

# Modular plastic belt conveyor WK

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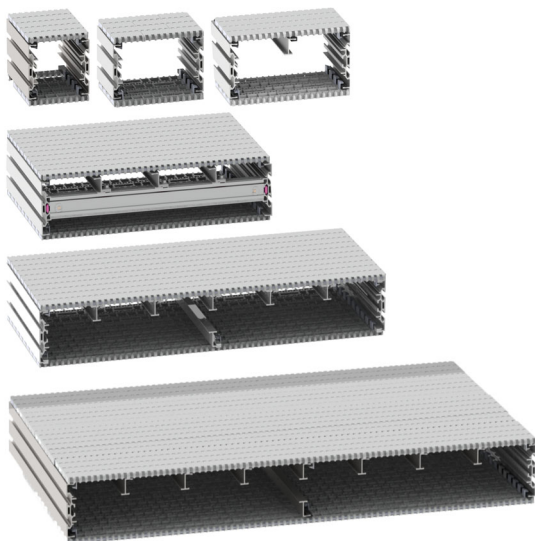
## System information



### 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:

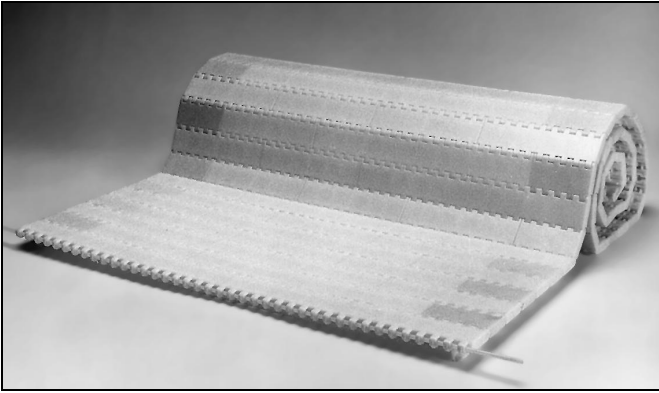
- Bearings
- Gear wheels
- Cylindrical products
- Bottles

### 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            |

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

## Belts – introduction



### 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.

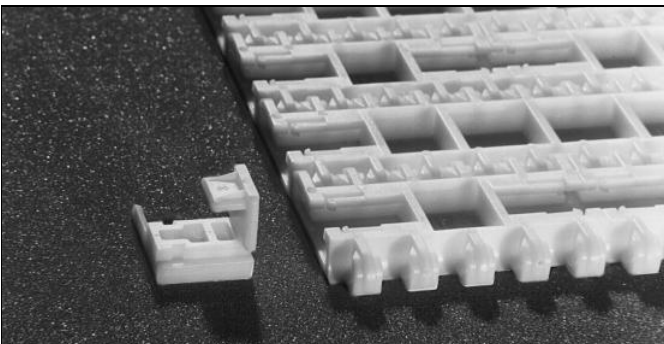
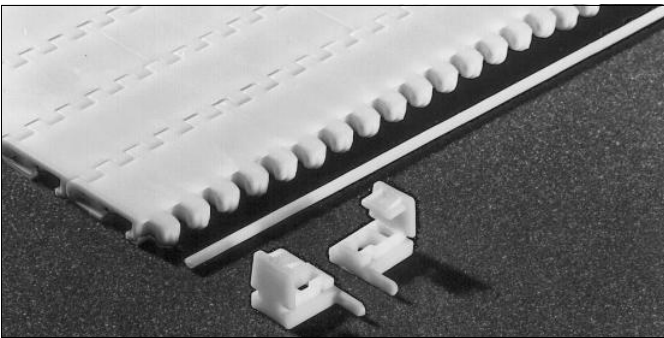
### Ordering information

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.

### Links and plastic rods

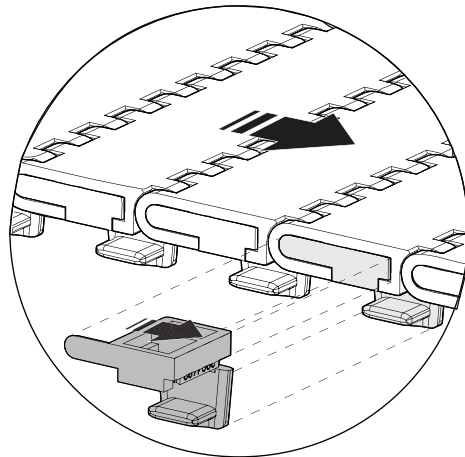
The belt consists of plastic hinge-type links connected by plastic rods and locked by plastic snap-in guide clips. The clips also serve as lateral chain guides. See photo.

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.



*Belt components*

### Belt direction (not applicable for center guide WK900)



### Technical characteristics

|                               |  |
|-------------------------------|--|
| Belt width                    | 150/225/300/600/900 and 1200 mm                                |
| Belt weight (Acetal)          | 10,66 kg/m <sup>2</sup>  |
| Belt pitch                    | 38,1 mm  |
| Max. permissible belt tension | 1250 N   |
| Temperature range (Acetal)    | -20 °C to +40 °C<br>(Request for quotation other temperatures) |

**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 5x3000 P**

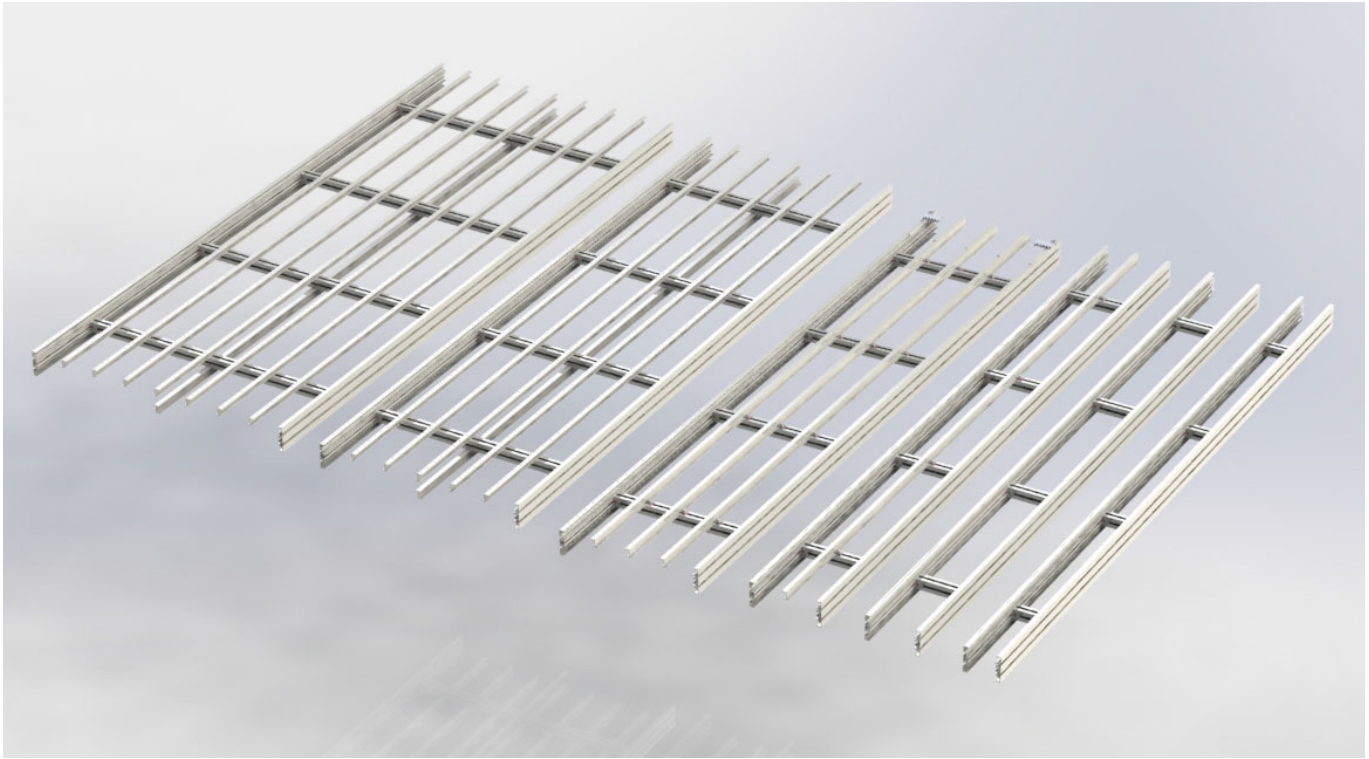
**Belts guide clip**

Belt guide clip, right **3904683**  
Belt guide clip, left **3904684**

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

## Conveyor sections

---



*The modular plastic belt conveyor in six widths – 150, 225, 300, 600, 900, 1200, – straight sections.*



Conveyor frame structure

## 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

|                          | WK 150 | WK 225 | WK 300 | WK 600 | WK 900 | WK 1200 |
|--------------------------|--------|--------|--------|--------|--------|---------|
| Conveyor width A (mm)    | 153    | 227    | 302    | 602    | 901    | 1200    |
| Usable belt width B (mm) | 149    | 224    | 299    | 597    | 896    | 1195    |
| <b>Top of chain:</b>     |        |        |        |        |        |         |
| Standard belt WKTP 1B_   | 68 mm  |        |        |        |        |         |

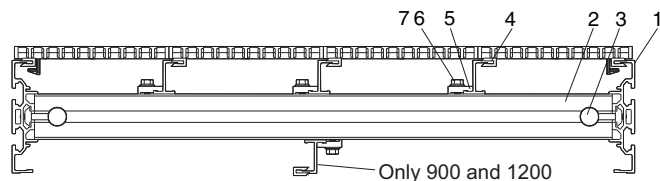
Each 3 m frame section consists of two frame profiles connected by four cross bars. The conveyor chain slides on the top edges of the frame profiles, and returns on the bottom side. Plastic slide rails ensure a low friction contact between chain and conveyor frame.

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 468. 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

| Pos | Part number    | Description     |
|-----|----------------|-----------------|
| 1   | XKCF L         | Half beam       |
| 2   | XCBL Lx44      | Beam spacer     |
| 3   | XCAF 44        | Fastener yoke   |
| 4   | WKC NL         | Support profile |
| 5   | XWCP 20        | Cleat           |
| 6   | XCAN 6         | Nut             |
| 7   | M6SF M6x16 fzb | Screw           |

## Minimum conveyor length

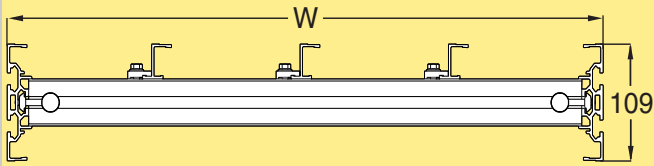
| Minimum conveyor length, Straight section | Width | L1   |
|---|-------|------|
|   | 150   | 1244 |
|   | 225   |      |
|   | 300   |      |
|   | 600   |      |
|   | 900   |      |
|   | 1200  |      |

## Ordering information

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

# Conveyor frame components

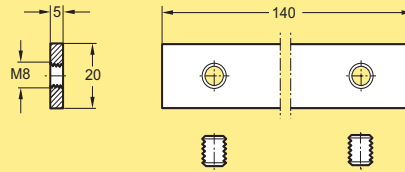
## Conveyor beam



|                                |                    |
|--------------------------------|--------------------|
| Conveyor beam, W=150           |                    |
| Length 3000 mm                 | <b>WKCB 3B150</b>  |
| Length to order (500- 3000 mm) | <b>WKCB LB150</b>  |
| Conveyor beam, W=225           |                    |
| Length 3000 mm                 | <b>WKCB 3B225</b>  |
| Length to order (500- 3000 mm) | <b>WKCB LB225</b>  |
| Conveyor beam, W=300           |                    |
| Length 3000 mm                 | <b>WKCB 3B300</b>  |
| Length to order (500- 3000 mm) | <b>WKCB LB300</b>  |
| Conveyor beam, W=600           |                    |
| Length 3000 mm                 | <b>WKCB 3B600</b>  |
| Length to order (500- 3000 mm) | <b>WKCB LB600</b>  |
| Conveyor beam, W=900           |                    |
| Length 3000 mm                 | <b>WKCB 3B900</b>  |
| Length to order (500- 3000 mm) | <b>WKCB LB900</b>  |
| Conveyor beam, W=1200          |                    |
| Length 3000 mm                 | <b>WKCB 3B1200</b> |
| Length to order (500- 3000 mm) | <b>WKCB LB1200</b> |

The beam section is delivered unassembled.

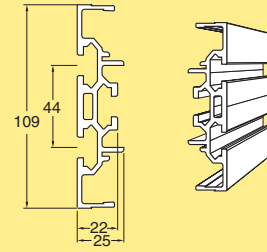
## Connecting strip



Connecting strip with set screws **XLCJ 5x140**

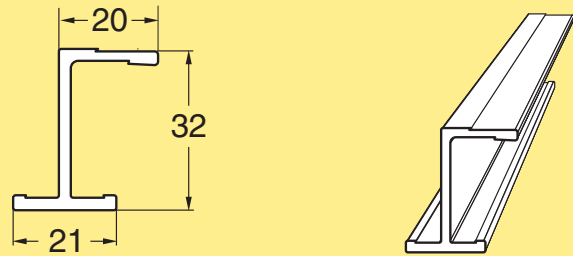
Note. Contains 10 pcs.

## Conveyor frame profile



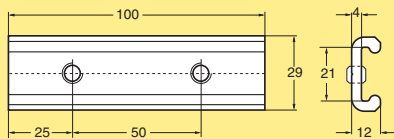
Frame profile  
 Length 3000 +10/-0 mm **WKCF 3**  
 Length to order (30- 3000 mm) **WKCF L**

## Centre support profile



Centre support profile  
 Length 3000 +10/-0 mm **WKN 3**  
 Length to order (30- 3000 mm) **WKN L**

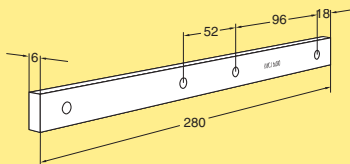
## Connecting sleeve



Connecting sleeve **XLRJ 100**

Including set screws. For connecting support profiles end to end.

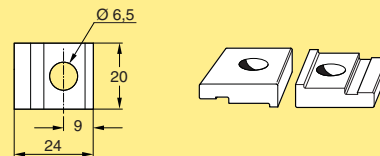
## Connecting strip



Connecting strip **XWCJ 6x280**

Length 280 mm  
 Including set screws

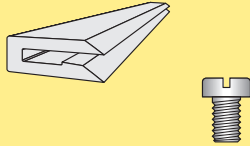
## Cleat



Cleat **XWCP 20**

Mounting:  
 One each of MC6S 6x14, BRB 6.4x12, XCAN 6

**Slide rail**



Slide rail, length 25 m  
 UHMW-PE (White)  
 UHMW-PE (Blue)  
 PVDF  
 PA-PE

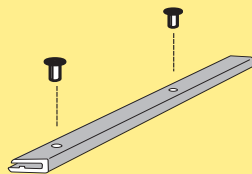
**XWCR 25 U**  
**WKCR 25 UL**  
**XWCR 25 P**  
**WKCR 25 H**

Plastic screw for slide rail

**XWAG 5\***

*\*Note. Contains 50 pcs.*

**Aluminium rivets for anchoring of slide rail**



Aluminium rivets 4 mm, brown

**XLAH 4x7**

*Note. Contains 250 pcs..*

**Components for cross bar**

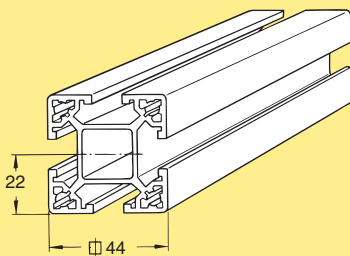
The following components from FlexLink structural system XC are used to build the crossbar.

Beam for cross bar  
 Fastener yoke  
 Slot nut for M6 screw

**XCBL 3x44**  
**XCAF 44**  
**XCAN 6\***

*\*Note. Contains 10 pcs.*

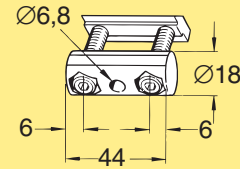
**Support beam 44x44, lightweight**



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

**XCBL 3x44**  
**XCBL Lx44**

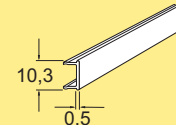
**Fastener yoke 44 mm**



Fastener yoke assembly  
 Length 44 mm  
 Zinc, die-cast

**XCAF 44**

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

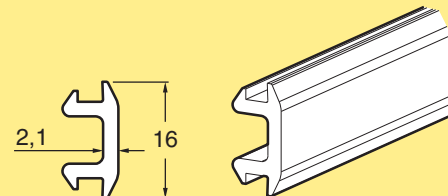


Cover strip for T-slot  
 Length 3 m  
 Grey PVC

**XCAC 3 P**

*Note! Can't be used with bends*

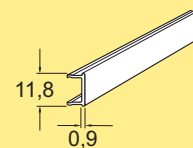
**Cover strip for T-slot, PVC**



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*

CC

X45

XS

X65

X65P

X85

X85P

XH

XK

XKP

X180

X300

GR

CS

XT

HU

WL

WK

XC

XF

XD

ELV

SC

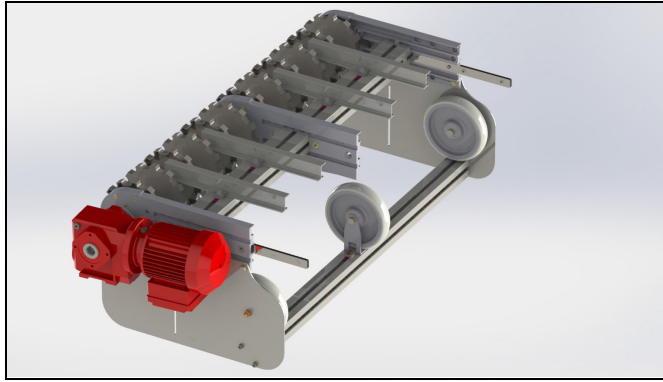
FST

TR

APX

IDX

# Drive units – introduction

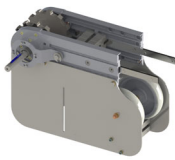



End drive unit

## 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

| Size             | Direct drive, no slip clutch   | Direct drive, slip clutch  |
|------------------|--|--|
| Drive unit types | <br>F, V | <br>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 ... 12

### Number of sprocket wheels vs. conveyor width

| Width           | 150 mm | 225 mm | 300 mm | 600 mm | 900 mm | 1200 mm |
|-----------------|--------|--------|--------|--------|--------|---------|
| Sprocket wheels | 1      | 1 1/2  | 2      | 4      | 6      | 8       |

## 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.

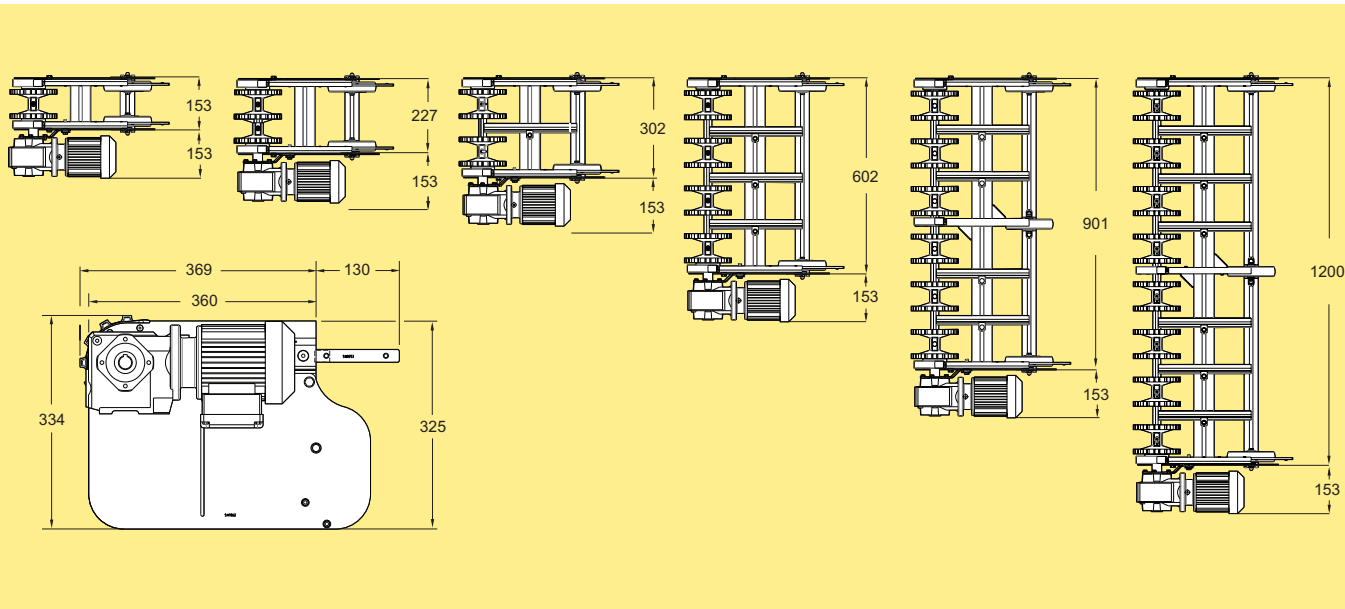
## Dimension

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

# End drive units, direct drive, no slip clutch

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

## 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 0B150NLP**  
**WKEB 0B150NRP**

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

**WKEB B225**  
**WKEB 0B225NLP**  
**WKEB 0B225NRP**

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

**WKEB B300**  
**WKEB 0B300NLP**  
**WKEB 0B300NRP**

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

**WKEB B600**  
**WKEB 0B600NLP**  
**WKEB 0B600NRP**

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

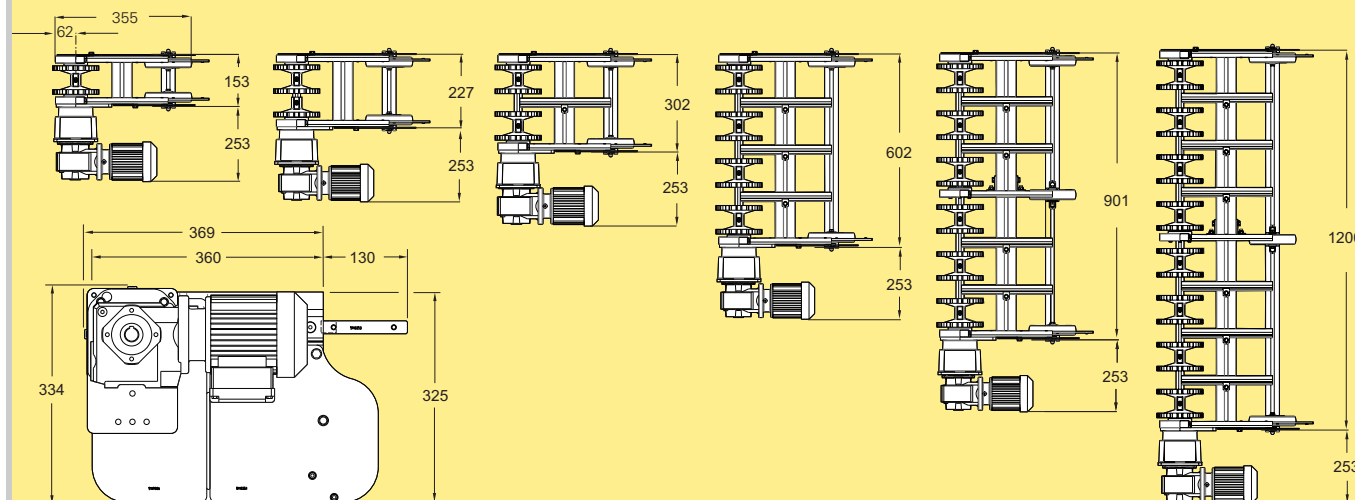
**WKEB B900**  
**WKEB 0B900NLP**  
**WKEB 0B900NRP**

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

**WKEB B1200**  
**WKEB 0B1200NLP**  
**WKEB 0B1200NRP**

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

## 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**

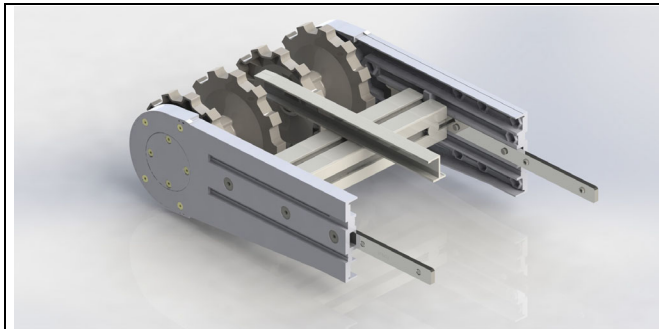
**WKEB 0B1200LP**

**WKEB 0B1200RP**

\* Use online configurator when ordering

Effective track length: 0,80 m

# Idler end units – introduction



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 two or more idler wheels on a common, rotating shaft supported by ball bearings.

### Number of idler wheels vs. conveyor width

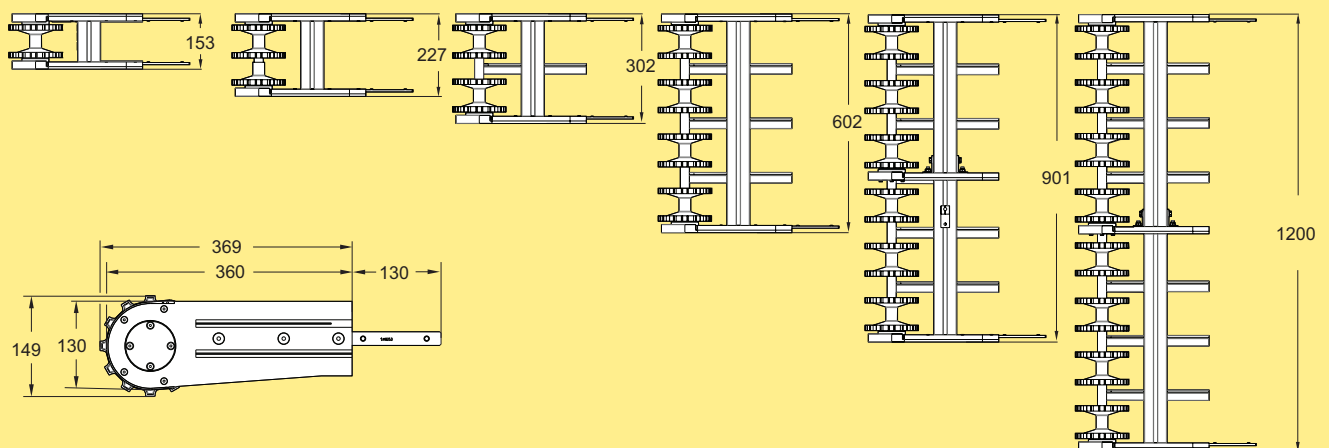
| Width        | 150 mm | 225 mm | 300 mm | 600 mm | 900 mm | 1200 mm |
|--------------|--------|--------|--------|--------|--------|---------|
| Idler wheels | 1      | 1 1/2  | 2      | 4      | 6      | 8       |

## Ordering information

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

# Idler units

## Idler end unit



Idler end unit, width 150 mm

**WKEJ 150 B**

Idler end unit, width 225 mm

**WKEJ 225 B**

Idler end unit, width 300 mm

**WKEJ 300 B**

Idler end unit, width 600 mm

**WKEJ 600 B**

Idler end unit, width 900 mm

**WKEJ 900 B**

Idler end unit, width 1200 mm

**WKEJ 1200 B**

Effective track length: 0,80 m

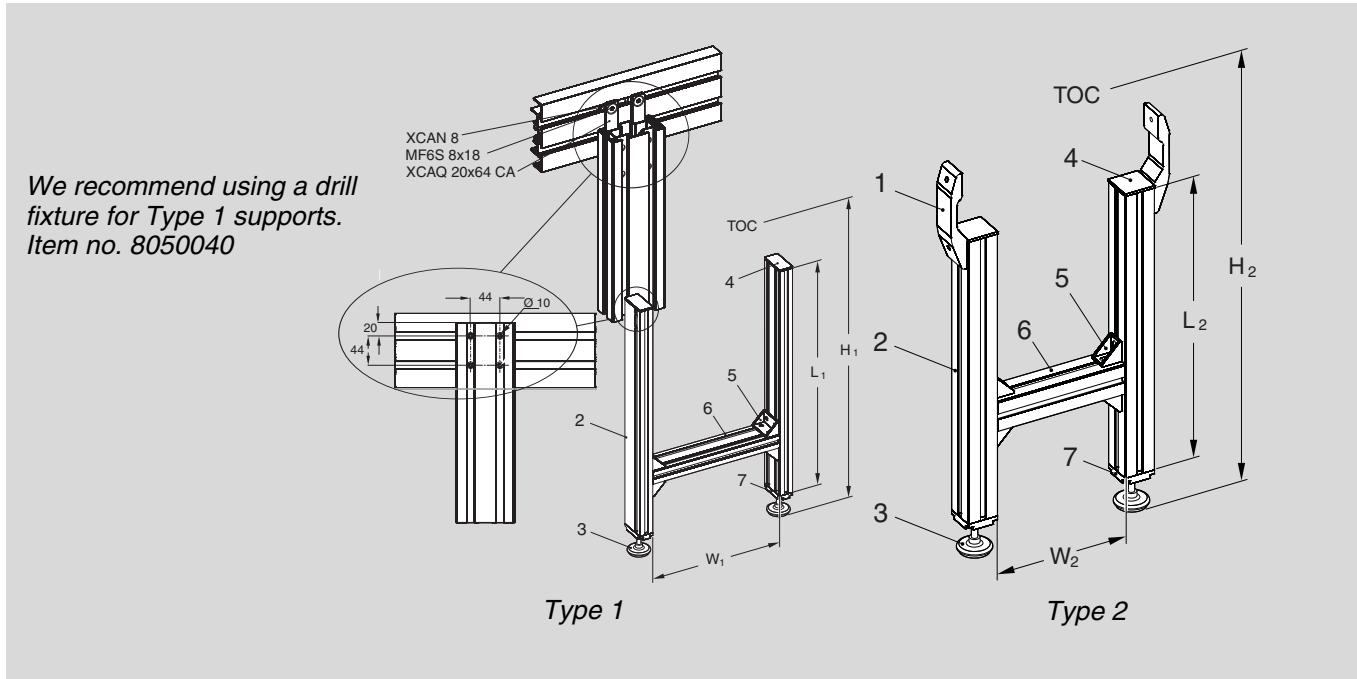
# Support designs

## 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

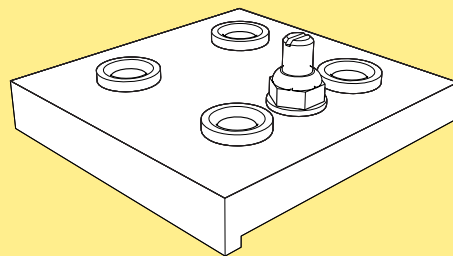
|         | WK150      | WK225      | WK300      | WK600      | WK900      | WK1200     |
|---------|------------|------------|------------|------------|------------|------------|
| W1 (mm) | 153        | 227        | 302        | 602        | 901        | 1200       |
| L1 (mm) | ca. H1-92  | ca. H1-92  | ca. H1-92  | ca. H1-92  | ca. H1-92  | ca. H1-92  |
| W2 (mm) | --         | 100        | 175        | 475        | 774        | 1073       |
| L2 (mm) | ca. H2-276 | ca. H2-276 | ca. H2-276 | ca. H2-276 | ca. H2-276 | ca. H2-276 |



### 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 |

### Drill fixture



Drill fixture

**8050040**