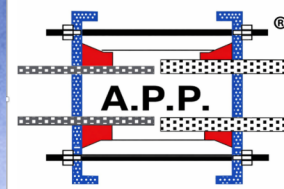


APP-F/PE

Pe Flange Adaptor



hedef
Engineering Services
Industry and Trade Inc.

INSTALLATION INSTRUCTIONS

This instruction has been prepared for the safe and leak-tight installation of wide-tolerance PE 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 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 (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) sequence 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.
- **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.