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/belt section

Belt tension limit:
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.
Belts – introduction

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.

<table>
<thead>
<tr>
<th>Belt type</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plain belt WLTPL...H</td>
<td>22</td>
<td>22,8</td>
</tr>
<tr>
<td>Friction top belt WLTP...FA</td>
<td>24,1</td>
<td>22,8</td>
</tr>
</tbody>
</table>

Technical characteristics

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Belt width</td>
<td>304/406/608 mm</td>
</tr>
<tr>
<td>Belt weight (Polypropylene)</td>
<td>9,3 kg/m²</td>
</tr>
<tr>
<td>Belt weight (Acetal)</td>
<td>14,9 kg/m²</td>
</tr>
<tr>
<td>Belt pitch</td>
<td>25,4 mm</td>
</tr>
<tr>
<td>Max. permissible belt tension With bend</td>
<td>1000 N</td>
</tr>
<tr>
<td></td>
<td>Without bend</td>
</tr>
<tr>
<td>Max. permissible belt tension for Friction top belt With bend</td>
<td>700 N</td>
</tr>
<tr>
<td></td>
<td>Without bend</td>
</tr>
<tr>
<td>Temperature range (Polypropylene)</td>
<td>1 °C to +60 °C</td>
</tr>
<tr>
<td>Temperature range (Acetal)</td>
<td>–46 °C to +60 °C</td>
</tr>
</tbody>
</table>

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
Length 1 m
304 mm wide, WL322
406 mm wide, WL424
608 mm wide, WL626

Friction top belt
Length 1 m
304 mm wide, WL322
406 mm wide, WL424
608 mm wide, WL626

Roller kit
Roller kit, centre belt support
wheel/roller
Kit for Friction top belt WLTP 1A608 FA, includes mounting hardware.

Accessories for use with Friction top belt

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.
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 401. For support components refer to catalogue section Conveyor support components.

Conveyor dimensions

<table>
<thead>
<tr>
<th>Conveyor width A</th>
<th>322 mm</th>
<th>424 mm</th>
<th>626 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usable belt width B</td>
<td>260 mm</td>
<td>362 mm</td>
<td>564 mm</td>
</tr>
</tbody>
</table>

Top of chain:
- Standard belt WLTPL...H: 60 mm
- Friction top belt WLTP...F: 55 mm
- Friction top belt WLTP...FA: 60 mm

Technical specifications

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

<table>
<thead>
<tr>
<th>Minimum conveyor length</th>
<th>Width</th>
<th>L1</th>
<th>L2</th>
<th>L3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Straight section</td>
<td>322</td>
<td>1160</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>424</td>
<td>1160</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>626</td>
<td>1160</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>L-shape section</td>
<td>322</td>
<td>550</td>
<td>800</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>424</td>
<td>550</td>
<td>800</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>626</td>
<td>750</td>
<td>1162</td>
<td>-</td>
</tr>
<tr>
<td>U-shape section</td>
<td>322</td>
<td>550</td>
<td>400</td>
<td>800</td>
</tr>
<tr>
<td></td>
<td>424</td>
<td>550</td>
<td>400</td>
<td>800</td>
</tr>
<tr>
<td></td>
<td>626</td>
<td>750</td>
<td>400</td>
<td>990</td>
</tr>
<tr>
<td>S-shape section</td>
<td>322</td>
<td>550</td>
<td>608</td>
<td>800</td>
</tr>
<tr>
<td></td>
<td>424</td>
<td>550</td>
<td>812</td>
<td>800</td>
</tr>
<tr>
<td></td>
<td>626</td>
<td>750</td>
<td>1216</td>
<td>990</td>
</tr>
</tbody>
</table>

Ordering information

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

Conveyor beam

- Conveyor beam, WL322
  - Length 3000 mm
  - Length to order (500-3000 mm)
- Conveyor beam, WL424
  - Length 3000 mm
  - Length to order (500-3000 mm)
- Conveyor beam, WL626
  - Length 3000 mm
  - Length to order (500-3000 mm)

*The beam section is delivered unassembled.*

Conveyor beam profile

- Frame profile
  - Length 3000 +10/-0 mm
  - Length to order (30-3000 mm)

Connecting strips for beam

- Connecting strip
  - XSCJ 6×160

Cleat

- Cleat
  - XWCP 20

Mounting:
One each of MC6S 6×14, BRB 6.4×12, XFAN 6

T-slot nut

- T-slot nut
  - M6
  - M6, multipack (500 pcs)

*Note. Must be ordered in multiples of 10*
Conveyor frame components (continued)

Support rail

Support rail, length 25 m
PA-PE (Grey)  
WLCS 25×5 H

Fastener yoke

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

Spacer beam

Spacer beam 30 mm × 30 mm
Length 279 mm  
8050032
Length 381 mm  
8050033
Length 583 mm  
8050034

Support beam 30×30

Beam 30 mm × 30 mm
Aluminium, anodized
Length 3000 mm  
XFBM 3×30
Length to order  
XFBM L×30

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

XBCR 25 H
XBCR 25 HB

Mounting tool for slide rail

WLMR 135
Drive units – introduction

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

<table>
<thead>
<tr>
<th>Drive unit types</th>
<th>Direct drive, no slip clutch</th>
<th>Direct drive, slip clutch</th>
</tr>
</thead>
<tbody>
<tr>
<td>F, V</td>
<td>F, V</td>
<td></td>
</tr>
</tbody>
</table>

Motor specifications
Motors are available for 230/400 V, 50 Hz and 230/460 V or 330/575 V, 60 Hz. All motors can be connected for delta or star configuration by means of jumpers.

Variable speed motors are SEW Movimot, 380–500 V. Note that variable speed motors include a control box that adds 93 mm to the width of the motor.

Technical specifications
Maximal speed................................. 40 m/min
Number of teeth on sprocket wheel ... 2×16

Number of sprocket wheels vs. conveyor width

<table>
<thead>
<tr>
<th>Width</th>
<th>322 mm</th>
<th>424 mm</th>
<th>626 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sprocket wheels</td>
<td>5</td>
<td>5</td>
<td>7</td>
</tr>
</tbody>
</table>

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 drawings in catalogue
Note that dimensions relating to drive unit motors depend on the motor specified during the configuration. In most cases, the motors shown in the catalogue drawings represent the largest size. If variable speed motors are used, some dimensions may increase, indicated by dimension values xxx (V: yyy). V represents the max dimension using variable speed motor.
End drive units, direct drive, no slip clutch

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 units, direct drive with slip clutch

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

* 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

* 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

* Use online configurator when ordering
Effective track length: 0,80 m
Idler end units – introduction

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

<table>
<thead>
<tr>
<th>Width</th>
<th>322 mm</th>
<th>424 mm</th>
<th>626 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idler wheels</td>
<td>3</td>
<td>3</td>
<td>5</td>
</tr>
</tbody>
</table>

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

Idler units

Idler end unit, WL322
Effective track length: 0,80 m

Idler end unit, WL424
Effective track length: 0,80 m

Idler end unit, WL626
Effective track length: 0,80 m
**Plain bends**

**Plain bend, 30°**

Plain bend, 30° ±1°
- R=820±10 mm, WL322
- R=1100±10 mm, WL424
- R=1650±10 mm, WL626

Effective track lengths:
- R820: 1,85 m (top+bottom)
- R1100: 2,20 m (top+bottom)
- R1650: 2,90 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

Effective track lengths:
- R820: 2,35 m (top+bottom)
- R1100: 2,90 m (top+bottom)
- R1650: 3,90 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

Effective track lengths:
- R820: 2,85 m (top+bottom)
- R1100: 3,55 m (top+bottom)
- R1650: 4,90 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

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°

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

Vertical bend, 5°, WL322
Vertical bend, 5°, WL424
Vertical bend, 5°, WL626

WLBV 5A322
WLBV 5A424
WLBV 5A626

Vertical bend, 15°

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

Vertical bend, 15° WL322
Vertical bend, 15° WL424
Vertical bend, 15° WL626

WLBV 15A322
WLBV 15A424
WLBV 15A626
Support designs

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 402 for details.

We recommend using a drill fixture for Type 1 supports. Item no. 8050040

Height and width of supports Type 1 and 2

<table>
<thead>
<tr>
<th>WL322</th>
<th>WL424</th>
<th>WL626</th>
</tr>
</thead>
<tbody>
<tr>
<td>W1 (mm)</td>
<td>322</td>
<td>424</td>
</tr>
<tr>
<td>L1 (mm)</td>
<td>ca. H1-100</td>
<td>ca. H1-100</td>
</tr>
<tr>
<td>W2 (mm)</td>
<td>172.5</td>
<td>274.5</td>
</tr>
<tr>
<td>L2 (mm)</td>
<td>ca. H2-284</td>
<td>ca. H2-284</td>
</tr>
</tbody>
</table>

Suggested support components

<table>
<thead>
<tr>
<th>Pos</th>
<th>Item</th>
<th>Designation Type 1</th>
<th>Designation Type 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Beam support bracket</td>
<td>–</td>
<td>XLCS 64 C</td>
</tr>
<tr>
<td>2</td>
<td>Leg support</td>
<td>XCBL 3x44x88</td>
<td>XCBL 3x64</td>
</tr>
<tr>
<td>3</td>
<td>Foot</td>
<td>XCF 12x68</td>
<td>XCF 12x68</td>
</tr>
<tr>
<td>4</td>
<td>End cap</td>
<td>XCBE 44x88</td>
<td>XCBE 64</td>
</tr>
<tr>
<td>5</td>
<td>Angle bracket</td>
<td>XCF 88 B</td>
<td>XCF 44 B</td>
</tr>
<tr>
<td>6</td>
<td>Cross beam</td>
<td>XCBL 3x44x88</td>
<td>XCBL 3x64</td>
</tr>
<tr>
<td>7</td>
<td>End plate for beam</td>
<td>XCFE 44x88 M12A</td>
<td>XCFE64 M12A</td>
</tr>
</tbody>
</table>
Additional support for WL626
System WL626 requires extra support due to the width of the conveyor.

<table>
<thead>
<tr>
<th>Plain belt WLTP 1A608 L H</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pos</strong></td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>A</td>
</tr>
<tr>
<td>B</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Friction top belt WLTP 1A608 FA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pos</strong></td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>A</td>
</tr>
<tr>
<td>B</td>
</tr>
<tr>
<td>C</td>
</tr>
</tbody>
</table>

See figure “Suggested support components” on page 401

Drill fixture

8050040