

INSTALLATION INSTRUCTIONS

This instruction has been prepared for the safe and leak-tight installation of wide-tolerance reducing PE couplings used to connect different pipe types (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 PE pipe perpendicular (approx. 90°) to the pipe axis. Uneven cuts may prevent proper sealing.
- **Surface Cleaning:** Clean dirt, mud, scale, and any contaminants from the pipe ends. The surface in contact with the sealing gasket must be smooth and clean.
- **Chamfering:** Apply an external chamfer of approximately 30° to the pipe end. This prevents damage to the gasket during insertion.
- **Support Sleeve (SDR Condition):** For thin-walled PE pipes (SDR > 17), a stainless steel support sleeve must be inserted inside the pipe to prevent inward deformation.

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 load distribution on the gasket.
- **Gradual Tightening:** First hand-tighten all bolts, then tighten gradually in multiple passes using a wrench.
- **Tightening of PE Grip Rings:** After all bolts are fully and evenly tightened, tighten the bolts of the PE grip rings to ensure full engagement and secure axial restraint of the pipe.

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.
- **Pull-Out Check:** Gently pull the pipe backward to verify that the gripping teeth are properly engaged.
- **Pressure Test:** Perform a low-pressure leak test before commissioning the pipeline. In case of leakage, first loosen the PE grip ring bolts and recheck the tightening sequence.



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.