Modular plastic belt conveyor WK

System information

Wide conveyor for transport and accumulation

The added advantage of a wide belt (up to 1200 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 150/225/300/600/900/1200 mm

Typical applications

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

• Bearings
• Gear wheels
• Cylindrical products
• Bottles

Technical specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum speed</td>
<td>40 m/min</td>
</tr>
<tr>
<td>Maximum conveyor length</td>
<td>20 m</td>
</tr>
<tr>
<td>Product weight</td>
<td>up to 30 kg</td>
</tr>
<tr>
<td>Total load</td>
<td>up to 250 kg</td>
</tr>
<tr>
<td>Max. product weight per belt pitch</td>
<td>2.5 kg/slide rail</td>
</tr>
<tr>
<td>Belt tension limit</td>
<td>1250 N</td>
</tr>
</tbody>
</table>

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Links and plastic rods

The belt consists of plastic hinge-type links connected by plastic rods and locked by plastic snap-in guide clips. The clips also serve as lateral chain guides. See photo.

The belt is woven together by 75 mm and 150 mm wide links. The assembled belt forms a wide, flat and tight conveyor surface. Six standard widths of belt can be delivered, from 150 mm up to 1200 mm. The 900 mm and 1200 mm wide belt come equipped with guide clips at the centre, in addition to those at the edges.

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 one plastic rod and two guide clips are included. To calculate the total length required, remember to add for belt consumed by the idler and drive units.

Technical characteristics

<table>
<thead>
<tr>
<th>Belt width</th>
<th>150/225/300/600/900 and 1200 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belt weight (Acetal)</td>
<td>10.66 kg/m²</td>
</tr>
<tr>
<td>Belt pitch</td>
<td>38.1 mm</td>
</tr>
<tr>
<td>Max. permissible belt tension</td>
<td>1250 N</td>
</tr>
<tr>
<td>Temperature range (Acetal)</td>
<td>–20 °C to +40 °C (Request for quotation other temperatures)</td>
</tr>
</tbody>
</table>
Belts

Belts 150 mm
Belt 150 mm
Length 1 m
WKTP 1B150

Belts 225 mm
Belt 225 mm
Length 1 m
WKTP 1B225

Belts 300 mm
Belt 300 mm
Length 1 m
WKTP 1B300

Belts 600 mm
Belt 600 mm
Length 1 m
WKTP 1B600

Belts 900 mm
Belt 900 mm
Length 1 m
WKTP 1B900

Belts 1200 mm
Belt 1200 mm
Length 1 m
WKTP 1B1200

Belts rod
Belt rod
Length 3 m
WKTD 5×3000 P

Belts guide clip
Belt guide clip, right
Belt guide clip, left
3904683
3904684
Conveyor sections

The modular plastic belt conveyor in six widths – 150, 225, 300, 600, 900, 1200, – straight sections.
Frame profiles and cross bars
Conveyor frame sections consist of 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

Conveyor dimensions
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. Suggested support layouts are shown on page 415. For other support components refer to catalogue section Conveyor support components.

Technical specifications
Typical friction between chain and slide rails after run-in:

<table>
<thead>
<tr>
<th>Pos</th>
<th>Part number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>XKCF 6</td>
<td>Half beam</td>
</tr>
<tr>
<td>2</td>
<td>XCBL 3x54</td>
<td>Beam spacer</td>
</tr>
<tr>
<td>3</td>
<td>XCAF 44</td>
<td>Fastener yoke</td>
</tr>
<tr>
<td>4</td>
<td>WKCNL 3x54</td>
<td>Support profile</td>
</tr>
<tr>
<td>5</td>
<td>XWCP 20</td>
<td>Cleat</td>
</tr>
<tr>
<td>6</td>
<td>XCAN 6</td>
<td>Nut</td>
</tr>
<tr>
<td>7</td>
<td>M6SF M6x16 fzb</td>
<td>Screw</td>
</tr>
</tbody>
</table>

Minimum conveyor length

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

#### Conveyor beam

<table>
<thead>
<tr>
<th>Width (W)</th>
<th>Length</th>
<th>Order Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>150</td>
<td>3000 mm</td>
<td>(500-3000 mm)</td>
</tr>
<tr>
<td>225</td>
<td>3000 mm</td>
<td>(500-3000 mm)</td>
</tr>
<tr>
<td>300</td>
<td>3000 mm</td>
<td>(500-3000 mm)</td>
</tr>
<tr>
<td>600</td>
<td>3000 mm</td>
<td>(500-3000 mm)</td>
</tr>
<tr>
<td>900</td>
<td>3000 mm</td>
<td>(500-3000 mm)</td>
</tr>
<tr>
<td>1200</td>
<td>3000 mm</td>
<td>(500-3000 mm)</td>
</tr>
</tbody>
</table>

The beam section is delivered unassembled.

#### Connecting sleeve

<table>
<thead>
<tr>
<th>Width</th>
<th>Length</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>280 mm</td>
<td>Including set screws. For connecting support profiles end to end.</td>
</tr>
</tbody>
</table>

#### Connecting strip

<table>
<thead>
<tr>
<th>Width</th>
<th>Length</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>6×280</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Conveyor frame profile

<table>
<thead>
<tr>
<th>Width</th>
<th>Length</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>3000+10/-0 mm</td>
<td></td>
</tr>
</tbody>
</table>

#### Centre support profile

<table>
<thead>
<tr>
<th>Width</th>
<th>Length</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>3000+10/-0 mm</td>
<td></td>
</tr>
</tbody>
</table>

#### Cleat

<table>
<thead>
<tr>
<th>Width</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>Mounting: One each of MC6S 6×14, BRB 6.4×12, XCAN 6</td>
</tr>
</tbody>
</table>

Note. Must be ordered in multiples of 10.
Slide rail

Slide rail, length 25 m
- UHMW-PE: XWCR 25 U
- PVDF: XWCR 25 P
- PA-PE: WKCR 25 H

Plastic screw for slide rail: XWAG 5*

*Note. Must be ordered in multiples of 50
### Conveyor frame components (continued)

**Aluminium rivets for anchoring of slide rail**

![Aluminium rivets 4 mm for XK-X180/X300 conveyors, brown](image)

Aluminium rivets 4 mm for XK-X180/X300 conveyors, brown

**Extra slide rail in plain bends must be anchored using plastic screws due to lack of space for the rivet crimping tool.**

*Note. Must be ordered in multiples of 250.*

**Components for cross bar**

The following components from FlexLink structural system XC are used to build the crossbar.

- **Beam for cross bar**
  - XCBL 3x44
- **Fastener yoke**
  - XCAF 44
- **Slot nut for M6 screw**
  - XCAN 6

*Note. Must be ordered in multiples of 10*

**Support beam 44x44, lightweight**

![Support beam 44x44](image)

Beam 44 mm x 44 mm
- Lightweight design
- Aluminium, anodized
- Length 3000 mm
- Length to order

**Cover strip for T-slot, PVC**

![Cover strip for T-slot, PVC](image)

Cover strip for T-slot
- Length 3 m
- Grey PVC

*Note! Can’t be used with bends*

**Cover strip for T-slot, PVC**

Cover strip for T-slot
- Length 25 m
- Grey PVC

**Cover strip for T-slot, aluminium**

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

*Note! Can’t be used with bends*

**Fastener yoke 44 mm**

![Fastener yoke 44 mm](image)

Fastener yoke assembly
- Length 44 mm
- Zinc, die-cast

**XCAF 44**
Drive units – introduction

Drive unit types
The WK system includes direct driven units with or without slip clutch. Available motors include variable speed types (V) as well as fixed speed motors (F).

End drive units

<table>
<thead>
<tr>
<th>Size</th>
<th>Direct drive, no slip clutch</th>
<th>Direct drive, slip clutch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive unit types</td>
<td>F, V</td>
<td>F, V</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... 12

Number of sprocket wheels vs. conveyor width

<table>
<thead>
<tr>
<th>Width</th>
<th>150 mm</th>
<th>225 mm</th>
<th>300 mm</th>
<th>600 mm</th>
<th>900 mm</th>
<th>1200 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sprocket wheels</td>
<td>1</td>
<td>1 1/2</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>8</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

<table>
<thead>
<tr>
<th>Width (mm)</th>
<th>Model</th>
<th>Without motor:</th>
<th>Transmission on left side</th>
<th>Transmission on right side</th>
</tr>
</thead>
<tbody>
<tr>
<td>150</td>
<td>WKEB 0B150NLP</td>
<td>153</td>
<td>153</td>
<td></td>
</tr>
<tr>
<td>225</td>
<td>WKEB 0B225NLP</td>
<td>153</td>
<td>153</td>
<td></td>
</tr>
<tr>
<td>300</td>
<td>WKEB 0B300NLP</td>
<td>153</td>
<td>153</td>
<td></td>
</tr>
<tr>
<td>600</td>
<td>WKEB 0B600NLP</td>
<td>153</td>
<td>153</td>
<td></td>
</tr>
<tr>
<td>900</td>
<td>WKEB 0B900NLP</td>
<td>153</td>
<td>153</td>
<td></td>
</tr>
<tr>
<td>1200</td>
<td>WKEB 0B1200NLP</td>
<td>153</td>
<td>153</td>
<td></td>
</tr>
</tbody>
</table>

* Use online configurator when ordering

**Effective track length:** 0.80 m

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## End drive units, direct drive, slip clutch

### End drive unit L/R

#### End drive unit
- **Fixed/variable speed**, width 150 mm
- Without motor:
  - Transmission on left side: WKEB B150
  - Transmission on right side: WKEB 0B150LP, WKEB 0B150RP

#### End drive unit
- **Fixed/variable speed**, width 225 mm
- Without motor:
  - Transmission on left side: WKEB B225
  - Transmission on right side: WKEB 0B225LP, WKEB 0B225RP

#### End drive unit
- **Fixed/variable speed**, width 300 mm
- Without motor:
  - Transmission on left side: WKEB B300
  - Transmission on right side: WKEB 0B300LP, WKEB 0B300RP

#### End drive unit
- **Fixed/variable speed**, width 600 mm
- Without motor:
  - Transmission on left side: WKEB B600
  - Transmission on right side: WKEB 0B600LP, WKEB 0B600RP

#### End drive unit
- **Fixed/variable speed**, width 900 mm
- Without motor:
  - Transmission on left side: WKEB B900
  - Transmission on right side: WKEB 0B900LP, WKEB 0B900RP

#### End drive unit
- **Fixed/variable speed**, width 1200 mm
- Without motor:
  - Transmission on left side: WKEB B1200
  - Transmission on right side: WKEB 0B1200LP, WKEB 0B1200RP

*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 two 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 (mm)</th>
<th>150</th>
<th>225</th>
<th>300</th>
<th>600</th>
<th>900</th>
<th>1200</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idler wheels</td>
<td>1</td>
<td>1 1/2</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>8</td>
</tr>
</tbody>
</table>

Ordering information

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

Idler units

Idler unit

Idler end unit, width 150 mm
Idler end unit, width 225 mm
Idler end unit, width 300 mm
Idler end unit, width 600 mm
Idler end unit, width 900 mm
Idler end unit, width 1200 mm

Effective track length: 0.80 m
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.

Height and width of supports Type 1, 2

<table>
<thead>
<tr>
<th>W1 (mm)</th>
<th>W2 (mm)</th>
<th>L1 (mm)</th>
<th>L2 (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>153</td>
<td>100</td>
<td>ca. H1-92</td>
<td>ca. H2-276</td>
</tr>
<tr>
<td>227</td>
<td>175</td>
<td>ca. H1-92</td>
<td>ca. H2-276</td>
</tr>
<tr>
<td>302</td>
<td>175</td>
<td>ca. H1-92</td>
<td>ca. H2-276</td>
</tr>
<tr>
<td>602</td>
<td>475</td>
<td>ca. H1-92</td>
<td>ca. H2-276</td>
</tr>
<tr>
<td>901</td>
<td>774</td>
<td>ca. H1-92</td>
<td>ca. H2-276</td>
</tr>
<tr>
<td>1200</td>
<td>1073</td>
<td>ca. H1-92</td>
<td>ca. H2-276</td>
</tr>
</tbody>
</table>

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

Suggested support components

<table>
<thead>
<tr>
<th>Pos</th>
<th>Item</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Beam support bracket</td>
<td>– XLC 64 C</td>
</tr>
<tr>
<td>2</td>
<td>Leg support</td>
<td>XCB 3x44x88 XCB 3x64</td>
</tr>
<tr>
<td>3</td>
<td>Foot</td>
<td>XCF 12x68 XCF 12x68</td>
</tr>
<tr>
<td>4</td>
<td>End cap</td>
<td>XCFE 44x88 XCFE 64</td>
</tr>
<tr>
<td>5</td>
<td>Angle bracket</td>
<td>XCF 88 B XCF 44 B</td>
</tr>
<tr>
<td>6</td>
<td>Cross beam</td>
<td>XCB 3x44x88 XCB 3x64</td>
</tr>
<tr>
<td>7</td>
<td>End plate for beam</td>
<td>XCFE 44x88 M12A XCFE 64 M12A</td>
</tr>
</tbody>
</table>

Drill fixture

Item no. 8050040