

Couplings for Grooved and Plain-End Ductile Iron Pipe

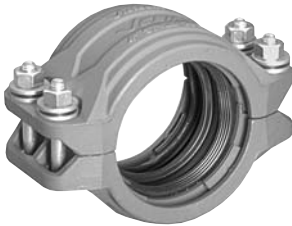
Installation Instructions



Style 31 Coupling



Style 307 Transition Coupling



Style 397 and 399 V-Grip Couplings

Style 31

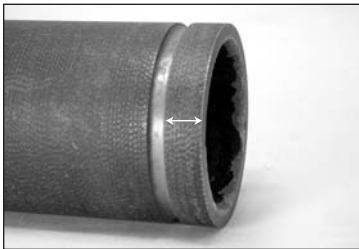
Coupling 3 – 12 inch (80 – 300 mm) Sizes

WARNING



- Read and understand all instructions before attempting to install any Victaulic piping products.
- Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products.
- Wear safety glasses, hardhat, and foot protection.

Failure to follow these instructions could result in serious personal injury, improper product installation, and/or property damage.



Lubricant or silicone lubricant to the gasket lips and exterior.

CAUTION

- Always use a compatible lubricant to prevent the gasket from pinching/tearing during installation.

Failure to follow this instruction could result in joint leakage.

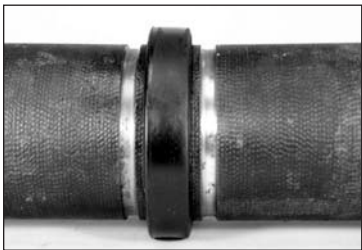
1. CHECK PIPE ENDS: The outside surface of the pipe, between the groove and the pipe end, must be smooth and free from deep pits and swells to provide a leak-tight seal for the gasket. All rust, loose scale, oil, grease, dirt, and cutting particles must be removed. Peened surfaces may require rework to provide a leak-tight seal for the gasket (refer to ANSI/AWWA C-606 or CSA B242).



3. INSTALL GASKET: Install the gasket over the pipe end. Make sure the gasket does not overhang the pipe end.



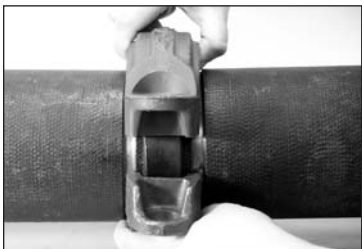
2. CHECK GASKET AND LUBRICATE: Check the gasket to make sure it is suitable for the intended service. Apply a thin coat of Victaulic



4. JOIN PIPE ENDS: Align and bring the two pipe ends together. Slide the gasket into position, and make sure it is centered between the grooves. Make sure no portion of the gasket extends into the groove on either pipe.



6. INSTALL BOLTS AND NUTS: Insert the bolts, and thread the nuts finger-tight onto the bolts. Make sure the oval neck of the bolts seat properly in the bolt holes.



5. INSTALL HOUSINGS: Install the housings over the gasket. Make sure the housings' keys engage the grooves properly on both pipes.



7. TIGHTEN NUTS: Tighten all nuts evenly by alternating sides until metal-to-metal contact occurs at the flat bolt pads. **NOTE:** It is important to tighten all nuts evenly to prevent gasket pinching.

! CAUTION

- Make sure the gasket does not become rolled or pinched while installing the housings.

Failure to follow this instruction could cause damage to the gasket, resulting in joint leakage.

Allowable Pipe-End Separation and Joint Deflection for Style 31 Couplings Flexible, Radius-Cut Grooved, Cast (Gray/Ductile) Iron Pipe

| Pipe Size | | Allowable Pipe-End Separation * inches (mm) | Deflection From Centerline | |
|------------------------------|--|--|----------------------------|--|
| Nominal Diameter inches (mm) | | | Degrees Per Coupling * | inches/one foot of Pipe (mm/one meter of Pipe) * |
| 3 80 | | 0 – 0.094 0 – 2,4 | 1° - 21' | 0.280 7,1 |
| 4 100 | | 0 – 0.094 0 – 2,4 | 1° - 8' | 0.210 5,3 |
| 6 150 | | 0 – 0.094 0 – 2,4 | 0° - 47' | 0.140 3,6 |
| 8 200 | | 0 – 0.094 0 – 2,4 | 0° - 36' | 0.110 2,8 |
| 10 250 | | 0 – 0.156 0 – 4,0 | 0° - 48' | 0.150 3,8 |
| 12 300 | | 0 – 0.156 0 – 4,0 | 0° - 41' | 0.130 3,3 |







* Standard, rigid radius-cut grooves provide no deflection or movement.

Style 31 Helpful Information

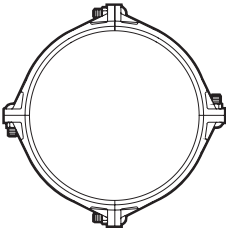
| Pipe Size | Socket Size inches |
|------------------------------|--------------------|
| Nominal Diameter inches (mm) | |
| 3 (80) | 7/8 |
| 4 (100) | 1 1/16 |
| 6 (150) | 1 1/16 |
| 8 (200) | 1 1/4 |
| 10 (250) | 1 1/4 |
| 12 (300) | 1 7/16 |

Style 31

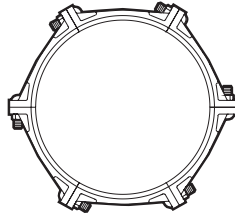
Coupling 14 – 36 inch (350 – 900 mm) Sizes

|  WARNING | | | | |
|---|---|---|---|---|
|  |  |  |  |  |
| <ul style="list-style-type: none">• Read and understand all instructions before attempting to install any Victaulic piping products.• Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products.• Wear safety glasses, hardhat, and foot protection. <p>Failure to follow these instructions could result in serious personal injury, improper product installation, and/or property damage.</p> | | | | |

Style 31 Couplings, in sizes 14 – 36 inches (388,6 – 972,8 mm), are cast in segments to ease handling and ensure coupling concentricity.

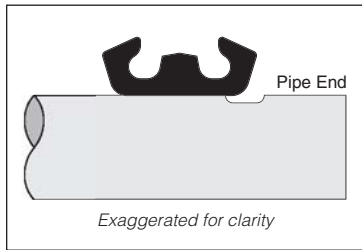


14 – 20 inch (388,6 – 548,6 mm) Sizes



24 – 36 inch (655,3 – 972,8 mm) Sizes;

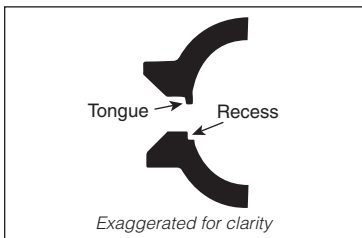
1. CHECK PIPE ENDS: The outside surface of the pipe, between the groove and the pipe end, must be smooth and free from deep pits and swells to provide a leak-tight seal for the gasket. All rust, loose scale, oil, grease, dirt, and cutting particles must be removed. Peened surfaces may require rework to provide a leak-tight seal for the gasket (refer to ANSI/AWWA C-606 or CSA B242).



4. INSTALL GASKET: For larger-size couplings, it may be easier to turn the gasket inside out, then slide it over the pipe end. Make sure the gasket does not overhang the pipe end.



5. JOIN PIPE ENDS: Align and bring the two pipe ends together. If the gasket was turned inside out in step 4, roll the gasket into position, and make sure it is centered between the grooves. Make sure no portion of the gasket extends into the groove on either pipe.



2. ASSEMBLE SEGMENTS:

Assemble the segments loosely into two equal halves, as shown above. Make sure the tongue and recess features mate properly (tongue-to-recess). Allow slight clearance between the segments to ease assembly onto the pipe.



3. CHECK GASKET AND LUBRICATE:

Check the gasket to make sure it is suitable for the intended service. Apply a thin coat of Victaulic Lubricant or silicone lubricant to the gasket lips and exterior.

! CAUTION

- Make sure the gasket does not become rolled or pinched while installing the housings.

Failure to follow this instruction could cause damage to the gasket, resulting in joint leakage.

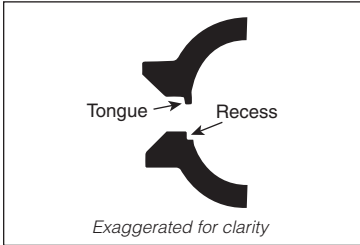
! CAUTION

- Always use a compatible lubricant to prevent the gasket from pinching/tearing during installation.

Failure to follow this instruction could result in joint leakage.



6a. INSTALL REMAINING SEGMENT ASSEMBLY: Install the second segment assembly over the gasket, making sure the tongue and recess features mate properly (tongue-to-recess). Make sure the housings' keys engage the grooves properly on both pipes. While supporting the weight of the assemblies, insert the remaining bolts, and thread the nuts finger-tight onto the bolts.
NOTE: Make sure the oval neck of all bolts seat properly in the bolt holes.



6. INSTALL FIRST SEGMENT ASSEMBLY: Install one of the pre-assembled halves over the gasket. Make sure the housings' keys engage the grooves properly on both pipes.

7. TIGHTEN NUTS: Tighten all nuts evenly by alternating sides until metal-to-metal contact occurs at the bolt pads. Make sure the housings' keys completely engage the grooves.
NOTE: It is important to tighten all nuts evenly to prevent gasket pinching.

Allowable Pipe-End Separation and Joint Deflection for Style 31 Couplings; Flexible, Radius-Cut Grooved, Cast (Gray/Ductile) Iron Pipe

| Pipe Size Nominal Diameter inches (mm) | Allowable Pipe-End Separation* inches (mm) | Deflection From Centerline | |
|--|--|----------------------------|--|
| | | Degrees Per Coupling* | inches/one foot of Pipe (mm/one meter of Pipe) * |
| 14 350 | 0 – 0.156 0 – 4,0 | 0° - 35' | 0.110 2,8 |
| 16 400 | 0 – 0.250 0 – 6,4 | 0° - 49' | 0.160 4,1 |
| 18 450 | 0 – 0.250 0 – 6,4 | 0° - 44' | 0.140 3,6 |
| 20 500 | 0 – 0.250 0 – 6,4 | 0° - 40' | 0.120 3,0 |
| 24 600 | 0 – 0.250 0 – 6,4 | 0° - 33' | 0.110 2,8 |
| 30 750 | 0 – 0.469 0 – 11,9 | 0° - 51' | 0.170 4,3 |
| 36 900 | 0 – 0.469 0 – 11,9 | 0° - 47' | 0.150 3,8 |

* Standard, rigid radius-cut grooves provide no deflection or movement.

Style 31 Helpful Information

| Pipe Size | Socket Size inches |
|---------------------------------|---------------------------------|
| Nominal Diameter inches (mm) | |
| 14 (350) | 1 ⁵ / ₈ |
| 16 (400) | 1 ⁵ / ₈ |
| 18 (450) | 1 ⁵ / ₈ |
| 20 (500) | 1 ¹³ / ₁₆ |
| 24 (600) | 1 ¹³ / ₁₆ |
| 30 (750) | 1 ¹³ / ₁₆ |
| 36 (900) | 1 ¹³ / ₁₆ |