Merge module

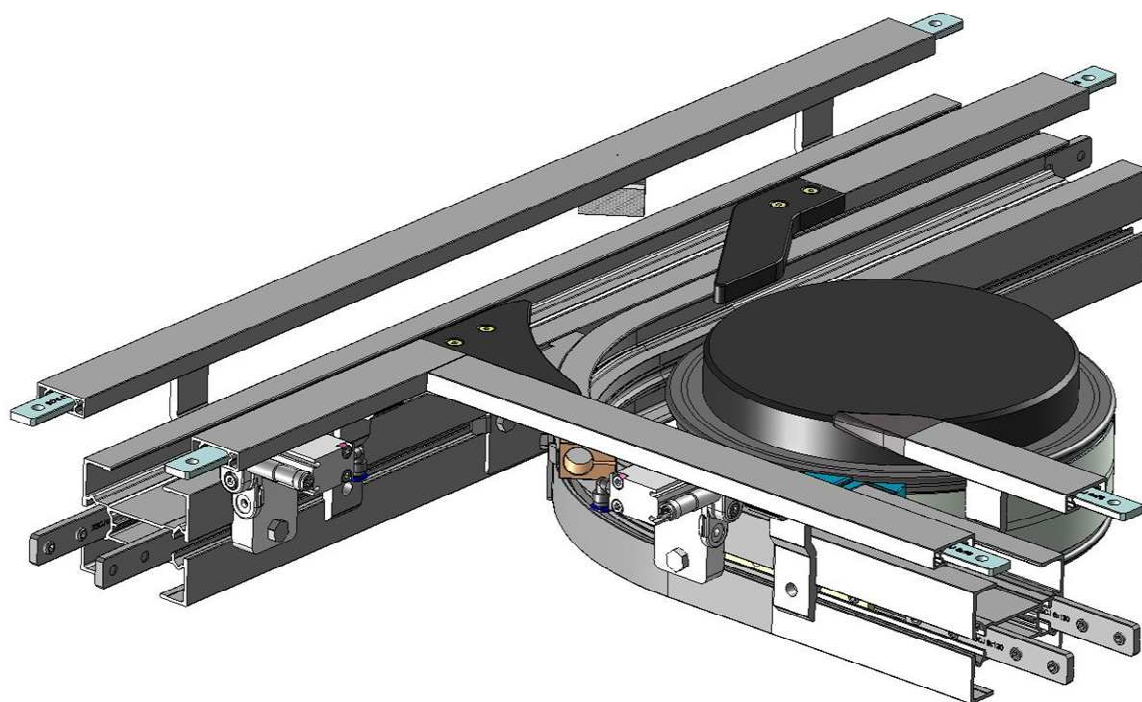## XBUT 45 MR, 90 MR, 45 ML and 90 ML

5970578-03
5970579-02
5970584-02
5970585-02

User documentation ver 1.0

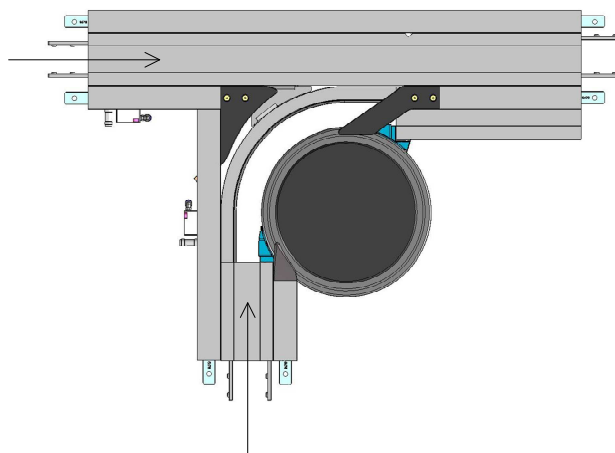# Merge module XBUT 45 MR, 90 MR, 45 ML and 90 ML

Merge module XBUT 45 MR, 90 MR, 45 ML and 90 ML

Function description

The Merge module gives the opportunity to merge two flows of pallets (*satellite* to *highway*) in a fully controlled way.
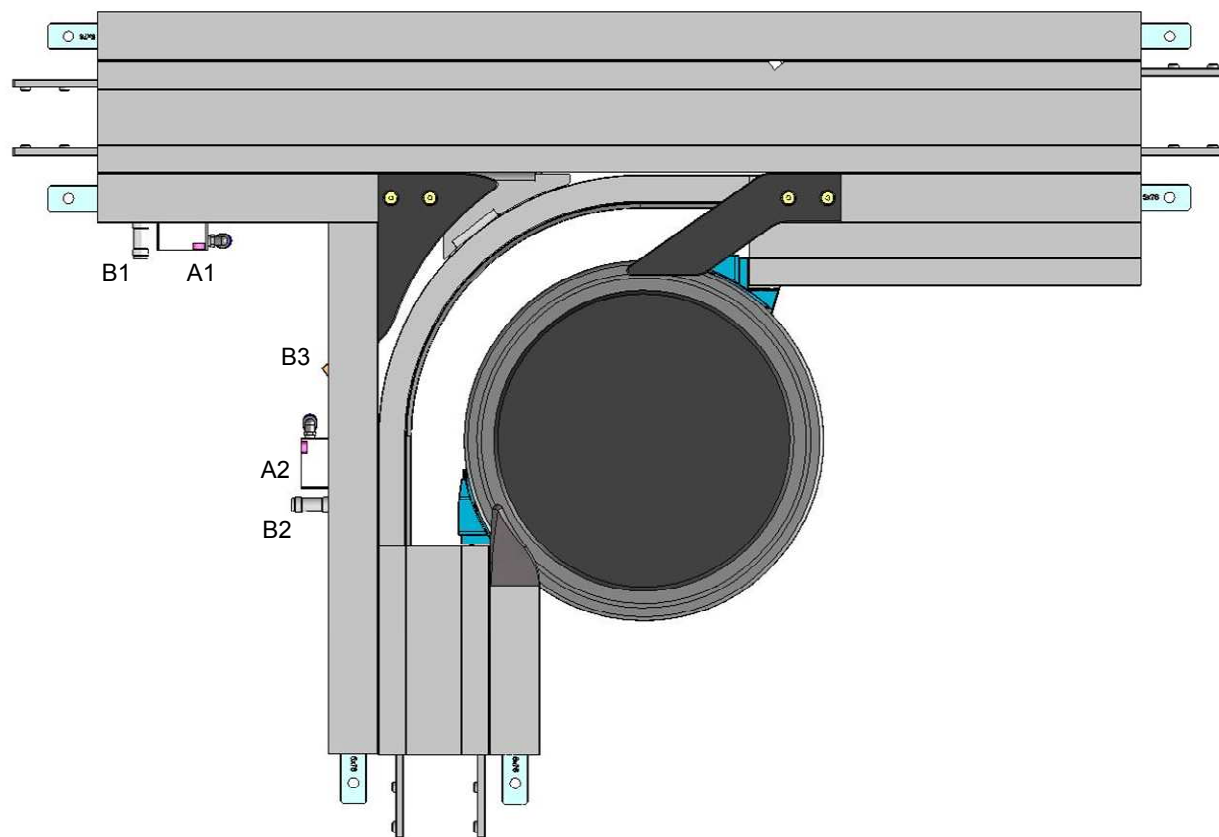
Stop positions

The two flows are equipped with stops in order to avoid collision.

Merge module XBUT 45 MR, 90 MR, 45 ML and 90 ML

Initiators and actuators

Initiators

B1 Pre-stop highway
B2 Pre-stop satellite
B3 Sensing pallet route

Actuators

A1 Pre-stop. Single acting.
A2 Pre-stop. Single acting.

Merge module XBUT 45 MR, 90 MR, 45 ML and 90 ML

Interfaces

<u>Initiators</u>

B1: M12-connector, 3-pin
B2: M12-connector, 3-pin
B3: M12-connector, 3-pin

<u>Actuators</u>

Pneumatic cylinders
    A1: 6 mm
    A2: 6 mm

Spare parts

Standard name	Des.	Manufacturer	Type	External order no	FlexLink order no
Sensor	B1	SICK	IM12-08NPS-ZC1	7900045	
Sensor bracket		FlexLink			XBPB 12 H
Sensor	B2	SICK	IM12-08NPS-ZC1	7900045	
Sensor	B3	SICK	MHL 15-P3336	1026129	
Reflector		SICK	PL 21A	1015172	

Merge module XBUT 45 MR, 90 MR, 45 ML and 90 ML

Cylinder details

Cylinder A1 and A2 "Pre-stop"

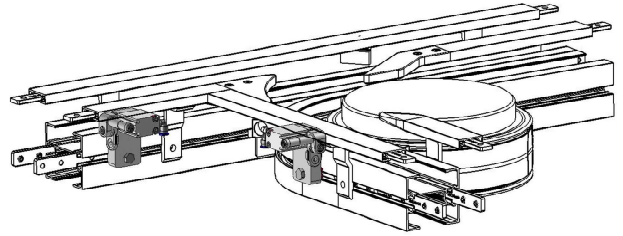Type: Single acting with two ports.

Function:
- Pressurized: Releases the pallet flow
- No pressure: Blocks the pallet flow

For safety reasons, the pallet stop is blocking the flow in case of a pressure drop, preventing pallets from travelling uncontrolled along the conveyor.

The stop should not re-block the flow while a pallet puck is in a position where it could be clamped.

It is recommended to re-block the flow after each pallet.

Cylinder A1 and A2
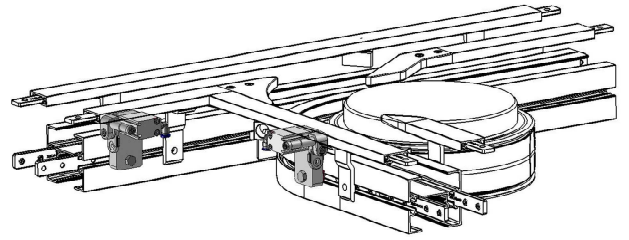
Sensor details

Sensor B1 and B2 "Pre-stop"

Type: Proximity switch, inductive

Position: Placed together with Pre-stop.
Function: Detects the initiator plate of the pallet before the pallet is stopped and stays active until the pallet leaves the stop.

The reason why the pallet is detected by the sensor before the pallet hits the stop, is to enhance the efficiency of the pallet flow. As the pallet is detected in advance, the controller has time to take a decision whether or not the pallet should be stopped. If it should pass, the stop changes state to "Release flow" before the pallet reaches it.
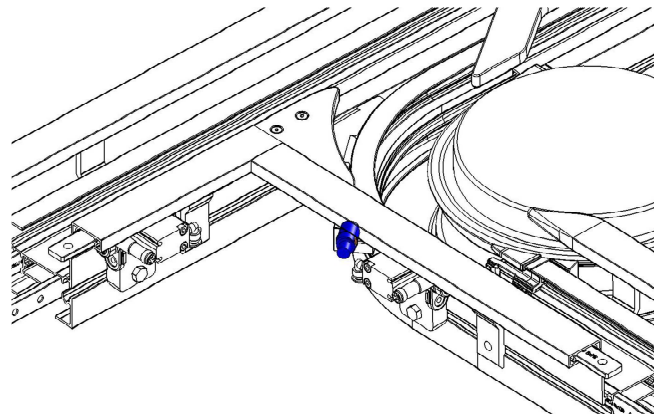

Sensor B1 and B2

Sensor B3 "Sensing pallet route"

Type: Photo eye.

Function: Detects if there is a pallet in the merging area. A new pallet must not be released from any of the stop positions before the merging area is clear.

Sensor B3

Merge module XBUT 45 MR, 90 MR, 45 ML and 90 ML

Pneumatic drawing

XBUT 45 MR, 90 MR, 45 ML and 90 ML

Pallet pre-stop

Pallet pre-stop

PUN-6x1

PUN-6x1

14

4

2

12

14

4

2

12

5

1

3

5

1

3