

Installation Instructions

Pneumatic drive

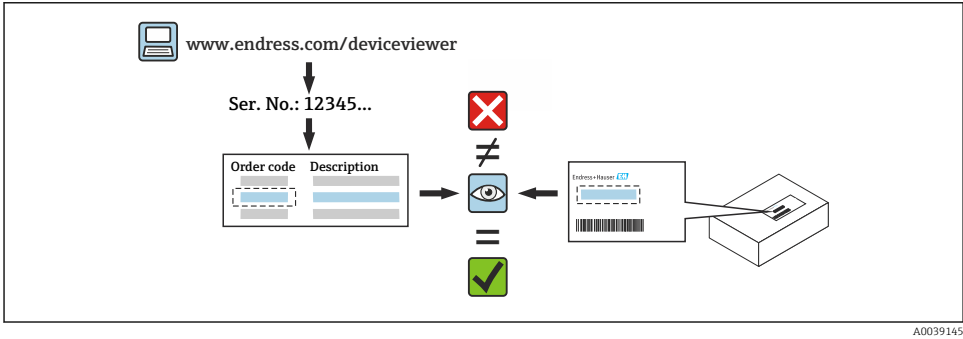
Source container FGQ61, FQG62



1 Intended use

- A defective unit can only be replaced with a functioning unit of the same type.
- Only use original parts from Endress+Hauser.
- In the *Device Viewer* (www.endress.com/deviceviewer), check whether the spare part is suitable for the device in question.

 In some devices, an overview of spare parts is provided inside the device. If the spare part set is listed in the overview, it is not necessary to check the Device Viewer.



2 Symbols

2.1 Safety symbols

WARNING

This symbol alerts you to a potentially dangerous situation. Failure to avoid this situation can result in serious or fatal injury.

CAUTION

This symbol alerts you to a potentially dangerous situation. Failure to avoid this situation can result in minor or medium injury.

2.2 Radiation warning sign



Warning symbol for radioactive source according to ISO 7010

Warning sign for ionizing radiation

Identification of places and objects in and around which the presence of ionizing radiation is to be expected.



Warning symbol for highly radioactive source according to ISO21482

High radiation warning sign

- Warns of highly radioactive substances or ionizing radiation.
- Highly radioactive sources are marked separately on the source containers with the wording "highly radioactive source" and the supplemental warning symbol according to ISO21482.

3 Requirements for the personnel

WARNING

Danger from inadequately qualified personnel.

Physical damage and personal injury. Particularly as a consequence of incorrect handling.

- ▶ The requirements for personnel described below are mandatory for the plant operator.

Authorized repair personnel

Authorized repair personnel are

- ▶ qualified specialists having the appropriate qualification for the relevant function and task and meeting the relevant national requirements,
- ▶ authorized by the plant operator and
- ▶ familiar with national regulations.

4 Safety instructions

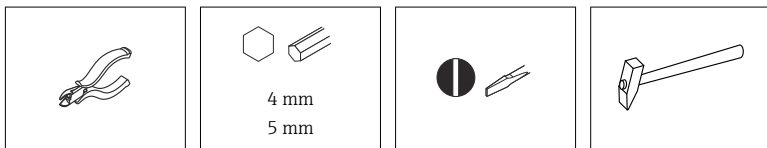
- Observe the Operating Instructions for the device.
- Comply with national regulations.
- Before removing the device: set the process to a safe state and purge the device of dangerous process substances.
- Risk of burns from hot surfaces! Before commencing work: allow the system and device to cool down to a touchable temperature.
- Modifications to the device are not permitted.
- Use original spare parts and accessories from Endress+Hauser only.

- Avoid ingress of foreign bodies, moisture or contaminants.
- If threads are damaged or defective, the device must be repaired.
- Observe the instructions for transporting and returning the device outlined in the Operating Instructions.



For information on service and spare parts, contact your Endress+Hauser sales center.

5 Tool list



6 Removal

⚠ WARNING

Radiation damage and risk of injury from ionizing radiation when replacing the spare part!

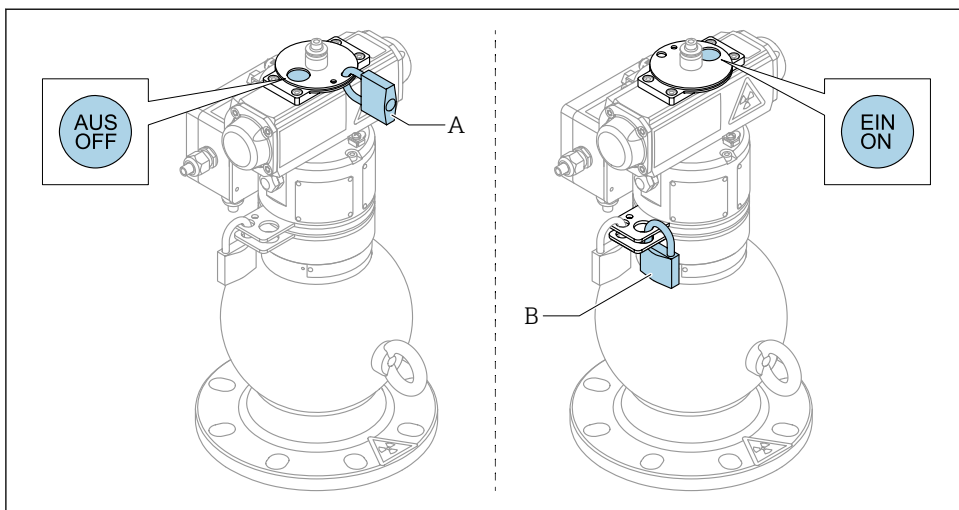
- ▶ Please follow the instructions on radiation protection contained in the Operating Instructions.
- ▶ Contact the relevant radiation safety officer for specific instructions.
- ▶ The source container must be secured in the "OFF" position.
- ▶ When working with radiation sources, avoid any unnecessary exposure to radiation.
- ▶ Keep all unavoidable radiation exposure to a minimum.
- ▶ Carry out all work from a protected position only.

⚠ CAUTION

Risk of being crushed by moving parts!

The actuator contains moving parts that can cause crushing injuries if anyone reaches into it. Hands may be crushed, resulting in personal injury.

- ▶ Do not touch the display plate or reach into the lock hole while the pneumatic auxiliary power supply of the drive is connected and active.
- ▶ When working on the source container, deactivate and lock the pneumatic auxiliary power supply.
- ▶ Do not wedge objects into the display plate to stop the drive moving.
- ▶ If the drive is blocked (e.g., due to "seizing" after being out of operation for a prolonged period), deactivate and lock the pneumatic auxiliary power supply before releasing the blockage.



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A Padlock in switch-on protection position

B Padlock in parking position

Note the following for source containers with a pneumatic actuator for switching on and off:

- The lock must be removed before automatic switching.
- When decommissioning or carrying out maintenance: secure the OFF position with a lock.



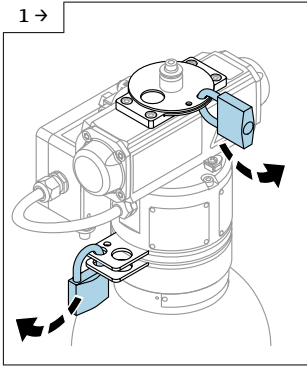
The second, lower padlock blocks access to the radiation source and must not be removed during normal operation.

6.1 Disassembling the pneumatic drive

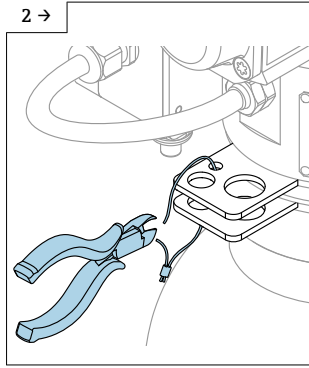
Please note the following:

- The source container must be secured in the "OFF" position.
- Switch off compressed air and remove compressed air lines.
- Remove the supply line for the proximity switches.

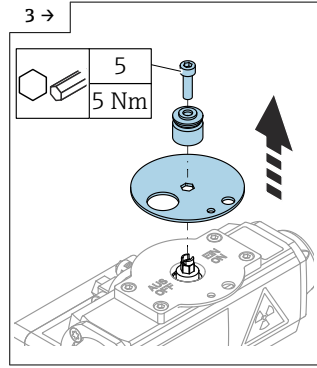
i The spare parts kit comprises a pneumatic drive unit and a spigot assembly. The two components must be replaced!



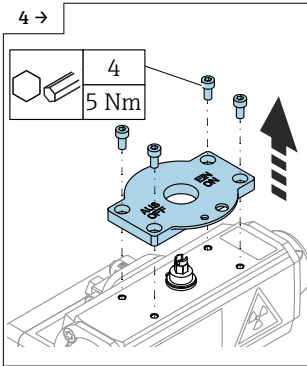
- Store the locks and accompanying keys in a safe place.



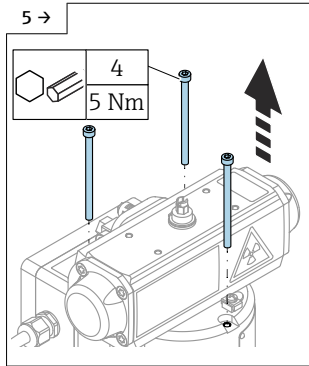
- Separate and remove the seal.



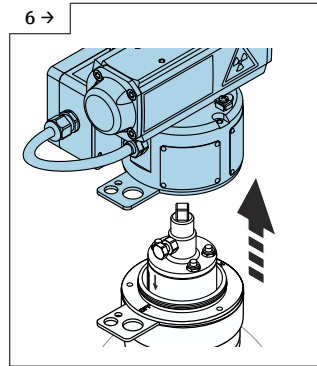
- Remove the display disk components and store in a safe place.



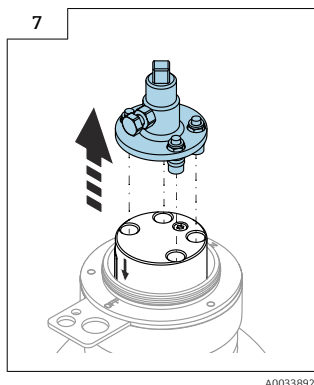
- Remove the display plate components and store in a safe place.



- Release the screws.



- Remove the drive unit.



- Remove the spigot assembly.

7 Installation

7.1 General installation instructions

Installation is performed by following the removal procedure in reverse order.

7.2 Special installation instructions

7.2.1 Installing the pneumatic drive

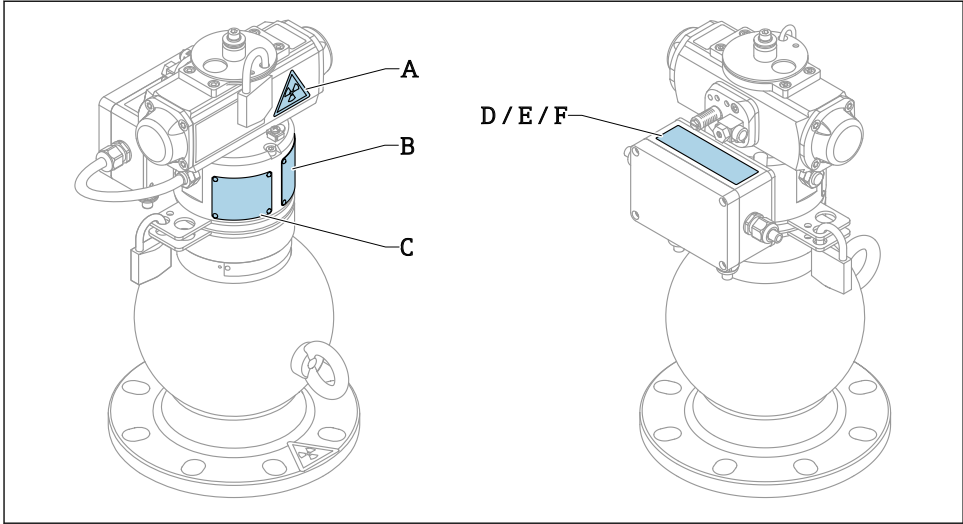
Please note the following:

- The arrow marking on the source holder is positioned above the "OFF" marking on the adapter disk (see step 6).
- Install the complete drive unit and fasten it with three screws. Use the longer screw on the protective ground connection.
- Install the display plate and the display disk (see steps 4 and 3).
- Attach padlocks and a new seal. This ensures that the radiation source is once again protected against unauthorized access.
- Connect the compressed air and supply lines to the proximity switches.

8 Attaching the nameplates

 The nameplate on the terminal housing must match the source container used.

- Apply the "Radioactivity" warning sign to the pneumatic drive.
- Select the sign for the terminal housing depending on the version of the source container and apply to the terminal housing.

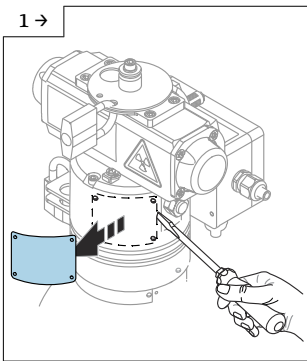


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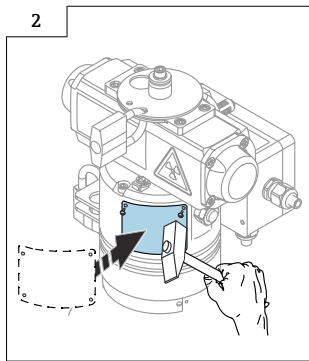
- A "Radioactive" warning sign
- B Additional nameplate
- C Nameplate of source container
- D Terminal housing nameplate, non-Ex, only for option K, M
- E Terminal housing nameplate, Ex (ATEX), only for option L, N
- F Terminal housing nameplate - Ex (EAC), only for option P, Q

8.1 Replacing the nameplate/additional nameplate

Carefully detach the nameplate and, where applicable, the additional label from the existing pneumatic drive and attach to the new drive unit using grooved pins.

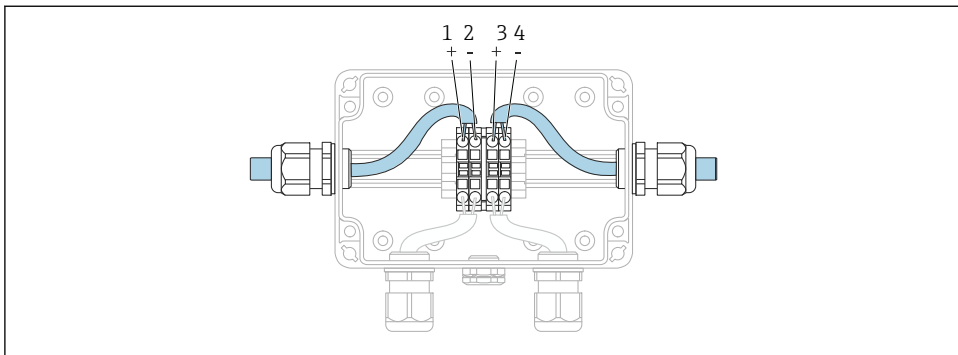


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9 Electrical connection



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1, 2 Proximity switch for "ON" switch position

3, 4 Proximity switch for "OFF" switch position

10 Visual inspection

- ☐ Is the device sealed again?
- ☐ Have all warning signs and nameplates been attached?
- ☐ Are both locks in working order and undamaged? If not, replace locks!

11 Additional test for source containers with ATEX certificate

Is the documentation (XA) present and complete?

12 Function check

Switch the compressed air on and off and check the movement of the turnable source holder and functioning of the NAMUR proximity switches.

13 Disposal

 If required by the Directive 2012/19/EU on waste electrical and electronic equipment (WEEE), the product is marked with the depicted symbol in order to minimize the disposal of WEEE as unsorted municipal waste. Do not dispose of products bearing this marking as unsorted municipal waste. Instead, return them to the manufacturer for disposal under the applicable conditions.



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