

INSTALLATION INSTRUCTIONS

This instruction has been prepared for the safe and leak-tight installation of wide-tolerance reducing couplings used to connect pipes of different diameters and materials (Ductile iron, Cast iron, Steel, PVC, PE, GRP, AC, etc.).

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.
- **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 ends 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:** Ensure both pipes are aligned as closely as possible. Universal adaptors can typically accommodate up to $\pm 6^\circ$ angular deviation; however, proper alignment is recommended for optimal performance.

3. Installation Steps

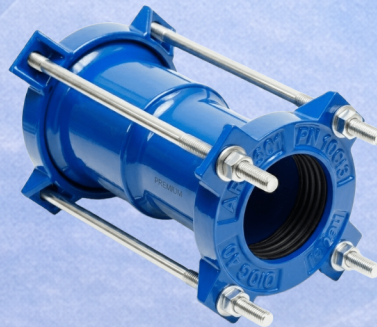
- **Lubrication:** Apply a silicone-based lubricant suitable for potable water to the gasket and pipe ends. (Do not use oil-based lubricants as they may damage the gasket.)
- **Placement:** Slide the adaptor loosely onto the first pipe, starting from the larger diameter side. Bring the second pipe into position and center the adaptor so that it equally covers both pipe ends (aligned with the reference marks).
- **Gap Control:** Ensure a gap of at least 10–20 mm between the pipe ends to allow for thermal expansion and settlement.

4. Tightening Procedure (Critical Step)

- **Cross Tightening:** Tighten the bolts in a diagonal (crosswise) sequence (e.g., 12–6 o'clock, 3–9 o'clock). This ensures even pressure 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:** Check 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.