



FlexLink®

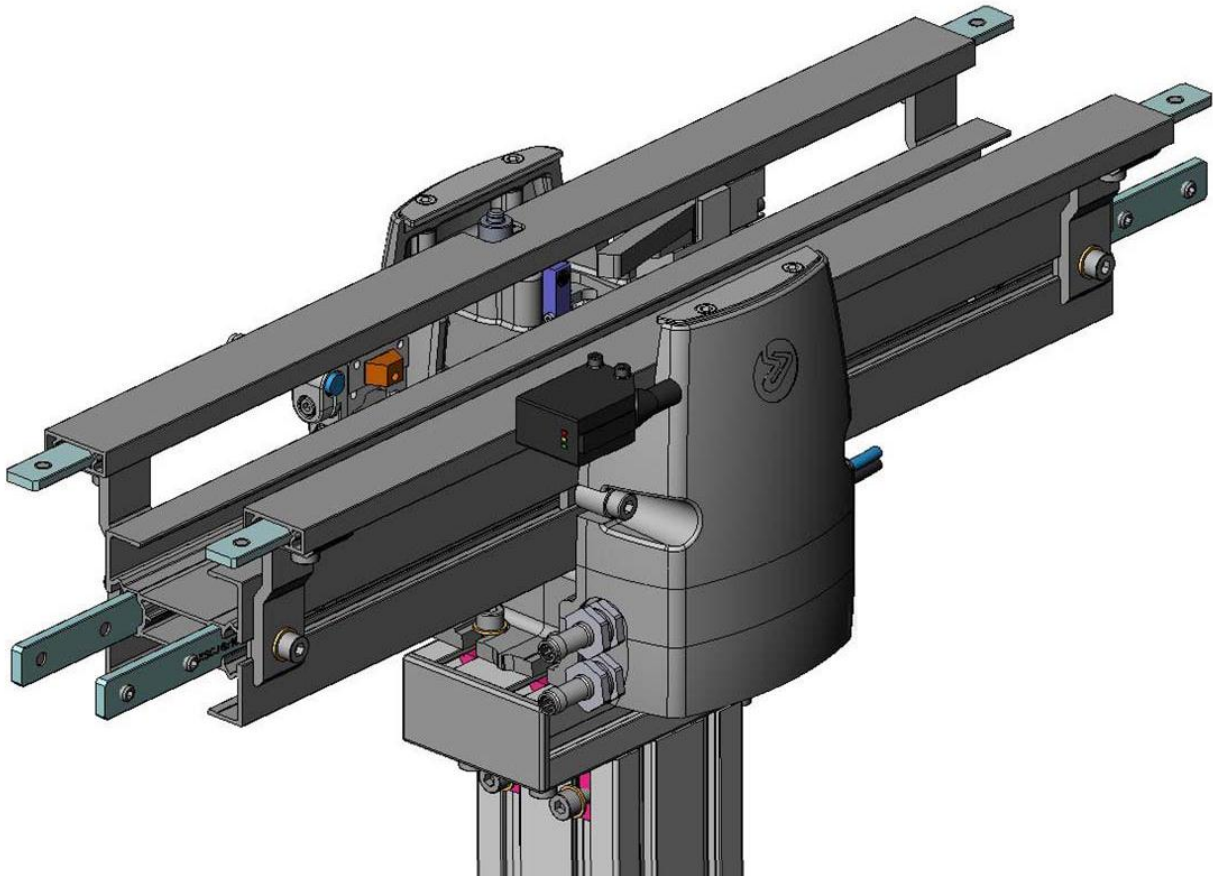
## Locating station

XBUL 11  
5110197-02

User documentation ver 2.0

# Locating station XBUL 11

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Observe! The sensor set-up depends on pallet size.

# Locating station XBUL 11

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## Function description

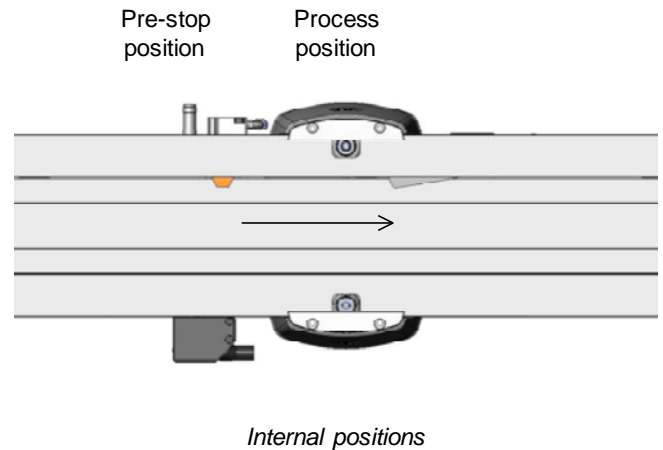
The Locating station is divided into Pre-stop position and Process position.

### Pre-stop position

The Pre-stop position is relieving the Process position of the queue-pressure. The RFID-reader of the Pre-stop identifies the pallet, affecting the efficiency as pallets with other destination quickly pass the Process position.

### Process position

The Process position receives one pallet at a time from the Pre-stop. If the pallet should be processed, it is caught by the integrated stop. Thereafter it is located and process is allowed to start.



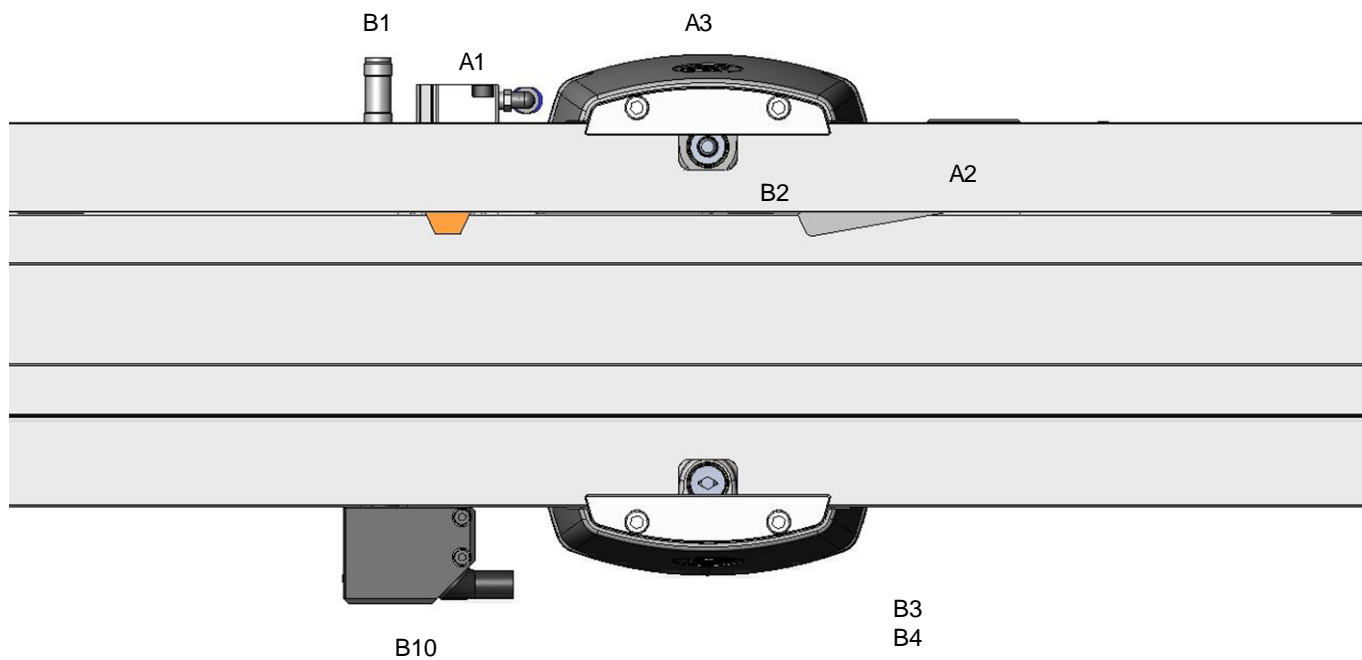
### Notes:

- The station is not equipped with any downstream maxqueue sensor as the design is only possible with an overview of the line as a whole.
- The sensor configuration is depending on the size of pallet. Mixed flow with reference to pallet length is not possible.

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## Initiators and actuators



### Initiators

B1 Pre-stop  
B2 In position  
B3 Locating Up  
B4 Locating Down

B10 RFID

### Actuators

A1 Pre-stop. Single acting.  
A2 Stop. Single acting.  
A3 Locating. Double acting.

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## Interfaces

### Initiators

B1: M12-connector, 3-pin

B2: M12-connector, 3-pin

B3: M12-connector, 3-pin

B4: M12-connector, 3-pin

B10: M12-connector, 4-pin (Asi)

Note: Sensors placed inside the Locating housing is equipped with sensor cables (with the given connector type above), reaching outside the housing.

### Actuators

Pneumatic cylinders

A1: 6 mm

A2: 6 mm

A3: 6 mm (tubing)

Note: The A3 cylinder, placed inside the Locating housing, is equipped with tubes (with the given size above), reaching outside the housing.

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## Spare parts

Standard name	Des.	Manufacturer	Type	Order number	FlexLink ID
<b>Pallet 160x100 mm</b>					
Sensor	B1	SICK	IM12-08NPS-ZC1	7900045	5058572
Sensor bracket		FlexLink	XBPB 12 H		5110793
Sensor	B2	SICK	IQ10-06NPS-KT1	7900209	5058574
Sensor	B3	SICK	IM12-08NPS-ZC1	7900045	5058572
Sensor	B4	SICK	IM12-08NPS-ZC1	7900045	5058572
RFID Reader/Writer	B10	IFM	DTA100		5058152
Read/Write head bracket		FlexLink			5110840
<b>Pallet 160x125 mm</b>					
Sensor	B1	SICK	IM12-08NPS-ZC1	7900045	5058572
Sensor bracket		FlexLink	XBPB 12 H		5110793
Sensor	B2	SICK	IQ10-06NPS-KT1	7900209	5058574
Sensor	B3	SICK	IM12-08NPS-ZC1	7900045	5058572
Sensor	B4	SICK	IM12-08NPS-ZC1	7900045	5058572
RFID Reader/Writer	B10	IFM	DTA100		5058152
Read/Write head bracket		FlexLink			5110840
<b>Pallet 160x175 mm</b>					
Sensor	B1	SICK	IM12-08NPS-ZC1	7900045	5058572
Sensor bracket		FlexLink	XBPB 12 H		5110793
Sensor	B2	SICK	IQ10-06NPS-KT1	7900209	5058574
Sensor	B3	SICK	IM12-08NPS-ZC1	7900045	5058572
Sensor	B4	SICK	IM12-08NPS-ZC1	7900045	5058572
RFID Reader/Writer	B10	IFM	DTA100		5058152
Read/Write head bracket		FlexLink			5110840
<b>Pallet 160x225 mm</b>					
Sensor	B1	SICK	IM12-08NPS-ZC1	7900045	5058572
Sensor bracket		FlexLink	XBPB 12 H		5110793
Sensor	B2	SICK	IM12-08NPS-ZC1	7900045	5058572
Sensor bracket		FlexLink	XBPB 12 H		5110793
Sensor	B3	SICK	IM12-08NPS-ZC1	7900045	5058572
Sensor	B4	SICK	IM12-08NPS-ZC1	7900045	5058572
RFID Reader/Writer	B10	IFM	DTA100		5058152
Read/Write head bracket		FlexLink			5110840

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## Cylinder details

### Cylinder A1 "Pre-stop"

Type: Double acting with spring return

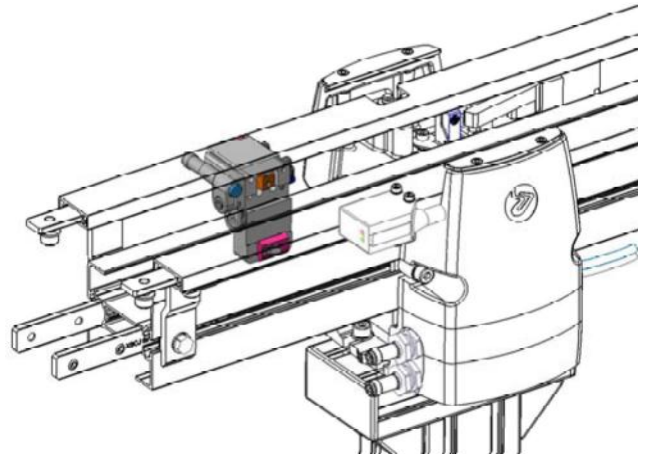
Function:

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

For security 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*

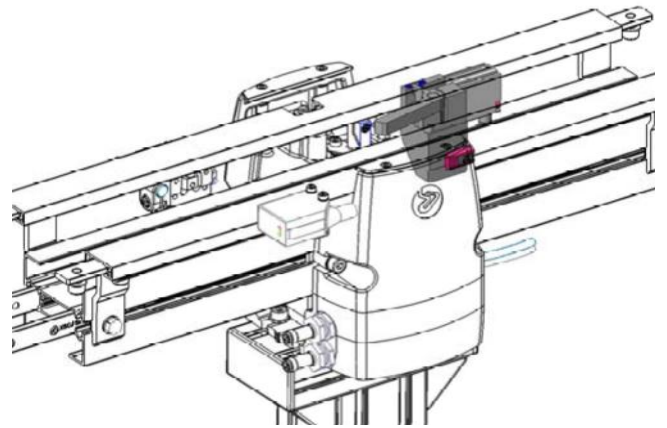
### Cylinder A2 "Stop"

Type: Double acting with spring return

Function:

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

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



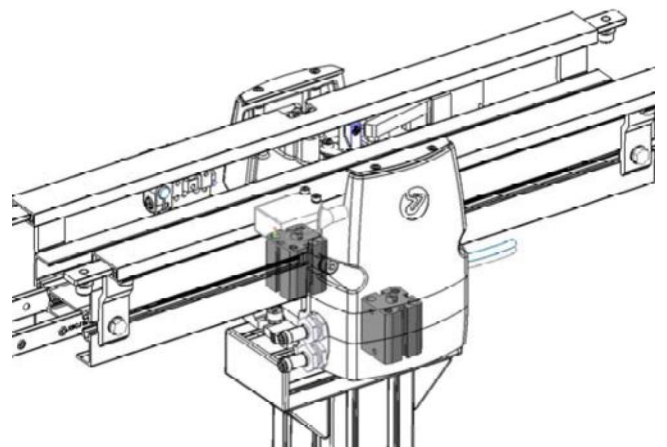
*Cylinder A2, pallet size 100-175 mm  
(pallet size 225 mm, cylinder A1)*

### Cylinder A3 "Locating"

Type: Double acting

Function: Locates the pallet.

Note 1: It is recommended that flow control valves are used, for example Festo GR-QS-6 (193969).



*Cylinder A3*

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## Sensor details

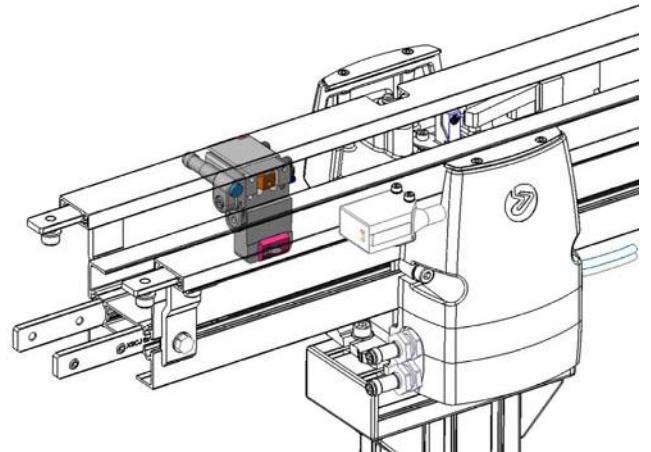
### Sensor B1 "Pre-stop"

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 change state to "Release flow" before the pallet reach it.



Sensor B1

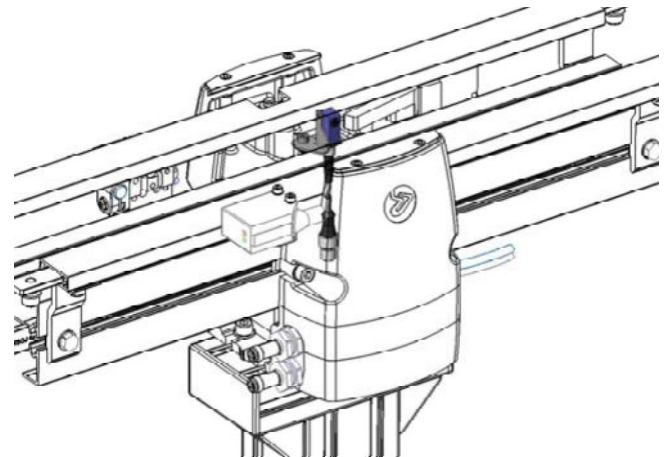
### Sensor B2 "In position"

Type: Proximity switch, inductive. Model depends on pallet length.

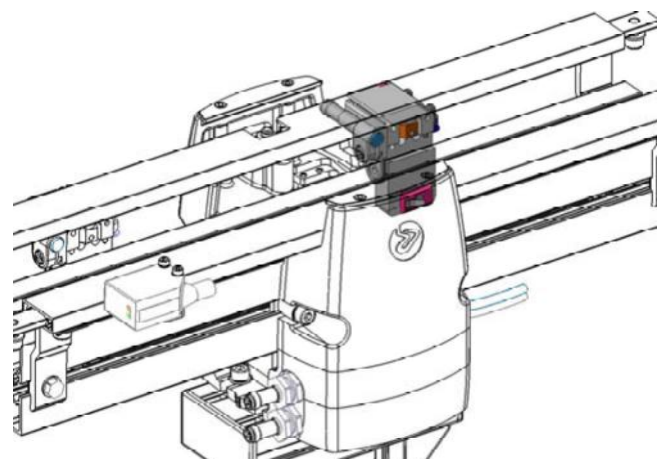
Position: Depends on pallet length.

- 100/125/175: Inside process position, left side
- 225: After process position, left side

Function: Detects the pallet initiator plate when the pallet is stopped in the process position.



Sensor B2



Sensor B2, pallet length 225mm



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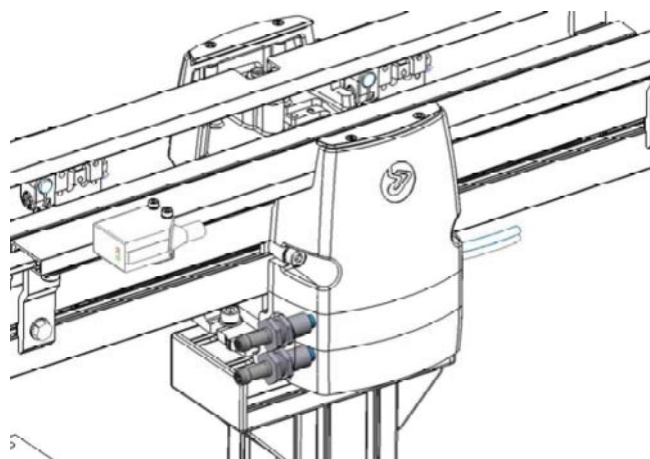
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## Sensor details

### Sensor B3 and B4 "Locating up/down"

Type: Proximity switch, inductive

Function: Activated then the pallet is located/released.



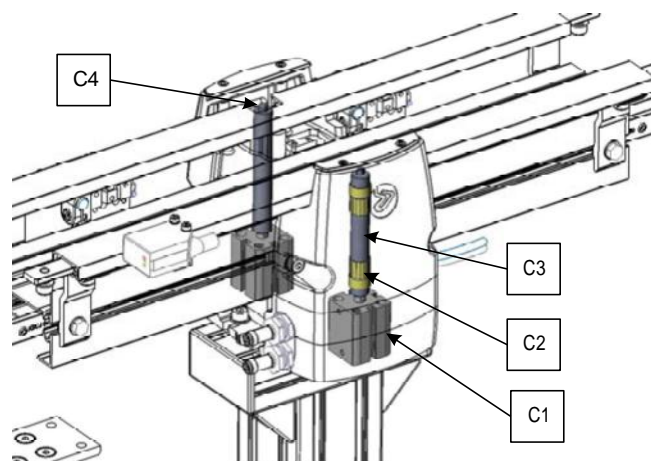
Sensor B3 and B4, Locating up/down

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## Mechanical spare parts

<u>No.</u>	<u>Flexlink no.</u>	<u>Type</u>
C1	5105005	Festo, ADN-25-10-I-P-A
C2	5110079	Igus, WLM-1618-26
C3	5059772	Shaft
C4	5059773	Shaft



Spare parts position balloons

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## Pneumatic drawing

