

Conveyor chain guide

System X45, X45H, XS, XL, X65, XM, X70X, X85, X85X, XH, XK, X180, X180X, X300, X300X, XT, XTC, WK, WL, WL222X, WL273X, WL374X, WL526X, WL678X, ELV

For the latest version of the chain guide and other catalogues, see the FlexLink technical documentation website <http://www.flexlink.com>

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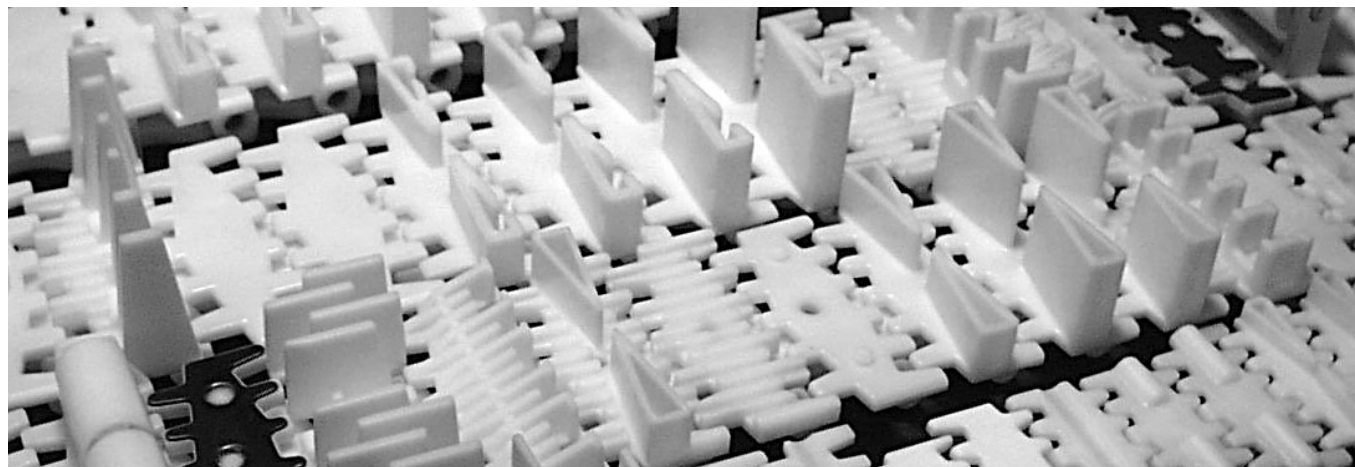
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Patents

Essential parts of the FlexLink product range are protected by patents and design regulations.

Drawings are made to European standards.



Chain and link designations

This catalogue presents currently available FlexLink conveyor chain types, catalogue items as well as special order types. Please consult the FlexLink conveyor catalogue for basic information about our conveyor program, and about conveyor chains.

Two forms of product designations are used. Most catalogue products use a designation beginning with X, whereas most non-catalogue products are identified by means of a 7-digit specification number.

As a standard the chains come in approximately 5 m lengths (XB and XT Compact: 3 m).

Note. Cleated chains are specified using the online configurator.

Link kits

For replacement purposes, the chain links are available in Link kits. Each link kit contains 10 links, 10 plastic pivots, and 10 stainless steel pins, unless otherwise specified.

Note. Individual links cannot be ordered. Link designations are only intended for reference purposes

Pin and pivot kits

Kits containing only steel pins and pivots are available. Each kit contains 25 items.

| System | Pin kit Stainless steel | Pivot kit PA66 | Pivot kit PA66 ISD | Pivot kit PDVF |
|--------------|-------------------------|----------------|--------------------|----------------|
| X45 | 5045030 | - | - | - |
| X45H | 5116330 | 5116331 | - | - |
| XT (compact) | 5045030 | - | - | - |
| XS/XL | 5111492 | 5111489 | 5111490 | 5111491 |
| X65 | 5116330 | 5117478 | - | - |
| XM | 5111172 | 5111493 | 5111494 | 5111495 |
| X85 | 5111172 | 5111169 | 5111171 | 5111170 |
| X85X | 5111172 | 5111169 | 5111171 | 5111170 |
| XH | 5111502 | 5056588 | 5111500 | 5111501 |
| XK | 5111498 | 5111497 | - | - |
| X180/X300 | 5111172 | 5111169 | 5111171 | 5111170 |
| X180X/X300X | 5111172 | 5111169 | 5111171 | 5111170 |
| WK | WKTD 5X3000 P | - | - | - |
| WL | - | - | - | - |
| WL222X | - | - | - | - |
| WL273X | - | - | - | - |
| WL374X | - | - | - | - |
| WL526X | - | - | - | - |
| WL676X | - | - | - | - |

Selecting the right chain material

Links

The base link parts of the chain links have the same basic shape, and the same technical properties. Five different materials are used. The standard material is acetal resin (POM). Different materials are used.

POM A: Copolymer Acetal with silicon

POM B: Homopolymer Acetal, silicon free

POM C: Copolymer Acetal, silicon free

POM D: Homopolymer with ultra low wear additive

| Properties | Copolymer POM A / C | Homopolymer POM B / D |
|----------------------|----------------------|-----------------------|
| Heat ageing | (+) Superior | 0 |
| Hot water resistance | (+) Superior | (-) |
| Chemical resistance | (+) Superior ph 4-14 | (-) ph 4-10 |
| Tensile strength | 0 | (+) Superior |
| Stiffness | 0 | (+) Superior |
| Impact Strength | 0 | (+) Superior |

Strength values at 20 °C:

| Product (POM) | X45 | XS | X65 | X85, XH, X180/X300 | XK | XT, X45H | XT Compact |
|-------------------------|-------|-------|--------|--------------------|--------|----------|------------|
| Maximum working tension | 200 N | 500 N | 1000 N | 1250 N | 2500 N | 900 N | 180 N |

The other materials are not as strong as POM:

- Polyester (PBT): 50% of POM value
- Polyvinylidene fluoride (PVDF): 40% of POM value
- Conductive POM: 40% of POM value
- High temperature resistant material, 50% of POM value
- Intrinsically static dissipative (ISD) POM: see the following table.

| Product (POM ISD) | X65 | X85 | XH | XT X45H | XT Compact |
|-------------------------|-------|-------|-------|---------|------------|
| Maximum working tension | 400 N | 400 N | 550 N | 450 N | 180 N |

Pivots

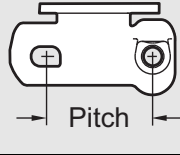
Most pivots are made in materials as specified in the table below. Otherwise the material is specified next to the link designation.

| Link | POM | POM (ISD) | PBT | PVDF |
|-------|------|------------|------|------|
| Pivot | PA66 | PA66 (ISD) | PA66 | PVDF |

Chain pitch and weight

The *Chain guide* lists the weight of most links. To calculate chain weight, you need to know the chain pitch (see picture below), the weight of the plastic pivot, the weight of the steel pin, and the cleat separation. See the following table.

| Parameter | Conveyor type | | | | | | |
|-------------------------|---------------|------|------|------|-----------|-------------|-----------------|
| | XS | X85 | XH | XK | X180/X300 | XT X45H X65 | XT Compact, X45 |
| Chain pitch, mm | 25,4 | 33,5 | 35,5 | 38,1 | 33,5 | 25,4 | 12,7 |
| Plastic pivot weight, g | 1 | 2 | 3 | 5 | 2 | 1 | n.a. |
| Steel pin weight, g | 4 | 10 | 17 | 24 | 10 | 3 | 1 |



Note

Some of the chains require modification of the drive units. There may also be limitations on minimum bend radius.

Material abbreviations

| Material abbreviation | Material |
|-----------------------|--|
| POM* | Acetal resin |
| POM* polished | Acetal resin, polished surface |
| POM*, pivot PVDF | Acetal resin, pivot: PVDF |
| POM* GY | Acetal resin, grey |
| POM* BK | Acetal resin, black |
| POM* COND | Acetal resin, conductive |
| POM* ISD NAT | Acetal resin ISD, natural colour (will turn darker when exposed to UV light) |
| POM* ISD GY | Acetal resin ISD, grey |
| PBT | Polyester |
| PVDF | Polyvinylidene fluoride |
| PVDF, pivot PA66 | Polyvinylidene fluoride, pivot: PA66 |
| POM* + steel | Acetal resin, steel top |
| POM* + SS | Acetal resin, stainless steel top |
| PA | Polyamide |

Chain strength and expansion vs. temperature

| Temperature °C | -20 | 0 | 20 | 40 | 60 | 80 | 100 | 120 |
|-------------------------|------|------|-----|-----|-----|-----|-----|-----|
| Tensile strength factor | 1,2 | 1,1 | 1,0 | 0,9 | 0,8 | 0,6 | 0,5 | 0,3 |
| Linear expansion% | -0,4 | -0,2 | 0 | 0,2 | 0,5 | 0,8 | 1,0 | 1,3 |

Chains – configuration strings

Below, example of text strings obtained from the configurator with explanations.

Input

Platform: “X85”

Chain type: “XBTF 5A85 U”

CC distance (mm) [133..167]: “167” (depending on the PAR value, the CC distance will change.)

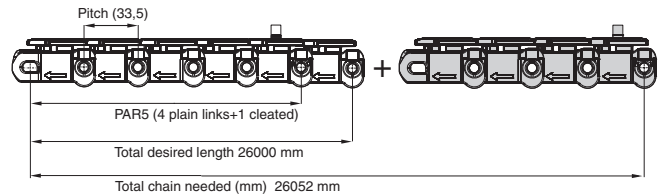
PAR 1-20: “5” (depending on the CC distance, the PAR value will change.)

Total desired length (m): “26”

The screenshot shows a configuration window with the following data:

| Step 1 | |
|---------------------------------|-------------|
| Platform | X85 |
| Chain type | XBTF 5A85 U |
| CC distance (mm) [133 .. 167] | 167 |
| PAR 1-20 | 5 |
| Total desired length (m) | 26.0 |
| ----- | |
| Chain pitch (mm) | 33,5 |
| Actual CC distance (mm) | 167 |
| Actual chain length (mm) | 5010 |
| Total chain needed (mm) | 26052 |
| Qty to be delivered | 6 |

Input values are on the left, and output values are on the right.



Qty to be delivered: “6” (The desired length is 26 m and items will be delivered in multiples of 5 -meter lengths; to cover demand of necessary length, 6 packages of chains are needed.)

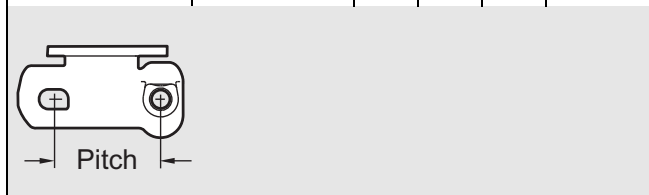
Configuration result:

| Item no | Qty | Description |
|-------------|-----|------------------|
| XBTF 5A85 U | 6 | XBTF 5A85 U PAR5 |

Output

Chain pitch: “33,5” (see table below)

| Parameter | Conveyor type | | | | |
|-----------------|-------------------|------|------|------|-----------|
| | XS, X45H, X65, XT | X85 | XH | XK | X180/X300 |
| Chain pitch, mm | 25,4 | 33,5 | 35,5 | 38,1 | 33,5 |



Actual CC distance (mm): The selected CC distance will be round off to the closest value which matches the chain pitch.

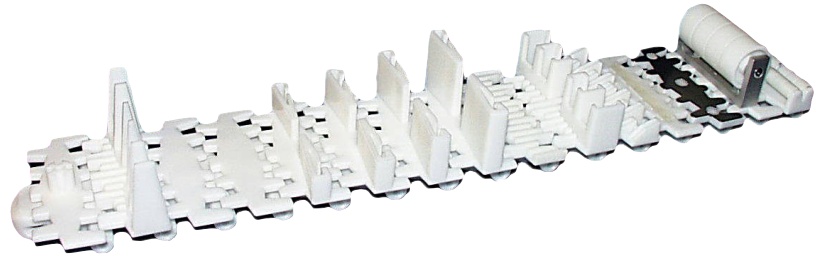
E.g. for value 400, Platform X85 (pitch 33,5 mm), CC distance= 400 mm, the Actual CC will be 402 mm.

Actual chain length (mm): The actual length depending on the CC/PAR value and that the chain always ends with a cleated link. This causes the length to vary from 3000-3250 mm or 5000 to 5500 mm depending on selected platform.

Total chain needed (mm): “26 052” (All configurable chains start with a number of plain links in this case 4 links before the cleat link (PAR5)). The desired length is 26 000 mm and the chain pitch for X85 is 33,5 mm. This creates an incorrect number of plain links before the last cleat link. The length is corrected by adding plain links (according to the desired PAR value) and a cleated link after the “last” cleat link. See picture.

Demo chains

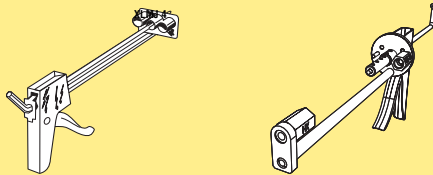
| | |
|---------|----------------|
| 3905780 | Demo chain XS |
| 3905781 | Demo chain XL |
| 5117552 | Demo chain X65 |
| 3905782 | Demo chain XM |
| 5111222 | Demo chain X85 |
| 3905783 | Demo chain XH |
| 3925720 | Demo chain XK |



Each demo chain contains the most common links (one of each type).
Standard material only.

Chain assembly tool

Chain assembly tool for FlexLink chains.

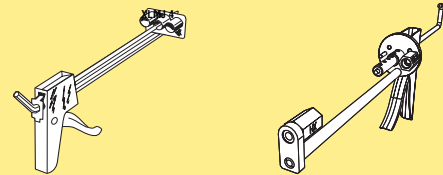


Chain assembly tool
XS-X65-XT
XS-X65-XT, PRO-Version

XLMJ 4
XLMJ 4 P

This product is suitable for frequent users..

Chain assembly tool for FlexLink chains

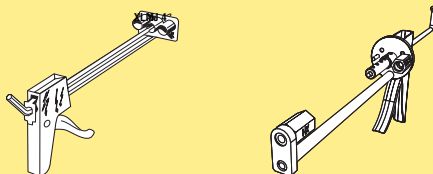


Chain assembly tool
X85-X180/X300
X85-X180/X300, XH PRO-Version

XMMJ 6
XBMJ 6 P

This product is suitable for frequent users..

Chain assembly tool for FlexLink chains

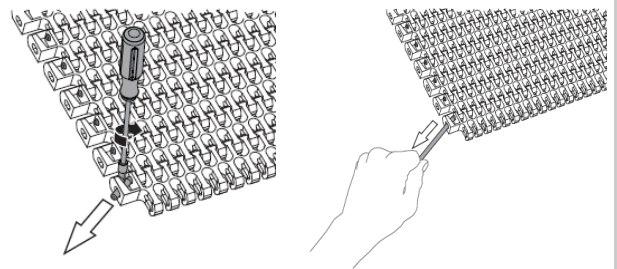


Chain assembly tool
XH
X85-X180/X300- XH, PRO-Version

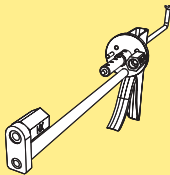
XHMJ 6
XBMJ 6 P

This product is suitable for frequent users..

Disassemble WL and WLX belts



Chain assembly tool for FlexLink chains



Chain assembly tool XK

XKMJ 8 P

