

## INSTALLATION INSTRUCTIONS

This instruction has been prepared for the correct and safe installation of pipe spools used to provide the required distance between two pieces of equipment or between flange adaptors in pipeline systems.

### 1. Pre-Installation Preparation

- **Product Verification:** Check the label information (DN size and tolerance range) and ensure compatibility with the pipeline.
- **Dimensional Verification:** Confirm that the spool length matches the required gap or removed section in the pipeline.
- **Flange & Pressure Rating Check:** Verify that the flange standard (PN10, PN16, ANSI, etc.) matches the existing system flanges.
- **Coating Inspection:** Inspect internal and external coatings (Epoxy, Galvanized, etc.) for any transport-related damage. Repair damaged areas prior to installation.

### 2. Installation Steps

#### 2.1 Cleaning and Preparation

- Clean all flange faces thoroughly.
- Ensure sealing surfaces are free from rust, dirt, and old gasket residues.

#### 2.2 Alignment (Centering)

- Position the flanged pipe spool between connection points.
- Ensure proper axial alignment to prevent stress on flanges and bolts.

#### 2.3 Gasket Placement

- Insert a suitable gasket (EPDM, NBR, or steel-reinforced type) between the flanges.
- Ensure the gasket is centered correctly and appropriate for the pressure class and fluid type.

#### 2.4 Bolt Tightening (Critical Step)

- Insert bolts and hand-tighten nuts until snug.
- Tighten bolts gradually using a star (crosswise) pattern to ensure even load distribution.
- Perform tightening in multiple stages to achieve uniform sealing pressure.

#### 2.5 Support and Fixing

- For long or heavy spools, use pipe supports, hangers, or base supports.
- Ensure that the spool weight is not transferred to flange connections.

### 3. Final Inspection & Testing

- **Visual Inspection:**
  - Verify that flange connections are properly aligned and bolts are evenly tightened.
- **Pressure Test:**
  - Before commissioning, perform a low-pressure leak test.
  - If leakage is detected, recheck and retighten bolts accordingly.

