

# PE 5/L, PE 5/L-T

Positioning unit

3 842 998 048

3 842 998 049

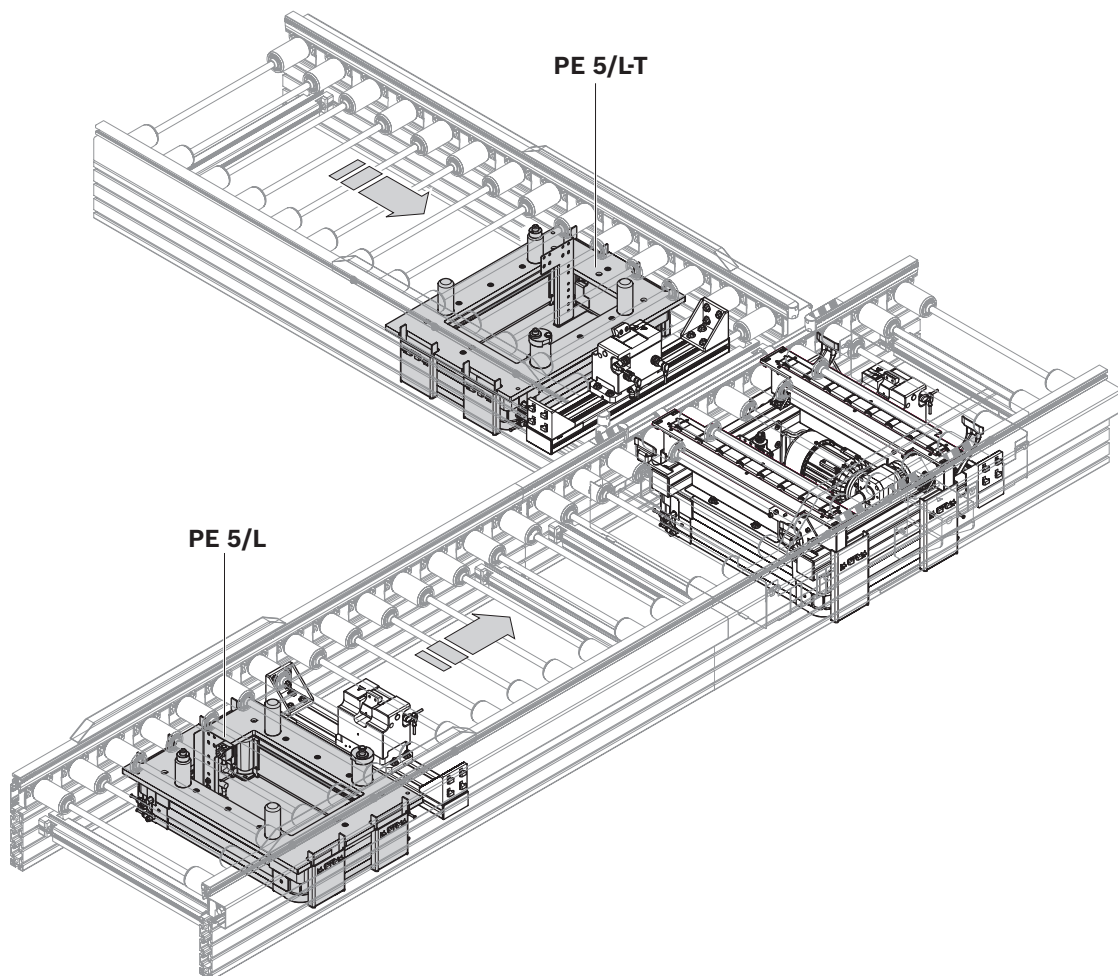
**Assembly instructions**

**3 842 558 550/2022-02**

Replaces: 2019-06

ENGLISH

ENGLISH



The information in this manual is for product description purposes only. Any statements in this manual on how to use the product only constitute examples and recommendations. Catalog information is not binding. The information given does not exempt the user from the obligation of own judgment and verification. Our products are subject to natural wear and aging.

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The cover depicts a sample configuration. The actual product may vary.

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| <b>EN</b> | <b>3 842 558 550</b> | PE 5/L, PE 5/L-T Positioning Unit           | English   |
| <b>FR</b> | <b>3 842 558 551</b> | PE 5/L, PE 5/L-T Unité de positionnement    | Français  |
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# 1 About this documentation

## 1.1 Validity of the documentation

This documentation applies to the following products:

- 3 842 998 048, PE 5/L positioning unit
- 3 842 998 049, PE 5/L-T positioning unit

This documentation is intended for fitters, operators, service engineers and system end users.

This documentation contains important information relating to the safe and proper assembly, transportation, commissioning, operation, use, maintenance and disassembly of the product, and on how to rectify simple faults yourself.

- Read this documentation in full prior to working with the product, particularly section 2 “Safety instructions” and section 3 “General notes on property and product damage”.

## 1.2 Required and supplementary documentation

- Only start up the product if the documentation marked with the book symbol  is available and you have understood and followed the instructions in it.

**Table 1: Required and supplementary documentation**

| Title                                                                                                            | Document number | Document type            |
|------------------------------------------------------------------------------------------------------------------|-----------------|--------------------------|
|  Employee safety training     | 3 842 527 147   |                          |
|  Declaration of incorporation | 3 842 358 899   |                          |
| MTpro <sup>1)</sup>                                                                                              | 3 842 539 057   | With list of spare parts |

<sup>1)</sup> Download at: [www.boschrexroth.com/mtpro](http://www.boschrexroth.com/mtpro)

## 1.3 Presentation of information

Standardized safety instructions, symbols, terms and abbreviations are used so that you can use this documentation to work quickly and safely with your product. These are explained in the following sections to help you understand them better.

### 1.3.1 Safety instructions

This document contains safety instructions in Section 2.6 “Product-specific safety instructions” and Section 3 “General notes on property and product damage”, as well as before any sequence of actions or any required action which involves a risk of personal injury or property damage. The described danger prevention measures must be observed.

Safety instructions are set out as follows:

| <div>  <b>SIGNAL WORD</b> </div>                      |
|----------------------------------------------------------------------------------------------------------------------------------------|
| <b>Type and source of danger!</b><br>Consequences of non-compliance <div> <div>► Steps to prevent danger</div> <div>► ...</div> </div> |

- **Warning sign:** points out the danger
- **Signal word:** indicates the severity of the danger
- **Type and source of danger:** indicates the type and source of the danger
- **Consequences:** describes the consequences of non-compliance
- **Prevention:** states how the danger can be avoided

Table 2: Risk classes according to ANSI Z535.6-2006

| Warning sign, signal word                                                                         | Meaning                                                                                     |
|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
|  <b>DANGER</b>   | Indicates a hazardous situation that will result in serious injury or death if not avoided. |
|  <b>WARNING</b>  | Indicates a hazardous situation that may result in severe injury or death if not avoided.   |
|  <b>CAUTION</b> | Indicates a hazardous situation that may result in minor to moderate injury if not avoided. |
| <b>NOTICE</b>                                                                                     | Property damage: The product or the surrounding area could get damaged.                     |

1.3.2
Symbols

The following symbols indicate important information that is not safety-relevant but increases the comprehensibility of the documentation.

Table 3: Meaning of the symbols

| Symbol                                                                              | Meaning                                                                                      |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
|  | If this information is not observed, the product cannot be used and/or operated as designed. |
| ►                                                                                   | Single, isolated step                                                                        |
| 1.<br>2.<br>3.                                                                      | Numbered steps:<br>The numbers indicate that the steps must be performed in sequence.        |

### 1.3.3 Designations

This document uses the following designations:

**Table 4: Designations**

| Designation | Meaning                                                           |
|-------------|-------------------------------------------------------------------|
| AS 5/...    | Drive unit from the Rexroth TS 5 transfer system                  |
| CU 5/...    | Curve from the Rexroth TS 5 transfer system                       |
| DA 5/...    | Damper from the Rexroth TS 5 transfer system                      |
| DI 5/...    | Diverter from the Rexroth TS 5 transfer system                    |
| HQ 5/...    | Lift transverse unit from the Rexroth TS 5 transfer system        |
| JU 5/...    | Junction from the Rexroth TS 5 transfer system                    |
| PE 5/...    | Positioning unit from the Rexroth TS 5 transfer system            |
| ST 5/...    | Conveyor unit from the Rexroth TS 5 transfer system               |
| SZ 5/...    | Section support from the Rexroth TS 5 transfer system             |
| TS 5        | Transfer system from the Rexroth TS 5 transfer system             |
| VE 5/...    | Stop gate from the Rexroth TS 5 transfer system                   |
| WT 5        | Workpiece pallet from the Rexroth TS 5 transfer system            |
| .../H       | Support profile: 45x90 mm                                         |
| .../XH      | Support profile: 45x180 mm                                        |
| .../OC      | Open center; section with open center; support profile: 135x90 mm |
| CT          | Cover Type (Protective cover)                                     |

## 2 Safety instructions

### 2.1 About this section

The product has been manufactured in accordance with the generally accepted rules of current technology. Nevertheless, there is a risk of personal injury and property damage if you do not take note of this section and follow the safety instructions in this document.

- ▶ Read this documentation carefully and completely before you start working with the product.
- ▶ Keep this documentation in a location where it is accessible to all users at all times.
- ▶ Always include it when giving the product to a third party.

### 2.2 Intended use

The product is an incomplete machine.

It may be used as follows:

- For installation in a Rexroth TS 5 transfer system
- For transporting Rexroth WT 5 workpiece pallets
- For the maximum load / section load: see the Technical Data on page 45.
- For the ambient conditions: see the Technical Data on page 45.

The product is only intended for professional use and not for private use.  
The intended use also implies that you have read all this documentation and fully understood it, in particular chapter 2 “Safety instructions”.

### 2.3 Improper use

Any use other than that described as intended use is considered to be improper, and is therefore not permitted.

Bosch Rexroth AG is not liable for any loss or damage resulting from improper use. The user alone bears any risks associated with improper use.

The following foreseeable misuses are also considered improper use:

- Transporting materials other than those specified.
- Using the product without protective casing or other protective guards (provided by the customer).
- Transporting people on the product or transported material.
- Persons climbing onto the product – the product must not be walked on or climbed onto.
- Private use.

### 2.4 Personnel qualifications

The activities described in this document require a basic knowledge of mechanical, electrical and pneumatic systems, as well as familiarity with the corresponding technical terms. Additional knowledge of using lifting gear and the associated slings is required for transporting and handling the product. To ensure safe use, these activities should therefore only be performed by a properly qualified operative, or by an instructed person acting under the direction of such a person.

“Qualified operative” means someone who can recognize possible hazards and take the appropriate safety measures due to his technical training, his knowledge and experience, and his knowledge of the relevant regulations. A qualified operative must comply with the relevant technical regulations and have the necessary expertise.



Bosch Rexroth offers measures to support training in specific areas. You can find an overview of the training content online at: <http://www.boschrexroth.de/didactic>

### 2.5 General safety instructions

- Observe the applicable regulations for accident prevention and environmental protection.
- Observe the safety rules and regulations of the country in which the product is being used.
- Only use Rexroth products that are in good working order.
- Heed all the notices on the product.
- Persons who assemble, operate, disassemble or maintain Rexroth products should not be under the influence of alcohol, drugs or medication that may affect their ability to react.
- Use only original accessories and spare parts from Rexroth in order to prevent hazards to people due to unsuitable spare parts.
- Observe the technical data and ambient conditions specified in the product documentation.

- Only start up the product if it has been determined that the end product (e.g. a machine or system) into which the Rexroth products have been installed complies with the country-specific provisions, safety regulations and standards of application.

## 2.6 Product-specific safety instructions

### General

- Never attempt to modify the product.
- Do not expose the product to any mechanical loads under any circumstances. Never use the product as a handhold or step. Do not place any objects on the product.
- Always secure the product against tipping.

### During transport

### During installation

- Observe the transport instructions on the packaging.
- Inspect the product for obvious transport damage.
- Lay cables and lines so that they cannot get damaged and no one can trip over them.
- Make sure the relevant system component is depressurized and de-energized before assembling the product or inserting or removing plugs.
- Ensure that the system component cannot be switched back on.
- Before start-up, make sure that all seals and plugs for the screwed connections are correctly installed and undamaged to prevent fluids and debris from infiltrating the product.

### During commissioning

- Allow the product to acclimatize for a few hours prior to start-up in order to prevent water condensation from forming in the housing.
- Make sure that all electrical and pneumatic connections are either in use or covered.
- Check the safety requirements according to DIN EN 619.
- Only start up a product that has been completely installed.
- Make sure that all the safety equipment belonging to the product is present, has been properly installed, and is fully functional. Do not move, bypass or disable any safety equipment.
- Do not reach into moving parts.
- Check the product for malfunctions.

### During operation

- Make sure that only authorized personnel perform the following tasks within the scope of the product's intended use:
  - starting or operating the system, or intervening in its normal functioning.
  - operating adjustment devices on components or parts.
- Only allow personnel authorized by the owner in the immediate vicinity of the product's operating area. This also applies while the product is at a standstill.
- Make sure that:
  - there are no obstacles preventing access to the EMERGENCY STOP controls.
  - all delivery points, workstations and passages are kept clear.
- Do not use EMERGENCY STOP controls for routine stopping.
- Regularly check the EMERGENCY STOP controls to ensure that they are functioning properly.

**EMERGENCY STOP,  
malfunction  
During maintenance  
and repair**

- Following an EMERGENCY STOP or in the event of a fault or other irregularity, turn the product off and secure it against being switched back on.
- Do not reach into moving parts.
- An idle system is not necessarily a safe system, as stored energy can be released unintentionally or through improper maintenance procedures.
- After an EMERGENCY STOP or a fault, only switch the system back on when you have established and eliminated the cause of the fault.
- Make sure that access to maintenance and inspection points is kept free of obstacles.
- Perform the prescribed maintenance work at the intervals specified in section 10.3 "Maintenance".
- Make sure that no line connectors, connections or components are disconnected as long as the system is supplied with pressure and voltage. Secure the system against being switched back on.
- Dispose of the product in accordance with the regulations in your country.

**During disposal**

## **2.7 Personal protective equipment**

- Appropriate protective clothing is to be worn when handling the product (e.g. safety shoes, close-fitting clothing, a hair net for long, loose hair).
- As the system user or operator, you are personally responsible for ensuring the use of appropriate protective equipment when the product is being used.
- All components of the personal protective equipment must be intact.

## **2.8 Operator's obligations**

- Before the initial start-up or re-commissioning of a conveyor system, run a risk assessment in accordance with DIN EN ISO 12100.
- Please also refer to the residual risks of the individual components (see the section 8.2 "Residual risks" on page 36).
- Before the initial start-up, make sure there are no protruding or sharp-edged parts that may be a hazard to personnel working or moving in the area.
- Provide safety-related instructions to the operating personnel before initial start-up or re-commissioning, and then at regular intervals.

### 3 General notes on property and product damage

The warranty only applies to the delivered configuration.

- The warranty is void in the event of faulty installation, commissioning and operation, as well as improper use and/or improper handling.
- Prevent cleaning agents from getting into the system.
- Never use solvents or aggressive cleaning agents.
- Do not use a high-pressure cleaner for cleaning.

#### **During cleaning**

## 4 Scope of delivery

The scope of delivery includes the following:

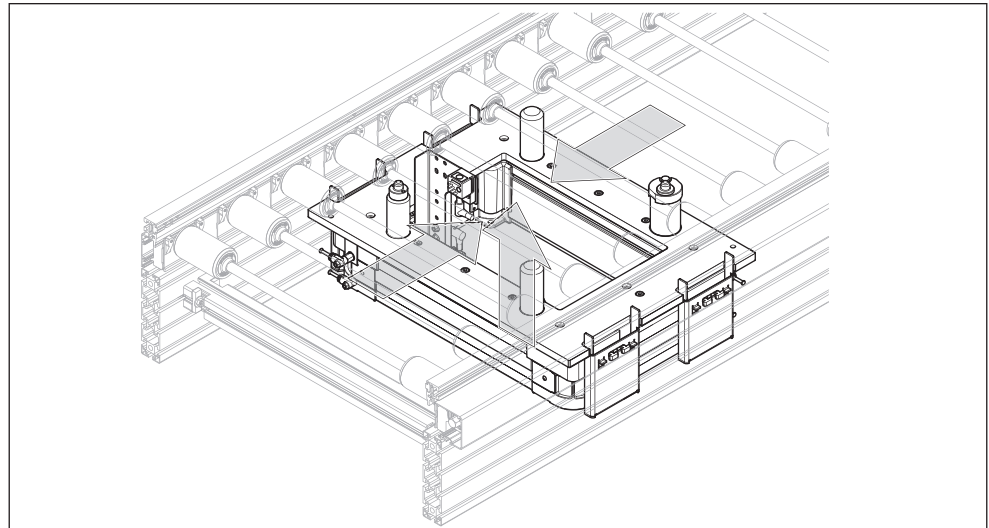
- 1 PE 5/L or PE 5/L-T positioning unit
- Fastening material
- Pneumatic elements such as fittings, throttle non-return valves, etc.
- Position monitoring kit
- 1 assembly instructions for the “PE 5/L, PE 5/L-T positioning unit”.

### 4.1 Condition on delivery

- PE 5/L or PE 5/L-T positioning unit, ready-to-install.

## 5 About this product

### 5.1 Specifications



557 616-01

**Fig. 1: Specifications for the PE 5/L and PE 5/L-T positioning unit**

#### 5.1.1 Utilization of the PE 5/L and PE 5/L-T positioning unit

- For installation in the ST 5/H and ST 5/XH conveyor units
- For installation in the AS 5/H and AS 5/XH drive units
- The PE 5/L is for use in the longitudinal conveyor (main section)
- The PE 5/L-T is for use in the transverse conveyor (transverse section)
- For lifting conveyor media and positioning workpiece pallets WT in a manual/automatic processing station with high requirements on positioning accuracy.

#### 5.1.2 PE 5/L and PE 5/L-T positioning unit features

- Extremely compact construction. Suitable for tight installation conditions.
- Pneumatic drive.

## 5.2 Product description

- A:** Positioning pins
- B:** Lifting frame
- C:** Supporting bolts
- D:** Mounting bracket
- E:** Position monitoring kit
- F:** Lateral guide cover (accessories, not included in the scope of delivery)
- G:** Guard plate (optional SC, included, with mounting material)



### Please note:

- For longitudinal conveyors, you require:
  - 3 proximity switches for the PE 5/L.
  - To query the WT, the position monitoring kit must be installed at position E<sub>1</sub> or E<sub>2</sub> depending on the roller pattern (spacing).
- For transverse conveyors, you require:
  - 2 proximity switches for the PE 5/L-T.
  - The system does not allow the workpiece pallet to be queried from below. A query is only possible via sensors in the stop gate (not included).

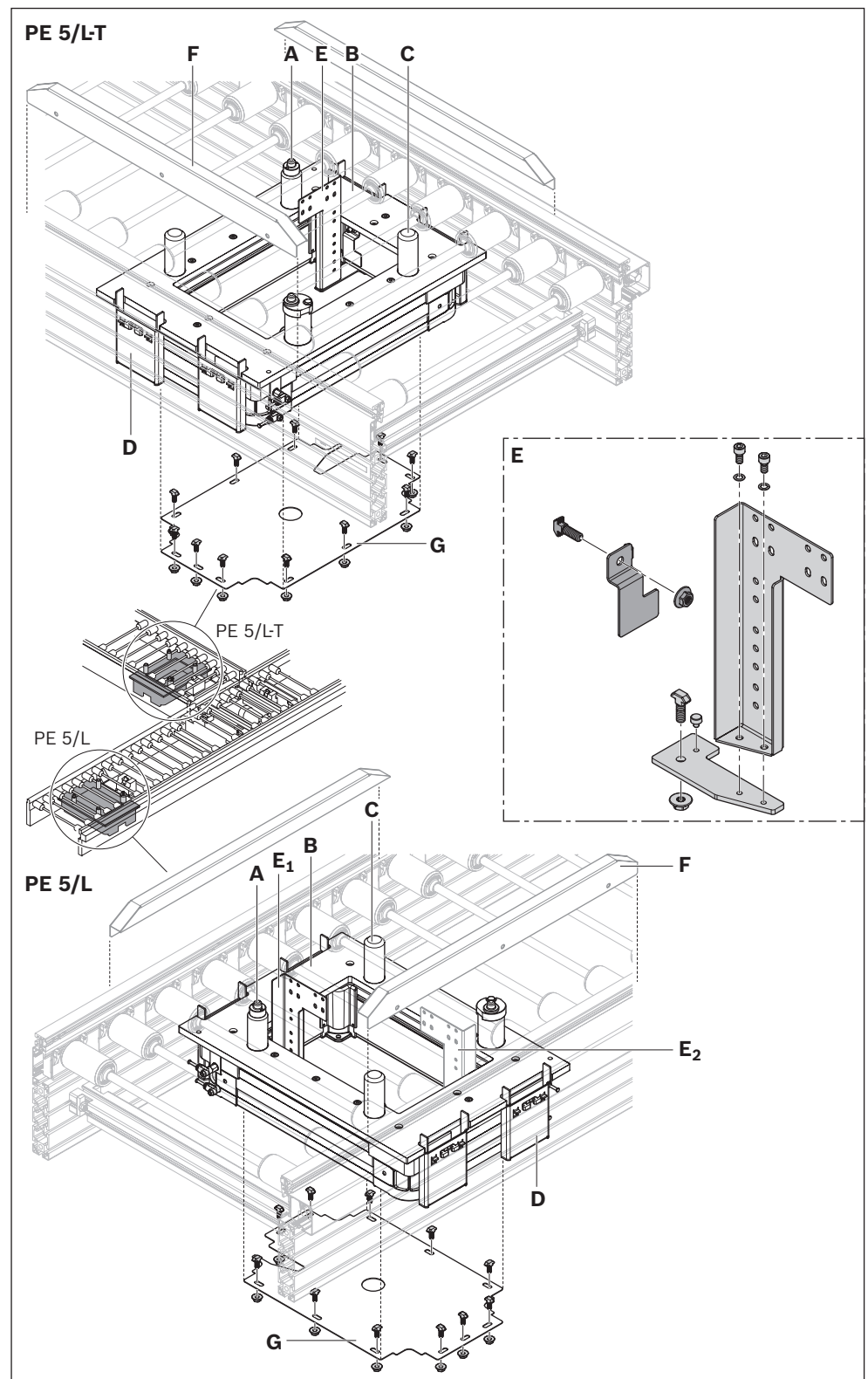
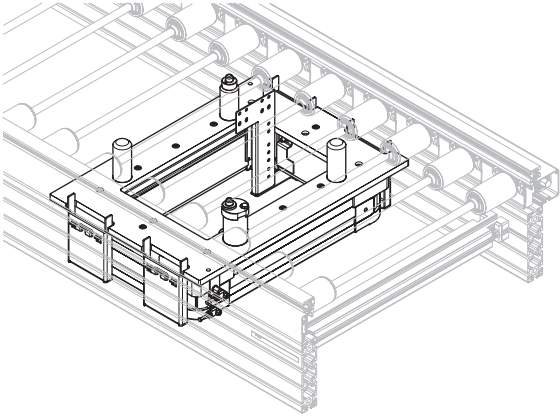
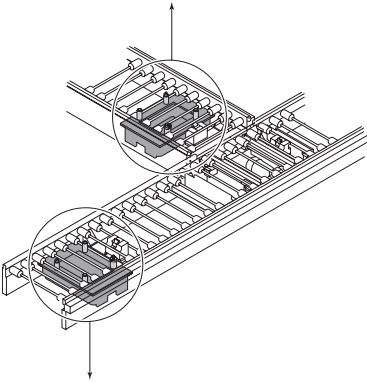
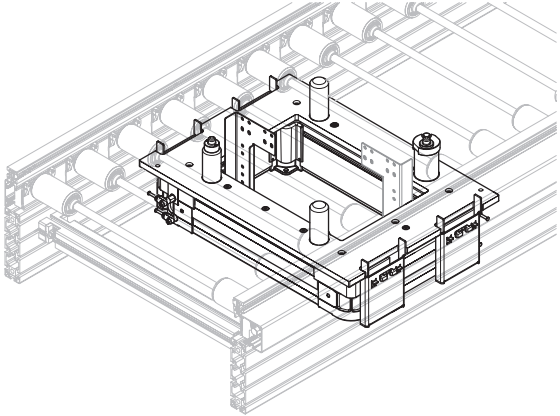


Fig. 2: PE 5/L, PE 5/L-T positioning unit

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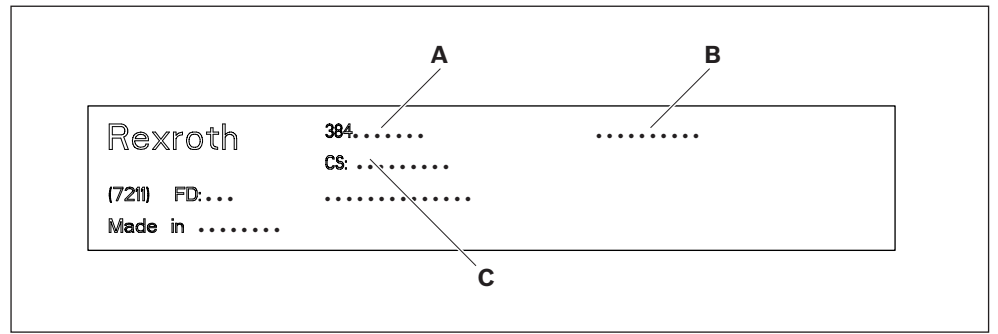
Table 5: Usable conveyor units and workpiece pallets

| Positioning unit                                                                                                                                                                                                                 | Usable conveyor units                                                                                             | Usable workpiece pallets |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|--------------------------|
| <p>PE 5/L-T<br/>3 842 998 049</p>  <p>Load up to 300 kg*</p>  | <p>Transverse section<br/>ST 5/H<br/>ST 5/XH<br/>For installation in the AS 5/H<br/>and AS 5/XH drive units</p>   | <p>WT 5</p>              |
| <p>PE 5/L<br/>3 842 998 048</p>  <p>Load up to 300 kg*</p>                                                                                    | <p>Longitudinal section<br/>ST 5/H<br/>ST 5/XH<br/>For installation in the AS 5/H<br/>and AS 5/XH drive units</p> | <p>WT 5</p>              |

\* Observe the conveyor section's maximum section load (see section 16 "Technical data" on page 45)

- A:** Material number  
(order number)
- B:** Designation
- C:** Design and dimensions

### 5.3 Identification of the product



**Fig. 3: Nameplate**

Typschild

## 6 Transport and storage

- Observe the transport instructions on the packaging.
- See the delivery documents for the transport weight.
- Secure the product against tipping!
- Always maintain the ambient conditions during storage and transport, see page 45.

### 6.1 Transporting the product

#### **WARNING**

##### **Suspended loads can fall!**

Falling objects can result in serious injury (or even death).

- ▶ Only use slings with a sufficiently high bearing load (see delivery documents for the product weight).
- ▶ Make sure the lifting straps are correctly fastened before lifting the product!
- ▶ Secure the product against tipping during lifting!
- ▶ Make sure that no one but the operator is in the danger zone during lifting and lowering!

### 6.2 Storing the product

- Only set the product down on a flat surface.
- Protect the product from mechanical influences.
- Protect the product from environmental influences, such as dirt and moisture.
- Observe the ambient conditions, see page 45.
- Support the product so that there is no load on suspended motors/actuators/cylinders.

## 7 Assembly



The PE 5/L and PE 5/L-T positioning units are installed in an ST 5/H or ST 5/XH conveyor unit with split rollers **from above**. The split rollers need to be removed for the installation.

### 7.1 Unpacking

- ▶ Lift the product out of its packaging.



Use a lift aid to lift the product. The frame of the positioning unit can be used as lifting points for a round sling, for example (for lifting points see Fig. 9 on page 24).

- ▶ Dispose of the packaging material in accordance with the applicable regulations in your country.

### 7.2 Installation requirements

- ▶ During installation, be sure to maintain the ambient conditions specified in the Technical Data (see page 45).

#### 7.2.1 Installation position

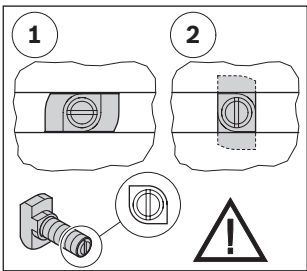
- ▶ Install the product level and plumb, at right angles, and axially parallel. This ensures proper functioning and prevents premature wear.

### 7.3 Required tools

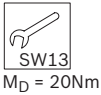
- Hex wrench SW13.
- Hex socket wrenches SW3, SW4, SW5, SW6.
- Cross recess screwdriver PZ2
- Rubber mallet
- Spirit level

7.4 Symbols used

Table 6: Symbols used



Connection with T-bolt and flange nut.  
Make sure the T-bolt is in the correct position when inserting it into the slot and tightening. The notch at the head of the screw indicates the orientation of the T-bolt.  
1 = T-bolt insertion position in the slot.  
2 = T-bolt clamping position in the slot.  
Tightening torque: 25 Nm



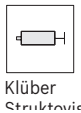
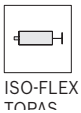
Hex wrench  
SW = wrench size ... mm  
M<sub>D</sub> = required tightening torque ... Nm



Hex socket wrench  
SW = wrench size ... mm  
M<sub>D</sub> = required tightening torque ... Nm



Screwdrivers for cross-head screws  
PZ ... = Pozidriv screw drive, size ...  
PH ... = Phillips screw drive, size ...



Lubricate/lubricate with specific grease lubricant:  
• gleitmo 585 K: gleitmo 585 K, [www.fuchs-lubritech.com](http://www.fuchs-lubritech.com)  
• Anti-Seize: Food Grade Anti-Seize/Loctite 8014, [www.henkel.com](http://www.henkel.com)



Lubricate/lubricate with specific mineral oil:  
• GHD: Structovis GHD, [www.klueber.com](http://www.klueber.com)  
• V 68: mineral oil with a viscosity of 68



Secure the screws with:  
• Loctite 243: medium strength (detachable), [www.loctite.de](http://www.loctite.de)  
• Loctite 601: high-strength screw retention (non-detachable), [www.loctite.de](http://www.loctite.de)



The marked parts are not required for the described assembly. Dispose of the parts or use them for other purposes.



Graphical depiction of the installation steps.  
The numbers correspond to the sequence of installation steps, in accordance with the instructions in the accompanying text.



Graphical depiction of the designation of components.  
The letters denote the components mentioned in the accompanying text.



Detail view from a different direction,  
for example, the back or the bottom side of the product.

## 7.5 Installing the product

### 7.5.1 Mounting dimensions

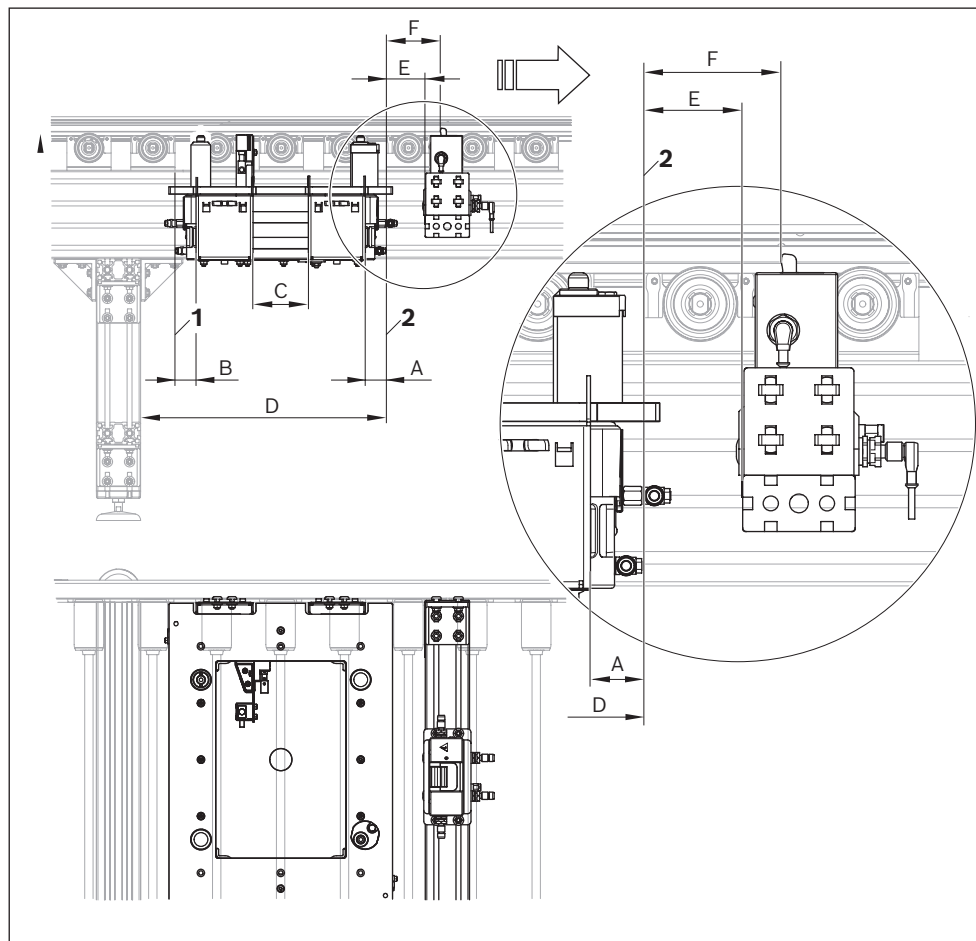


**Please note:**

Depending on the length of the workpiece pallet ( $l_T$ ) and the roller pattern (p), the PE 5/L or PE 5/L-T positioning unit can only be mounted at a specified distance from the roller axles. This gives rise to the mounting dimensions for the VE 5/... stop gate. Observe these dimensions when installing the mounting bracket.

The reference points for the installation are (in the transport direction):

- Trailing edge of the roller bearing pedestal before PE (1)
- Leading edge of the roller bearing pedestal after PE (2)



557 616-05

Fig. 4: PE 5/L and PE 5/L-T positioning unit mounting dimensions



**Please note:**

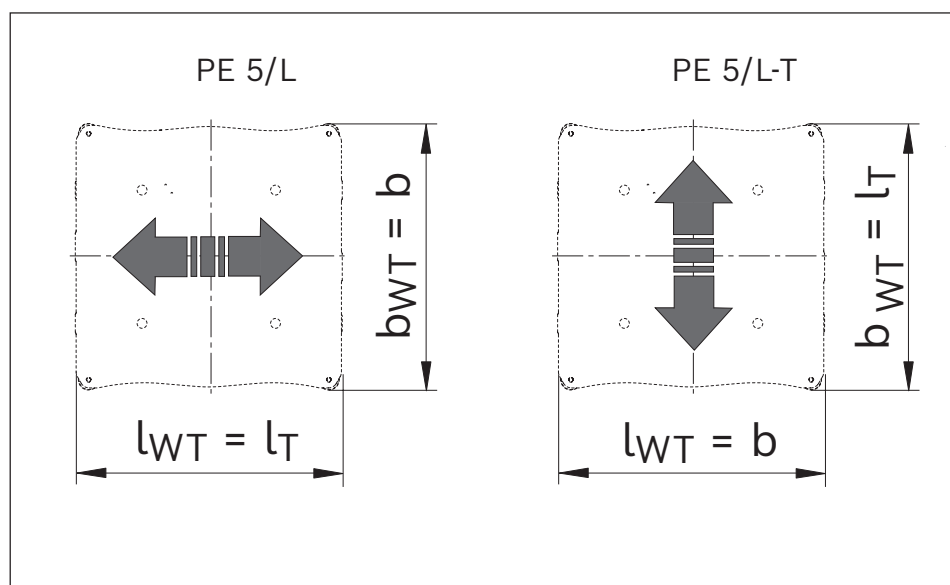
Observe the minimum distance D to the leg set.

Fig. 5 shows the dimensions of the workpiece pallet (WT) in relation to PE 5/L and PE 5/L-T.

The double arrow shows the direction of transport.

$l_{WT}$  = length of workpiece pallet

$b_{WT}$  = width of workpiece pallet



557 616-05.1

Fig. 5: Dimensions / Direction of transport

**Table 7: PE 5/L mounting dimensions**

| b [mm] | L <sub>T</sub> [mm] | p [mm] | PE 5/L |        |        |          | VE 5/D-300 | VE 5/D-301 | VE 5/D-1000 | F [mm] |
|--------|---------------------|--------|--------|--------|--------|----------|------------|------------|-------------|--------|
|        |                     |        | A [mm] | B [mm] | C [mm] | D [mm]   | E [mm]     | E [mm]     | E [mm]      |        |
| 455    | 455                 | 130    | 15,25  | 15,25  | 37,5   | min. 395 | 46,5       | 49,5       | 43          | 77,5   |
| 650    | 650                 | 130    | 42,75  | 42,75  | 112,5  | min. 525 | 79         | 82         | 75,5        | 110    |
| 455    |                     | 195    | 42,75  | 107,75 | 112,5  | min. 525 |            |            |             |        |
| 845    | 845                 | 130    | 42,75  | 107,75 | 307,5  | min. 722 | 79         | 82         | 75,5        | 110    |
| 650    |                     | 195    | 42,75  | 107,75 | 307,5  | min. 722 |            |            |             |        |
|        |                     | 260    | 42,75  | 107,75 | 307,5  | min. 722 |            |            |             |        |
| 845    | 1040                | 130    | 42,75  | 42,75  | 502,5  | min. 917 | 79         | 82         | 75,5        | 110    |
|        |                     | 195    | 42,75  | 107,75 | 502,5  | min. 917 |            |            |             |        |
|        |                     | 260    | 42,75  | 172,75 | 502,5  | min. 917 |            |            |             |        |
|        |                     | 325    | 42,75  | 107,75 | 502,5  | min. 917 |            |            |             |        |

b = Track width    p= Roller spacing / roller pitch  
l<sub>T</sub> = Length in direction of transport

**Table 8: PE 5/L-T mounting dimensions**

| b [mm] | l <sub>T</sub> [mm] | p [mm] | PE 5/L-T |        |        |          | VE 5/D-300 | VE 5/D-301 | VE 5/D-1000 | F [mm] |
|--------|---------------------|--------|----------|--------|--------|----------|------------|------------|-------------|--------|
|        |                     |        | A [mm]   | B [mm] | C [mm] | D [mm]   | E [mm]     | E [mm]     | E [mm]      |        |
| 455    | 455                 | 130    | 15,25    | 15,25  | 37,5   | min. 395 | 52,5       | 55,5       | 49          | 73,5   |
| 650    | 455                 | 130    | 15,25    | 15,25  | 37,5   | min. 395 | 46,7       | 49,7       | 43,2        | 67,7   |
| 650    | 650                 | 130    | 42,75    | 42,75  | 112,5  | min. 525 | 79,7       | 82,7       | 76,2        | 100,7  |
|        |                     | 195    | 42,75    | 107,75 | 112,5  | min. 525 |            |            |             |        |
| 845    | 650                 | 130    | 42,75    | 42,75  | 112,5  | min. 525 | 78,6       | 81,6       | 75,1        | 99,6   |
|        |                     | 195    | 75,25    | 75,25  | 112,5  | min. 525 |            |            |             |        |
| 845    | 845                 | 130    | 25,75    | 25,75  | 307,5  | min. 722 | 79         | 82         | 75,5        | 100    |
|        |                     | 195    | 42,75    | 25,75  | 307,5  | min. 722 |            |            |             |        |
|        |                     | 260    | 42,75    | 107,75 | 307,5  | min. 722 |            |            |             |        |
| 1040   | 845                 | 130    | 42,75    | 22,25  | 307,5  | min. 722 | 62,1       | 65,1       | 58,6        | 83,1   |
|        |                     | 195    | 42,75    | 107,75 | 307,5  | min. 722 |            |            |             |        |
|        |                     | 260    | 42,75    | 107,75 | 307,5  | min. 722 |            |            |             |        |

b = Track width    p= Roller spacing / roller pitch  
l<sub>T</sub> = Length in direction of transport

### 7.5.2 Removing the split rollers

#### Required tools

- Disassembly tool  
**3 842 545 836**.



#### Please note:

The cover of the king shaft on the drive unit AS 5/... in some variants (p = 130, l = 390, DP on 2nd or 2nd last roller) is connected to the covers of the adjoining modular units (X).

1. Remove the covers from the passive side.
2. Remove the cover of the king shaft.

- The covers are assembled as shown in detail Y.

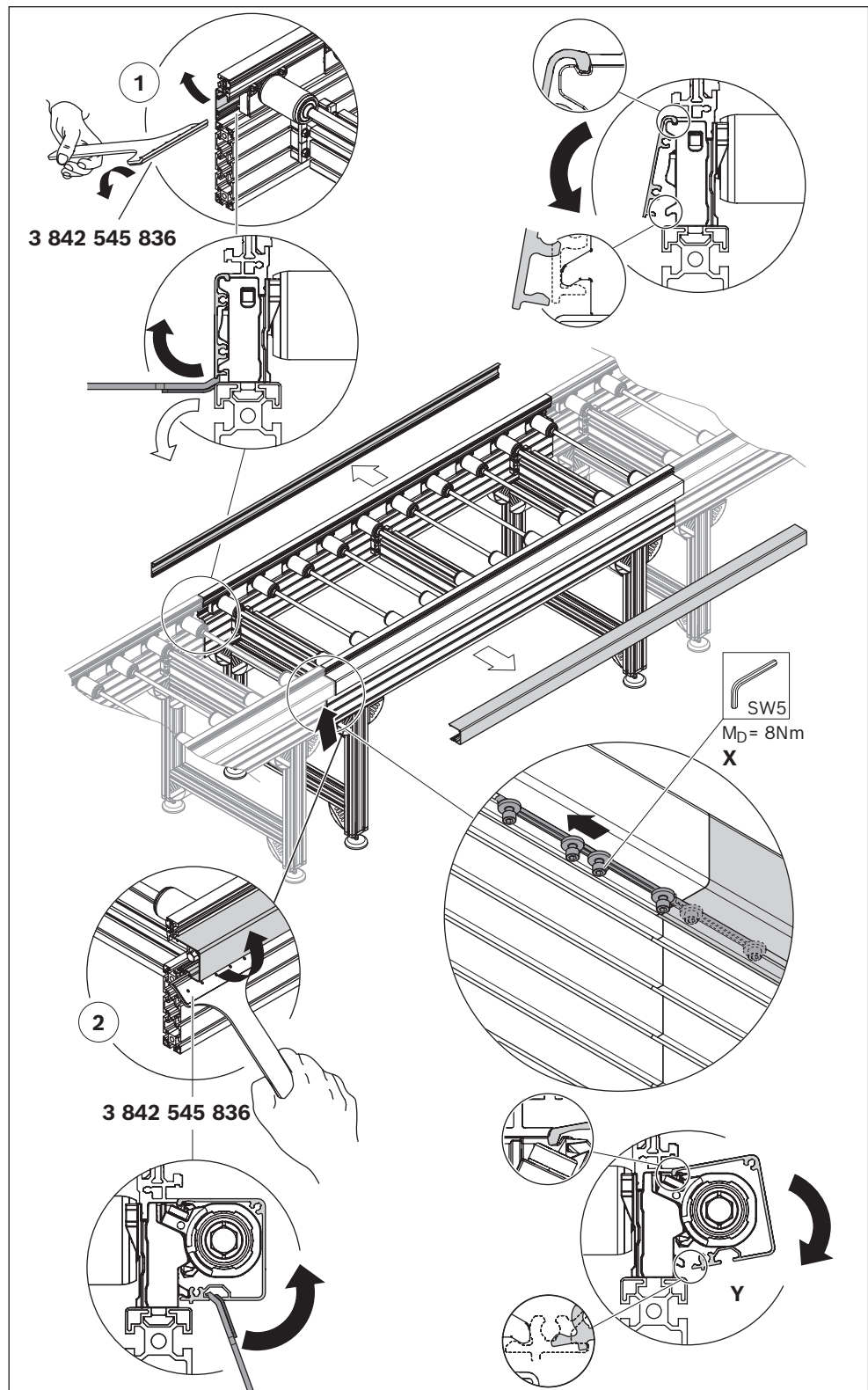


Fig. 6: Removing the split rollers (1/3)

557 616-06

3. Loosen the profile connector of the lateral guide (2 rotations).
4. Move the profile connectors into the adjacent module.
5. Loosen the headless setscrews of the lateral guide (2 rotations).
6. Remove the lateral guide.

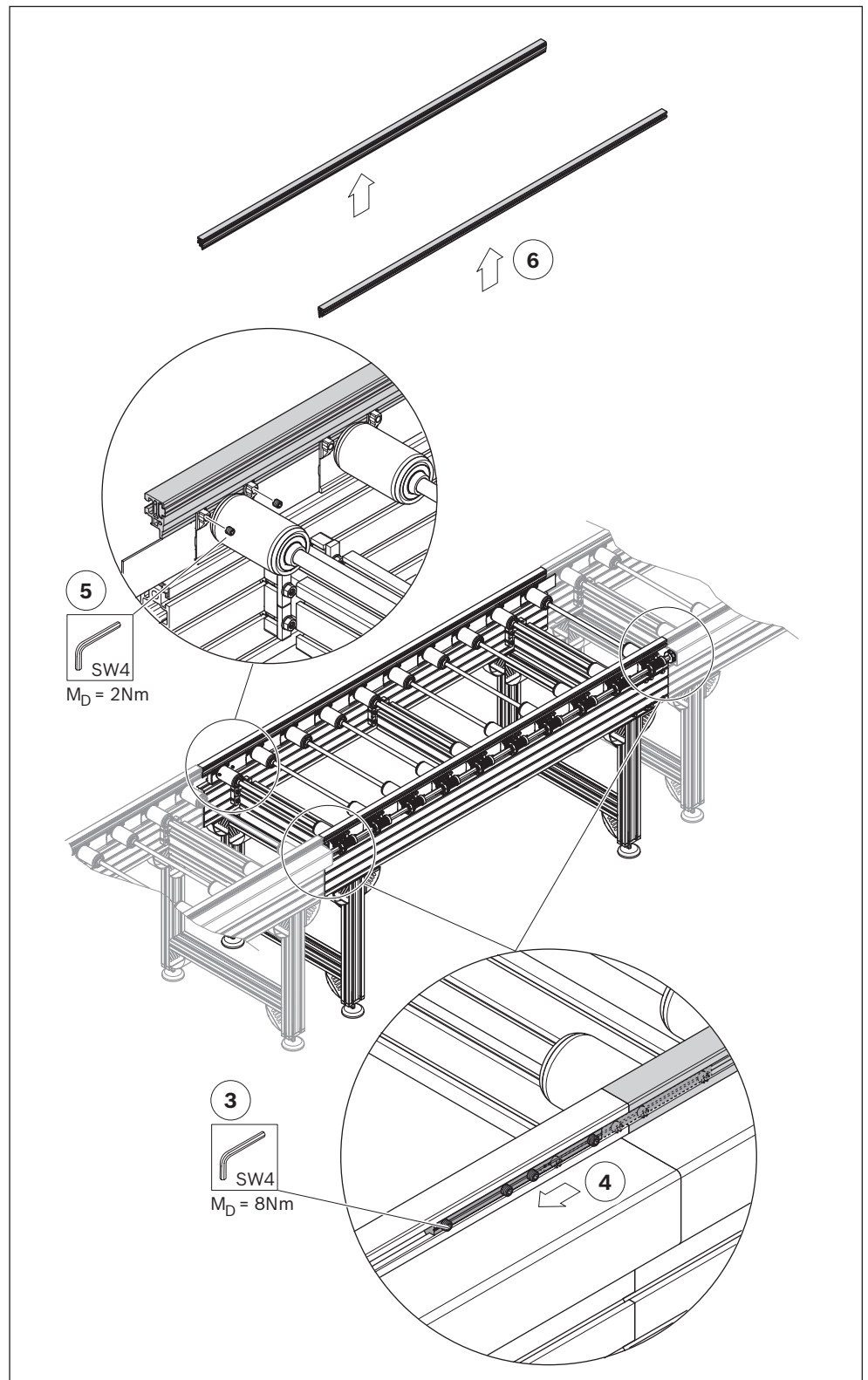
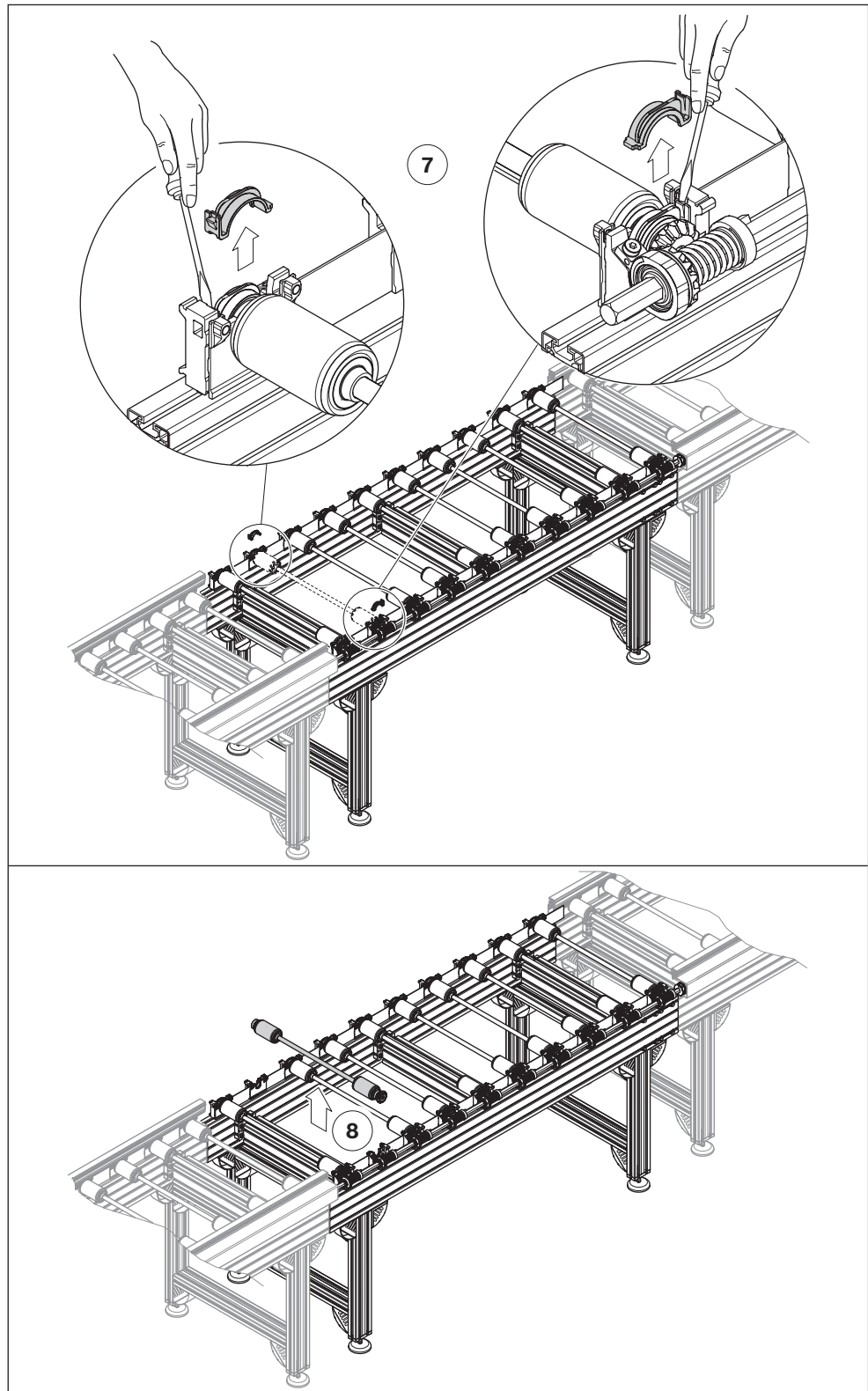


Fig. 7: Removing the split rollers (2/3)

557 616-07

7. Remove the clamps.
  8. Remove the split rollers vertically upwards.
- After mounting the PE, the split rollers are correspondingly assembled in the reverse order.

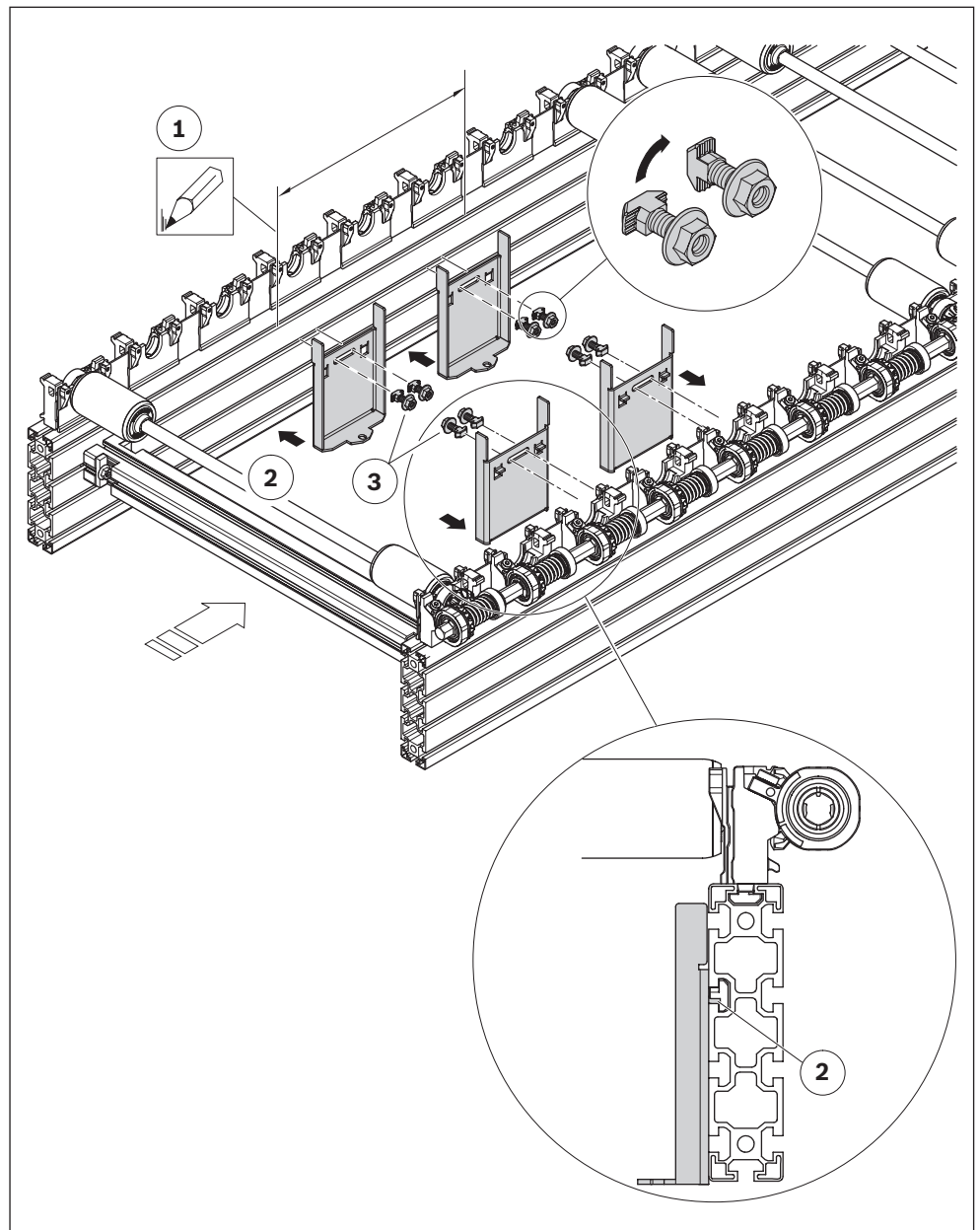


**Fig. 8: Removing the split rollers (3/3)**

557 616-08

### 7.5.3 Preassembling the mounting bracket

1. Mark the installation position of the mounting bracket in accordance with the installation dimensions on Page 18.
2. Mount the mounting bracket on the section profile.
3. Insert the T-bolts into the section profiles and tighten the flange nuts.



**Fig. 9: Preassembling the mounting bracket**

557 616-09

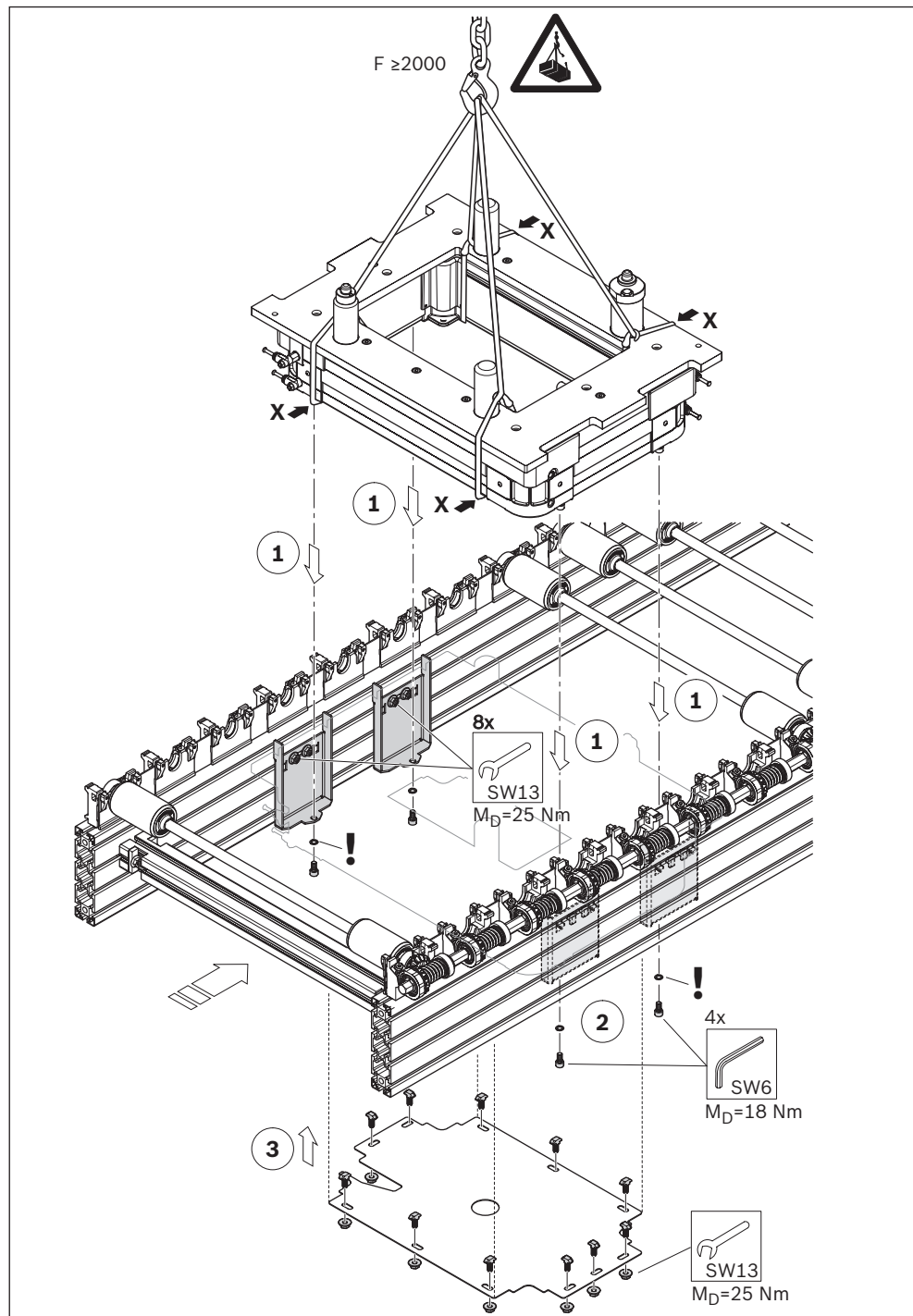
### 7.5.4 Installing the positioning unit



**Please note:**

Use a lift aid to lift the product. The positions indicated with an (X) in the drawing are used as lifting points for a round sling, for example.

1. Insert the positioning unit in the section profile.
2. Tighten the fastening screws of the mounting bracket.
3. Install the guard plate.



557 616-10

**Fig. 10: Installing the positioning unit (example shown here on PE 5/L)**

Required accessories

- Proximity switch  
3 842 549 811 or  
3 842 549 814
- Switch bracket  
3 842 537 289

**Please note:**

- For longitudinal conveyors, you require:
  - 3 proximity switches for the PE 5/L.
  - For querying the WT, the position monitoring kit must be installed at position E<sub>1</sub> or E<sub>2</sub> depending on the roller pattern (spacing).
  - The proximity switch for querying the WT must be installed at different positions according to the WT width b (see detail E).
- For transverse conveyors, you require:
  - 2 proximity switches for the PE 5/L-T.
  - The system does not allow the workpiece pallet to be queried from below. A query is only possible via sensors in the stop gate (not included).

1. Install the switching flag on the lift frame of the positioning unit.
2. Assemble the position monitoring kit including switch bracket.
3. Install the position monitoring kit from below on the lift frame.
4. Install the proximity switches.

7.5.5 Installing the position monitoring kit

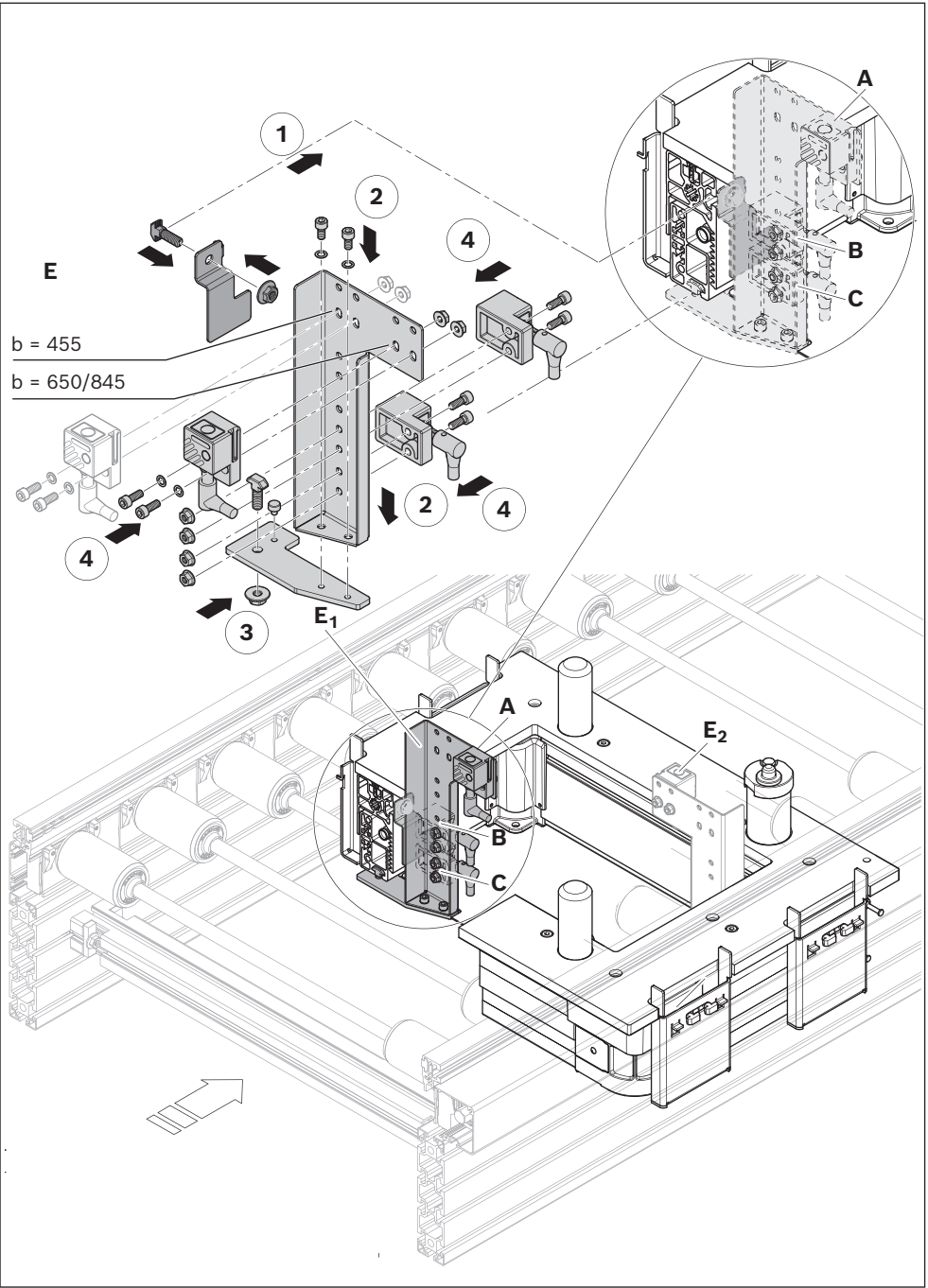


Fig. 11: Installing the position monitoring kit (example shown here on PE 5/L)

| Positioning unit /<br>direction of transport | Query by proximity switch               |                    |                    |
|----------------------------------------------|-----------------------------------------|--------------------|--------------------|
|                                              | A                                       | B                  | C                  |
| PE 5/L<br>(longitudinal conveyor)            | WT                                      | Upper end position | Lower end position |
| PE 5/L-T<br>(transverse conveyor)            | Query not possible<br>due to the system | Upper end position | Lower end position |

## 7.5.6 Installing the stop gate

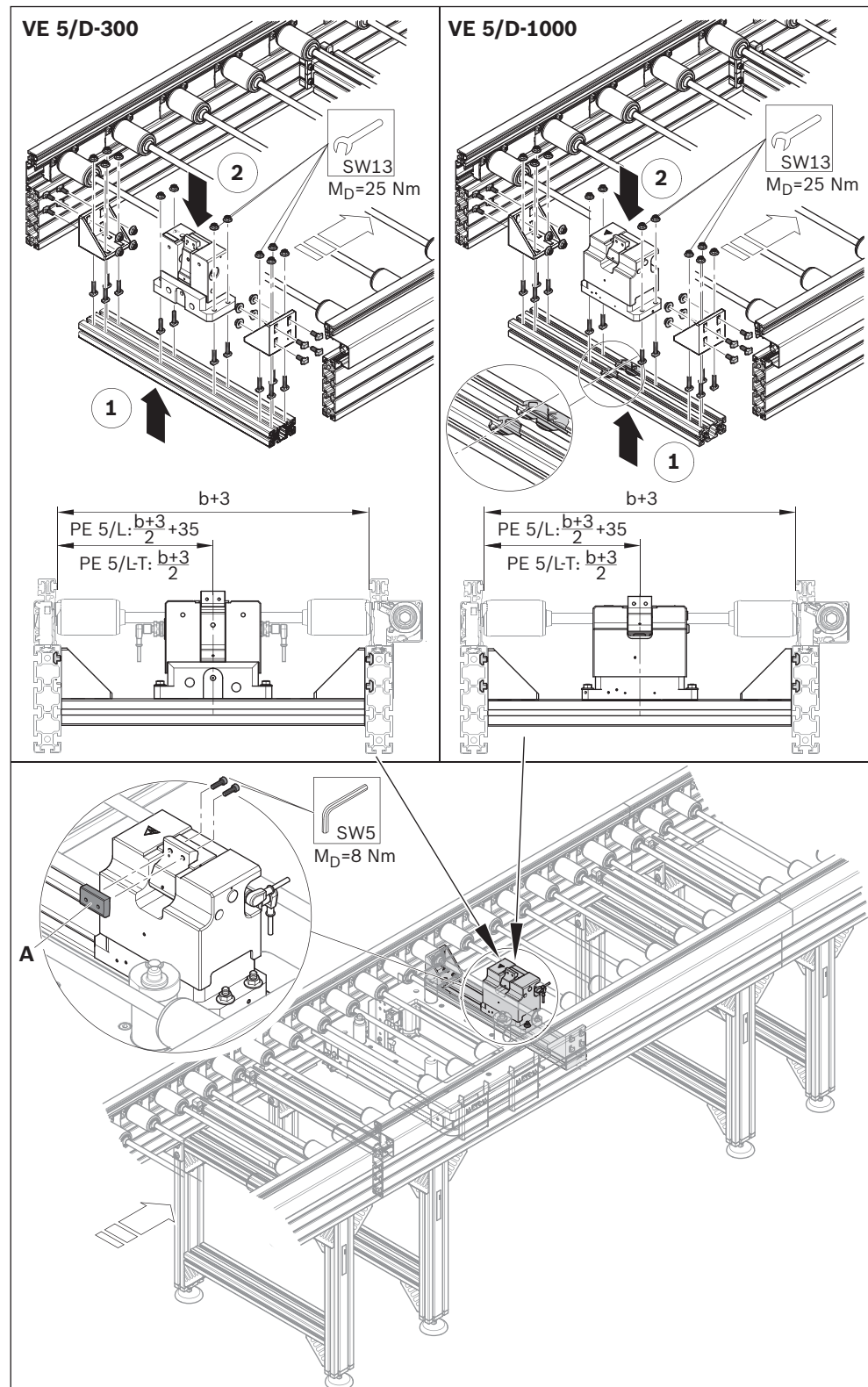
**Required accessories**

- VE 5/D-300 stop gate  
**3 842 998 517**
- VE 5/D-1000 stop gate  
**3 842 998 805**

- Install the VE 5/... stop gate on the section profile.
  - For the mounting position for the PE 5/L see Table 7 on page 19
  - For the mounting position for the PE 5/L-T see Table 8 on page 19

**Only applies to the PE 5/L-T:**

- Install the adapter plate A.
- **Stopping in the longitudinal conveyor**  
(main section, front end of WT):  
center offset: +35 mm.
- **Stopping in the transverse conveyor**  
(transverse section, front end of WT):  
no center offset.



557 616-12

**Fig. 12: Installing the VE 5/... stop gate (example shown here on PE 5/L)**

### 7.5.7 Protective cover cutouts for a PE 5/L

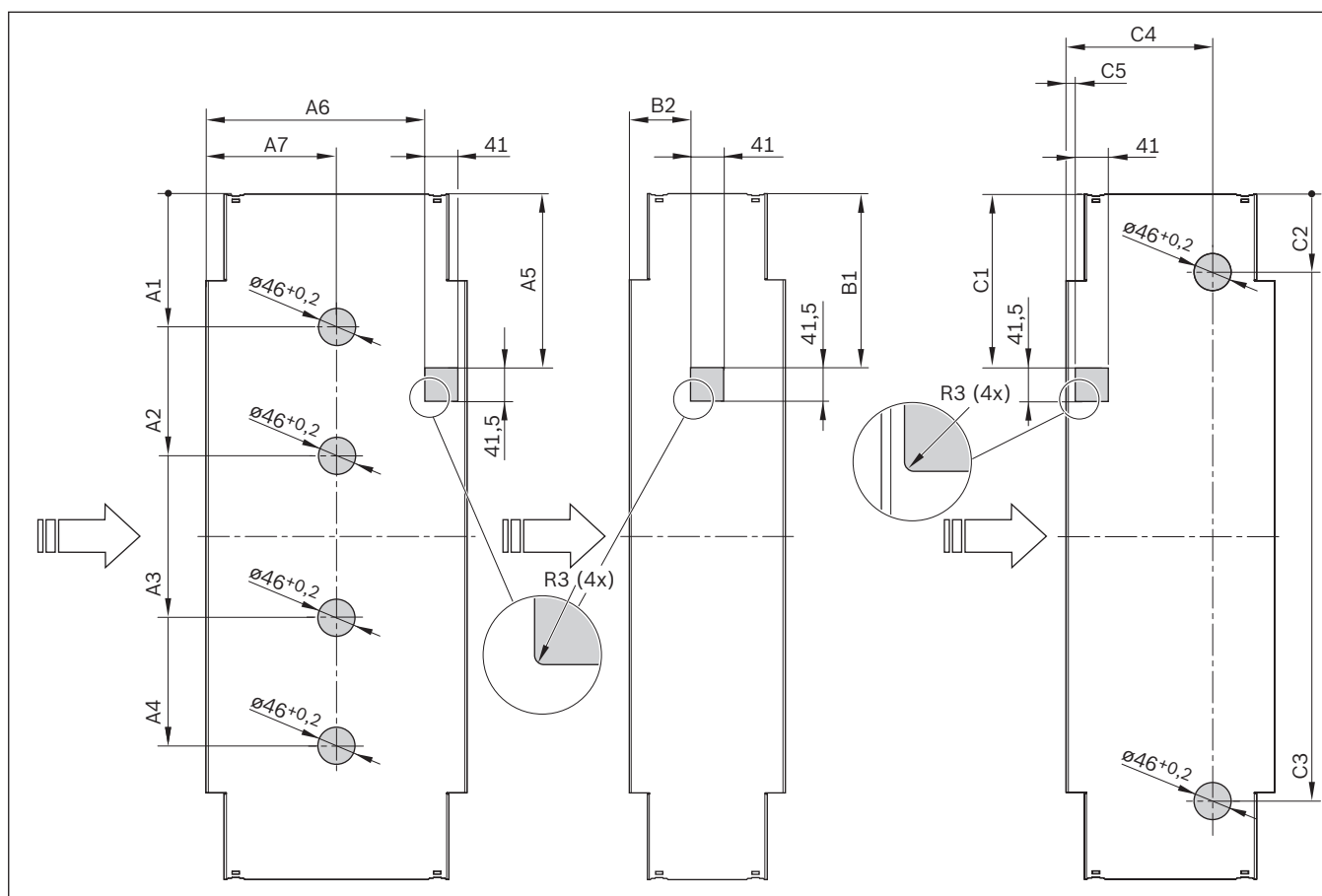


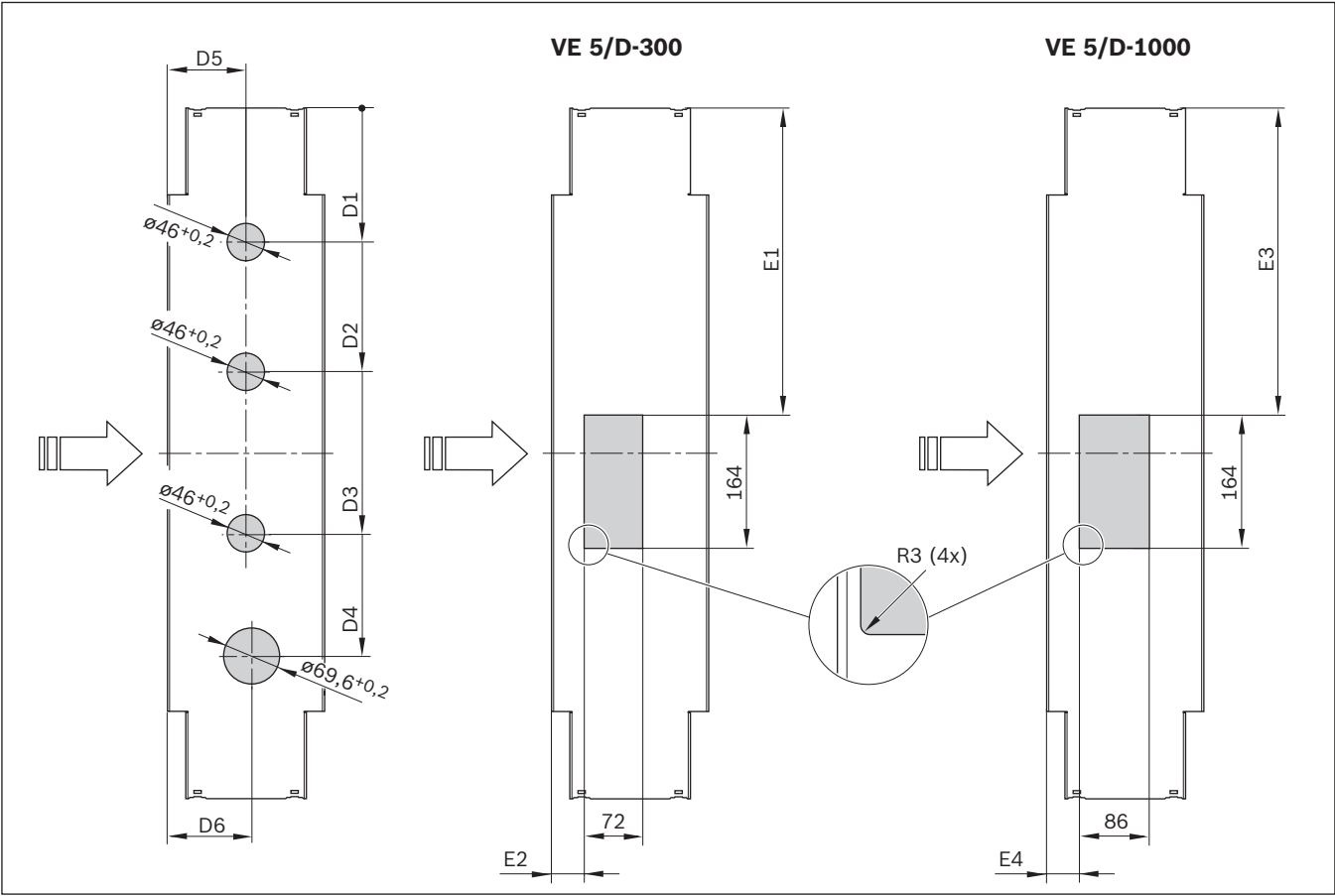
Fig. 13: Protective cover cutouts for a PE 5/L (1/2)

| b    | l <sub>r</sub> | p    | A1    | A2   | A3   | A4    | A5    | A6    | A7   | B1    | B2   | C1    | C2   | C3   | C4    | C5   |
|------|----------------|------|-------|------|------|-------|-------|-------|------|-------|------|-------|------|------|-------|------|
| [mm] | [mm]           | [mm] | [mm]  | [mm] | [mm] | [mm]  | [mm]  | [mm]  | [mm] | [mm]  | [mm] | [mm]  | [mm] | [mm] | [mm]  | [mm] |
| 455  | 455            | 130  | 132.5 | –    | –    | 327.5 | –     | –     | 97   | 183.3 | 76.5 | –     | –    | –    | –     | –    |
| 455  | 650            | 130  | 132.5 | –    | –    | 327.5 | –     | –     | 97   | 183.3 | 76.5 | –     | –    | –    | –     | –    |
| 455  | 650            | 195  | 132.5 | –    | –    | 327.5 | –     | –     | 162  | 183.3 | 76.5 | –     | –    | –    | –     | –    |
| 650  | 650            | 130  | 165   | –    | –    | 490   | –     | –     | 97   | 215.8 | 76.5 | –     | –    | –    | –     | –    |
| 650  | 650            | 195  | 165   | –    | –    | 490   | –     | –     | 162  | 215.8 | 76.5 | –     | –    | –    | –     | –    |
| 650  | 845            | 130  | 165   | –    | –    | 490   | –     | –     | 32   | 215.8 | 11.5 | –     | 97   | 558  | 52    | –    |
| 650  | 845            | 195  | 165   | –    | –    | 490   | –     | –     | 162  | 215.8 | 76.5 | –     | 97   | 558  | 52    | –    |
| 650  | 845            | 260  | 165   | –    | –    | 490   | –     | –     | 162  | –     | –    | 215.8 | 97   | 558  | 182   | 11.5 |
| 845  | 845            | 130  | 165   | 325  | 525  | 685   | –     | –     | 32   | 215.8 | 11.5 | –     | 97   | 753  | 52    | –    |
| 845  | 845            | 195  | 165   | 325  | 525  | 685   | –     | –     | 162  | 215.8 | 76.5 | –     | 97   | 753  | 52    | –    |
| 845  | 845            | 260  | 165   | 325  | 525  | 685   | –     | –     | 162  | –     | –    | 215.8 | 97   | 753  | 182   | 11.5 |
| 845  | 1040           | 130  | 165   | 325  | 525  | 685   | –     | –     | 97   | 215.8 | 76.5 | –     | 97   | 753  | 64.5  | –    |
| 845  | 1040           | 195  | 165   | 325  | 525  | 685   | –     | –     | 162  | 215.8 | 76.5 | –     | 97   | 753  | 129.5 | –    |
| 845  | 1040           | 260  | 165   | 325  | 525  | 685   | –     | –     | 227  | 215.8 | 76.5 | –     | 97   | 753  | 64.5  | –    |
| 845  | 1040           | 325  | 165   | 325  | 525  | 685   | 215.8 | 271.5 | 162  | –     | –    | –     | 97   | 753  | 194.5 | –    |



**Please note:**

- The protective covers for ST 5/H and ST 5/X-H are used and machined.
- The protective covers do not come with cutouts.
- Shown from above. Cutouts should be made from the bottom side. If the cutout intersects a joint, first cut through the bar on the bottom side near the cutout.



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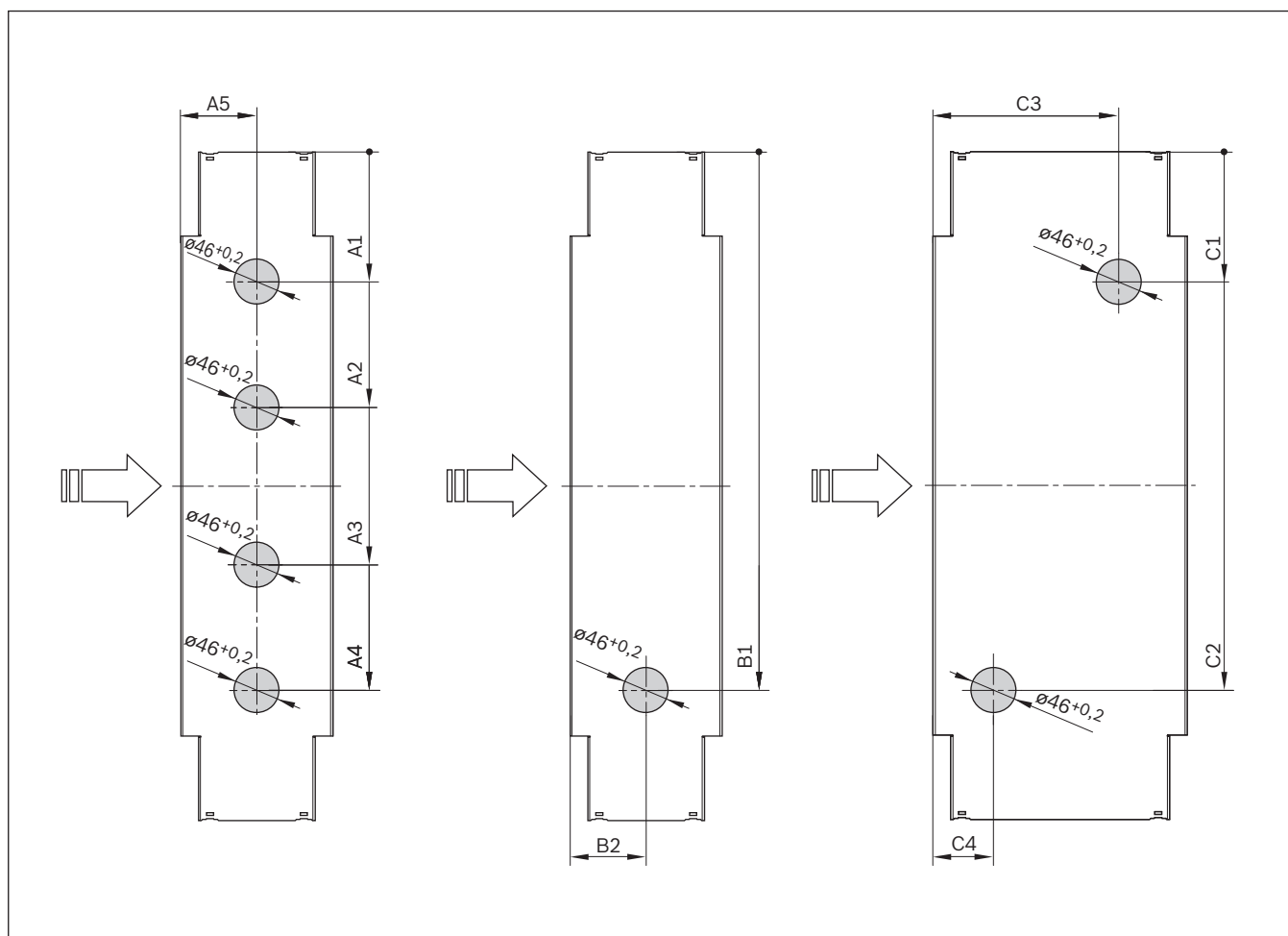
Fig. 14: Protective cover cutouts for a PE 5/L (2/2)

| b    | l <sub>T</sub> | p    | D1    | D2   | D3   | D4    | D5   | D6    | E1    | E2   | E3    | E4   |
|------|----------------|------|-------|------|------|-------|------|-------|-------|------|-------|------|
| [mm] | [mm]           | [mm] | [mm]  | [mm] | [mm] | [mm]  | [mm] | [mm]  | [mm]  | [mm] | [mm]  | [mm] |
| 455  | 455            | 130  | 132,5 | –    | –    | 318,7 | 32   | 40,8  | 183   | 8    | 183   | 6    |
| 455  | 650            | 130  | 132,5 | –    | –    | 316,8 | 32   | 38,4  | 183   | 40,5 | 183   | 38,5 |
| 455  | 650            | 195  | 132,5 | –    | –    | 316,8 | 97   | 103,4 | 183   | 40,5 | 183   | 38,5 |
| 650  | 650            | 130  | 165   | –    | –    | 481,2 | 32   | 40,8  | 280,5 | 40,5 | 280,5 | 38,5 |
| 650  | 650            | 195  | 165   | –    | –    | 481,2 | 97   | 105,9 | 280,5 | 40,5 | 280,5 | 38,5 |
| 650  | 845            | 130  | 165   | –    | –    | 479,4 | 32   | 38,6  | 280,5 | 40,5 | 280,5 | 38,5 |
| 650  | 845            | 195  | 165   | –    | –    | 479,4 | 97   | 103,6 | 280,5 | 40,5 | 280,5 | 38,5 |
| 650  | 845            | 260  | 165   | –    | –    | 479,4 | 162  | 168,6 | 280,5 | 40,5 | 280,5 | 38,5 |
| 845  | 845            | 130  | 165   | 325  | 525  | 676,2 | 32   | 40,8  | 378   | 40,5 | 378   | 38,5 |
| 845  | 845            | 195  | 165   | 325  | 525  | 676,5 | 97   | 105,8 | 378   | 40,5 | 378   | 38,5 |
| 845  | 845            | 260  | 165   | 325  | 525  | 676,2 | 162  | 170,8 | 378   | 40,5 | 378   | 38,5 |
| 845  | 1040           | 130  | 165   | 325  | 525  | 674,9 | 32   | 39,4  | 378   | 40,5 | 378   | 38,5 |
| 845  | 1040           | 195  | 165   | 325  | 525  | 674,9 | 97   | 104,4 | 378   | 40,5 | 378   | 38,5 |
| 845  | 1040           | 260  | 165   | 325  | 525  | 674,9 | 162  | 169,4 | 378   | 40,5 | 378   | 38,5 |
| 845  | 1040           | 325  | 165   | 325  | 525  | 674,9 | 227  | 234,4 | 378   | 40,5 | 378   | 38,5 |

**Please note:**

- The protective covers for ST 5/H and ST 5/X-H are used and machined.
- The protective covers do not come with cutouts.
- Shown from above. Cutouts should be made from the bottom side. If the cutout intersects a joint, first cut through the bar on the bottom side near the cutout.

# 7.5.8 Protective cover cutouts for a PE 5/L-T



557 616-15

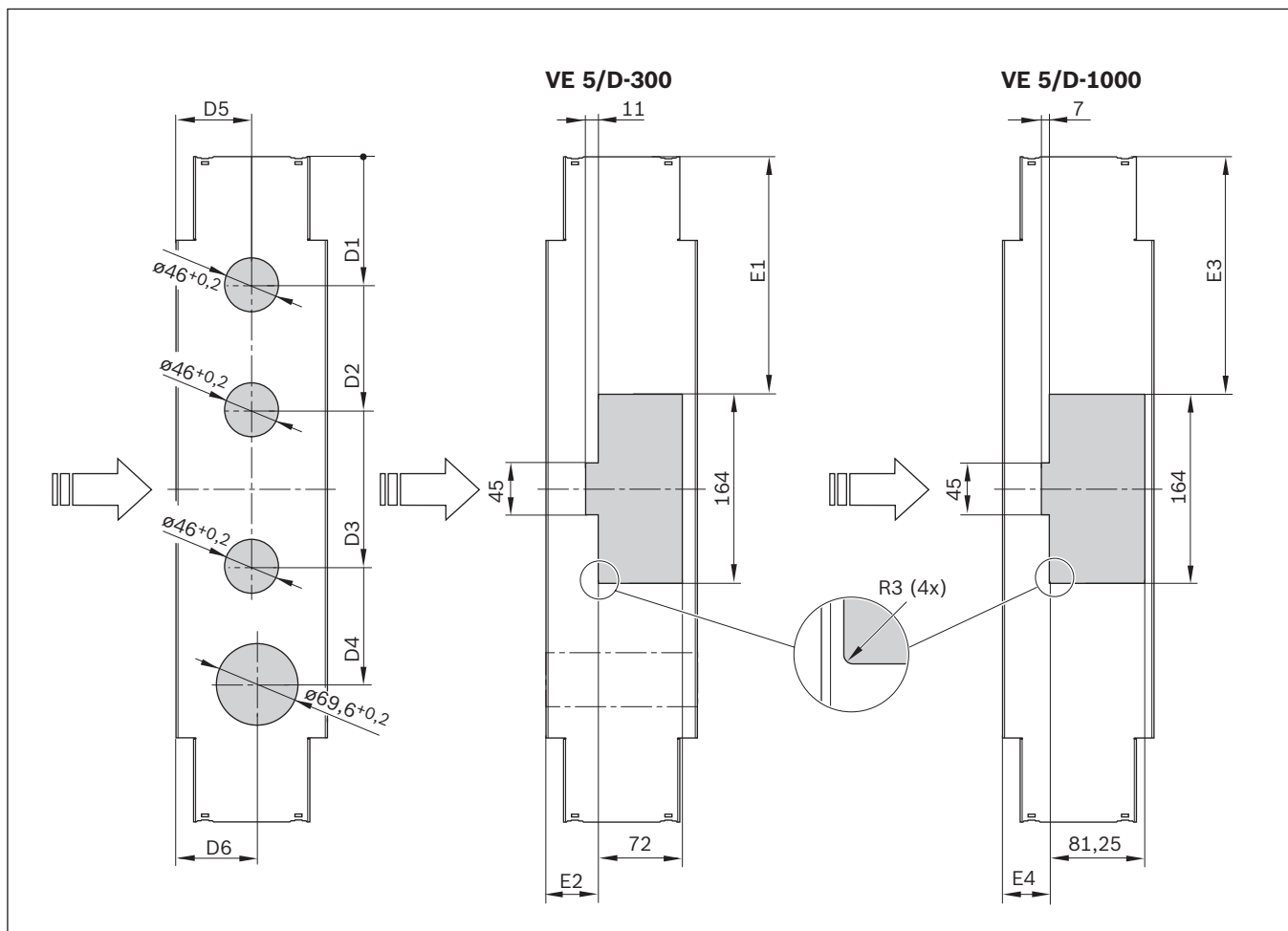
**Fig. 15: Protective cover cutouts for a PE 5/L-T (1/2)**

| b    | l <sub>T</sub> | p    | A1    | A2    | A3    | A4    | A5   | B1   | B2   | C1   | C2   | C3   | C4   |
|------|----------------|------|-------|-------|-------|-------|------|------|------|------|------|------|------|
| [mm] | [mm]           | [mm] | [mm]  | [mm]  | [mm]  | [mm]  | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] |
| 455  | 455            | 130  | 132,5 | –     | –     | 327,5 | 98   | –    | –    | –    | –    | –    | –    |
| 650  | 455            | 130  | 165   | –     | –     | 490   | 98   | –    | –    | –    | –    | –    | –    |
| 650  | 650            | 130  | 165   | –     | –     | 490   | 98   | –    | –    | –    | –    | –    | –    |
| 650  | 650            | 195  | 165   | –     | –     | 490   | 163  | –    | –    | –    | –    | –    | –    |
| 845  | 650            | 130  | 165   | 325   | 525   | 685   | 98   | –    | –    | –    | –    | –    | –    |
| 845  | 650            | 195  | 165   | 325   | 525   | 685   | 163  | –    | –    | –    | –    | –    | –    |
| 845  | 845            | 130  | 165   | 310   | 540   | 685   | 31   | 808  | 61   | 42   | –    | 61   | –    |
| 845  | 845            | 195  | 165   | 310   | 540   | 685   | 161  | 808  | 126  | 42   | –    | 61   | –    |
| 845  | 845            | 260  | 165   | 310   | 540   | 685   | 161  | –    | –    | 42   | 808  | 191  | 61   |
| 1040 | 845            | 130  | 165   | 422,5 | 622,5 | 880   | 31   | 1003 | 61   | 42   | –    | 61   | –    |
| 1040 | 845            | 195  | 165   | 422,5 | 622,5 | 880   | 161  | 1003 | 126  | 42   | –    | 61   | –    |
| 1040 | 845            | 260  | 165   | 422,5 | 622,5 | 880   | 161  | –    | –    | 42   | 1003 | 191  | 61   |



## Please note:

- The protective covers for ST 5/H and ST 5/X-H are used and machined.
- The protective covers do not come with cutouts.
- Shown from above. Cutouts should be made from the bottom side. If the cutout intersects a joint, first cut through the bar on the bottom side near the cutout.



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Fig. 16: Protective cover cutouts for a PE 5/L-T (2/2)

| b    | l <sub>T</sub> | p    | D1    | D2    | D3    | D4    | D5   | D6    | E1    | E2   | E3    | E4   |
|------|----------------|------|-------|-------|-------|-------|------|-------|-------|------|-------|------|
| [mm] | [mm]           | [mm] | [mm]  | [mm]  | [mm]  | [mm]  | [mm] | [mm]  | [mm]  | [mm] | [mm]  | [mm] |
| 455  | 455            | 130  | 132,5 | –     | –     | 318,7 | 33   | 41,8  | 147,5 | 14   | 147,5 | 12,5 |
| 650  | 455            | 130  | 165   | –     | –     | 479,3 | 33   | 39,4  | 245,5 | 8,5  | 245,5 | 7    |
| 650  | 650            | 130  | 165   | –     | –     | 481,2 | 33   | 41,8  | 245,5 | 41   | 245,5 | 39,5 |
| 650  | 650            | 195  | 165   | –     | –     | 481,2 | 98   | 106,8 | 245,5 | 41   | 245,5 | 39,5 |
| 845  | 650            | 130  | 165   | 325   | 525   | 674,4 | 33   | 39,6  | 343   | 40,5 | 343   | 39   |
| 845  | 650            | 195  | 165   | 325   | 525   | 674,4 | 98   | 104,6 | 343   | 40,5 | 343   | 39   |
| 845  | 845            | 130  | 165   | 310   | 540   | 674,2 | 31   | 39,8  | 343   | 40,5 | 343   | 39   |
| 845  | 845            | 195  | 165   | 310   | 540   | 674,2 | 96   | 104,8 | 343   | 40,5 | 343   | 39   |
| 845  | 845            | 260  | 165   | 310   | 540   | 674,2 | 161  | 169,8 | 343   | 40,5 | 343   | 39   |
| 1040 | 845            | 130  | 165   | 422,5 | 622,5 | 869,9 | 31   | 38,3  | 440,5 | 23,5 | 440,5 | 22   |
| 1040 | 845            | 195  | 165   | 422,5 | 622,5 | 869,9 | 96   | 103,3 | 440,5 | 23,5 | 440,5 | 22   |
| 1040 | 845            | 260  | 165   | 422,5 | 622,5 | 869,9 | 161  | 168,3 | 440,5 | 23,5 | 440,5 | 22   |

**Please note:**

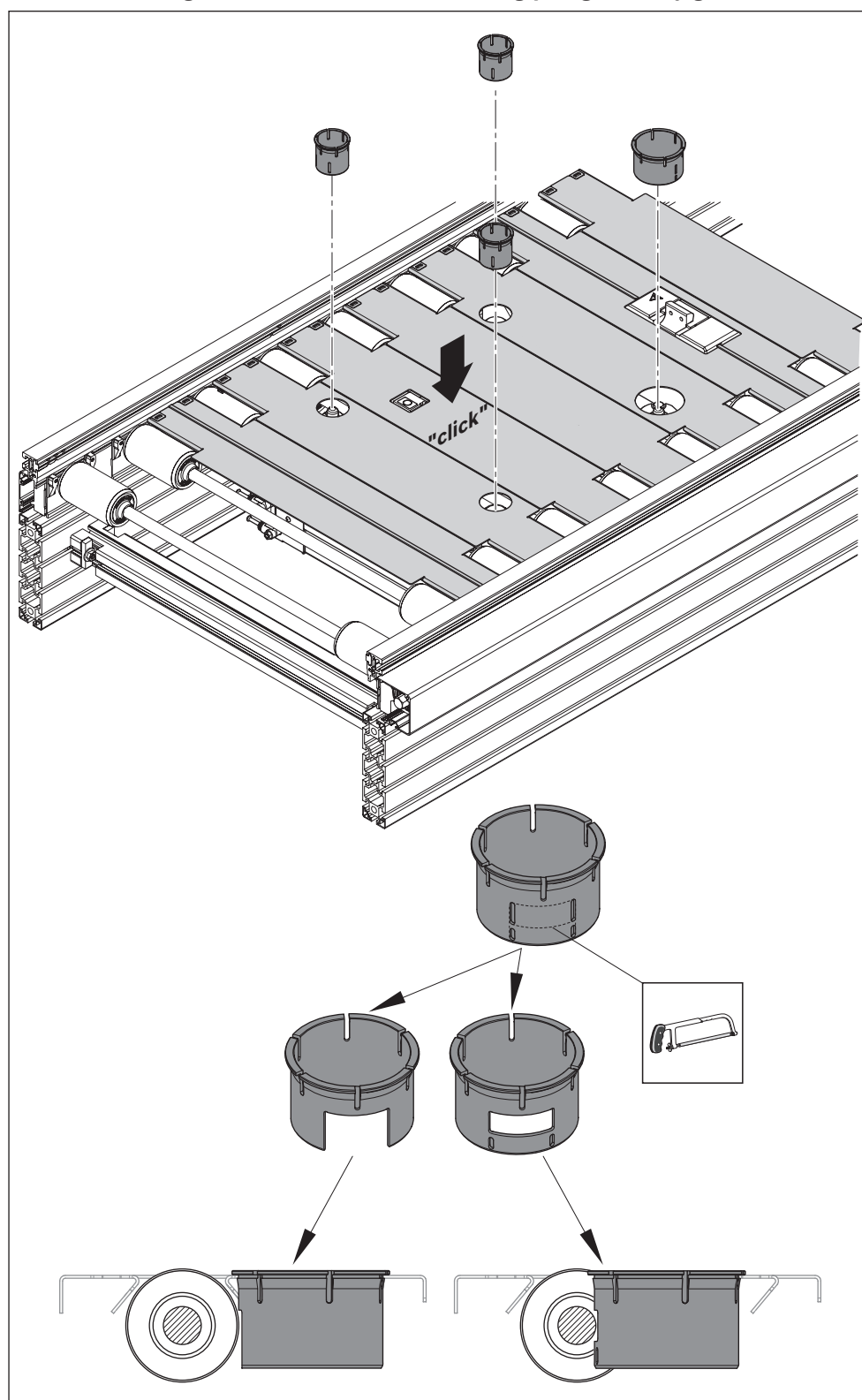
- The protective covers for ST 5/H and ST 5/X-H are used and machined.
- The protective covers do not come with cutouts.
- Shown from above. Cutouts should be made from the bottom side. If the cutout intersects a joint, first cut through the bar on the bottom side near the cutout.

**Required accessories**

- For protective sleeves A and B, see catalog TS 5.
- ▶ Clip the protective sleeves into the cutouts of the protective covers above the PE 5/L, PE 5/L-T lifting plungers for safety.
- ▶ Remove the protective sleeves if shafts or rollers project into the required clearance area.

**Please note:**

The protective covers do not come with cutouts.

**7.5.9 Installing the PE 5/L and PE 5/L-T lifting plunger safety guard**

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**Fig. 17: Installing the PE 5/L and PE 5/L-T lifting plunger safety guard**

### 7.5.10 Installing the PE 5/L and PE 5/L-T lateral guide cover

#### Required accessories

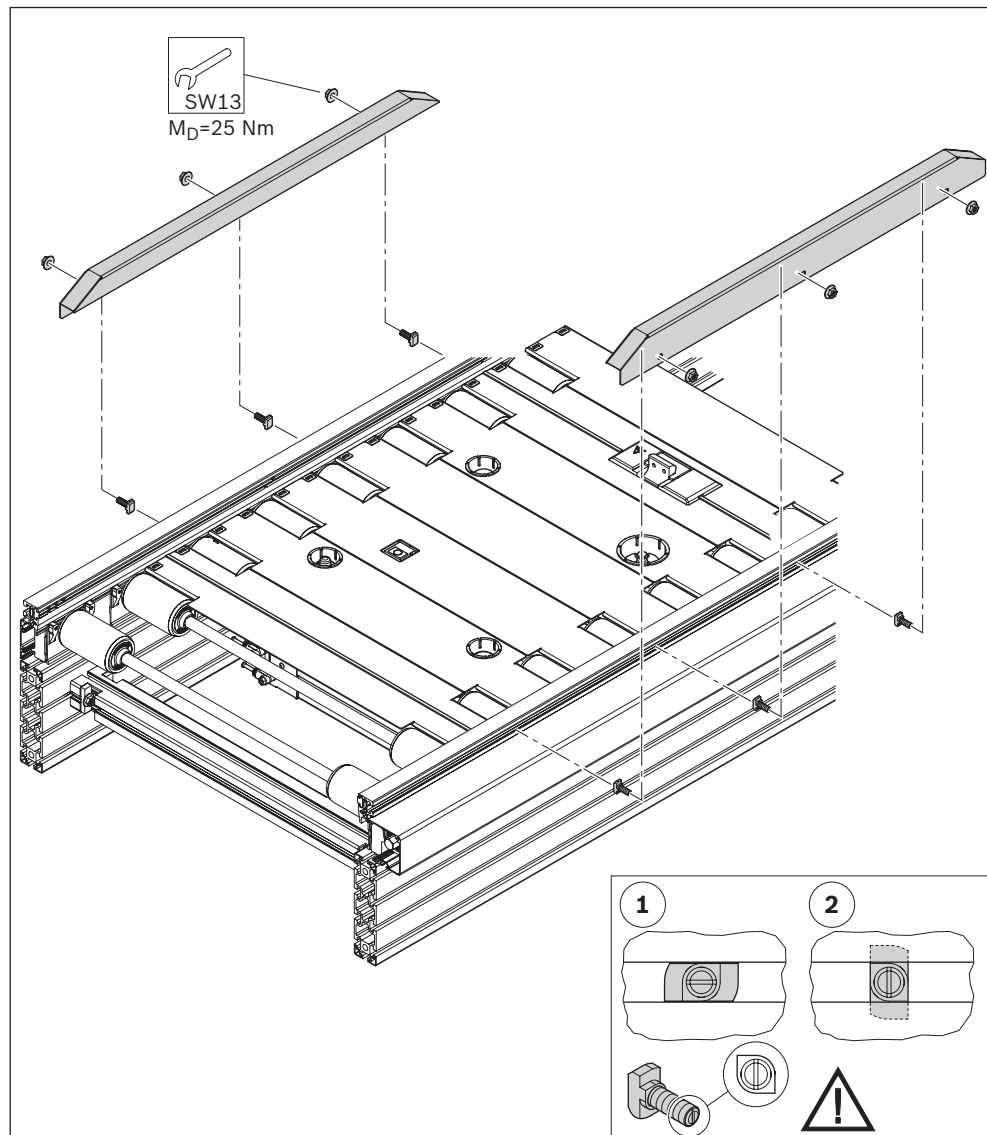
- For lateral guide covers, see catalog TS 5.

- Install the lateral guide cover.



#### Please note:

The lateral guide covers can be installed on either side around the PE 5/L and PE 5/L-T depending on use.



557 616-18

Fig. 18: Installing the PE 5/L and PE 5/L-T lateral guide cover

### 7.5.11 Safety guard under workpiece pallet 5

- Attach the rubber tape in the marked locations (1) as finger protection against reaching under the workpiece pallet.

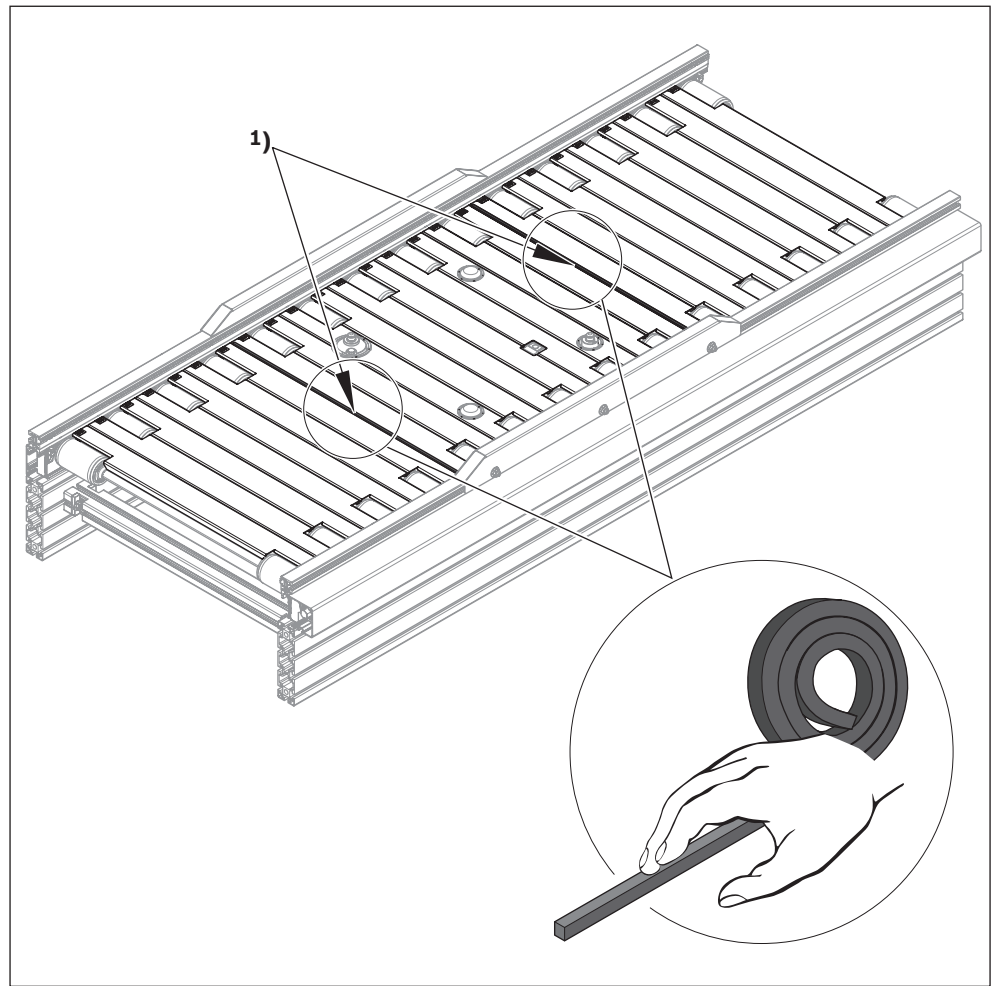


Fig. 19: Assembly of rubber band as safety guard under workpiece pallet 5

### 7.5.12 Connecting the product to the pneumatic system



## WARNING

#### High pneumatic pressure!

Risk of serious injury or death.

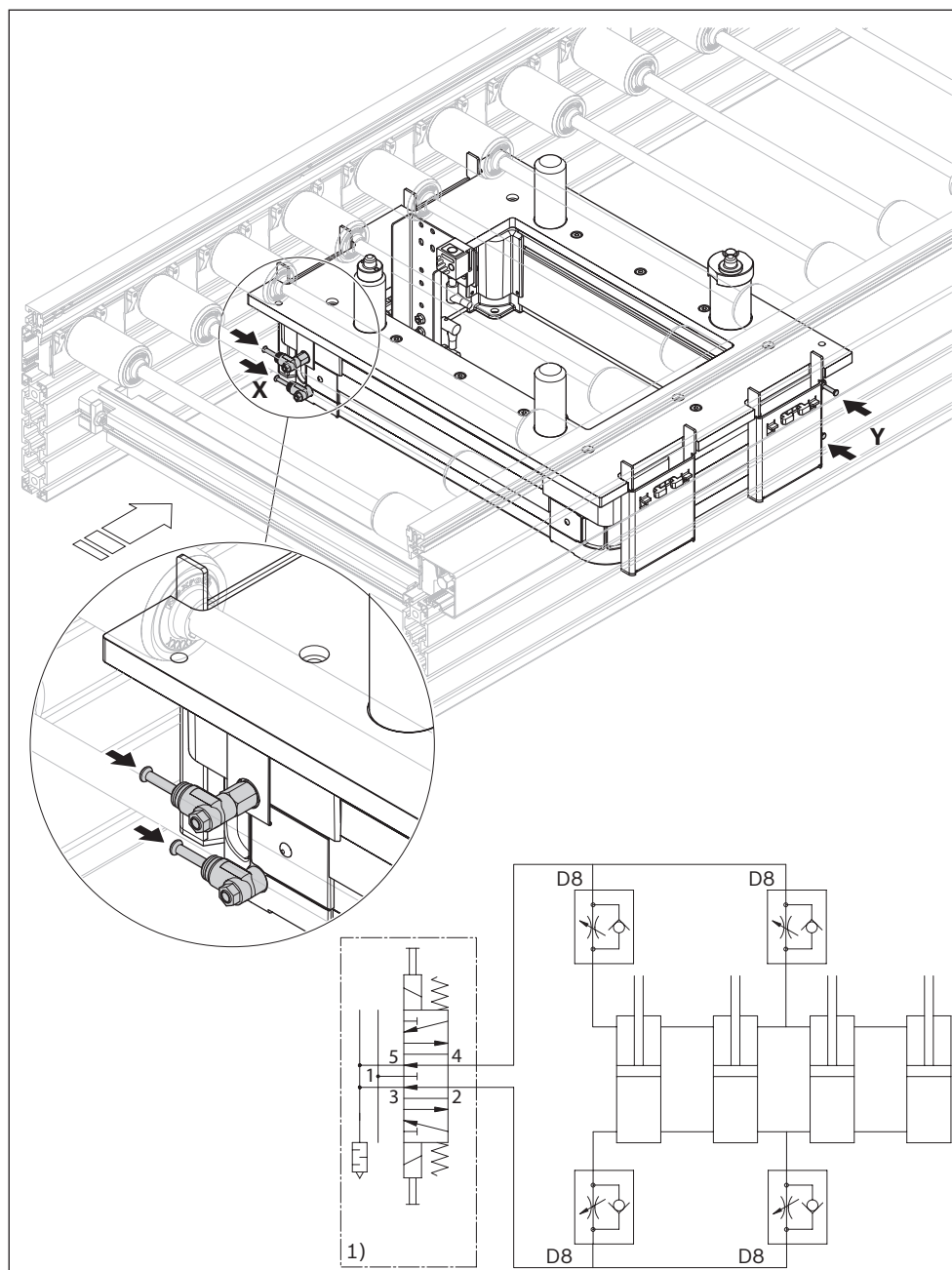
- ▶ Switch off the compressed air supply to the relevant system component before installing, removing or connecting the product to the pneumatic system.
- ▶ Secure the system against being unintentionally switched on again.

- For the compressed air and operating pressure specifications, see page 46.



#### Please note:

- Connect the pneumatics at X and Y. This charges the system more quickly and evenly (better synchronization).
- The pneumatic hoses at all 4 ports must be the same length!
- ▶ Connect the positioning unit to the compressed air supply.



1) Not included in the scope of delivery

Pneumatic connection (example shown here on PE 5/L) and pneumatic diagram

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## 8 Start-up

### 8.1 Initial start-up



#### CAUTION

##### **Sudden movements, falling workpiece pallets**

- ▶ Risk of injury caused by sudden movements and falling objects.
- ▶ Make sure that the product has been installed properly by qualified personnel (see page 8) before starting it up.

#### NOTICE

##### **Malfunctions due to incorrect assembly and start-up**

The product can get damaged and its service life shortened.

- ▶ Commissioning requires basic mechanical, pneumatic and electrical knowledge.
- ▶ The product may only be commissioned by qualified personnel (see page 8).

ENGLISH

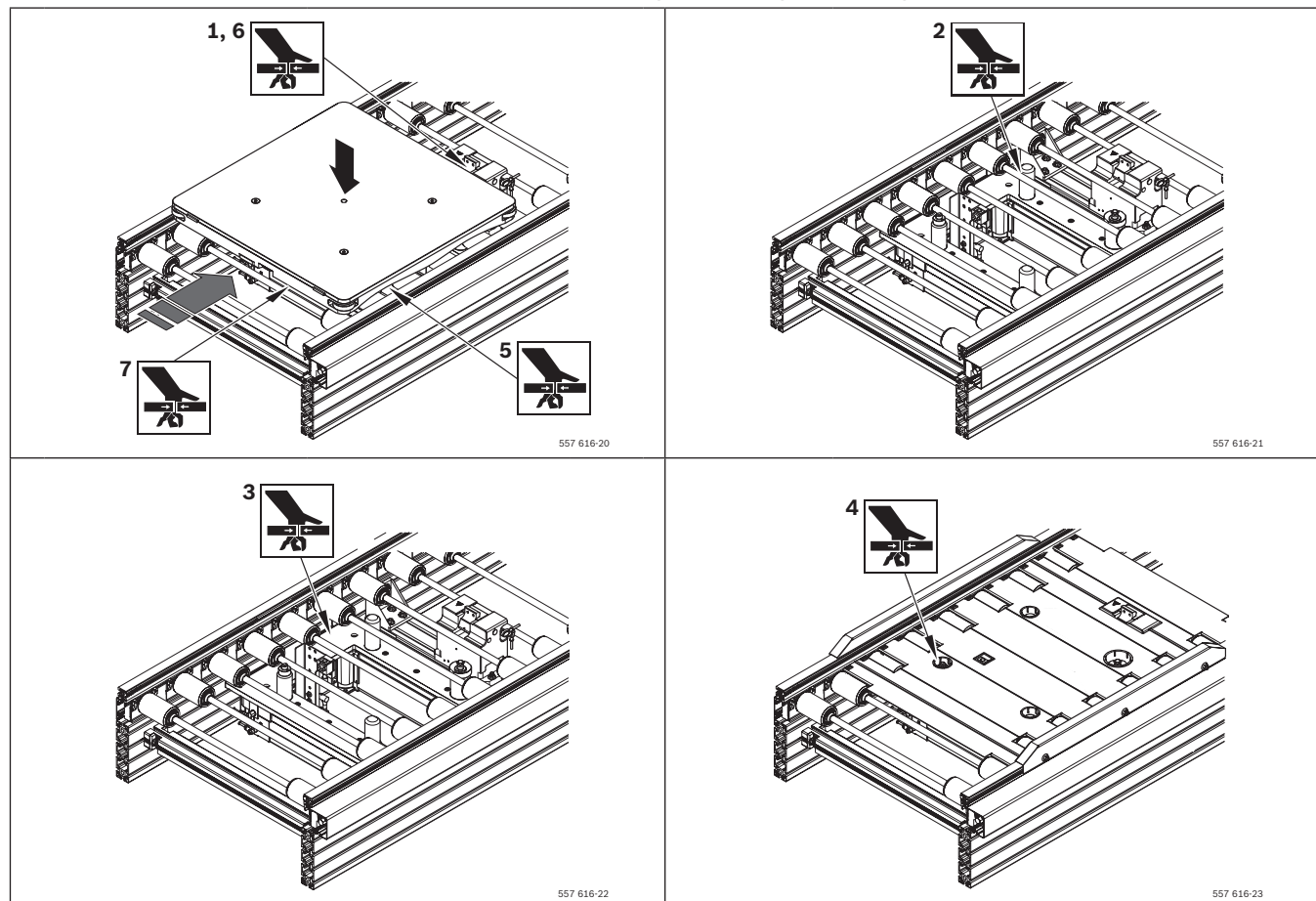
- Before the initial start-up or re-commissioning of a conveyor system, run a risk assessment in accordance with DIN EN ISO 12100.
- Before the initial start-up, make sure there are no protruding or sharp-edged parts that may be a hazard to personnel working or moving in the area.
- According to EU Machinery Directive 2006/42/EC, you must equip the transfer system with EMERGENCY STOP devices.
- The surfaces of motors and gears can reach temperatures of over 65 °C under certain load and operating conditions. In these cases, you must comply with the respective applicable accident prevention regulations (UVV) by taking appropriate constructive measures (safety guards) or by affixing/displaying appropriate warning signs!
- Make sure that all the electrical and pneumatic connections are either in use or covered. Make sure that all bolted connections and plug-in connections are properly seated. All relevant protective covers must be fitted.
- Only inspect and adjust continuous conveyors that are in motion or operation when the safety guards are in place.
- Note DIN EN ISO 13857 when you remove or replace safety guards and/or bypass safety equipment.
- Test runs with open paneling should only be performed by a person with appropriate knowledge and experience using tip switches, and if there is no possibility of interference from other switching devices.
- Only start up the product if all safety equipment has been installed in the system and is functional.
- Only start up a product that has been completely installed.

## 8.2 Residual risks

**Table 9: Residual risks**

|   | Location                                                                     | Situation                     | Danger                                                                                      | Action                                                                                                                                                                                                 |
|---|------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Between workpiece pallet and stop gate latch during approach                 | Body parts can become trapped |  Crushing  | Pre-separate before work areas.<br>Do not reach into the running system.<br>Danger zone is to be marked.                                                                                               |
| 2 | Between PE lifting plate and rollers                                         | Body parts can become trapped |  Crushing  | Pre-separate before work areas.<br>Do not reach into the running system.<br>Safety measure required:<br>E.g. add protective covers, sleeves and protective casing in accessible areas.                 |
| 3 | Between PE mandrels and rollers                                              | Body parts can become trapped |  Crushing  |                                                                                                                                                                                                        |
| 4 | Between PE mandrels and protective covers                                    | Body parts can become trapped |  Crushing  |                                                                                                                                                                                                        |
| 5 | When lowering: between lifted workpiece pallet and top edge of lateral guide | Body parts can become trapped |  Crushing  | Do not reach into the running system.<br>Safety measure required:<br>e.g. add safety guard.                                                                                                            |
| 6 | When lowering: between workpiece pallet and stop gate                        | Body parts can become trapped |  Crushing  | Do not reach into the running system.<br>Danger zone is to be marked.<br>Safety measure required.<br>Make sure the stop gate is always in the upper position and only lowers after the WT has lowered. |
| 7 | When lowering: between lifted workpiece pallet and protective covers.        | Body parts can become trapped |  Crushing | Do not reach into the running system.<br>Safety measure required:<br>e.g. add safety guard.<br>Danger zone is to be marked.                                                                            |

The user must take constructive measures to eliminate the danger areas, e.g. by safety guards.



### 8.3 Re-commissioning after a standstill period

Follow the steps outlined for the initial start-up.

### 8.4 Setting the lifting speed



**Please note:**

- Mount the corresponding WT workpiece pallet before configuring the lifting speed (operating load).
  - On delivery the setting achieves an even, almost smooth lifting movement of the positioning unit.
  - Set the check throttle valves for both lifting cylinders to the same position.
- To adjust the speed for the lifting movement throttle the supply air.
- Rotate in the “+” direction  
The movement is slower.
  - Rotate in the “-” direction  
The movement is faster.



## WARNING

#### Sudden movements

Risk of serious injury or death.

- Final commissioning may only be performed with protective devices in place. These must be provided and installed by the customer.

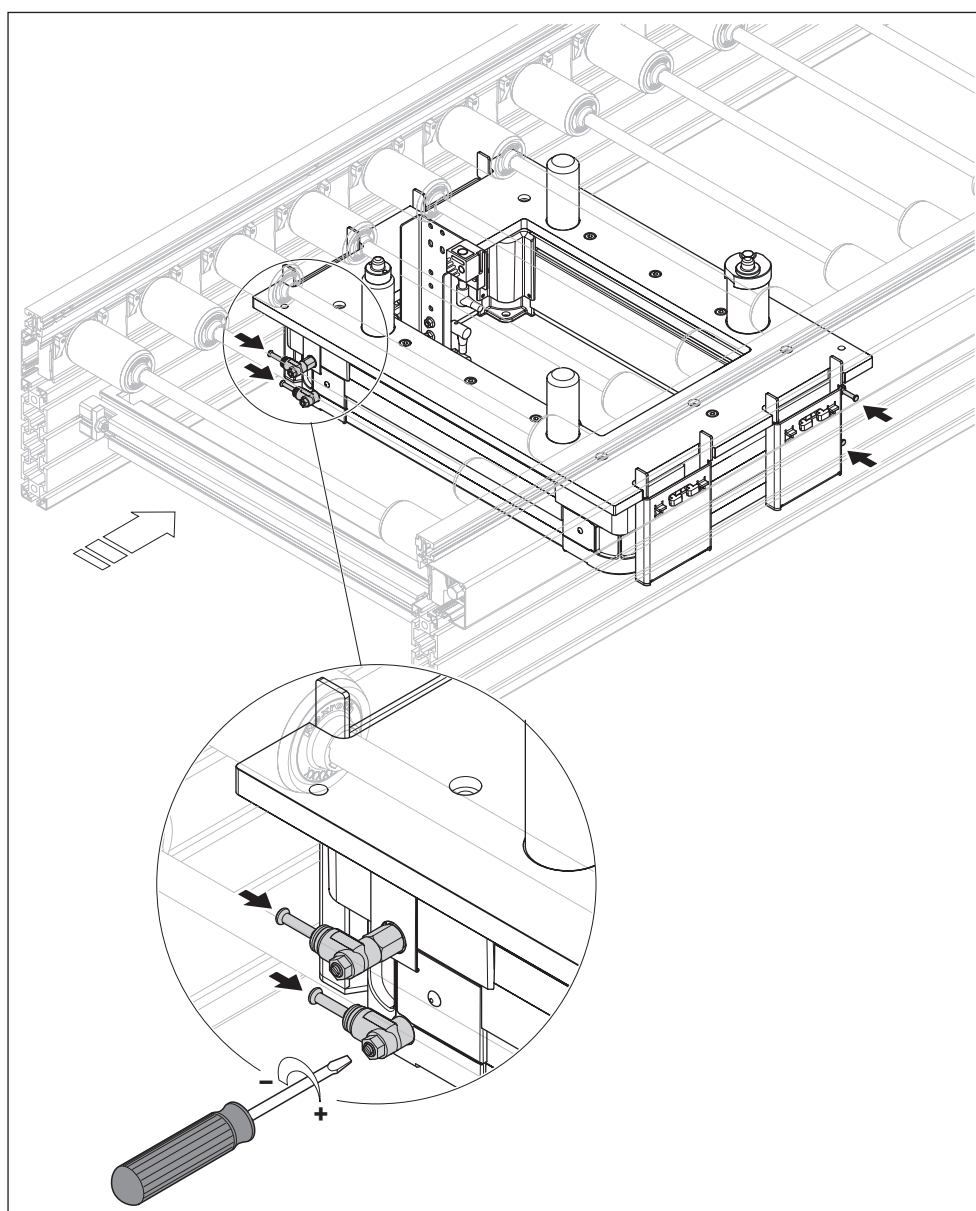


Fig. 20: Setting the lifting speed (example shown here on PE 5/L)

557 616-24

## 9 Operation



### CAUTION

#### **Hot electric motor surfaces during operation!**

Risk of burns from touching hot surfaces above 65 °C.

- ▶ Install appropriate safety guards.
- ▶ Let the unit cool down at least 30 minutes before performing maintenance and/or repair tasks.

### 9.1 Notes regarding operation

#### 9.1.1 Wear

- Individual components are subject to unavoidable wear by their very nature. Through constructive measures and the choice of materials, we endeavor to achieve functional reliability over the full service life. However, wear is also dependent on the operating, maintenance and ambient conditions at the place of use (resistance, contamination).
- The overloading of conveyor sections can cause the conveyor medium to malfunction and lead to the premature breakdown of motors and gears.
- If pneumatically activated components are overloaded, it is not possible to guarantee their function.

#### 9.1.2 Measures to reduce wear

The following commonsense measures will reduce wear:

- Switch off the conveyor section during system shutdowns, for example, during breaks, at night, and on weekends.
- Do not select a higher speed for the conveyor section than that required for the corresponding function.
- Avoid contamination due to abrasive media, reduce contamination by cleaning on a regular basis.

#### 9.1.3 Loading the workpiece pallet

The modular units are designed and tested under the assumption that the workpiece pallets will not all have the same weight during one cycle on one line section.

Workpiece pallets are both loaded and unloaded.

Significantly different weights may require special measures to avoid malfunctions.

This applies to:

- The permitted accumulation length before stop gates.
- Damper functionality.
- Dampened stop gates.

#### 9.1.4 Environmental influences

- Our products are resistant to many media that are commonly found in manufacturing, such as water, mineral base oil, grease and detergents. Contact your Rexroth representative if you have any doubts about resistance to specific chemicals, such as test oil, doped oils, aggressive cleaning agents, solvents or brake fluid.
- Avoid contact with highly reactive acidic or alkaline materials.
- Contamination can greatly increase wear – specifically from abrasive media from the surrounding area, such as sand and silicates, e.g. from construction as well as machining processes in the transfer system (e.g. welding beads, pumice powder, glass shards, chips, waste parts, etc.). Maintenance intervals should be significantly reduced under these circumstances.
- Resistance to media and contamination does not mean that functional safety is guaranteed in every case.
  - Liquids that thicken as they evaporate and become highly viscous or adhesive can lead to malfunctions.
  - If they get carried onto systems with rollers, media which have a lubricating effect can lead to a reduction in the drive power that is transmitted via friction.In such instances, special care must be taken when planning the system, and the maintenance intervals must be correspondingly shortened.

## 10 Maintenance and repair



### WARNING

#### High electrical voltage!

Risk of serious injury or death from electric shock.

- ▶ Disconnect the relevant system component before performing maintenance or servicing.
- ▶ Secure the system against being unintentionally switched on again.

#### High pneumatic pressure!

Risk of serious injury or death.

- ▶ Switch off the compressed air supply to the relevant system component before performing any maintenance or repair work.
- ▶ Secure the system against being unintentionally switched on again.



### CAUTION

#### Hot electric motor surfaces during operation!

Risk of burns from touching hot surfaces above 65 °C.

- ▶ Install appropriate safety guards.
- ▶ Let the unit cool down at least 30 minutes before performing maintenance and/or repair tasks.

- Only inspect and adjust continuous conveyors that are in motion or operation when the safety guards are in place.
- Note DIN EN ISO 13857 when you remove or replace safety guards and/or bypass safety equipment.
- Test runs with open paneling should only be performed by a person with appropriate knowledge and experience using tip switches, and if there is no possibility of interference from other switching devices.

### 10.1 Cleaning and care

#### NOTICE

##### Bearing failure

Applying grease-dissolving substances to the bearing points, e.g. during cleaning, leads to bearing failure. There is a risk of damage to property, and service life may be reduced.

- ▶ Keep degreasers or aggressive cleaning agents away from the bearings!
- ▶ Only clean the product with a damp cloth.

### 10.2 Inspection

#### Lift unit

Regularly check the pneumatic connections for leaks.

### 10.3 Maintenance

#### Bearings

The bearings have lifelong lubrication and are maintenance-free under normal conditions of use.

#### Positioning pins

### **NOTICE**

**Operating errors and possible damage to the positioning unit when the maintenance cycles are not complied with**

The positioning pins must be replaced every 2 million cycles.

There is a risk of damage to property, and the service life may be reduced if the maintenance intervals are not complied with.

For replacing the positioning pins, see section 10.4.1.

## **10.4 Replacement of wear parts**

### **Required tools**

- Hex wrench SW13.
- Hex socket wrenches SW3, SW4, SW5, SW6.
- Cross recess screwdriver PZ2
- Caliper, 500 mm
- Rubber mallet
- Strainer
- Hand-lever press

### 10.4.1 Replacing positioning pins

#### Required accessories

- Positioning pin,  
**3 842 529 926.**
- Positioning pin,  
**3 842 529 929.**

#### Required tools

- Hex wrench SW13
- Strainer
- Hand-lever press

1. Remove the fitting screw.
2. Take off the compensating disk.
3. Push out the positioning pin.
4. Remove the positioning pin using 2 M6x35 jacking screws.
5. Install the new positioning pins.
6. Install the fitting screw.



#### Please note:

Do not damage the fittings. Otherwise, it may be necessary to use new compensating disks.

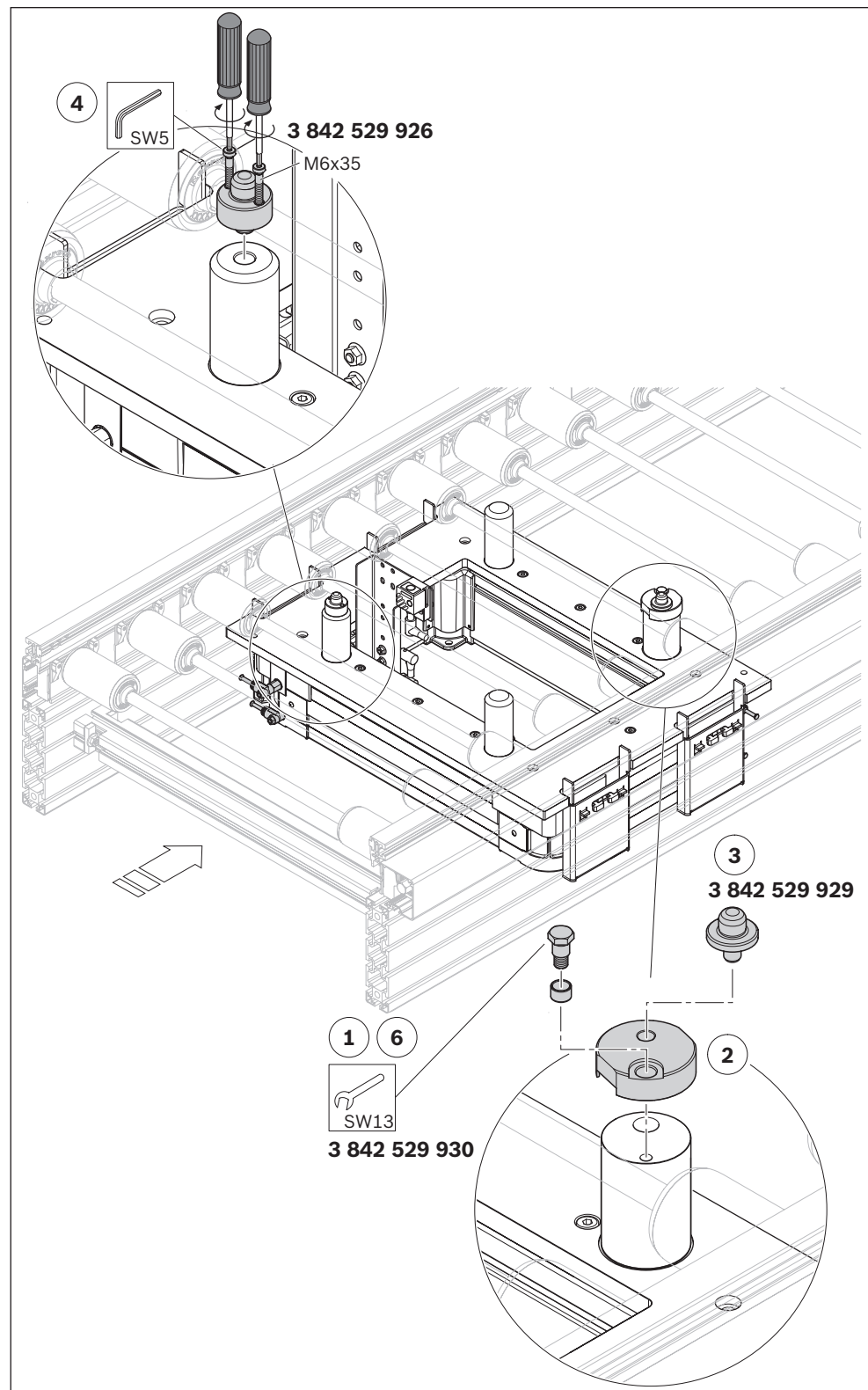


Fig. 21: Replacing positioning pins

557 616-26

### 10.4.2 Spare parts

For a list of spare parts, see MTpro, **3 842 539 057**  
(download: [www.boschrexroth.com/mtpro](http://www.boschrexroth.com/mtpro))

## 11 Decommissioning

This product does not need to be decommissioned. Accordingly, this section has been left blank.

## 12 Disassembly and replacement

### **WARNING**

#### **High electrical voltage!**

Risk of serious injury or death from electric shock.

- ▶ Disconnect the relevant system component before performing maintenance or servicing.
- ▶ Secure the system against being unintentionally switched on again.

#### **High pneumatic pressure!**

Risk of serious injury or death.

- ▶ Switch off the compressed air supply to the relevant system component before performing any maintenance or repair work.
- ▶ Secure the system against being unintentionally switched on again.

#### **Suspended loads can fall!**

Falling objects can result in serious injury (or even death).

- ▶ Only use slings with a sufficiently high bearing load (see delivery documents for the product weight).
- ▶ Make sure the lifting straps are correctly fastened before lifting the product.
- ▶ Secure the product against tipping when lifting.
- ▶ Make sure that no one but the operator is in the danger zone during lifting and lowering.

### 12.1 Preparing the product for storage/later use

- Only set the product down on a flat surface.
- Protect the product from mechanical influences.
- Protect the product from environmental influences, such as dirt and moisture.
- Observe the ambient conditions, see page 45.
- For products with a mounted motor: Support the product so that the motor is not placed under mechanical load.

## 13 Disposal

- The materials used are environmentally friendly.
- They can be recycled or reused (components may have to be processed and replaced). Recyclability is ensured by the selection of materials and the ability to take the components apart.
- Careless disposal may lead to environmental contamination.
- Dispose of the product in accordance with the regulations in your country.

## 14 Upgrading and modification

- Do not modify the product.
- The Bosch Rexroth warranty only applies to the configuration as delivered, and to approved upgrades. The manufacturer will not accept any warranty claims for systems with unapproved modifications or upgrades.

## 15 Troubleshooting and repair

- If you cannot correct a fault, go to [www.boschrexroth.com](http://www.boschrexroth.com) to find the address to contact.

## 16 Technical data

- For dimensions, see sales catalog TS 5, 3 842 540 379
- Permissible section load:
 

|         |          |
|---------|----------|
| ST 5/H  | 200 kg/m |
| ST 5/XH | 380 kg/m |
- Lift over transport level: 5 mm
- Positioning accuracy  $\pm 0.3$  mm
- Permissible vertical process force with center load 3500 N incl. WT
- Max. load: 300 kg
- Noise emission: < 70 dB (A)

### 16.1 Ambient conditions

- The transfer systems have been designed for stationary use in weather-protected areas.
- Operating temperature
 

|                                     |
|-------------------------------------|
| +5 °C to +40 °C                     |
| -5 °C to +60 °C at 20% reduced load |
- Storage temperature -25 °C to +70 °C
- Relative humidity 5% to 85%, non-condensing
- Air pressure > 84 kPa, corresponds to an altitude < 1400 m above sea level
- Max. load capacity of floor: 1000 kg/m<sup>2</sup>
- At altitudes > 1400 m, the load values of the electric drives are reduced by 15%.
- The area should be kept free of mold, fungus, rodents and other vermin.
- Do not install or operate in the immediate vicinity of industrial equipment producing chemical emissions.
- Do not install or operate near sources of sand or dust.
- Do not install or operate in areas that are regularly subjected to high-energy forces caused, for example, by presses or heavy machinery.
- Resistant to many media that are commonly found in manufacturing, such as water, mineral oil, grease, and detergents. Contact your Rexroth representative if you have any doubts about resistance to specific chemicals, such as test oil, doped oils, corrosive detergents, solvents or brake fluid.
- Avoid prolonged contact with highly reactive acidic or alkaline materials.

## 16.2 Pneumatics

- Oiled or non-oiled, filtered, dry compressed air.
- Operating pressure: 4 to 6 bar
- Solids
  - Particle size  $\leq 5 \mu\text{m}$  (Class 6 as per ISO 8573-1:2010)
  - Particle quantity  $\leq 5 \text{ mg/m}^3$  (Class 6 as per ISO 8573-1:2010)
- Humidity – water content
  - Pressure dew point <sup>1)</sup>  $\leq +3 \text{ }^\circ\text{C}$  (Class 4 as per ISO 8573-1:2010)
- <sup>1)</sup> The pressure dew point should be at least 15 °C below ambient temperature.
- Oil content
  - Oil quantity  $\leq 1 \text{ mg/m}^3$  (Class 3 as per ISO 8573-1:2010)



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