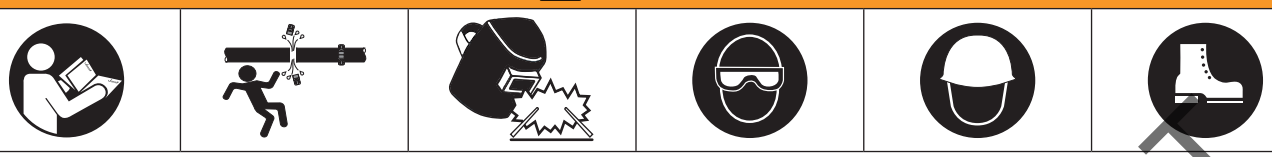
Style 809 High-Pressure Coupling for Ring Systems

IMPORTANT INFORMATION

⚠ WARNING

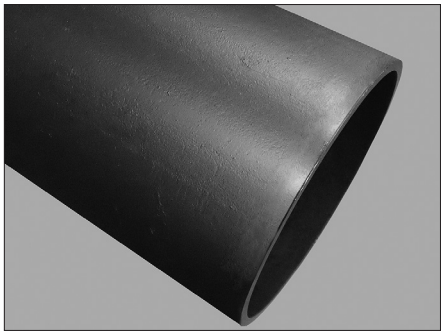


- **Read and understand all instructions before attempting to install, remove, adjust, or maintain any Victaulic piping products.**
- **Depressurize and drain the piping system before attempting to install, remove, adjust, or maintain any Victaulic piping products.**
- **Wear required personal protective equipment during the welding process, and follow all jobsite regulations regarding welding safety.**
- **Wear safety glasses, hardhat, and foot protection during the coupling installation process.**

Failure to follow these instructions could result in death or serious personal injury and property damage.

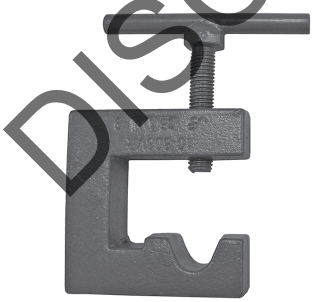
The Style 809 High-Pressure Coupling for Ring Systems is designed for installation on Schedule 80 or heavier wall carbon steel pipe that is prepared with rings supplied only by Victaulic. DO NOT attempt to install this product on pipe that is direct grooved. DO NOT attempt to install this product with rings supplied by other manufacturers.

PIPE PREPARATION



1. INSPECT PIPE ENDS: The outside surface of the pipe ends (approximately 2 inches/ 51 mm back from the ends) must be smooth and free from indentations and projections. All oil, grease, loose paint, dirt, and cutting particles must be removed.

2. Using appropriate tooling, spread the ring apart to aid in sliding the ring over the pipe end. Remove the tooling and position the ring at the required distance. Refer to the following page for the required distance from the edge of the ring to the pipe end ("B" Dimension).

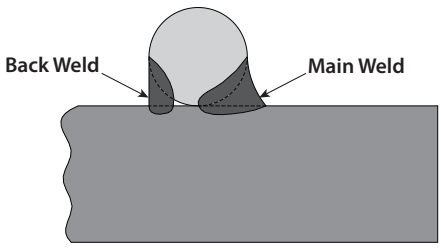


Ring clamp for 10-inch/273.0-mm pipe shown above - ring clamps for additional sizes are provided with the corresponding product size

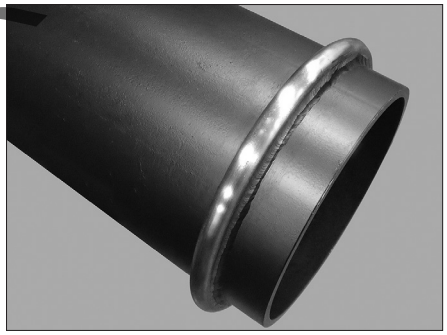
NOTE: Ring clamps are provided to hold the rings at the appropriate location on the pipe ends during tack welding.

3. Hold the rings in position by applying a ring clamp at three locations around the pipe circumference, as shown above. DO NOT cover the butt ends of the ring with a ring clamp.

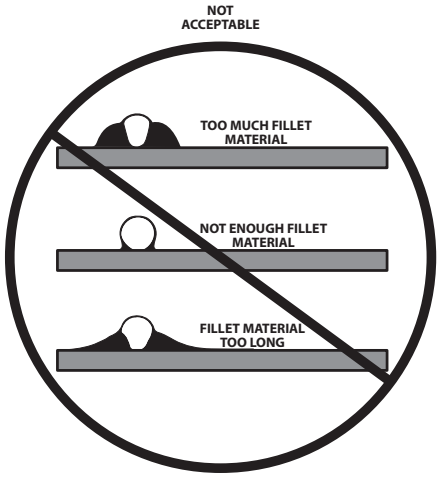
3a. Tack weld the ring to the pipe at several locations.

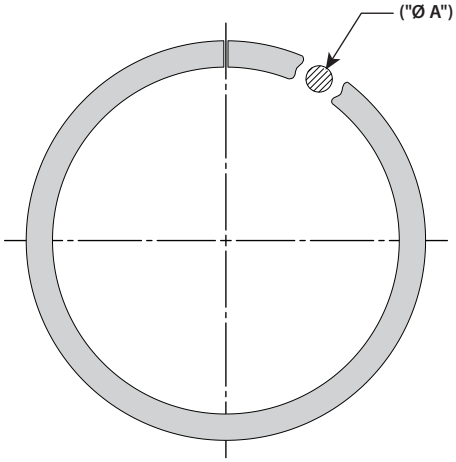


3b. Remove the ring clamps, then proceed with a full weld around the entire circumference on both sides of the ring. **NOTE: The main weld shall be located toward the pipe end, as shown in the drawing above.** Refer to the following page for complete weld requirements.

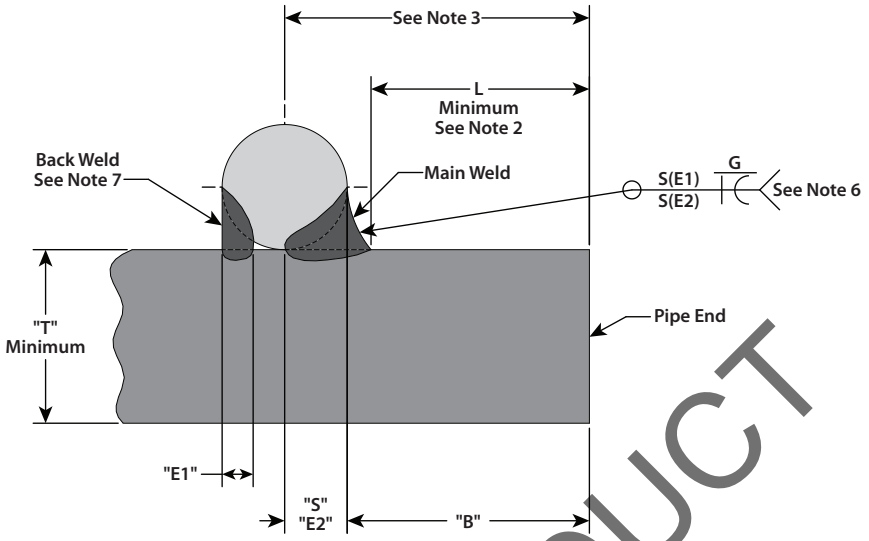


4. INSPECT RINGS AND WELDS: The outside surface of the rings must be smooth. **Any excess weld material at the back weld must be ground flush to the ring surface.**

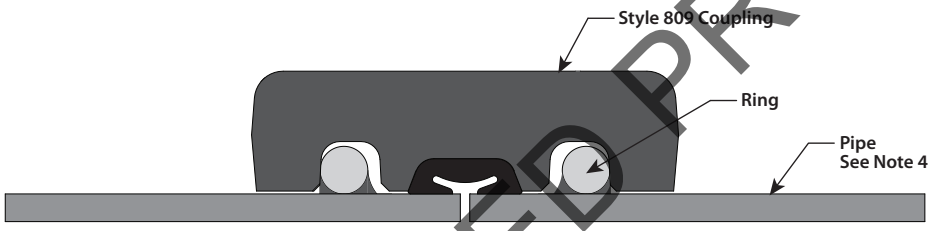




RING DETAIL



RING WELD DETAIL



MECHANICAL JOINT DETAIL

NOTES:

1. Victaulic shall supply rings unpainted with a rust-proof coating applied.
2. Surface to remain smooth in area indicated. No weld metal projection allowed.
3. This area shall be free from indentations, projections, and weld splatter to ensure a leak-tight seal. All oil, grease, and dirt must be removed.
4. Carbon steel pipe shall have a minimum yield strength of 35-ksi/241-MPa minimum (ASTM A-53 or API-5L Grade "B").
5. Minimum pipe wall thickness shown shall not include coating or lining thickness.
6. Weld procedures by others. Take precautions during welding to minimize heat buildup. Excessive heat buildup can result in ring diameter shrinkage.
7. Back weld shall not extend past the edge of the ring.

WELD SIZE TABLE

Dimensions - inches/millimeters							
Nominal Pipe Size inches/Actual mm	Ring ("Ø A")	"B"	"S"	"L" Minimum	Weld Size "E1"	Weld Size "E2"	"T" Minimum (See Note 5)
4 114.3	0.38 9.5	1.00 25.4	0.19 4.8	0.88 22.4	3/32 2.4	3/16 4.8	Schedule 80
6 168.3	0.50 12.7	1.22 31.0	0.25 6.4	1.10 27.9	1/8 3.2	1/4 6.4	Schedule 80
8 219.1	0.50 12.7	1.22 31.0	0.25 6.4	1.10 27.9	1/8 3.2	1/4 6.4	Schedule 80
10 273.0	0.63 16.0	1.22 31.0	0.31 7.9	1.10 27.9	5/32 4.0	5/16 7.9	Schedule 80

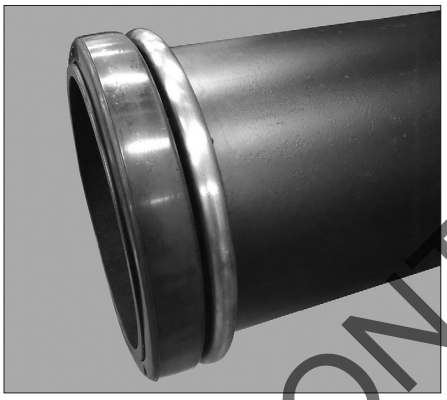
COUPLING INSTALLATION

1. CHECK GASKET AND LUBRICATE: Check the gasket to make sure it is suitable for the intended service. The color code identifies the gasket grade. Refer to Victaulic publication 05.01 in the G-100 General Catalog for the color code chart, which can be downloaded at victaulic.com. Apply a thin coat of Victaulic Lubricant or silicone lubricant to the gasket sealing lips and exterior.

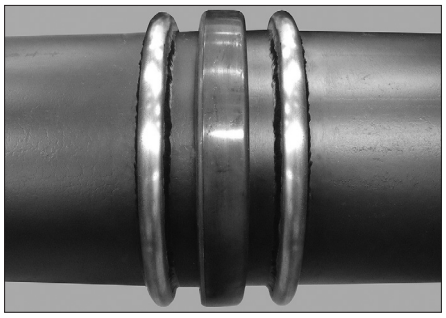
⚠ CAUTION

- **Always use a thin coat of Victaulic Lubricant or silicone lubricant to prevent the gasket from pinching/tearing during installation.**

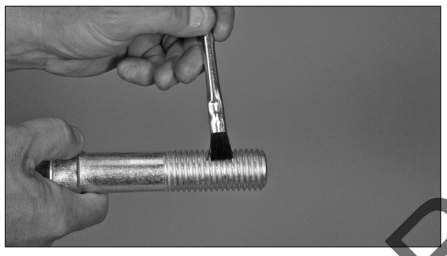
Failure to use a compatible lubricant could cause damage to the gasket, resulting in joint leakage and property damage.



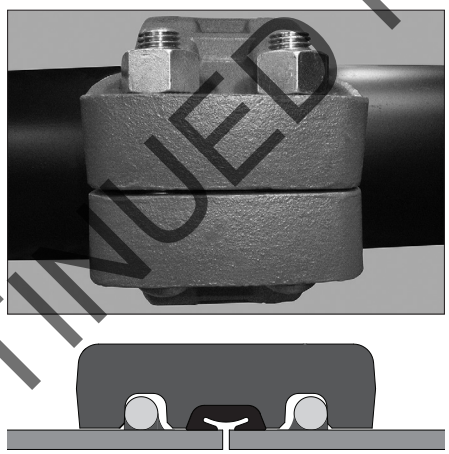
2. POSITION GASKET: Position the gasket over one pipe end. Make sure the gasket does not overhang the pipe end.



3. JOIN PIPE ENDS: Align and bring the two pipe ends together within ⅛-inch/3-mm gap. Slide the gasket into position and center it between the rings.



4. LUBRICATE BOLT THREADS: Lubricate the bolt threads with a thin coat of Victaulic Lubricant or silicone lubricant.



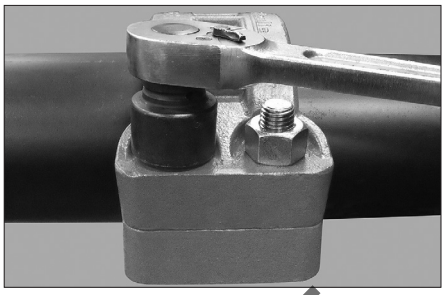
5. INSTALL HOUSINGS: Install the housings over the gasket and rings. Make sure the housings engage the rings completely on both pipe ends without interference from the applied welds. Grind welds, if necessary, in accordance with the instructions on pages 1 and 2.

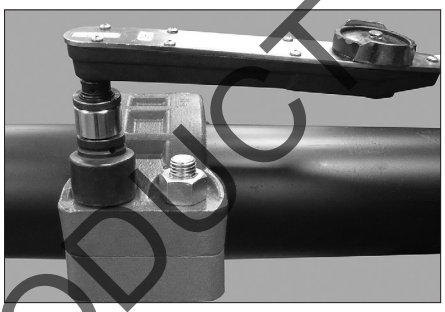
6. INSTALL BOLTS/NUTS: Install the bolts. Thread a nut finger-tight onto each bolt. Make sure the oval neck of each bolt seats properly in the bolt hole.

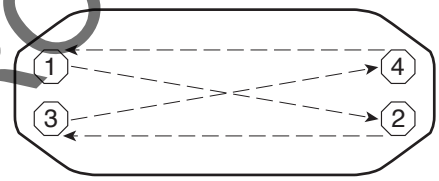
⚠ CAUTION

- **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 and/or property damage.







7. TIGHTEN NUTS: Tighten all nuts evenly by alternating sides (follow the sequence shown above). Make sure the housings' keys engage each ring completely on both pipe ends. Continue to tighten the nuts evenly until metal-to-metal contact occurs at the bolt pads **AND** the required torque value are achieved at each nut. Refer to the "Style 809 Required Assembly Torques" table. **NOTE:** It is important to tighten the nuts evenly to prevent gasket pinching. The use of a torque wrench is strongly recommended for proper assembly of Style 809 Couplings. If anything other than a torque wrench is used, the wrench handle must be long enough to permit effective tightening.

STYLE 809 REQUIRED ASSEMBLY TORQUES

Pipe Size	Actual Pipe Outside Diameter	Required Torque
Nominal inches	inches/mm	ft-lbs/N•m
4	4.500 114.3	250 339
6	6.625 168.3	450 610
8 & 10	8.625 & 10.750 219.1 & 273.0	500 678

STYLE 809 HELPFUL INFORMATION

Pipe Size	Actual Pipe Outside Diameter	Bolt Size	Socket Size
Nominal inches	inches/mm	inches/ Metric	inches/ mm
4	4.500 114.3	¾ M20	1 ¼ 32
6	6.625 168.3	1 M24	1 ⅝ 41
8 & 10	8.625 & 10.750 219.1 & 273.0	1 ⅛ M27	1 13/16 46

Instructions continue on the following page

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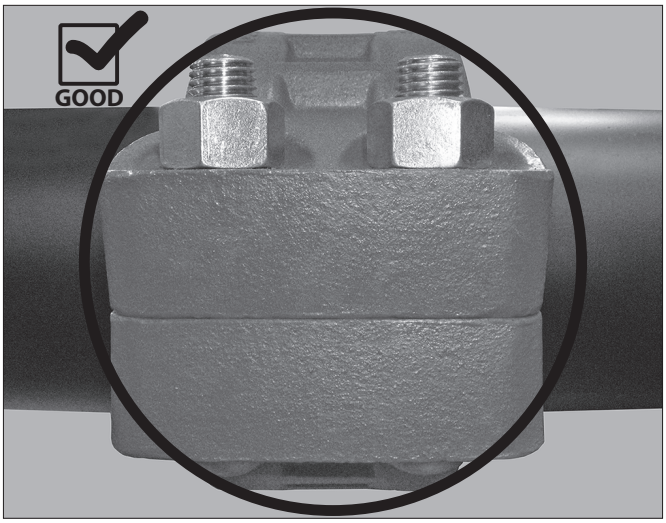

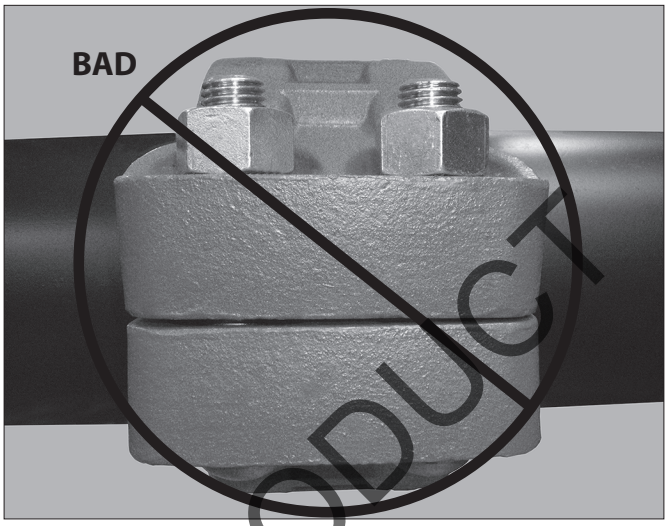

8. INSPECT BOLT PADS: Before pressurizing the system, inspect the bolt pads at each joint to ensure proper assembly is achieved. If any gaps are present at the bolt pads after the required torque values are achieved, the coupling must be removed so that the welds can be inspected. Any interference must be corrected at the welds to ensure proper coupling assembly.