

INSTALLATION INSTRUCTIONS

This instruction has been prepared for the safe and leak-tight installation of wide-tolerance PE end caps used to seal the ends of pipelines made of different 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 diameter of the pipe.
- **Pipe Cutting:** Cut the pipe perpendicular (approx. 90°) to the pipe axis. Uneven cuts may prevent proper sealing.
- **Surface Cleaning:** Clean rust, dirt, scale, and any contaminants from the pipe end 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.
- **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 the full adaptor length.

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 and position it up to the marked reference line.
- **Gap Control:**
 - Ensure a gap of at least 5–10 mm between the pipe end and the blind flange 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 flange and the adaptor body is uniform around the entire circumference.
- **Pull-Out Test:** 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. If leakage is detected, recheck and retighten the bolts.

6. Thrust Block (Anchorage) Recommendation

- Although PE end caps are designed as pull-out resistant types, high internal pressure may still create axial forces that can affect long-term pipe performance.
- Therefore, it is recommended to install a concrete thrust block behind the end cap to provide additional security.



• 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.