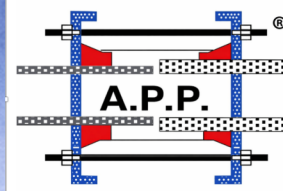


# APP-GGG

## Ductile Iron Coupling



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## INSTALLATION INSTRUCTIONS

This instruction has been prepared for the safe and leak-tight installation of wide-tolerance ductile iron couplings used to connect different types of pipes (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

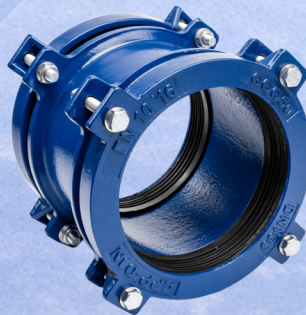
- **Lubrication:** Apply a silicone-based lubricant suitable for potable water to the gasket and pipe ends. (Do not use oil-based lubricants as they may damage the gasket.)
- **Placement:**
  - **Slide the adaptor loosely onto the first pipe:** Bring the second pipe into position and center the adaptor 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.