

INSTALLATION INSTRUCTIONS

This instruction has been prepared for the safe and leak-tight installation of wide-tolerance flange adaptors used to connect different types of pipes (Ductile iron, Cast iron, Steel, PVC, PE, GRP, AC, etc.) to flanged equipment.

1. Pre-Installation Preparation

- **Product Check:** Verify the label information on the adaptor (DN size and tolerance range) and ensure it is suitable for the outer diameters of the pipes to be connected.
- **Flange Compatibility:** Check that the adaptor flange matches the mating flange (PN10, PN16, PN25, etc.) in terms of bolt hole number and pitch circle diameter (PCD).
- **Pipe Cutting:** Cut the pipes perpendicular (approx. 90°) to the pipe axis. Uneven cuts may prevent proper seating of the sealing gasket.
- **Surface Cleaning:** Clean rust, dirt, scale, and old coatings from the pipe ends using a wire brush. The surface in contact with the sealing gasket must be smooth and clean.
- **Chamfering (If Required):** Apply an external chamfer of approximately 30° to the pipe end if necessary. This prevents damage to the gasket during insertion.

2. Positioning and Marking

- **Insertion Depth Marking:** Measure the adaptor body length and mark a reference line on the pipe equal to half of the adaptor length.
- **Pipe Alignment:** Flange adaptors typically allow up to $\pm 3^\circ$ angular deviation; however, proper alignment is recommended for optimal performance.

3. Installation Steps

- **Lubrication:** Apply a silicone-based lubricant suitable for potable water to the gasket and pipe end. (Do not use oil-based lubricants as they may damage the gasket.)
- **Placement:** Slide the adaptor loosely onto the pipe.
- **Flange Connection:** Align the adaptor flange with the mating flange (valve or equipment). Insert a standard flange gasket between the flanges.

4. Tightening Procedure (Critical Step)

- **Flange Bolt Tightening:** First, tighten the flange bolts in a star (crosswise) pattern to fix the adaptor in position.
- **Adaptor Bolt Tightening:** Tighten the adaptor bolts diagonally (e.g., 12–6 o'clock, 3–9 o'clock). This ensures even load distribution on the gasket.
- **Gradual Tightening:** First hand-tighten all bolts, then tighten gradually in multiple passes using a wrench.

5. Final Check and Testing

- **Visual Inspection:** Ensure that the gap between the pressure flanges and the adaptor body is uniform around the entire circumference.
- **Pressure Test:** Perform a low-pressure leak test before commissioning the pipeline. If leakage is detected, recheck and retighten the bolts.



• SAFETY NOTES

- Wear protective gloves and safety footwear during installation.
- For large-diameter adaptors, use pipe supports or blocking elements to prevent excessive load on the adaptor.
- Ensure that the protective coating of bolts (galvanized, Dacromet, etc.) is not damaged to maintain corrosion resistance.