Introduction

The X45 is a very compact conveyor system for handling small and light products.

Examples of application areas

All types of small products down to 10 mm diameter. Typical products transported directly on the conveyor are pharmaceutical bottles, perfume bottles and smaller products/packages up to 100 mm wide. Puck handling of products like test tubes for blood and urine, small bottles, cosmetics and electrical parts such as batteries.
System information X45

Conveyor X45C and X45H
The X45 offer includes a range of conveyor modules both for handling products directly on chain or handling X45 standard pucks.

The X45C conveyor is a lightweight platform including both normal 3 phase AC motors and 24V DC motors with built in intelligence.

The X45H conveyor is a high capacity conveyor platform. It is normally used in combination with X45C when handling longer transportation and systems requiring more bends and higher speed.

Puck handling equipment X45e
X45e includes a range of function units for puck handling such as Divert, Merge, Stop or Locating. There are units handling both single pucks and train of pucks.

X45e functions includes 24V motors with embedded controls that can reduce the total lead time significantly from system design to ramp-up of the line. Each function motor include possibilities to connect to a network and in/out signals.

Standard X45 pucks are available in two types, with or without lock for rotating.

Divert/merge devices
Divert/merge devices are used for routing products by dividing or combining product flows. Usually there is a main conveyor, a “highway” (X45H), and separate subordinated conveyors, “satellites” (X45C).

On the satellites, products can be subjected to various operations such as turning, grinding, assembly or testing, without disturbing the main flow. After the operations, the products return to the highway.

A combination of a highway and one or more satellites is often called a cell. Using puck handling functions (X45e), it is possible to build cell junctions which facilitate transfer of a puck from one cell to another. See figure below.
## Technical characteristics

<table>
<thead>
<tr>
<th>System</th>
<th>X45C</th>
<th>X45H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beam width</td>
<td>45 mm</td>
<td>45 mm</td>
</tr>
<tr>
<td>Chain width</td>
<td>43 mm</td>
<td>43 mm</td>
</tr>
<tr>
<td>Chain pitch</td>
<td>12,7 mm</td>
<td>25,4 mm</td>
</tr>
<tr>
<td>Drive unit capacity</td>
<td>100- 200 N</td>
<td>900N</td>
</tr>
<tr>
<td>Chain tension limit</td>
<td>200 N (100 N Conductive)</td>
<td>900 N</td>
</tr>
<tr>
<td>Item width</td>
<td>10-100 mm</td>
<td>10-100 mm</td>
</tr>
<tr>
<td>Maximum conveyor length</td>
<td>6 m (4 m Conductive)</td>
<td>25 m</td>
</tr>
<tr>
<td>Maximum weight on conveyor</td>
<td>30 kg</td>
<td>125 kg</td>
</tr>
<tr>
<td>Maximum load per 100 mm conveyor length</td>
<td>4000 g (500 g/ link)</td>
<td>4000 g (1000 g/ link)</td>
</tr>
<tr>
<td>Maximum single item weight, horizontal transport</td>
<td>800 g</td>
<td>8000 g</td>
</tr>
<tr>
<td>Conveyor speed</td>
<td>Variable speed 5-20 m/min</td>
<td>Fixed speed 5, 10, 15, 20, 30, 40, 50, 60 m/min</td>
</tr>
<tr>
<td>Horizontal plain bends:</td>
<td>30°/45°/90°/180°</td>
<td>30°/45°/90°</td>
</tr>
<tr>
<td>Radius 150 mm</td>
<td>Note! Maximum 2 bends/conveyor</td>
<td></td>
</tr>
<tr>
<td>Horizontal wheel bends:</td>
<td>No</td>
<td>90°/180°</td>
</tr>
<tr>
<td>Vertical bends:</td>
<td>5°/15°</td>
<td>5°/15°</td>
</tr>
<tr>
<td>Radius</td>
<td>400 mm</td>
<td>358 mm/515 mm</td>
</tr>
<tr>
<td>Note! 2 bends/conveyor (maximum)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrostatic discharge feature (ESD)</td>
<td>Standard/Conductive</td>
<td>Standard</td>
</tr>
<tr>
<td>Example: Max permissible product weight 200 g</td>
<td>Max permissible puck weight 1000 g/ link</td>
<td>Max permissible puck weight (base, fixture, product) Max 3000 g/puck</td>
</tr>
<tr>
<td>Max permissible single item weight 800 g</td>
<td>Puck Ø 43,7</td>
<td></td>
</tr>
<tr>
<td>Max permissible single item weight 8000 g</td>
<td>Puck Ø 43,7</td>
<td></td>
</tr>
</tbody>
</table>

Note! Maximum 2 bends/conveyor

Example: Max permissible product weight 200 g

Max permissible puck weight (base, fixture, product) Max 3000 g/puck

Max permissible single item weight 8000 g

Puck Ø 43,7

© FlexLink 2019 Technical characteristics 51
The following guidelines must be considered when engineering conveyor:

1. **Conveyor length**

   Maximum permissible conveyor length: See “Technical characteristics” on page 51.

2. **Plain bends (only applies to X45C)**

   Horizontal conveyor modules can include maximum two Plain bends 30, 45, 90 or 180°. Different plain bends can be mixed, but the sum of the two bends may not exceed 270°.
   - Horizontal conveyor modules in conductive versions may not exceed 180°

3. **Guide rails**

   Guide rails for straight standard conveyor modules can be adapted for products up to maximum 100 mm width. Guide rails for standard conveyor modules with horizontal bends can be adapted for products up to maximum 100x200 mm (WxL).

4. **Conductive version**

   Conveyor modules are available in standard or conductive chain and slide rail materials versions.

5. **RFID option**

   RFID is available for controlling puck handling functions.
Conveyor System X45C

Conveyor – introduction

The modular conveyor system X45C makes it very easy and fast to create simple as well as advanced layouts. A range of conveyor modules can be ordered:

- Straight horizontal conveyors
- Horizontal conveyors with one or two bends
- Vertical conveyors, transporting products from one level to another

Also a range of single and multi-lane support modules can be chosen.

The conveyor modules can be divided into:

- Standard conveyor modules
- Conveyor modules for puck handling

Configuration of X45C is done using FlexLink Online Store or the design tool FLDT.

Beam design

The X45C beams are designed for rigidity, smooth running and low noise. The T-slots ensure easy but rigid attachment of accessories such as guide rail brackets. Connecting strip kit XUCJ 50 is placed in the middle of the beam keeping the T-slots free.

Cross-section of straight section conveyor beam with slide rails for non puck application

Cross-section of straight section conveyor beam with slide rails for puck application

Top Of Chain (TOC) 25.5 mm
Conveyor modules X45C

Straight conveyor

Vertical conveyor

Single bend conveyor

Two bend conveyor

Support modules – single and multi-lane

Minimum clearance distance

When two conveyors meet end to end or when a conveyor ends, they must be separated by a minimum clearance distance.

*Use online configurator when ordering
Chains – introduction

Chain types
The conveyor chain is designed for smooth running, minimum wear and low noise level at normal speeds.

Chain
- Plain chain
- Plain chain conductive
- Friction top chain
- Friction top chain, conductive
- Flexible cleat chain

Plain chain can be used up to 5°±2° slopes, depending on the friction coefficient between product and chain.

Friction top chain increases the friction between product and chain and can often be used for 15° slopes.

Flexible cleat chain is used for wedge conveyors elevating products or straight horizontal transfers.
- For individual weights up to 500 g

Plain chain
- Length 3 m
- Standard material
- Conductive material

XUTP 3A45
XUTP 3A45 E

Plain link kit *
- Standard material
- Conductive material

5113047
5113048
* Link kit contains 10 links, 10 steel pins

Flexible cleat chain
- Length 3 m

XUTE 3A45 C

Flexible cleat link kit *
- Standard material

5113494
* Link kit contains 10 links, 10 steel pins

Friction top chain
- Length 3 m
- All links are friction type
- Standard material
- Conductive material

XUTP 3A45 F
XUTP 3A45 EF

Friction top link kit *
- Standard material
- Conductive material

5113492
5113493
* Link kit contains 10 friction top links, 10 steel pins
Beams

**Conveyor beam**

![Diagram of conveyor beam]

**Beam**
- Length 3000 +10/-0 mm
- Length to order (30-3000 mm)

The beam has the same T-slot as used in the XF structural system see “T-slot dimensions” on page 439.

**Profile for split conveyor beam**

![Diagram of profile for split conveyor beam]

**Profile for split conveyor beam**
- Length 3000 +10/-0 mm
- Length to order (30-3000 mm)

**Joint piece**

![Diagram of joint piece]

**Joint piece**
- Aluminium

Including M6 screw and locking nut.

**Connecting strip kit**

![Diagram of connecting strip kit]

**Connecting strip kit**
- Aluminium
- Including M8 screws. Use drill fixture 5123264

**Beam section for chain installation**

![Diagram of beam section for chain installation]

**Beam section kit**
- Including connection strips and screws

**Drill instruction, Beam section for chain installation**

To connect the Beam section for chain installation, drill a hole straight through beam with diameter 6 mm, 13 mm from the edge. (Use drill fixture 5123264)
**Beams (continued)**

**Beam spacer**

**Beam spacer X45-X45**  
**XUCD 15x20**

*Complete kit*  
*Note! Recommended distance between Beam spacer 600 mm.*

**Beam spacer**

**Beam spacer X45H<=>X45**  
**5114822**

*Complete kit*  
*Note! Recommended distance between Beam spacer 600 mm.*

**Cover strip**

**Cover strip for T-slot**  
**Length 3 m**  
*Polyvinyl chloride, grey*  
**XFAC 3 T**

**T-slot nut**

*T-slot nut*  
*Steel, zinc-chromated*  
*M5*  
*M5, multipack (500 pcs)* **XFAN 5**  
**5056131**

*M6*  
*M6, multipack (500 pcs)* **XFAN 6**  
**5056130**

*Note. Must be ordered in multiples of 10*

**Drill fixture for conveyor beam**

**Drill fixture for conveyor beam**  
**5123264**

*To be used when drilling a 13 mm hole for Connecting strip kit XUCJ 50 and a 6 mm hole for Beam section for chain installation XUCC 65.*

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Beams 57
Slide rail

The slide rails are designed for long service life, smooth running, low elongation and minimized risk of failure. Several options exist for high performance operation.

Slide rail types include:
- Type H – high wear resistance (standard)
- Type E – conductive

All slide rails can be mounted to the conveyor beams without using rivets for anchoring.

Two slide rail profiles

Slide rails are available in two profile designs: Slide rail for non puck-application and slide rail for puck handling.

<table>
<thead>
<tr>
<th>Slide rails to be used for conveyors for puck handling</th>
<th>For straight sections</th>
<th>For plain bends (inner and outer slide rail)</th>
<th>For the return side of the conveyor beam</th>
<th>To be used with standard chains</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>XUCR 3 HAG</td>
<td>XUCR 3 HAGI</td>
<td>XUCR 3 HAGO</td>
<td>XTCR 25 H</td>
</tr>
<tr>
<td>Conductive</td>
<td></td>
<td></td>
<td></td>
<td>To be used with standard chains</td>
</tr>
</tbody>
</table>

Slide rails to be used for standard conveyors

| Standard       | XTCR 25 H                        | To be used with standard chains |
| Conductive     | XTCR 25 E                        | To be used with conductive chains   |
Slide rails

Slide rail for non puck-application or return side

Slide rail
Length 25 m
PA-PE (standard) (Grey)
PE-UHMW (conductive) (Black)  XTCR 25 H
XTCR 25 E

Slide/guide rail for puck handling

Slide/guide rail
Length 3 m
PA-PE (standard) (White)  XUCR 3 HAG

Inner and outer Slide/guide rail for bends, puck handling

Slide/guide rail
Length 3 m
Inner, PA-PE (standard) (White)  XUCR 3 HAGI
Outer, PA-PE (standard) (White)  XUCR 3 HAGO

Note! The guide rail do not permit accumulation through the bend. At accumulation pucks may be pushed out.

Slide rail tools

Mounting tool for slide rail

Mounting tool for slide rail  XTMR 160 A
Drive and idler units X45C – introduction

Drive unit X45C

The drive unit is an active function with the main purpose of driving the chain of a conveyor. The X45C system include 24V and 380-440V drive units. Drive units are available as end drive and intermediate drive units.

24 Volt drive unit

The 24V smart motor is equipped with a permanent magnetic (PM) motor and a built in embedded controller. The unit has interfaces to PROFINET and Ethernet/IP and connections for 8 in and 4 out signals. The embedded controller enables local decisions directly down in the drive unit giving a big advantage regarding software developing, electrical design and electrical installation.

The drive unit has a variable speed ranging from 5 m/min to 20 m/min with a maximum traction force of 100N over the whole speed range. Each side is equipped with a LED indicating its status.

The drive unit has two main alternatives of receiving commands. In the local mode the drive unit starts immediately or by one of the digital input signals. In the line control mode the drive unit receives commands over the Ethernet/IP or PROFINET.

If the motor are in local mode only power (24VDC) is needed to work properly.

For more detailed information about the function see User documentation.

380-440V drive unit

The 380-440V, 50/60Hz drive unit is available in a range of fixed speeds between 5-20m/min, see table below. The traction force depends on the speed with a maximum of 200N.
### Ordering information Drive units

<table>
<thead>
<tr>
<th>Type</th>
<th>Designation</th>
<th>Chain pull</th>
<th>Speed in meters per minute 50/60 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>100 N</td>
<td>200 N</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4,2/5</td>
<td>8,5/10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13,5/16</td>
<td>17/20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5-20</td>
<td></td>
</tr>
<tr>
<td>24V End drive unit, motor on left side</td>
<td>XUEB L B</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>24V End drive unit, motor on right side</td>
<td>XUEB R B</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>24V Intermediate drive unit, motor on left side</td>
<td>XUER L A B</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>24V Intermediate drive unit, motor on right side</td>
<td>XUER R A B</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>380-440V End drive unit, motor on left side</td>
<td>XUEB ML1</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>XUEB ML2</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>XUEB ML3</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>XUEB ML4</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>380-440V End drive unit, motor on right side</td>
<td>XUEB MR1</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>XUEB MR2</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>XUEB MR3</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>XUEB MR4</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>380-440V Intermediate drive unit, motor on left or right side</td>
<td>XUER M1 A</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>XUER M2 A</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>XUER M3 A</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>XUER M4 A</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

### End drive units

**End drive unit, 24 V, 40 W**

- **End drive unit**
  - Maximum traction force: up to 100 N.
  - Maximum permissible speed: 20 m/min.
- **Motor on left side:**
  - Variable speed * XUEB L B
- **Motor on right side (not shown):**
  - Variable speed * XUEB R B
- Effective track length: 0,125 m
  - (Height 185 mm to center T-slot)
- *See table “Ordering information Drive units”*

**End drive unit, 380 V-440 V, 40 W**

- **End drive unit**
  - Maximum traction force: up to 200 N.
  - Maximum permissible speed: 20 m/min.
- **Motor on left side:**
  - Fixed speed * XUEB ML
  - Without motor XUEB ML0
- **Motor on right side (not shown):**
  - Fixed speed * XUEB MR
  - Without motor XUEB MR0
- Effective track length: 0,125 m
  - (Height 170 mm to center T-slot)
- *See table “Ordering information Drive units”*
Intermediate drive units

Intermediate drive unit, 24 V, 40 W

Maximum traction force: up to 100 N.
Maximum permissible speed: 20 m/min.

Motor on left side:
Variable speed *

Motor on right side (not shown):
Variable speed *

Effective track length: 0.45 m
(Height 240 mm to center T-slot)

* See table “Ordering information Drive units”

Intermediate drive unit, 380 V-440 V, 40 W

Maximum traction force: up to 100 N.
Maximum permissible speed: 20 m/min.

Motor on left or right side:
Fixed speed *
Without motor

Effective track length: 0.45 m
(Height 225 mm to center T-slot)

*See table “Ordering information Drive units”

Placement of Intermediate drive unit for X45

L = (L1 + L2 + L3)

≤ L tot/2
Basic units

Basic unit

Basic unit

Spare part 24 V Basic unit
(see Spare parts list)

Effective track length: 0,125 m

Idler units

Idler end unit

Effective track length: 0,125 m

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### Plain bends

#### Plain bend, 30°
*Effective track lengths: R150: 0,16 m 1-way (0,32 m 2-way)*
*Effective track lengths: R210: 0,20 m 1-way (0,40 m 2-way)*

<table>
<thead>
<tr>
<th>Item no</th>
<th>Angle (a)</th>
<th>Radius (R)</th>
<th>Length (L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>XUBP 30R150</td>
<td>30° ±1°</td>
<td>150 ±5 mm</td>
<td>160 mm</td>
</tr>
<tr>
<td>XUBP 30R210</td>
<td>30° ±1°</td>
<td>210 ±5 mm</td>
<td>210 mm</td>
</tr>
<tr>
<td>XUBP 45R150</td>
<td>45° ±1°</td>
<td>150 ±5 mm</td>
<td>190 mm</td>
</tr>
<tr>
<td>XUBP 45R210</td>
<td>45° ±1°</td>
<td>210 ±5 mm</td>
<td>232 mm</td>
</tr>
<tr>
<td>XUBP 90R150</td>
<td>90° ±1°</td>
<td>150 ±5 mm</td>
<td>212 mm</td>
</tr>
<tr>
<td>XUBP 90R210</td>
<td>90° ±1°</td>
<td>210 ±5 mm</td>
<td>272 mm</td>
</tr>
<tr>
<td>XUBP 180R150</td>
<td>180° ±1°</td>
<td>150 ±5 mm</td>
<td>212 mm</td>
</tr>
<tr>
<td>XUBP 180R210</td>
<td>180° ±1°</td>
<td>210 ±5 mm</td>
<td>272 mm</td>
</tr>
</tbody>
</table>

#### Plain bend, 45°
*Effective track lengths: R150: 0,21 m 1-way (0,42 m 2-way)*
*Effective track lengths: R210: 0,25 m 1-way (0,50 m 2-way)*

<table>
<thead>
<tr>
<th>Item no</th>
<th>Angle (a)</th>
<th>Radius (R)</th>
<th>Length (L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>XUBP 45R150</td>
<td>15°-45° ±1°</td>
<td>R=210-500 ±10 mm</td>
<td>210 mm</td>
</tr>
<tr>
<td>XUBP 90R150</td>
<td>46°-90° ±1°</td>
<td>R=210-500 ±10 mm</td>
<td>212 mm</td>
</tr>
<tr>
<td>XUBP 45R210</td>
<td>15°-45° ±1°</td>
<td>R=501-1000 ±10 mm</td>
<td>232 mm</td>
</tr>
<tr>
<td>XUBP 90R210</td>
<td>46°-90° ±1°</td>
<td>R=501-1000 ±10 mm</td>
<td>272 mm</td>
</tr>
</tbody>
</table>

#### Plain bend, 90°
*Effective track lengths: R150: 0,34 m 1-way (0,68 m 2-way)*
*Effective track lengths: R210: 0,43 m 1-way (0,86 m 2-way)*

<table>
<thead>
<tr>
<th>Item no</th>
<th>Angle (a)</th>
<th>Radius (R)</th>
<th>Length (L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>XUBP 90R150</td>
<td>15°-45° ±1°</td>
<td>R=501-1000 ±10 mm</td>
<td>212 mm</td>
</tr>
<tr>
<td>XUBP 90R210</td>
<td>46°-90° ±1°</td>
<td>R=501-1000 ±10 mm</td>
<td>272 mm</td>
</tr>
</tbody>
</table>

#### Plain bend, 180°
*Effective track lengths: R150: 0,60 m 1-way (1,2 m 2-way)*
*Effective track lengths: R210: 0,90 m 1-way (1,8 m 2-way)*

<table>
<thead>
<tr>
<th>Item no</th>
<th>Angle (a)</th>
<th>Radius (R)</th>
<th>Length (L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>XUBP 180R150</td>
<td>15°-45° ±1°</td>
<td>R=210-500 ±10 mm</td>
<td>212 mm</td>
</tr>
<tr>
<td>XUBP 180R210</td>
<td>46°-90° ±1°</td>
<td>R=501-1000 ±10 mm</td>
<td>272 mm</td>
</tr>
</tbody>
</table>

#### Plain bend, 15°-45°, 46°-90°

- Plain bend, 15°-45°±1°, R=210-500 ±10 mm
- Plain bend, 46°-90°±1°, R=210-500 ±10 mm
- Plain bend, 15°-45°±1°, R=501-1000 ±10 mm
- Plain bend, 46°-90°±1°, R=501-1000 ±10 mm

**Item no**
- XUBP 30R150
- XUBP 30R210
- XUBP 45R150
- XUBP 45R210
- XUBP 90R150
- XUBP 90R210
- XUBP 180R150
- XUBP 180R210
- XUBP 45TYP5
- XUBP 90TYP5
- XUBP 45TYP10
- XUBP 90TYP10
Vertical bends

Vertical bend, 5° and 15°

Vertical bend 5°
R=400, L=116,5, a=5°
Vertical plain bend
Vertical bend 15°
R=400, L=187, a=15°
Vertical plain bend

Effective track lengths:
a=5° R400: 0,20 m 1-way (0,40 m 2-way)
a=15° R400: 0,26 m 1-way (0,52 m 2-way)

Enclosure components X45C and X45H

Cable cover

Guide rail system

See “Guide rail components” on page 289

Conveyor support

See “Conveyor support components” on page 317

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Conveyor System X45H

Conveyor – introduction

The X45H conveyor is high capacity conveyor system for handling small products and can easily integrated with X45 conveyors. X45 conveyors enable the advantage of running longer conveyors with more bends and with higher speed than X45.

Puck handling

The standard pucks for X45 can run on the X45H conveyors. Slide rails with integrated rail for puck handling are available for straight conveyors as well as for bends. A number of puck handling functions for diverting and merging is available.

The standard guide components can be used.

Beam design

The X45H beams are designed for rigidness, smooth running and low noise. The T-slots ensure easy but rigid attachment of accessories such as guide rail brackets.
**X45H components**

**Chains – introduction**

The conveyor chain is designed for smooth running, minimum wear and low noise level at normal speeds.

**Chain types**

- Plain chain

Plain chain can be used up to $5^\circ \pm 2^\circ$ slopes, depending on the friction coefficient between product and chain.

**Chains X45H**

**Plain chain**

Length 5 m

**Chain accessories X45H**

**Steel pin kit**

Steel pin kit XT

*Note. kit contains 25 pcs of XTTD 4.5x30*

**Ball kit XT**

Ball kit XT

*Note. kit contains 25 pcs of XTTT 11x17*
**Beams X45H**

**Conveyor beam**

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

**Beam spacer**

Beam spacer X45H-X45H

**Connecting strip kit**

- Steel, electro-zinc-plated
- Kit with two connecting strips. Including M8 set screws.
- Not for XT Compact beam

**Drill fixture for conveyor beam**

- To be used when drilling a 10 mm hole for Connecting strip kit 5053503

---

**Note!** Recommended distance between Beam spacer 600 mm.
Cover strip for T-slot

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

Note! Can’t be used with bends

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

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

Note! Can’t be used with bends

Slide rails

Slide rail (A)
- Length 25 m
- PA-PE (Grey)
- UHMW-PE (White)
- UHMW-PE + carbon (conductive) (Black)

Plastic slide rails for XS beam
- Length 25 m
- PVDF ($\mu=0.15–0.35$) (Natural white)

Slide/guide rail for puck handling
- Length 3 m
- PA-PE (standard) (White)

Inner and outer Slide/guide rail for bends, puck handling
- Length 3 m
- Inner, PA-PE (standard) (White)
- Outer, PA-PE (standard) (White)

Note! The guide rail do not permit accumulation through the bend. At accumulation pucks may be pushed out.
Slide rail tools

Drill fixture for slide rail

Drill fixture for slide rail 3923584

Rivet tool

Rivet tool 3923563

Mounting tool for slide rail

Mounting tool for slide rail XTMR 160 A
Drive and idler units – introduction

Drive unit types
The X45H system includes direct drive units, Heavy and Medium. 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</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium</td>
<td>F, V</td>
</tr>
<tr>
<td>Heavy</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 except those for Compact drive units 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.

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.

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

End drive unit NLP/NRP

Direct drive, No slip clutch
Maximum traction force: 900 N at 5 m/min.
Fixed speed up to 60 m/min
Variable speed up to 60 m/min

End drive unit, left
50 Hz 230/400 V
Without motor
XTEB

End drive unit, right
50 Hz 230/400 V
Without motor
XTEB

Connecting strips are included.
Use online configurator when ordering

End drive unit MNLP/MNRP

Direct drive, No slip clutch
Maximum traction force: 700 N at 5 m/min.
Fixed speed up to 25 m/min
Variable speed up to 25 m/min

End drive unit, left
50 Hz 230/400 V
Without motor
XTEB

End drive unit, right
50 Hz 230/400 V
Without motor
XTEB

Connecting strips are included.
Use online configurator when ordering
End drive unit X45H, Mid drive

End drive unit, configured item*
Fixed speed: 5-10-15-20 m/min*
End drive unit, Mid
50/60 Hz 230/400 V
* Use online configurator when ordering
Effective track length: 2x0.80 m

End drive unit NLPD/NRPD

End drive unit, configured item*
Fixed speed: 5-10-15-20 m/min*
End drive unit, left/right
50/60 Hz 230/400 V
* Use online configurator when ordering
Effective track length: 2x0.80 m

Idler end unit

Idler end unit

Idler end unit (single)
Length 320 mm
XTEJ 320
Two idler units must be ordered for a conveyor with return chain.
Connecting strips are included.
Wheel bends

Wheel bend, 90°

 Wheel bend, 90°
**XTBH 90R150**
Connecting strips are included.

Wheel bend, 180°

 Wheel bend, 180°
**XTBH 180R150**
Connecting strips are included.

Guide disc for X45H wheel bend

 Guide disc
**5117691**
This guide disc will help guiding the pucks through the wheel bend of a X45H conveyor.
Horizontal plain bends

Horizontal plain bend, 30°
R=358±10 mm
R=518±10 mm
Effective track lengths:
R358: 0,60 m 1-way (1,2 m 2-way)
R518: 0,70 m 1-way (1,40 m 2-way)

Horizontal plain bend, 45°
R=358±10 mm
R=518±10 mm
Effective track lengths:
R358: 0,70 m 1-way (1,40 m 2-way)
R518: 0,85 m 1-way (1,70 m 2-way)

Horizontal plain bend, 90°
R=358±10 mm
R=518±10 mm
Effective track lengths:
R358: 0,97 m 1-way (1,94 m 2-way)
R518: 1,25 m 1-way (2,50 m 2-way)

Vertical bends

Vertical bend, 5°
Connecting strips are included.

Horizontal plain bend, 30°±1°
XTBP 30R358
XTBP 30R518

Horizontal plain bend, 45°±1°
XTBP 45R358
XTBP 45R518

Horizontal plain bend, 90°±1°
XTBP 90R358
XTBP 90R518

Vertical bend, 5°
XTBV 5R300

Connecting strips are included.
Enclosure components X45C and X45H

Cable cover

Cable cover
Plastic
Including mounting details

Guide rail system

See “Guide rail components” on page 289

Conveyor support

See “Conveyor support components” on page 317
Puck handling functions X45e for X45C and X45H

Conveyor functions for puck handling X45C and X45H

Conveyor function kits for puck handling are used for handling individual products on standard pucks (carrier) XUPP 43 and XUPP 43 T. A whole range of functions such as Divert, Merge, Combined Divert/Merger, Stop and Locating can easily be integrated to X45C and X45H conveyors.

This makes it easy and fast to create layouts for routing, balancing, buffering and positioning of pucks. RFID identification in the pucks enables one piece track and trace and logistic control for the production line.

Typical conveyor layouts for puck handling

The figures shows a typical conveyor layouts for puck handling. A system that includes a mix of X45C and X45H conveyors with X45e kits for handling the puck functions in the system.

Configuration X45e kit for X45C and X45H

Functional X45e kits are available with the following functions: Divert, Merge, Combined Divert/Merger, Transfer, Locate and Stops.

Configuration procedure

All functions are delivered with an assembly instruction that contains detailed information about or how to:

- Bill of material (BOM)
- Function origin.
  (Identification of the function origin. All components are mounted from this point.)
- Cutting Slide Rail
- How to cut different types
- Motor Assembly
- Mounting Motor
- Mounting Guide Rails
- Mounting Sensors

The instructions are included with the kit or can be downloaded at our website www.flexlink.com.

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The control system for the platforms X45e is structured in an object oriented way. All puck function motors in the platform have embedded control units and local sensors are connected directly to each motor unit. This layout gives a big advantage regarding software developing, electrical design and electrical installation.

**Function control**

The motor unit consists of a motor, circuit boards and eight connectors in an encapsulated housing. There are two types of motor units, the drive unit and the function unit. All that differs on these variants are the motor and the mechanical housing.

**Function units X45e**

Each function unit includes an embedded controller for handling local decisions within the function area. The unit is equipped with 8 input signals and 4 output signals for connection to sensors and other function units and equipment. The motor unit has a LED on each side indicating the status.

The motors can be autonomously controlled only by the input of the local sensors or controlled from a line controller over a EtherNet/IP or PROFINET network.

If the motors are in autonomous mode they only need power (24VDC) to work properly.

All software in the X45e motors are preloaded and the behavior of the motors can be adjusted to different performance (such as function type, speed and angle settings) by connecting a computer via the USB connector.

For more detailed information about the function see User documentation.

**Line control and power**

A line controller can be interlinked via an external EtherNet/IP or PROFINET network. RFID reader/writers can be connected to the same network via a control interface unit. All dynamic route handling has to be implemented in the line controller. The main electrical cabinet supplies the motor units with power, 24 VDC. The power is divided in safe and continuous power in order to have the possibilities to implement emergency or safety stops.
Diverters, Mergers, Combined Diverters/Mergers and Transfers
for Puck handling

Diverters
Diverters are used to split a flow of pucks from one line into two. The lines can be parallel or in a 90° angle.

Mergers
Mergers are used to combine the flow from two lines into one. The lines can be parallel or in a 90° angle.

Combined Diverter/merger
A combined diverter/merger is used to create a sub line for example to guide pucks out and in on a satellite conveyor from the main conveyor. They can also be used as "shortcuts".

Transfers
Transfers are used to transfer the puck between the conveyors in a system. The parallel transfers are passive but the 90° and 180° angled transfers are driven by a motor.

Maximum permissible weight X45C and X45H

The diagram shows the maximum permissible weight of a group of pucks (product weight + puck weight) that the functions Divert, Merger, Combined Diverter/Merger, Stop and Locating are capable stopping, as a function of the conveyor speed.
Conveyor noise level X45C

The noise level was measured at a distance of 1 meter from drive unit.

Overall installation dimensions

The figure shows the overall installation dimensions for function units X45C and X45H and Top Of Chain (TOC)
Divert functions and kits

The diverter is an active unit with one infeed and two outfeed conveyors.
There are four different variants of the diverter.
- Diverter, Parallel, Left
- Diverter, Parallel, Right
- Diverter, 90°, Left
- Diverter, 90°, Right

The unit has two positions for photoelectric sensors. The first one is used for sensing the queue status of the infeed conveyor. This sensor can be replaced by a RFID read/write head.

When a puck arrives the rotation disc opens up to receive the puck. The second sensor is used for detecting that the puck has reached the gap of the rotation disc. This is the trigger signal for the main rotation of the rotation disc, with a puck in the gap.

The decision of which outfeed conveyor to release the puck on can be received from the external bus, via a local sensor or from a predetermined pattern.

For more detailed information about the function, see User documentation in Technical library at flexlink.com

Diverter, parallel

Diverter kit X45C<=>X45C
Diverter kit X45H<=>X45C
Diverter kit X45H<=>X45H

Figure shows XUUT D_type L (divert to left)
Use online configurator when ordering

Diverter, 90°

Diverter 90° kit X45C<=>X45C
Diverter 90° kit X45H<=>X45

Figure shows XUUT 90 D_type L (divert to left, merge from left)
Use online configurator when ordering

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## Function structure list, Divert functions and kits

<table>
<thead>
<tr>
<th>Function</th>
<th>Direction</th>
<th>Designation</th>
<th>Layout</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Parallel</strong></td>
<td>Diverter kit X45C&lt;=&gt;X45, Left</td>
<td>XUPJ 43 DL B</td>
<td><img src="#" alt="Diagram" /></td>
</tr>
<tr>
<td></td>
<td>Diverter kit X45H&lt;=&gt;X45C, Left</td>
<td>XUPJ 43 DLH B</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Diverter kit X45H&lt;=&gt;X45H, Left</td>
<td>XTPJ 43 DL B</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Diverter kit X45C&lt;=&gt;X45, Right</td>
<td>XUPJ 43 DR B</td>
<td><img src="#" alt="Diagram" /></td>
</tr>
<tr>
<td></td>
<td>Diverter kit X45H&lt;=&gt;X45C, Right</td>
<td>XUPJ 43 DRH B</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Diverter kit X45H&lt;=&gt;X45H, Right</td>
<td>XTPJ 43 DR B</td>
<td></td>
</tr>
<tr>
<td><strong>90°</strong></td>
<td>Diverter 90° kit X45C&lt;=&gt;X45C, Left</td>
<td>XUPJ 43 DL 90 B</td>
<td><img src="#" alt="Diagram" /></td>
</tr>
<tr>
<td></td>
<td>Diverter 90° kit X45H&lt;=&gt;X45C, Left</td>
<td>XUPJ 43 DL 90HB</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Diverter 90° kit X45H&lt;=&gt;X45C, Right</td>
<td>XUPJ 43 DR 90 B</td>
<td><img src="#" alt="Diagram" /></td>
</tr>
<tr>
<td></td>
<td>Diverter 90° kit X45H&lt;=&gt;X45C, Right</td>
<td>XUPJ 43 DR 90HB</td>
<td></td>
</tr>
</tbody>
</table>
The merger is an active unit with two infeed and one outfeed conveyor.

There are four different variants of the merger.

- Merger, Parallel, Left
- Merger, Parallel, Right
- Merger, 90°, Left
- Merger, 90°, Right

The unit has two sets of guide brackets each containing two photoelectric sensors. The first sensor position on each side is used for sensing the queue status of the infeed conveyors. These queue sensors are the trigger signal for the merger to move the rotation disc to one of the two receive positions. This is done either clockwise or counter clockwise depending on which conveyor to receive pucks from.

The last sensor is used for sensing pucks in the gap of the rotation disc. This is the trigger signal for the main rotation of the rotation disc, with a puck in the gap. When the rotation disc has reached the release position the cycle is complete and the unit waits for a new puck to arrive.

For more detailed information about the function, see User documentation in Technical library at flexlink.com
<table>
<thead>
<tr>
<th>Function</th>
<th>Direction</th>
<th>Designation</th>
<th>Layout</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parallel</td>
<td>Merger kit X45C&lt;&gt;X45C, Left</td>
<td>XUPJ 43 ML B</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Merger kit X45H&lt;&gt;X45C, Left</td>
<td>XUPJ 43 MLH B</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Merger kit X45H&lt;&gt;X45H, Left</td>
<td>XTPJ 43 ML B</td>
<td></td>
</tr>
<tr>
<td>Merge</td>
<td>Merger kit X45C&lt;&gt;X45C, Right</td>
<td>XUPJ 43 MR B</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Merger kit X45H&lt;&gt;X45C, Right</td>
<td>XUPJ 43 MRH B</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Merger kit X45H&lt;&gt;X45H, Right</td>
<td>XTPJ 43 MR B</td>
<td></td>
</tr>
<tr>
<td>90°</td>
<td>Merger 90° kit X45&lt;&gt;X45C, Left</td>
<td>XUPJ 43 ML 90 B</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Merger 90° kit X45H&lt;&gt;X45C, Left</td>
<td>XUPJ 43 ML 90HB</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Merger 90° kit X45C&lt;&gt;X45C, Right</td>
<td>XUPJ 43 MR 90 B</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Merger 90° kit X45H&lt;&gt;X45C, Right</td>
<td>XUPJ 43 MR 90HB</td>
<td></td>
</tr>
</tbody>
</table>
Combined Divert/Merge

A Combined Diverter/Merger is used to create a sub line for example to guide pucks out and in on a satellite conveyor from the main conveyor. They can also be used as "shortcuts".

This function has the behaviour from both the diverter and the merger. The prioritized order can be predetermined or decided dynamically from a line controller.

For more detailed information about the function, see User documentation in Technical library at flexlink.com

Combined Divert/Merge 90°

Combined Diverter and Merger kit 90° X45C<>X45C
Combined Diverter and Merger kit 90° X45H<>X45C

Figure shows type L (divert to left, merge from left)
Use online configurator when ordering

Combined Divert/Merge 180°

Combined Diverter and Merger kit 180° X45C<>X45C
Combined Diverter and Merger kit 180° X45H<>X45C
Combined Diverter and Merger kit 180° X45H<>X45H

Figure shows type L (divert to left, merge from left)
Use online configurator when ordering
## Function structure list, Combined Diverter/Merger

<table>
<thead>
<tr>
<th>Function</th>
<th>Direction</th>
<th>Designation</th>
<th>Layout</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Divert/Merge kit X45C&lt;&gt;X45C, Left</td>
<td>XUPJ 43 CL B</td>
<td><img src="image1.png" alt="Diagram" /></td>
<td></td>
</tr>
<tr>
<td>Combined Divert/Merge kit X45C&lt;&gt;X45H, Left</td>
<td>XUPJ 43 CLH B</td>
<td><img src="image2.png" alt="Diagram" /></td>
<td></td>
</tr>
<tr>
<td>Combined Divert/Merge kit X45H&lt;&gt;X45H, Left</td>
<td>XTPJ 43 CL B</td>
<td><img src="image3.png" alt="Diagram" /></td>
<td></td>
</tr>
<tr>
<td>Combined Divert/Merge kit X45C&lt;&gt;X45C, Right</td>
<td>XUPJ 43 CR B</td>
<td><img src="image4.png" alt="Diagram" /></td>
<td></td>
</tr>
<tr>
<td>Combined Divert/Merge kit X45C&lt;&gt;X45H, Right</td>
<td>XUPJ 43 CRH B</td>
<td><img src="image5.png" alt="Diagram" /></td>
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<tr>
<td>Combined Divert/Merge kit X45H&lt;&gt;X45H, Right</td>
<td>XTPJ 43 CR B</td>
<td><img src="image6.png" alt="Diagram" /></td>
<td></td>
</tr>
<tr>
<td>Combined Divert/Merge kit X45C&lt;&gt;X45C, Left</td>
<td>XUPJ 43 90 B</td>
<td><img src="image7.png" alt="Diagram" /></td>
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</tr>
<tr>
<td>Combined Divert/Merge kit X45C&lt;&gt;X45H, Left</td>
<td>XUPJ 43 90HB</td>
<td><img src="image8.png" alt="Diagram" /></td>
<td></td>
</tr>
<tr>
<td>Combined Divert/Merge kit X45C&lt;&gt;X45C, Right</td>
<td>XUPJ 43 90 B</td>
<td><img src="image9.png" alt="Diagram" /></td>
<td></td>
</tr>
<tr>
<td>Combined Divert/Merge kit X45C&lt;&gt;X45H, Right</td>
<td>XUPJ 43 90HB</td>
<td><img src="image10.png" alt="Diagram" /></td>
<td></td>
</tr>
</tbody>
</table>
**Combined Diverter/Merger for handling train of products**

This combined diverter/merger unit is handling train of products. It requires a gap in the product flow during function operation change. Gaps are normally created by stop units located on each incoming conveyor. The decision of which outfeed conveyor to release the pucks on can be received from the external bus, via a local sensor or from a predetermined pattern. For more detailed information about the function, see User documentation in Technical library at flexlink.com

<table>
<thead>
<tr>
<th>Function</th>
<th>Direction</th>
<th>Designation</th>
<th>Function alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Diverter/Merge Train product handling</td>
<td>Diverter/Merge kit X45C&lt;&gt;X45</td>
<td>XUPJ 43 DT B</td>
<td></td>
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<tr>
<td></td>
<td>Diverter/Merge kit X45H&lt;&gt;X45C</td>
<td>XUPJ 43 DTH B</td>
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<td>Diverter/Merge kit X45H&lt;&gt;X45H</td>
<td>XTPJ 43 DT B</td>
<td></td>
</tr>
</tbody>
</table>
Transfer

Transfers are used to transfer the puck between the conveyors in a system.

For more detailed information about the function, see User documentation in Technical library at flexlink.com

Transfer, parallel

Transfer kit parallel X45C<=X45C  XUPJ 43 T
Transfer kit parallel X45H<=X45C  XUPJ 43 TH
Transfer kit parallel X45H<=X45H  XTPJ 43 T

Figure shows type L (transfer to left)
Use online configurator when ordering

Transfer 90°

Transfer kit 90° X45C<=X45C  XUPJ 43 T_90
Transfer kit 90° X45H<=X45  XUPJ 43 T_90 H

Figure shows type L (transfer to left)
Use online configurator when ordering

Transfer 180°

Transfer kit 180° X45C<=X45C  XUPJ 43 T_180
Transfer kit 180° X45H<=X45C  XUPJ 43 T_180 H
Transfer kit 180° X45H=>X45C  XTPJ 43 T_180 U
Transfer kit 180° X45H<=X45H  XTPJ 43 T_180

Figure shows type L (transfer to left)
Use online configurator when ordering
### Function structure list, Transfer, parallel and 90°

<table>
<thead>
<tr>
<th>Function</th>
<th>Direction</th>
<th>Designation</th>
<th>Layout</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transfer</strong></td>
<td><strong>Parallel</strong></td>
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<tr>
<td></td>
<td>Transfer kit, parallel, left, X45C&lt;=&gt;X45</td>
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<td>Transfer kit, parallel, right, X45H&lt;=&gt;X45C</td>
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<td>XTPJ 43 T</td>
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<td><strong>90°</strong></td>
<td>Transfer kit, 90, left, X45C&lt;=&gt;X45C</td>
<td>XUPJ 43 TL 90 B</td>
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<td>XUPJ 43 TL 90HB</td>
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<td>Transfer kit, 90, right, X45C&lt;=&gt;X45C</td>
<td>XUPJ 43 TR 90 B</td>
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<td>Transfer kit, 90, right, X45H&lt;=&gt;X45C</td>
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<td><img src="image" alt="90° X45H&lt;=&gt;X45C" /></td>
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</table>
## Function structure list, Transfer 180°

<table>
<thead>
<tr>
<th>Function</th>
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<tbody>
<tr>
<td>Transfer</td>
<td>180°</td>
<td>Transfer kit, 180, left, X45C&lt;=X45C</td>
<td>XUPJ 43 TL 180B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transfer kit, 180, left, X45H&lt;=X45C</td>
<td>XUPJ 43 TL 180HB</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transfer kit, 180, left, X45H=&gt;X45C</td>
<td>XTPJ 43 TL 180UB</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transfer kit, 180, left, X45H&lt;=&gt;X45H</td>
<td>XTPJ 43 TL 180B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transfer kit, 180, right, X45C&lt;=X45C</td>
<td>XUPJ 43 TR 180B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transfer kit, 180, right, X45H&lt;=X45C</td>
<td>XUPJ 43 TR 180HB</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transfer kit, 180, right, X45H=&gt;X45C</td>
<td>XTPJ 43 TR 180UB</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transfer kit, 180, right, X45H&lt;=&gt;X45H</td>
<td>XTPJ 43 TR 180B</td>
</tr>
</tbody>
</table>
Stop unit is an active unit acting on a single conveyor. The unit has only one photoelectric sensor. This detects a puck in the queue. The default position of the stop unit is closed, i.e. it is able to resist a queue of pucks. If the stop is deactivated the unit opens up to receive a puck.

This unit can be controlled either via the external bus or in local mode by a signal in the local digital input.

For more detailed information about the function, see User documentation in Technical library at flexlink.com
Locating unit

Locating unit is an active unit acting on a single conveyor. The station has only one photoelectric sensor. This is detecting that the puck has reached the gap of the rotation disc. The locating station can also be equipped with a RFID read/write head on the locating position. The station can be controlled either via the external bus or using only local control.

For more detailed information about the function, see User documentation in Technical library at flexlink.com

Locating unit

Locating unit X45C, kit
Locating accuracy ±0,5 mm
Angle accuracy ± 2°

Locating unit X45H, kit
Locating accuracy ±0,5 mm
Angle accuracy ± 2°

Use online configurator when ordering

Figure shows type Left

Locating unit, with bypass

Locating unit X45C, kit
Locating accuracy ±0,5 mm
Angle accuracy ± 2°

Use online configurator when ordering

Figure shows type Right

Locating unit, end of satellite

Locating unit X45C, kit
Locating accuracy ±0,5 mm
Angle accuracy ± 2°

Use online configurator when ordering
<table>
<thead>
<tr>
<th>Function</th>
<th>Direction</th>
<th>Designation</th>
<th>Item</th>
<th>Layout</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locating unit</td>
<td>X45C, Left, kit</td>
<td>XUPX 43 OL B</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>X45H, Left, kit</td>
<td>XTPX 43 OL B</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>X45C, Right, kit</td>
<td>XUPX 43 OR B</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>X45H, Right, kit</td>
<td>XTPX 43 OR B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Locating unit, end of satellite</td>
<td>X45C, Left, kit</td>
<td>XUPX 43 SL B</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>X45C, Right, kit</td>
<td>XUPX 43 SR B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Locating unit, locating with bypass</td>
<td>X45C, Left, kit</td>
<td>XUPX 43 OBL B</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>X45C, Right, kit</td>
<td>XUPX 43 OBR B</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The rotating disc guides the puck sideways out of the conveyor into the locating position. A spring function included in the rotating disc presses the puck towards a v-shaped block. In this position the puck is locked vertical and can take limited vertical forces e.g. unload or load a test tube. No loads are aloud in the X, Y-plane.

Accuracy:
- Locating ±0.5 mm
- Angle ± 2°
Puck handling

A complete Puck XUPP 43 or XUPP 43 TA consists of a base and a ring part.

Function of the ring is to allow the function disc in all different function units, to rotate without getting force from the other pucks that can be in queue in a line up situation.

**Puck**

Plastic PA
Puck weight: 12g
Max load on puck: 250g

*Puck can be equipped with RFID tag, see Page 95*

**XUPP 43 TA**

Puck plastic PA
Puck weight: 14 g
Max load on puck: 250 g

*XUPP 43 TA works as a pallet this means that full orientation control of the product is obtained, which can be an advantage in the process.*

The puck will be a bit more stable as more of the surface area is in contact with the conveyor.

*Puck can be equipped with RFID tag, see Page 95*

**Product specific application/fixture**
(valid for both XUPP 43 and XUPP 43 TA)

*Interface description product specific application/fixture*
RFID components

RFID tag
The RFID tag is a circular tag with a diameter of 30 mm operating at the frequency of 13.56 MHz. The memory available is 1024 bit or 16 kbit.

Read/ write head
The read/write head exchanges data with the passive RFID tags at a maximum distance of 50 mm.

The read/write head has an M12 connector. The M12 cable is connected to a control interface unit.

Control interface unit
Every read/write head has to be connected to a control interface unit. These units exist in different variants that can connect up to four read/write heads each.

They are equipped with interfaces for some of the most common field bus system, Profibus, PROFINET, Ethernet and DeviceNet and Interbus, as well as with serial interfaces.

For more detailed information about the function, see User documentation.

RFID Reader/writer for X45 and X45H

RFID Reader/writer locating station

RFID tag

5113121 5113120
RFID tag 1024 bit 5113121
RFID tag 16 kbit 5113120

RFID Reader/writer locating station

Including bracket kit 5113119

Including bracket kit 5113046
In order to prevent any jam in the production flow, a maximum queue sensor can be connected. It will read if an unexpected long queue occurs, a signal will be received by the embedded software in previous function motor in the flow and stop the feed or feed through to another flow.

### Sensor maximum queue

- **Sensor maximum queue X45C**
- **Sensor maximum queue X45H**

*Figure shows type Left*

*Including mounting hardware and Cable cover 5113038*

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### Maximum queue

- **Maximum queue sensor**
- **Maximum queue buffer**
- **Maximum queue limit**

*E.g. maximum queue for this configuration is 9 pucks.*