

# Modular plastic belt conveyor WL

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## System information

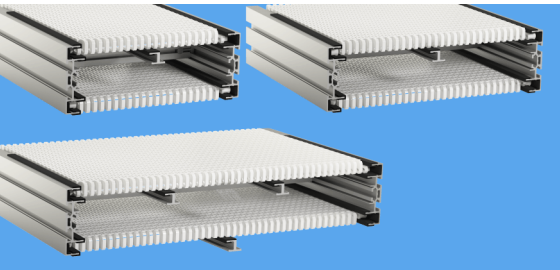


### Wide conveyor for transport and accumulation

The WL conveyor system offers many of the benefits of the original FlexLink conveyor system. The added advantage of a wide belt (up to 600 mm) permits effective transport and accumulation in several different configurations.

Many accessory components of the original FlexLink system will fit, including guide rail components and supports. Most components are attached by means of T-slot fasteners, ensuring maximum flexibility. Nothing is welded. Only a minimum of cutting and drilling will be required to install a conveyor and have it running.

### Belt width 304/406/608 mm



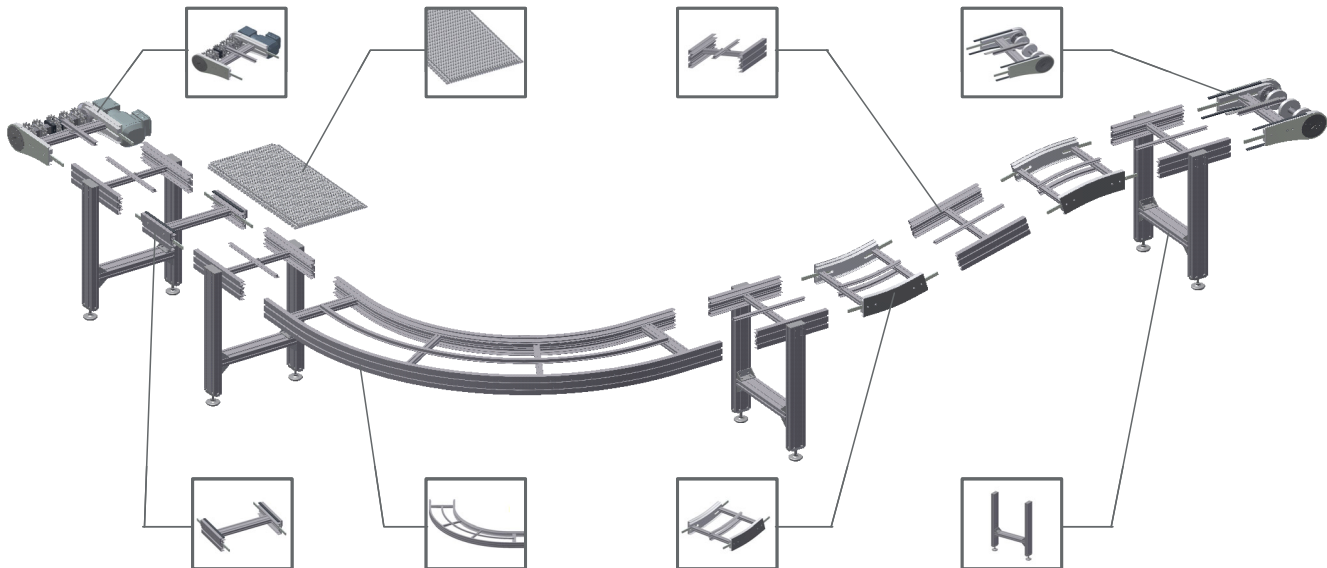
### Typical applications

The WL conveyor system is designed for transport and accumulation of lightweight goods such as:

- Secondary packaging of food and hygiene products
- Pouches
- Shrink wrapped products
- Card board boxes
- Plastic containers

### Technical specifications

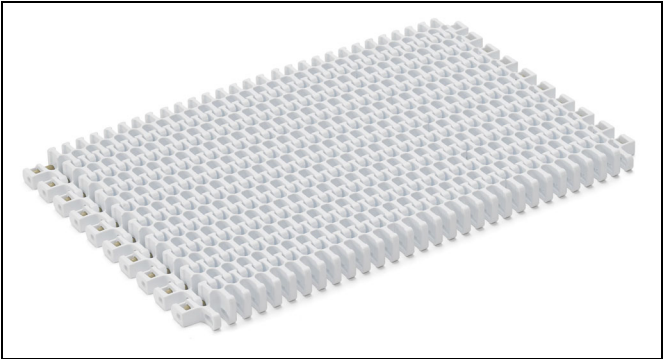
Maximum speed .....	40 m/min
Maximum conveyor length.....	15 m
Product weight .....	up to 30 kg
Total load .....	up to 250 kg
Max. product weight per belt pitch .....	1,5 kg/slide rail
<b>Belt tension limit:</b>	
Conveyor with bend.....	1000 N
Conveyor without bend.....	1200 N



*The modular plastic belt conveyor in three widths – 322, 424 and 626 mm – can be built as straight sections or in S, U or L-shape with 30, 45, 60 or 90° horizontal bend, or combinations thereof.*

*Vertical bends are available in 5° and 15°.*

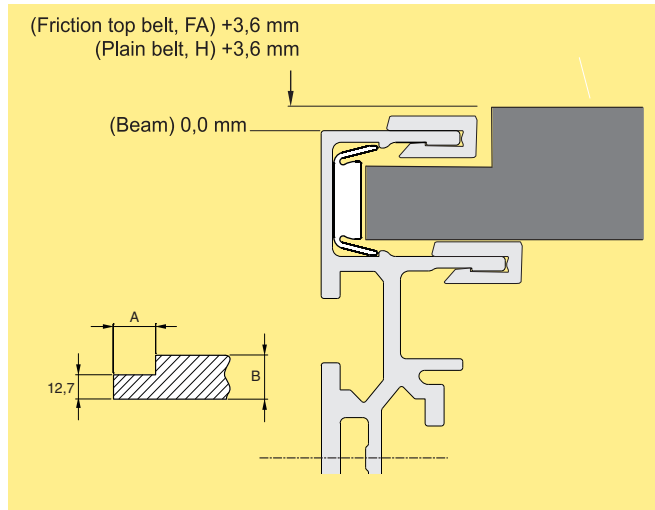
*Note! A combination of horizontal and vertical curves are not recommended.*



Links and plastic rods

The belt consists of plastic hinge-type links connected by plastic rods. The belt is woven together by 102 mm, 124 mm and 180 mm wide links. The assembled belt forms a wide, flat and tight conveyor surface. Three standard widths of belt can be delivered, 304 mm, 406 mm and 608 mm.

Belt type	A	B
Plain belt WLTP...H	22	22,8
Friction top belt WLTP...FA	24,1	22,8



Technical characteristics

Belt width	304/406/608 mm
Belt weight (Polypropylene)	9,3 kg/m <sup>2</sup>
Belt weight (Acetal)	14,9 kg/m <sup>2</sup>
Belt pitch	25,4 mm
Max. permissible belt tension	
With bend	1000 N
Without bend	1200 N
Max. permissible belt tension for Friction top belt	
With bend	700 N
Without bend	1000 N
Temperature range (Polypropylene)	1 °C to +60 °C
Temperature range (Acetal)	–46 °C to +60 °C

Belt type	Belt material	Plastic rod material
Plain belt	Acetal	Polyamide
Friction top belt	Polypropylene	Acetal

Tools and accessories

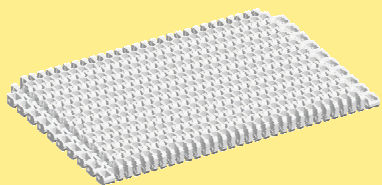
No special tools are required. The belt is lubrication-free. A new belt running on new slide rails, however, will need a few hours of running-in before it runs perfectly smoothly. For applications where absolutely smooth running is essential from start, use a silicone or teflon based lubricant.

Ordering information

The belt is delivered in assembled 1 m lengths. To calculate the total length required, remember to add for belt consumed by the idler and drive units.

## Belts

### Plain belt



#### Plain belt

Length 1 m

Acetal

304 mm wide, WL322

406 mm wide, WL424

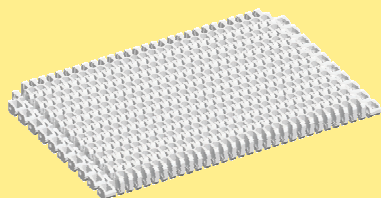
608 mm wide, WL626

**WLTP 1A304L H**

**WLTP 1A406L H**

**WLTP 1A608L H**

### Friction top belt



#### Friction top belt

Length 1 m

Polypropylene

304 mm wide, WL322

406 mm wide, WL424

608 mm wide, WL626

**WLTP 1A304 FA**

**WLTP 1A406 FA**

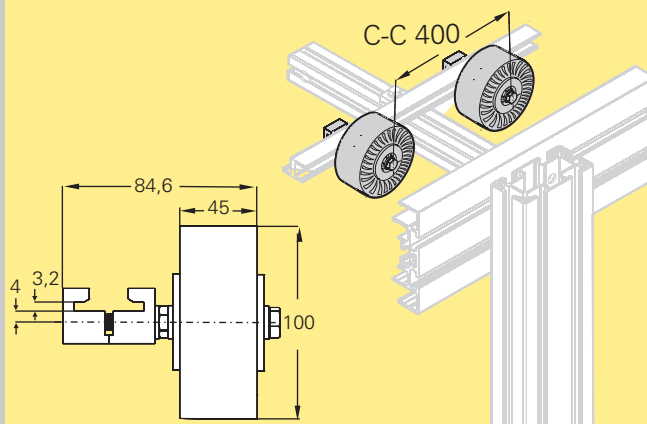
**WLTP 1A608 FA**

**Friction top belt** increases the friction between product and chain and can often be used for 20° slopes.

**Note!** Can only be used in straight sections and in combination with Vertical bends, a combination with Plain bends are not allowed

## Accessories for use with Friction top belt

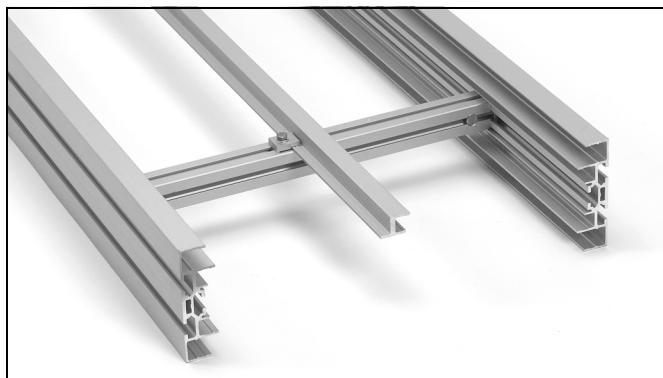
### Roller kit



Roller kit, centre belt support  
wheel/roller

Kit for Friction top belt WLTP 1A608  
FA, includes mounting hardware.

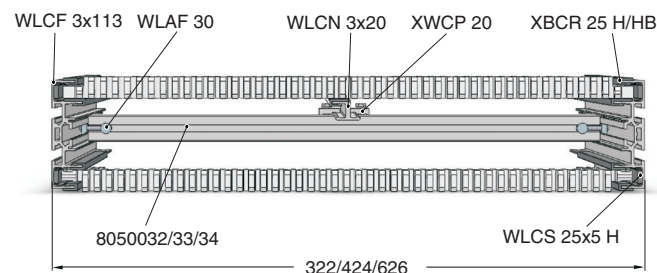
**FLX1001216**



Conveyor frame structure

## Technical specifications

Typical friction between chain and slide rails after run-in:  
XBCR 25 H/HB and WLCS 25x5 H..... 0,25



Cross-section of conveyor frame

## Frame profiles and cross bars

Conveyor frame sections are built from the following components:

- Frame profile (3 m or cut to any length from 0,5 m up to 3 m)
- Centre support profile
- Beam for cross bar
- Fastener yoke
- Mounting hardware

Each 3 m frame section consists of two frame profiles connected by four cross bars. The conveyor chain slides on the top edges of the frame profiles, and returns on the bottom side. Plastic slide rails ensure a low friction contact between chain and conveyor frame.

One or more centre support profiles is used to prevent the centre portion of the chain from sagging with heavy loads. A centre support profile should be used every 200 mm, except for very light loads. The 626 mm wide conveyor also requires a centre chain support in type of profile for standard plain belt and a Roller kit for Friction top belt on the bottom side.

Suggested support layouts are shown on page 459. For support components refer to catalogue section *Conveyor support components*.

## Conveyor dimensions

	WL 322	WL 424	WL 626
Conveyor width A	322 mm	424 mm	626 mm
Usable belt width B	260 mm	362 mm	564 mm
<b>Top of chain:</b>			
Standard belt WLTP...H	60 mm		
Friction top belt WLTP...F	55 mm		
Friction top belt WLTP...FA	60 mm		

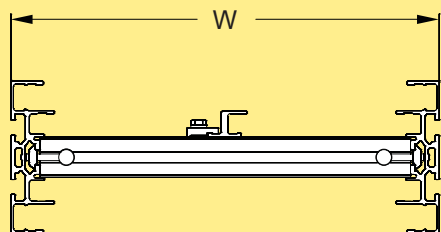
## Minimum conveyor length

Minimum conveyor length	Width	L1	L2	L3
Straight section	322	1160	-	-
	424	1160	-	-
	626	1160	-	-
L-shape section	322	550	800	-
	424	550	800	-
	626	750	1162	-
U-shape section	322	550	400	800
	424	550	400	800
	626	750	400	990
S-shape section	322	550	608	800
	424	550	812	800
	626	750	1216	990

## Ordering information

Slide rail, connecting strips, and connecting sleeves must be ordered separately.

## Conveyor beam



Conveyor beam, WL322

Length 3000 mm

Length to order (500- 3000 mm)

**WLCB 3A322**

**WLCB LA322**

Conveyor beam, WL424

Length 3000 mm

Length to order (500- 3000 mm)

**WLCB 3A424**

**WLCB LA424**

Conveyor beam, WL626

Length 3000 mm

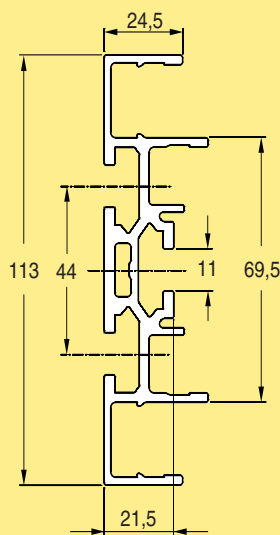
Length to order (500- 3000 mm)

**WLCB 3A626**

**WLCB LA626**

*The beam section is delivered unassembled.*

## Conveyor frame profile



Frame profile

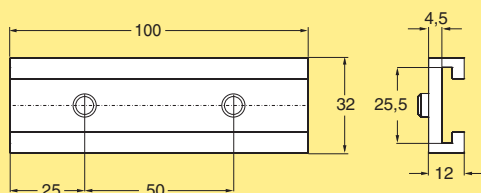
Length 3000 +10/-0 mm

Length to order (30- 3000 mm)

**WLCF 3x113**

**WLCF Lx113**

## Connecting sleeve kit



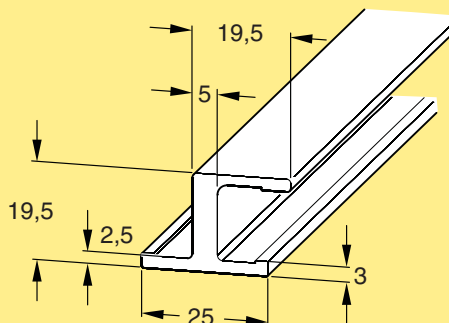
Connecting sleeve

Length 100 mm

Including set screws

**8050045**

## Centre support profile



Centre support profile

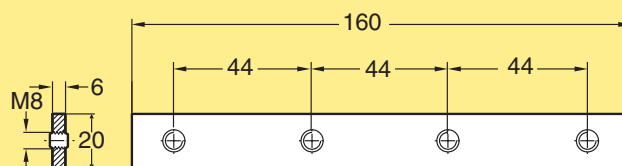
Length 3000 +10/-0 mm

Length to order (30- 3000 mm)

**WLCN 3x20**

**WLCN Lx20**

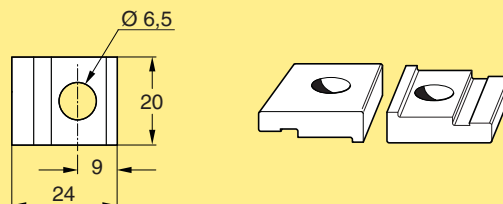
## Connecting strips for beam



Connecting strip

**XSCJ 6x160**

## Cleat



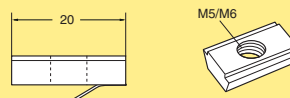
Cleat

**XWCP 20**

*Mounting:*

*One each of MC6S 6x14, BRB 6.4x12, XFAN 6*

## T-slot nut



T-slot nut

M6

M6, multipack (500 pcs)

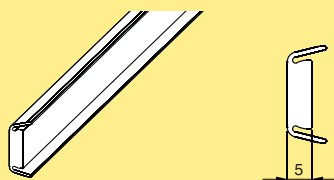
**XFAN 6\***

**5056130**

*\*Note. Contains 10 pcs.*



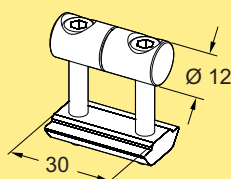
### Support rail



Support rail, length 25 m  
PA-PE (Grey)

**WLCS 25x5 H**

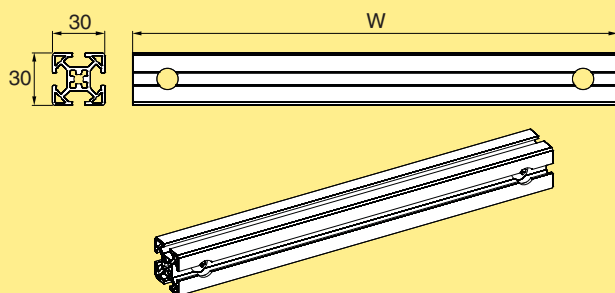
### Fastener yoke



Fastener yoke  
Steel, electro-zinc-plated  
Length 30 mm

**WLAF 30**

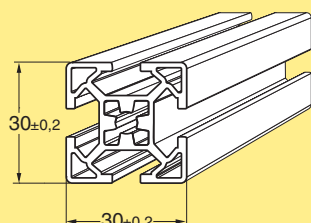
### Spacer beam



Spacer beam 30 mm x 30 mm  
Length 279 mm  
Length 381 mm  
Length 583 mm

**8050032**  
**8050033**  
**8050034**

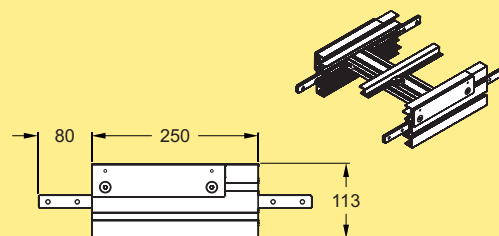
### Support beam 30x30



Beam 30 mm x 30 mm  
Aluminium, anodized  
Length 3000 mm  
Length to order

**XFBM 3x30**  
**XFBM Lx30**

### Beam section for belt installation

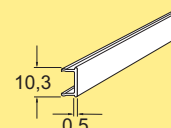


Beam section kit  
WL322  
WL424  
WL626

**WLCC 322**  
**WLCC 424**  
**WLCC 626**

*Including connection strips and screws*

### Cover strip for T-slot, PVC

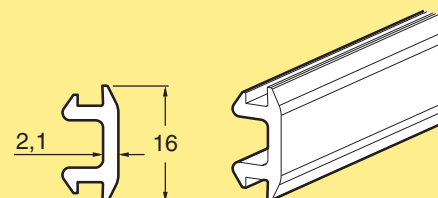


Cover strip for T-slot  
Length 3 m  
Grey PVC

**XCAC 3 P**

*Note! Can't be used with bends*

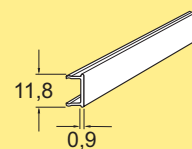
### Cover strip for T-slot, PVC



Cover strip for T-slot  
Length 25 m  
Grey PVC

**XCAC 25 P**

### Cover strip for T-slot, aluminium



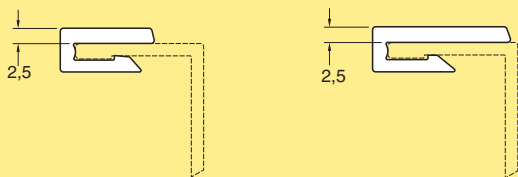
Cover strip for T-slot  
Aluminium, anodized  
Length 2 m

**XCAC 2**

*Note! Can't be used with bends*

## Slide rail

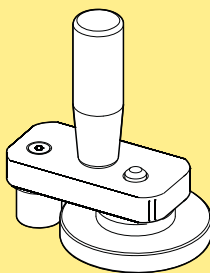
### Slide rail



Slide rail, length 25 m  
PA-PE (Grey)  
PA-PE (Grey)

**XBCR 25 H**  
**XBCR 25 HB**

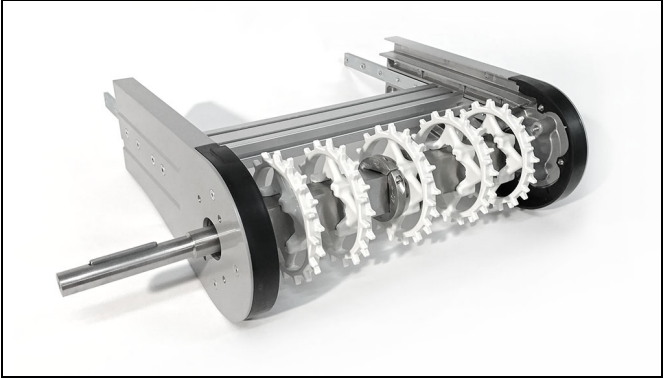
### Mounting tool for slide rail



Mounting tool for slide rail

**WLMR 135**





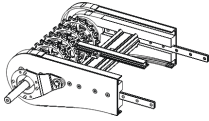
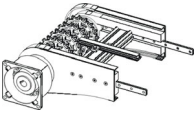
End drive unit

Drive unit types

The WL system includes direct driven units with or without slip clutch. The belt is guided through the drive unit eliminating any pinch point in the drive unit.

Available motors include variable speed types (V) as well as fixed speed motors (F).

End drive units

Size	Direct drive, no slip clutch	Direct drive, slip clutch
Drive unit types	 F, V	 F, V

Motor specifications

Motors are available for 230/400 V, 50 Hz and 230/460 V, 60 Hz. Variable speed motors are SEW Movimot, 380–500 V. Note that variable speed motors include a control box that adds 120 mm to the width of the motor.

IP55 available with standard oil.

IP65 available with food grade oil.

Technical specifications

Maximal speed ..... 40 m/min

Number of teeth on sprocket wheel ... 2×16

Number of sprocket wheels vs. conveyor width

Width	322 mm	424 mm	626 mm
Sprocket wheels	5	5	7

Ordering information

Drive units with motors must be specified using the web-based configurator. The configurator provides detailed information and step-by-step guidance in the specification process. A product code string is generated, containing the specification details. See next page for examples of code strings.

Drive units *without* motors can be ordered using the designations in the catalogue.

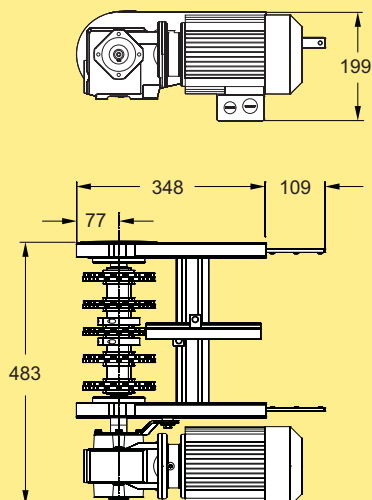
- Connecting strips are included with the drive units.
- Slide rail must be ordered separately.

Dimension

Note that dimensions relating to drive unit motors depend on the motor specified during the configuration.

PO  
CC  
X45  
XS  
X65  
X65P  
X85  
X85P  
XH  
XK  
XKP  
X180  
X300  
GR  
CS  
XT  
HU  
WL  
WK  
XC  
XF  
XD  
ELV  
CTL  
FST  
TR  
APX  
IDX

## End drive unit L/R, WL322



End drive unit

Fixed/variable speed\*

Without motor:

Transmission on left side

Transmission on right side

**WLEB A322**

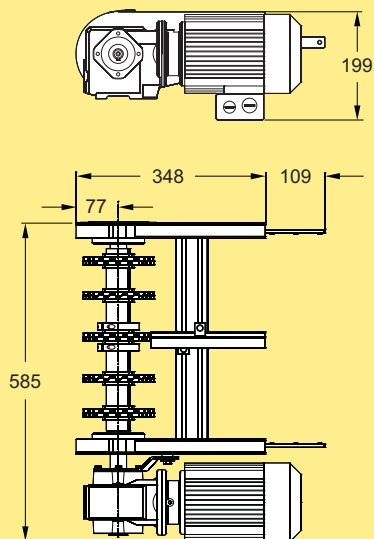
**WLEB 0A322NLP**

**WLEB 0A322NRP**

\* Use online configurator when ordering

Effective track length: 0,80 m

## End drive unit L/R, WL424



End drive unit

Fixed/variable speed\*

Without motor:

Transmission on left side

Transmission on right side

**WLEB A424**

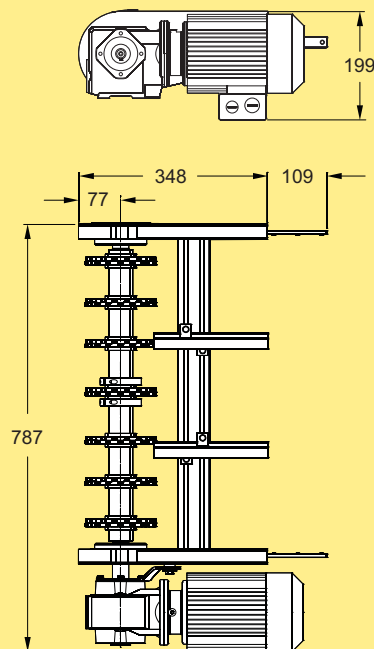
**WLEB 0A424NLP**

**WLEB 0A424NRP**

\* Use online configurator when ordering

Effective track length: 0,80 m

## End drive unit L/R, WL626



End drive unit

Fixed/variable speed\*

Without motor:

Transmission on left side

Transmission on right side

**WLEB A626**

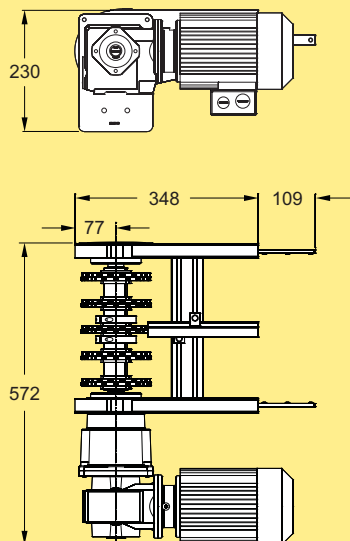
**WLEB 0A626NLP**

**WLEB 0A626NRP**

\* Use online configurator when ordering

Effective track length: 0,80 m

## End drive unit L/R with slip clutch, WL322



End drive unit

Fixed/variable speed\*

Without motor:

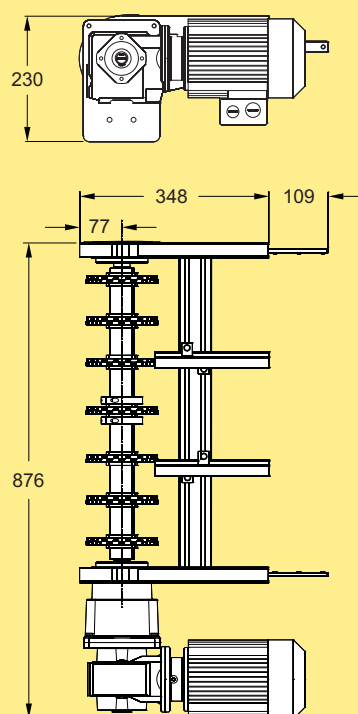
Transmission on left side

Transmission on right side

**WLEB A322****WLEB 0A322LP****WLEB 0A322RP**

\* Use online configurator when ordering  
Effective track length: 0,80 m

## End drive unit L/R with slip clutch, WL626



End drive unit

Fixed/variable speed\*

Without motor:

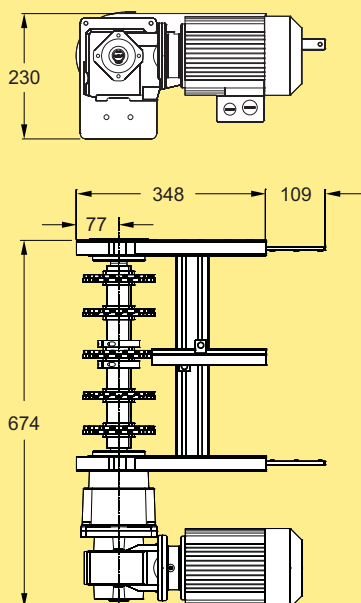
Transmission on left side

Transmission on right side

**WLEB A626****WLEB 0A626LP****WLEB 0A626RP**

\* Use online configurator when ordering  
Effective track length: 0,80 m

## End drive unit L/R with slip clutch, WL424



End drive unit

Fixed/variable speed\*

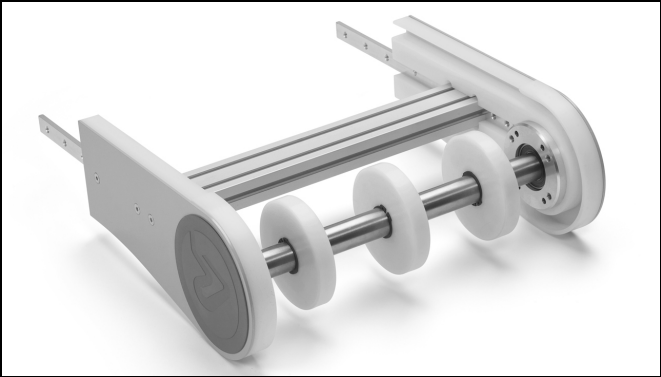
Without motor:

Transmission on left side

Transmission on right side

**WLEB A424****WLEB 0A424LP****WLEB 0A424RP**

\* Use online configurator when ordering  
Effective track length: 0,80 m



Idler end unit

Chain guidance at end of conveyor

The idler end unit is used to guide the chain from the return side of the conveyor up to the top side with a minimum of friction. The chain is guided by three or more idler wheels on a common, rotating shaft supported by ball bearings.

Number of idler wheels vs. conveyor width

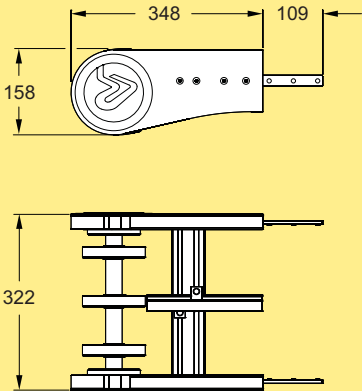
Width	322 mm	424 mm	626 mm
Idler wheels	3	3	5

Ordering information

- Connecting strips are included with the idler end units.
- Slide rail must be ordered separately.

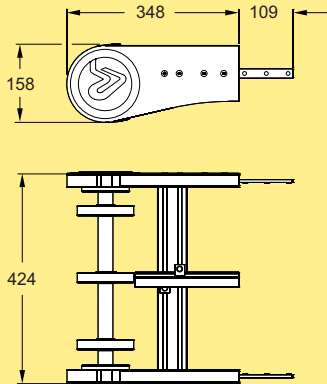
Idler units

Idler end unit, WL322



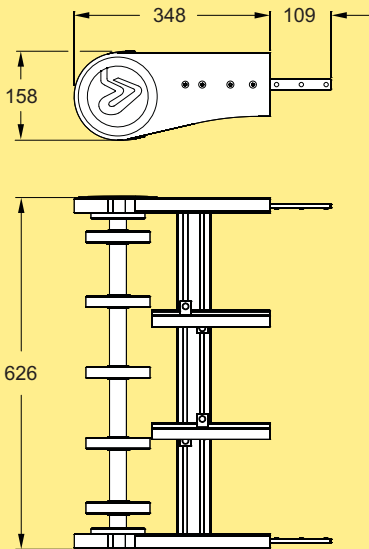
Idler end unit  
Effective track length: 0,80 m  
**WLEJ 300A322**

Idler end unit, WL424



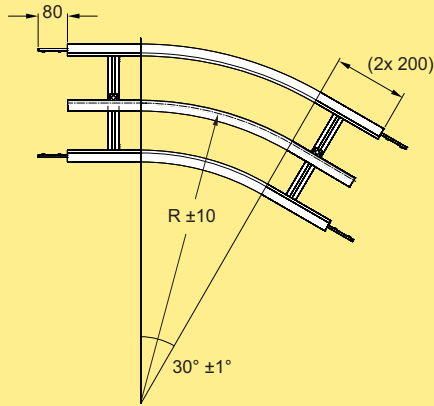
Idler end unit  
Effective track length: 0,80 m  
**WLEJ 300A424**

Idler end unit, WL626



Idler end unit  
Effective track length: 0,80 m  
**WLEJ 300A626**

## Plain bend, 30°



Plain bend, 30°±1°

R=820±10 mm, WL322

R=1100±10 mm, WL424

R=1650±10 mm, WL626

**WLBP 30A322**

**WLBP 30A424**

**WLBP 30A626**

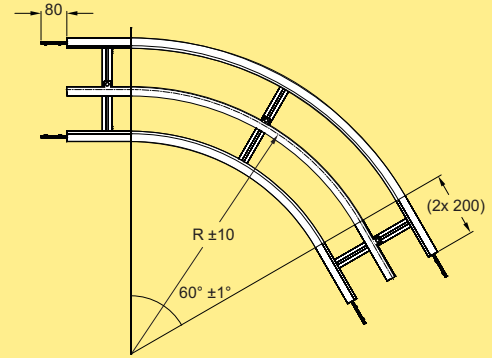
*Effective track lengths:*

*R820: 1,85 m (top+bottom)*

*R1100: 2,20 m (top+bottom)*

*R1650: 2,90 m (top+bottom)*

## Plain bend, 60°



Plain bend, 60°±1°

R=820±10 mm, WL322

R=1100±10 mm, WL424

R=1650±10 mm, WL626

**WLBP 60A322**

**WLBP 60A424**

**WLBP 60A626**

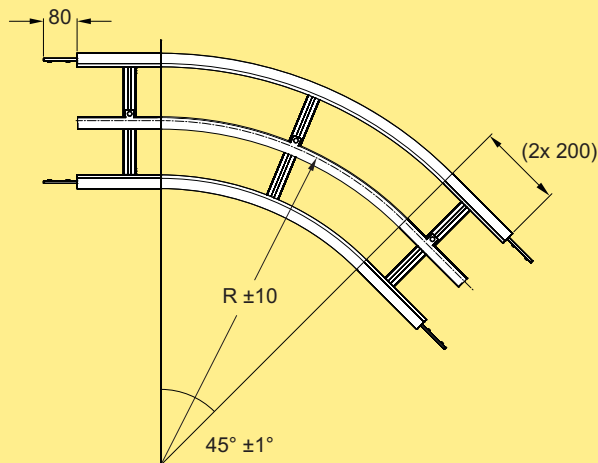
*Effective track lengths:*

*R820: 2,85 m (top+bottom)*

*R1100: 3,55 m (top+bottom)*

*R1650: 4,90 m (top+bottom)*

## Plain bend, 45°



Plain bend, 45°±1°

R=820±10 mm, WL322

R=1100±10 mm, WL424

R=1650±10 mm, WL626

**WLBP 45A322**

**WLBP 45A424**

**WLBP 45A626**

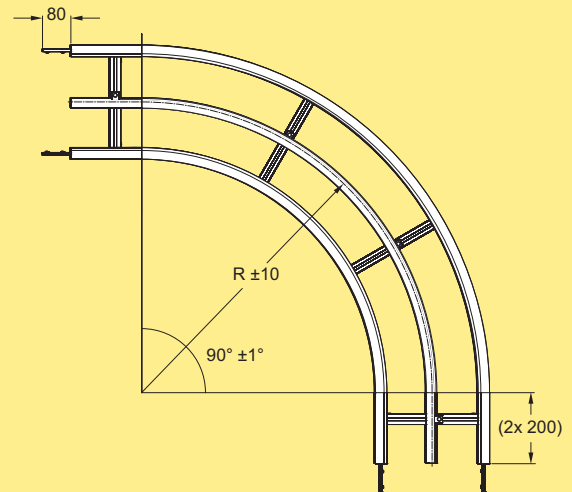
*Effective track lengths:*

*R820: 2,35 m (top+bottom)*

*R1100: 2,90 m (top+bottom)*

*R1650: 3,90 m (top+bottom)*

## Plain bend, 90°



Plain bend, 90°±1°

R=820±10 mm, WL322

R=1100±10 mm, WL424

R=1650±10 mm, WL626

**WLBP 90A322**

**WLBP 90A424**

**WLBP 90A626**

*Effective track lengths:*

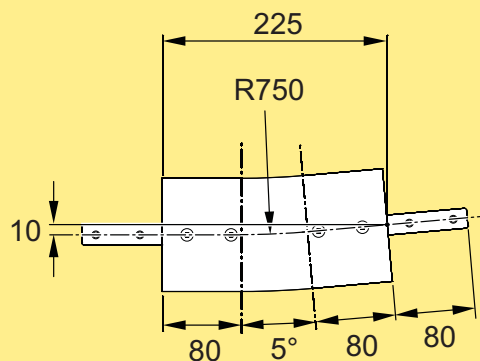
*R820: 3,85 m (top+bottom)*

*R1100: 4,90 m (top+bottom)*

*R1650: 6,95 m (top+bottom)*

## Vertical bends

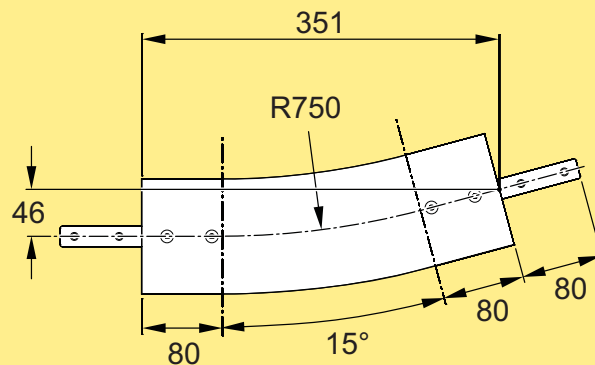
### Vertical bend, 5°



Vertical bend, 5°, WL322 **WLBV 5A322**  
 Vertical bend, 5°, WL424 **WLBV 5A424**  
 Vertical bend, 5°, WL626 **WLBV 5A626**

*Effective track length: 0,50 m (top+bottom)*

### Vertical bend, 15°



Vertical bend, 15° WL322 **WLBV 15A322**  
 Vertical bend, 15° WL424 **WLBV 15A424**  
 Vertical bend, 15° WL626 **WLBV 15A626**

*Effective track length: 0,75 m (top+bottom)*

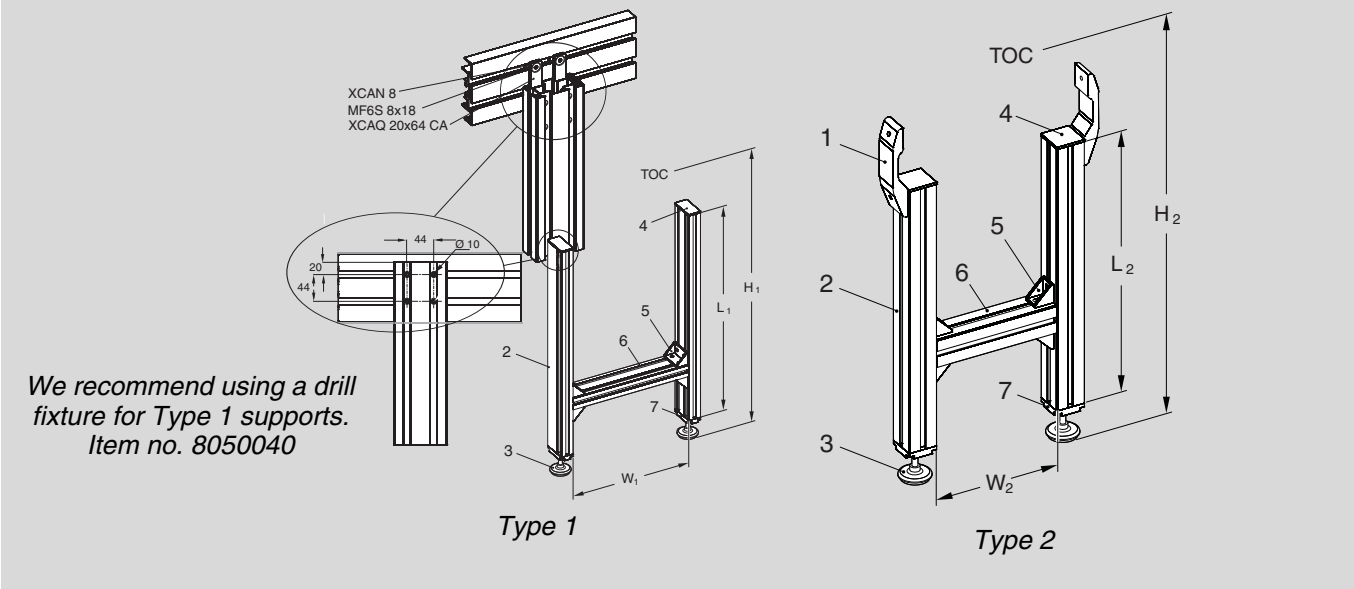
Support components

The illustrations on this page show recommended supports for the conveyor. All supports are built using components from FlexLink structural system XC. See main catalogue section *Conveyor support components* for more information.

System WL626 requires some additional support, please see page 460 for details.

Height and width of supports Type 1 and 2

	WL322	WL424	WL626
W1 (mm)	322	424	626
L1 (mm)	ca. H1-100	ca. H1-100	ca. H1-100
W2 (mm)	172,5	274,5	476,5
L2 (mm)	ca. H2-284	ca. H2-284	ca. H2-284



Suggested support components

Pos	Item	Designation	
		Type 1	Type 2
1	Beam support bracket	—	XLCS 64 C
2	Leg support	XCBL 3x44x88	XCBL 3x64
3	Foot	XCFS 12x68	XCFS 12x68
4	End cap	XCBE 44x88	XCBE 64
5	Angle bracket	XCFA 88 B	XCFA 44 B
6	Cross beam	XCBL 3x44x88	XCBL 3x64
7	End plate for beam	XCFE 44x88 M12A	XCFE64 M12A

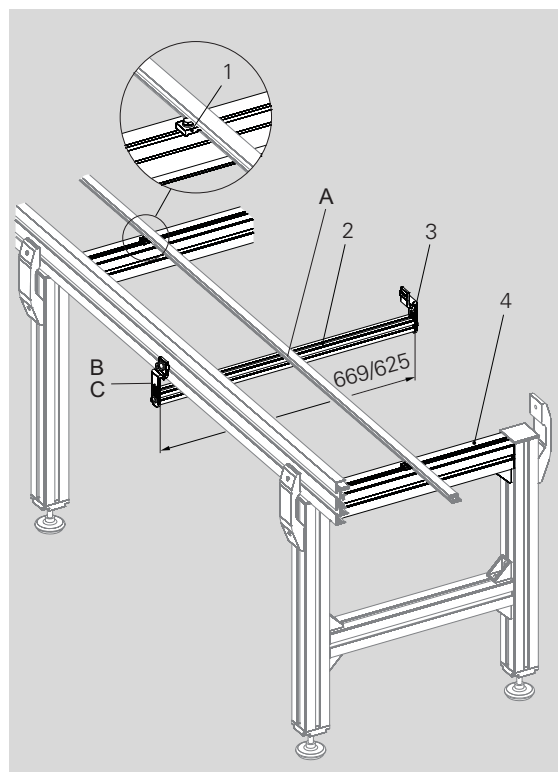


### Additional support for WL626

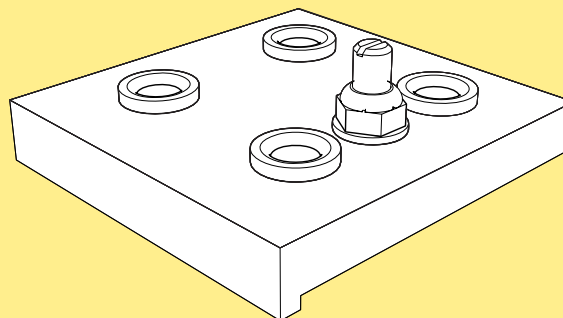
System WL626 requires extra support due to the width of the conveyor.

Plain belt WLTP 1A608 L H			
Pos	Item	Designation	
1	Cleat	XWCP 20	
2	Support profile 669 mm	XFBM Lx30	
3	Support bracket	XLDB 21x100	
4	Cross beam	XCBL 3x44x88	Used together with leg support XCBL 3x44x88
4	Cross beam	XCBL 3x64	
A	Fastening material	XFAN 6, MC6S 6x14, BRB 6,4x12	
B	Fastening material	XCAN 8, M6S 8x14	

Friction top belt WLTP 1A608 FA			
Pos	Item	Designation	
1	Cleat	XWCP 20	
2	Support profile 625 mm	XFBM Lx30	
3	Support bracket	FLX1001249	
4	Cross beam	XCBL 3x44x88	Used together with leg support XCBL 3x44x88
4	Cross beam	XCBL 3x64	
A	Fastening material	XFAN 6, MC6S 6x14, BRB 6,4x12	
B	Fastening material	XLAT 17, BRB 8,4 x16, XLAN 8	
C	Fastening material	BRB 8,4 x 16, MC6S-TT 6 x 30	



### Drill fixture



Drill fixture

**8050040**

See figure "Suggested support components" on page 459