

Installation Instructions


Flanges, seals, mounting kit

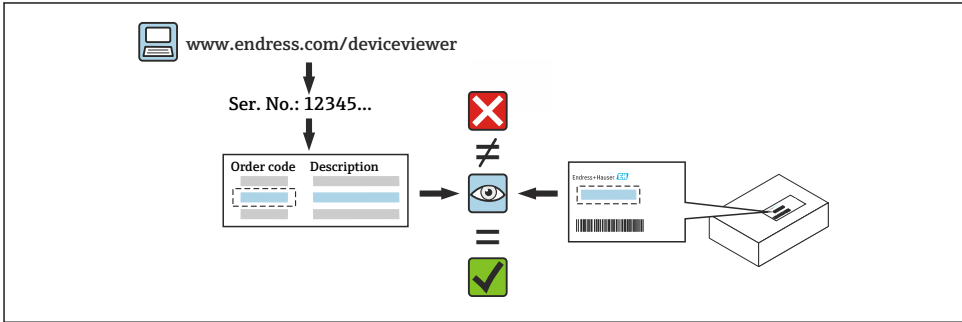
Deltabar



1 Intended use

- A defective unit can only be replaced with a functioning unit of the same type.
- Use only original parts from Endress+Hauser.
- In the W@M Device Viewer, check if the spare part is suitable for the existing device.


 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 Personnel authorized to carry out repairs

Technical staff must comply with the following requirements for repair, mounting, electrical installation and commissioning of the devices:

- Be trained in instrument safety.
- Be familiar with the individual operating conditions of the devices.
- In the case of Ex-certified devices, they must also be trained in explosion protection.

 Technical staff carrying out work are responsible for ensuring that the work is carried out safely and to the required quality standard. They must also guarantee the safety of the device following repair.

3 Safety instructions

- Comply with national regulations governing mounting, electrical installation, commissioning, maintenance and repair procedures.
- Device is live! Risk of fatal injury from electric shock. Open the device only when the device is deenergized.
- For devices intended for use in hazardous locations, please observe the instructions in the Ex documentation (XA).
- In the case of devices in safety-related applications in accordance with IEC 61508 or IEC 61511: Commission in accordance with Operating Instructions after repair.
- Before removing the device: set the process to a safe state and purge the pipe 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.
- In the case of devices in custody transfer, the custody transfer status no longer applies once the seal has been removed.
- Observe the Operating Instructions for the device.
- Risk of damage to electronic components! Ensure you have a working environment protected from electrostatic discharge.
- After removing the electronics compartment cover: risk of electrical shock due to missing touch protection!
Switch the device off before removing internal covers.
- Modifications to the device are not permitted.
- Only open the housing for short periods. Avoid ingress of foreign bodies, moisture or contaminants.
- Replace defective seals only with original seals from Endress+Hauser.
- If threads are damaged or defective, the device must be repaired.
- Do not lubricate threads (e.g. of electronics compartment cover or connection compartment cover).
- If spacing is reduced or the dielectric strength of the device is not guaranteed during repair work, perform a test on completion of the work (e.g. high-voltage test in accordance with the manufacturer's instructions).
- Service connector:
 - Do not connect in potentially explosive atmospheres.
 - Only connect to Endress+Hauser service devices.
- Observe the instructions for transporting and returning the device outlined in the Operating Instructions.



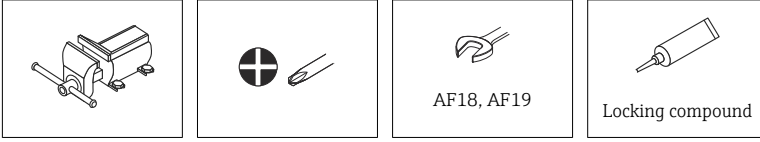
Contact Endress+Hauser Service if you have questions: www.addresses.endress.com

4 Symbols

Forbidden

Procedures, processes or actions that are forbidden.

5 Tool list



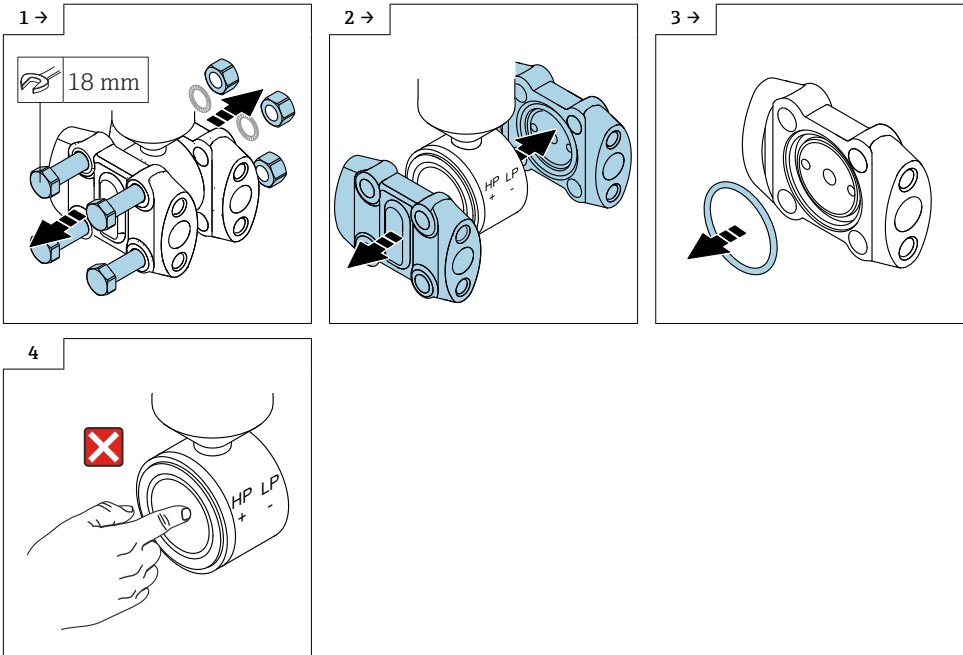
6 Removing flanges and seals

NOTICE

Controlled fabrication properties, such as a constant temperature, a set air pressure and consistent humidity, can only be achieved in the manufacturing process. After the replacement of the flanges and seals, the technical properties of the device are no longer within the specifications.

The device measures with reduced accuracy. The fault is independent of the measuring range and is 3 mbar at the very maximum.

- Observe the mounting instructions



7 Mounting the flanges and seals

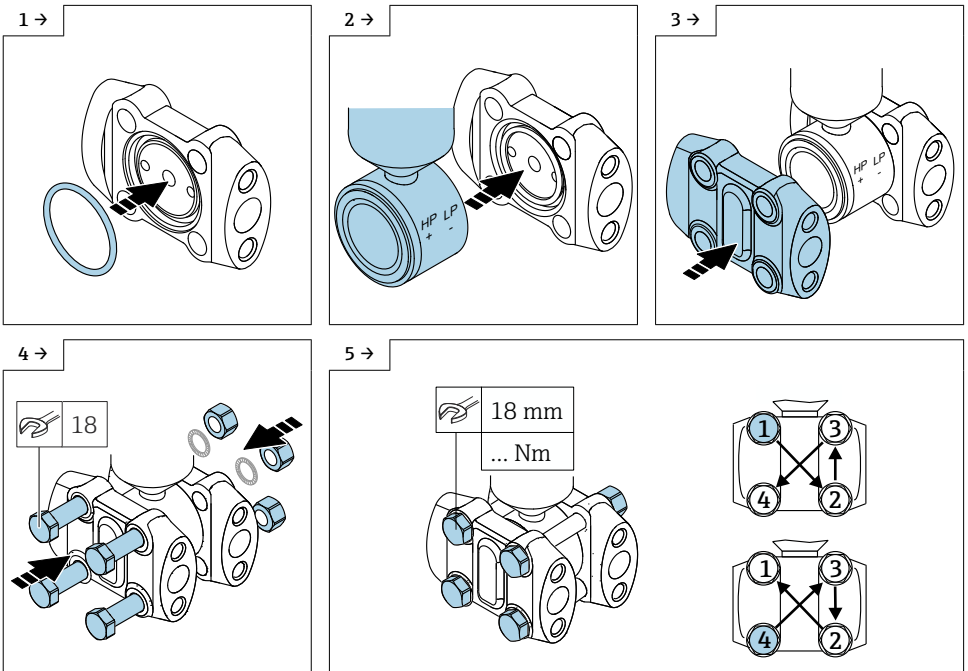
7.1 Mounting instructions

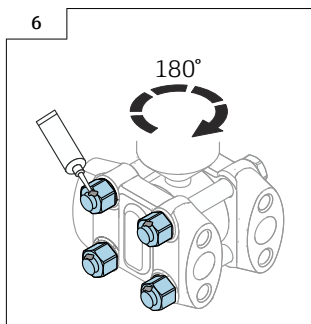
- Carefully clean both seals and flange interiors so they are free from dust and grease. The parts must not be damaged (scratches, dents).
- Any sensor orientation is possible. The markings for the LP and HP pressure sides are located on both sides of the sensor.
- Depending on the seal and pressure version, the screws are secured with toothed lock washers, or screws with an adhesive coating are used. Screws with a coating may not be used a second time.

Order the screw sets separately:

- Part number: 52020758 - screws with adhesive coating (PN160)
- Part number: 52020693 - screws and toothed lock washers (PN420)
- Tighten the threaded joints in a diagonally opposite sequence. Comply with the torques and waiting times indicated in the table below.

7.2 Mounting





8 Commissioning

1. Install the measuring instrument again at the measuring point.
2. Connect the measuring instrument.

8.1 Adjustment/Calibration

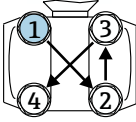
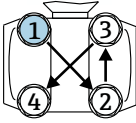
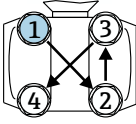
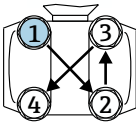
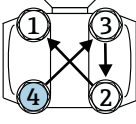
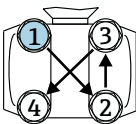
Once the device has been fully assembled, it is ready to operate again.

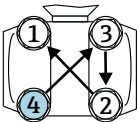
Make the following settings as specified in the Operating Instructions:

1. Reset to factory setting, this deletes customer-specific calibration data.
2. Set or calibrate the measuring range.
3. Perform position adjustment.

i Zero point and span errors can be corrected by an adjustment; however, they change over time and depending on the temperature and require readjustment.

9 Tightening torques of the flange screws

Step	Screw number		Seal	
			Elastomer ¹⁾ (PN160)	Copper
1	1		10 Nm	6 Nm
	2			10 Nm
	3			6 Nm
	4			10 Nm
2	1		42 Nm ²⁾	30 Nm
	2			
	3			
	4			
3	1		-	42 Nm ²⁾
	2			
	3			
	4			
Waiting time			-	>60 min
4	1		-	30 Nm
	2			
	3			
	4			
5	4		-	42 Nm ²⁾
	3			
	2			
	1			
Waiting time			-	>15 min
6	1		-	30 Nm
	2			
	3			
	4			

Step	Screw number		Seal	
			Elastomer ¹⁾ (PN160)	Copper
7	4		-	42 Nm ²⁾
	3			
	2			
	1			

- 1) Elastomer seal: NBR, FKM, EPDM
- 2) Tolerance +13% (hand-tighten with torque wrench)



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