cleaning, accumulating mode
10	2M5 U0-U2 A	PU, green, 100°C, smooth, light friction	3	General transport, accumulating mode
11	2M5 U0-U2 HP W A	PU, white, 100°C, smooth, FDA, light friction	3	Packaged foods, easy cleaning
12	2M5 U0-U2 HP VL blue A	PU, blue, 100°C, smooth, medium friction	3	General transport
13	2M8 U0-U2 N HC	PU, black, 100°C, smooth, conductive (UNI EN ISO 21179)	4	Electronic components
14	2M12 U0-U3 RA	PU, green, 100°C, smooth, light friction	4	Stamped parts
15	2MT8 S0-S0	Silicone, transparent, 160°C, fabric, light friction	5	Plastic components, high temperature
16	2MT8 S0-S2	Silicone, transparent, 160°C, coated, high friction	5	Plastic components, high temperature
17	ENI-5EE	PU, black, 100°C, fabric, light friction	5	ESD applications

Supports

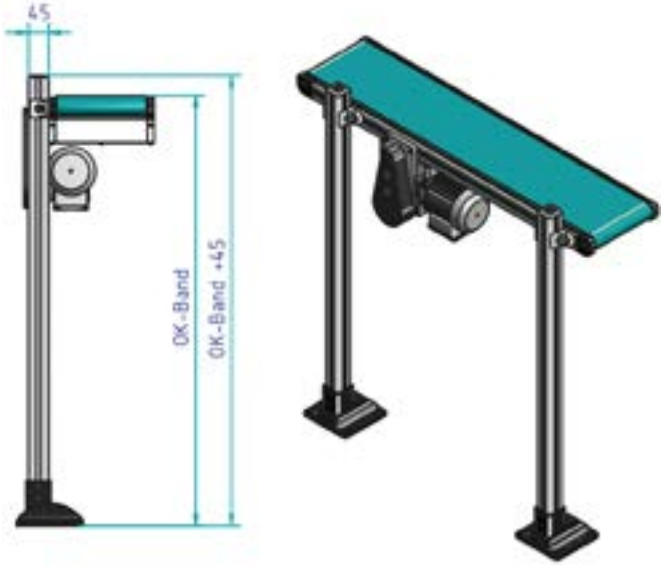
Double support from W = 200 mm

- Height adjustment of ± 150 mm
- Belt incline can be adjusted from 0° to 30°
- Support spacing up to 2,000 mm



Single support

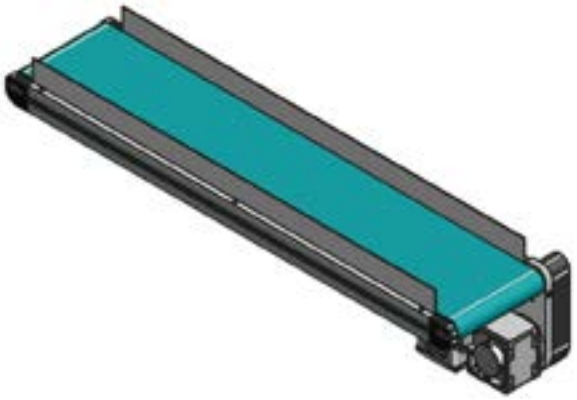
- Height adjustment using profile groove
- Belt can be inclined
- Support spacing up to 2,000 mm

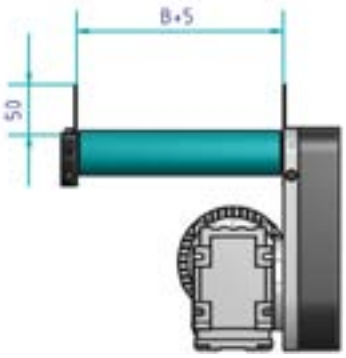


Side guides

Fixed side guidance

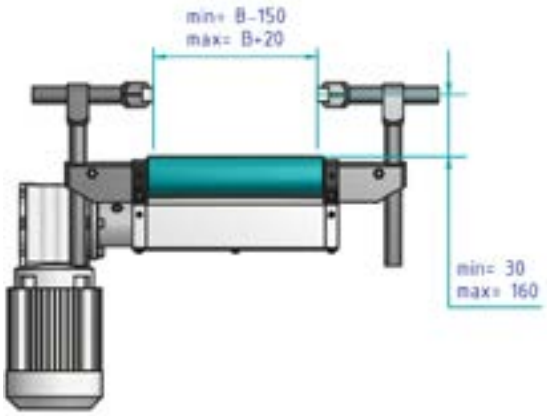
- Aluminium angle bracket L50 x 15 x 2
- Cold-rolled, untreated surface
- Fixings included
- Side guide length = profile length





Adjustable side guidance

- Side guidance consisting of holders and profile rails
- Profile rails made of aluminium with PE slide strip (ESD-safe)
- Plastic holder including fastening set
- Horizontal clamp holder, D=12, L=100
- Vertical clamp holder, D=18, L=160
- Side guide holders spaced at <500 mm

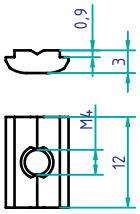
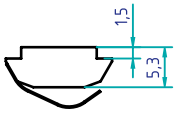
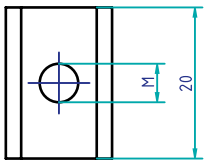


Accessories

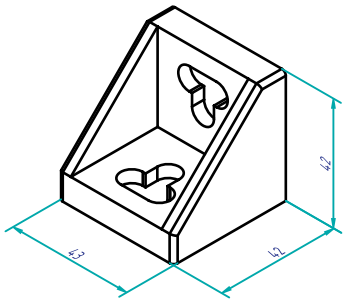
Cover profiles

Figure	Description	Order No.
	Cover profile, groove 6, plastic, black L = 2,000 mm	461 518343
	Cover profile, groove 10, plastic, black L = 2,000 mm	411 146901

T-slot nuts

Figure	Description	Order No.
	T-slot nut, M4, groove 6, stainless steel	462 536669
	T-slot nut, M5, groove 10, bright zinc-plated steel	412 529298
	T-slot nut, M6, groove 10, bright zinc-plated steel	412 529299
	T-slot nut, M8, groove 10, bright zinc-plated steel	412 529300

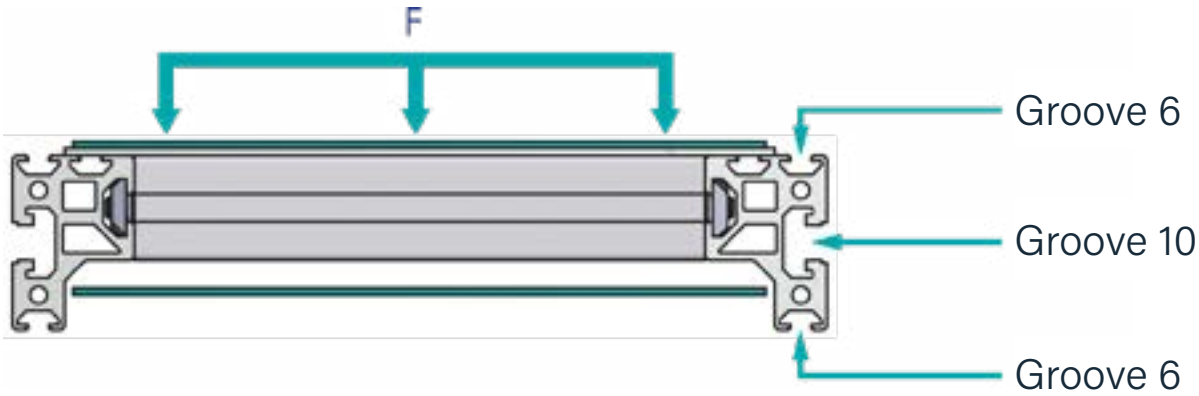
Angle brackets

Figure	Description	Order No.
	43 x 42 angle bracket, groove 10/10, die-cast aluminium, including fastening set	412 352009

Technical description

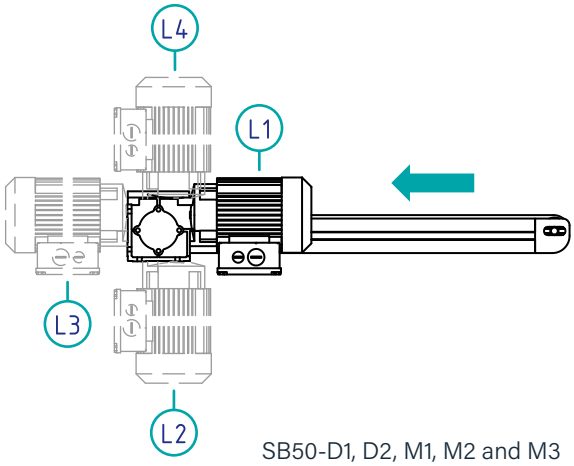
Belt conveyor construction

- Aluminium profile frame, anodized profile surface, profile height 50 mm
- The profile groove is compatible with Bosch Rexroth fastening technology
- The top plate is made of bright zinc-plated sheet steel and is bonded to the basic frame
- Top plate in stainless steel – screw fastened on request
- Drive shaft design features an elastomer coupling for bearing-friendly usage and direct influence on the service life of the belt conveyor
- The maximum belt load can be taken from the individual data sheets on Seite 4 to 13.
- High belt speeds, considerable point loads, accumulating and cyclical operation can reduce the maximum belt load

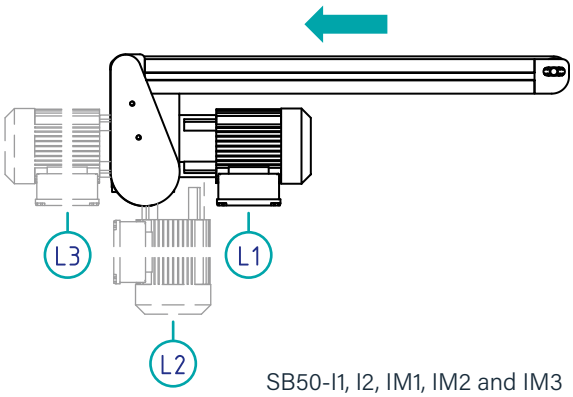


Motor arrangements

- The motor arrangement can be rotated through 90° increments
- The terminal box arrangement can also be rotated through 90° increments
- Position 1 is the default arrangement that is supplied if an alternative arrangement is not requested



SB50-D1, D2, M1, M2 and M3



SB50-I1, I2, IM1, IM2 and IM3

SB50-Z belt conveyors – the advantages

- High lateral stability
- Fixed side guidance
- Cost-effective maintenance
- Available in various heights and lengths
- 2 different angles – 30° / 45°
- Perfect for unit loads and small parts
  With particle size >5 mm
- Max. conveying weight of 10 kg per metre
  Overall weight not exceeding 75 kg – detailed specifications depend on belt width, speed, etc.

Figure: SB50Z-45°

Maximum flexibility

Our SB50-Z-series belt conveyor is a Z-shaped conveyor belt system that offers versatile configuration options.

Available in various heights, angles and lengths, it is the ideal solution for bridging various height differences.

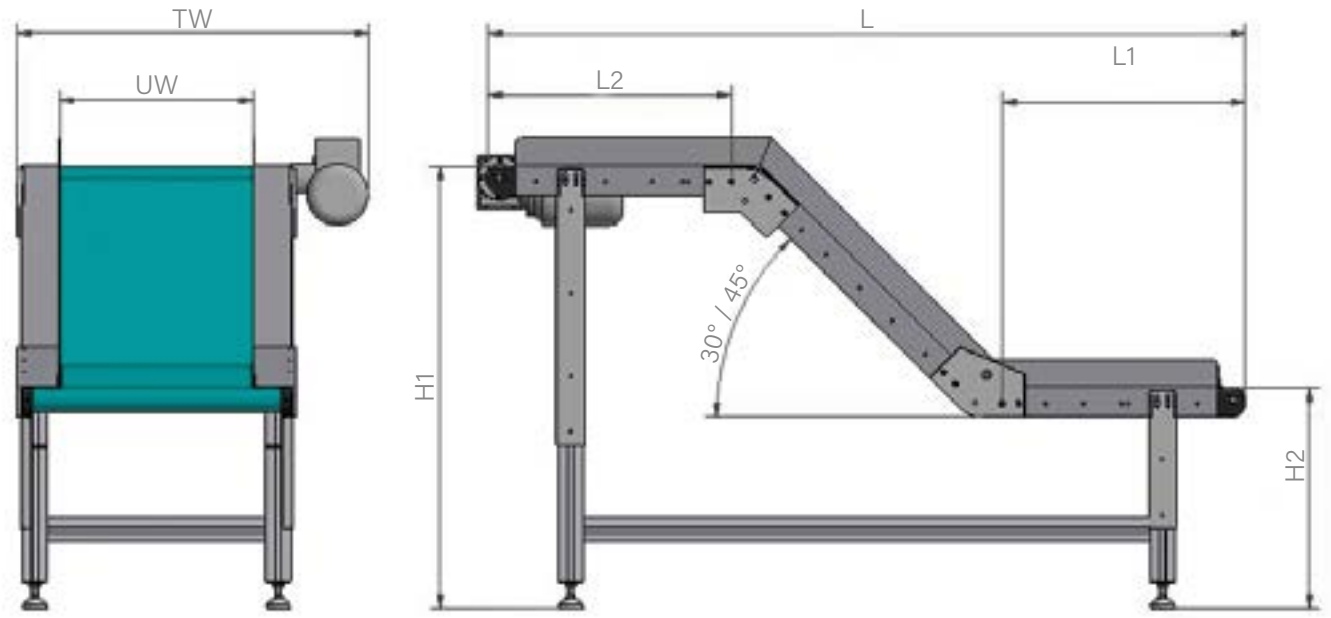
It is particularly suitable for transporting unit loads and other small parts.

With its motor installed on the left or right side and configured to pull, belt conveyor SB50-Z is primarily designed to move small parts upwards.
For instance, it is often used to remove parts on machinery or to fill containers, crates or cartons.

Thanks to its diverse range of configuration options, the SB50-Z is a dependable tool that makes your working processes faster and more effective.

Figure: SB50Z-30°

Data sheet



Type	UW	TW	L1	L2	H1*	H2
SB50Z-30°	50 - 600 mm	UW + 287 mm	200 - 2,800 mm	200 - 2,800 mm	200 - 2,800 mm	300 - 2,000 mm
SB50Z-45°	50 - 600 mm	UW + 287 mm	200 - 2,800 mm	200 - 2,800 mm	200 - 2,800 mm	300 - 2,000 mm

*H1 must be at least 300 mm more than H2!

UW = Usable width
TW = Total width

Length calculation:

Total length L30°	L30° = L1 + L2 + [(H1 - H2 + 102) / 0.577]
Total length L45°	L45° = L1 + L2 + H1 - H2 + 170

Features

Features:

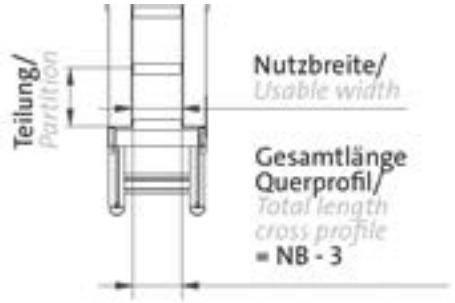
Motor installation (in direction of travel)	On right or left, pulling configuration
Speed (m/min)	2 / 3 / 4.5 / 6 / 7.5 / 9 / 12 / 15 / 18 / 23.5 / 35 / 47 / 70
Integral frequency inverter in motor (for speed adjustment)	Yes / no
CAD data	Yes / no

Selection of conveyor belt / belt:

Colour	Green / white

Selection of carrying mechanism / cross profile:

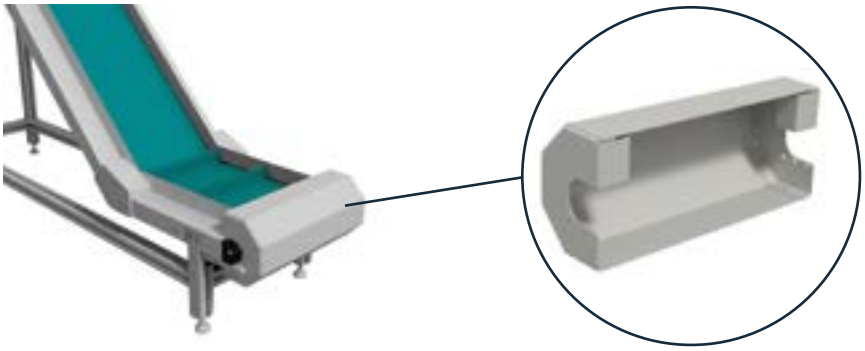
Features	PU, smooth, light friction, +100°C
Total length	UW - 3 mm



K6 U:
W × H: 6 × 3 mm

T20 U:
W × H: 20 × 20 mm
T30 U:
W × H: 20 × 30 mm
T40 U:
W × H: 20 × 40 mm
T50 U:
W × H: 20 × 50 mm

Optional safety device / cover:



Your notes

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