Modular plastic belt conveyor WK

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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
Maximum speed .............................................. 40 m/min
Maximum conveyor length .................................. 20 m
Product weight .............................................. up to 30 kg
Total load .................................................. up to 250 kg
Max. product weight per belt pitch ............. 2.5 kg/slide rail
Belt tension limit .......................................... 1250 N
**Belts – introduction**

**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.

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**Belt components**

---

**Technical characteristics**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belt width</td>
<td>150/225/300/600/900 and 1200 mm</td>
</tr>
<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**
- Length 1 m
- WKTP 1B150

**Belts 225 mm**
- Length 1 m
- WKTP 1B225

**Belts 300 mm**
- Length 1 m
- WKTP 1B300

**Belts 600 mm**
- Length 1 m
- WKTP 1B600

**Belts 900 mm**
- Length 1 m
- WKTP 1B900

**Belts 1200 mm**
- Length 1 m
- WKTP 1B1200

**Belts 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 408. For other support components refer to catalogue section Conveyor support components.

Technical specifications

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

- XWCR 25 U ........................................ 0.25
- XWCR 25 P ........................................ 0.30
- WKCR 25 H ........................................ 0.25

Cross-section of conveyor frame

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>Beam Width (W)</th>
<th>Length</th>
<th>Length Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>150 mm</td>
<td>3000 mm</td>
<td>(500-2999 mm)</td>
</tr>
<tr>
<td>225 mm</td>
<td>3000 mm</td>
<td>(500-2999 mm)</td>
</tr>
<tr>
<td>300 mm</td>
<td>3000 mm</td>
<td>(500-2999 mm)</td>
</tr>
<tr>
<td>600 mm</td>
<td>3000 mm</td>
<td>(500-2999 mm)</td>
</tr>
<tr>
<td>900 mm</td>
<td>3000 mm</td>
<td>(500-2999 mm)</td>
</tr>
<tr>
<td>1200 mm</td>
<td>3000 mm</td>
<td>(500-2999 mm)</td>
</tr>
</tbody>
</table>

**WKCB** series

### Connecting sleeve

- **XLRJ 100**
  - Including set screws. For connecting support profiles end to end.

### Connecting strip

- **XWCJ 6x280**
  - Length 280 mm
  - Including set screws

### Centre support profile

- **WKCN 3**
  - Length 3000 +10/-0 mm
  - Length to order (30-2999 mm)

### Cleat

- **XWCP 20**
  - Mounting: One each of MC6S 6x14, BRB 6,4x12, XCAN 6

### Slide rail

- **XWCR 25 U**
  - UHMW-PE
- **XWCR 25 P**
  - PVDF
- **WKCR 25 H**
  - PA-PE

- **XWAG 5**
  - Plastic screw for slide rail
  - *Note. Must be ordered in multiples of 50*
Aluminium rivets for anchoring of slide rail

Aluminium rivets 4 mm for XK-X180/X300 conveyors, brown XLAH 4×7

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 3×44
Fastener yoke XCAF 44
Slot nut for M6 screw XCAN 6*

*Note. Must be ordered in multiples of 10

Support beam 44×44, lightweight

Beam 44 mm × 44 mm Lightweight design Aluminium, anodized Length 3000 mm Length to order XCBL 3×44 XCBL L×44

Fastener yoke 44 mm

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

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
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>

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.

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.
End drive units, direct drive, no slip clutch

End drive unit L/R

End drive unit
- Fixed/variable speed*, width 150 mm
- Without motor:
  - Transmission on left side
  - Transmission on right side

End drive unit
- Fixed/variable speed*, width 225 mm
- Without motor:
  - Transmission on left side
  - Transmission on right side

End drive unit
- Fixed/variable speed*, width 300 mm
- Without motor:
  - Transmission on left side
  - Transmission on right side

End drive unit
- Fixed/variable speed*, width 600 mm
- Without motor:
  - Transmission on left side
  - Transmission on right side

End drive unit
- Fixed/variable speed*, width 900 mm
- Without motor:
  - Transmission on left side
  - Transmission on right side

End drive unit
- Fixed/variable speed*, width 1200 mm
- Without motor:
  - Transmission on left side
  - Transmission on right side

* Use online configurator when ordering

Effective track length: 0,80 m
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
Transmission on right side
WKEB B150
WKEB 0B150LP
WKEB 0B150RP

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

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

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

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

End drive unit
Fixed/variable speed*, width 1200 mm
Without motor:
Transmission on left side
Transmission on right side
WKEB B1200
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</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>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

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>WK150</th>
<th>WK225</th>
<th>WK300</th>
<th>WK600</th>
<th>WK900</th>
<th>WK1200</th>
</tr>
</thead>
<tbody>
<tr>
<td>W1 (mm)</td>
<td>153</td>
<td>227</td>
<td>302</td>
<td>602</td>
<td>901</td>
</tr>
<tr>
<td>W2 (mm)</td>
<td>--</td>
<td>100</td>
<td>175</td>
<td>475</td>
<td>774</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 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>XCFA 88 B</td>
<td>XCFA 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>

Drill fixture

Drill fixture 8050040