

Composite Flexible Coupling

STYLE 171



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, adjust, or maintain any Victaulic piping products.
- Wear safety glasses, hardhat, and foot protection during installation.

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

INSTRUCTIONS FOR THE INITIAL INSTALLATION OF STYLE 171 COUPLINGS



1. DO NOT DISASSEMBLE THE COUPLING: Style 171 Couplings are installation ready. The coupling is designed so that the installer does not need to remove the bolts and nuts for installation. This design facilitates installation by allowing the installer to directly install grooved pipe/fitting ends into the coupling.

2. CHECK PIPE/FITTING ENDS: The outside surface of the pipe/fitting, between the groove and the pipe/fitting end, must be smooth and free from indentations, projections, weld seams, and roll marks to ensure a leak-tight seal. All oil, grease, loose paint, dirt, and cutting particles must be removed. Measurements taken across grooved pipe/fitting ends must not exceed the maximum allowable flare diameter. The pipe/fitting OD, groove dimensions, and maximum allowable flare diameter must be within the tolerances published in current Victaulic grooving specifications. **NOTE:** Maximum allowable pipe/fitting ovality should not vary by more than 1%. Greater variations between the major and minor pipe/fitting diameters will result in difficult coupling assembly.

WARNING

- A compatible lubricant must be used to prevent the gasket from pinching/tearing during installation. Always consult with the pipe manufacturer for lubricant compatibility requirements for non-metallic pipe.

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



3. CHECK GASKET: 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 or the I-100 Field Installation Handbook for the color code chart.

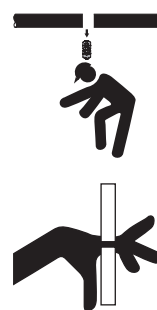
3a. LUBRICATE GASKET: For applications on all pipe materials, except for HDPE, apply a thin coat of Victaulic Lubricant only to the sealing lips of the gasket interior. DO NOT use Victaulic Lubricant on HDPE pipe (refer to the "Lubricant Compatibility for HDPE Pipe" table below and always consult with the pipe manufacturer for lubricant compatibility requirements for non-metallic pipe). **NOTE: The gasket exterior is supplied with a factory-applied lubricant, so it is not necessary to remove the gasket from the housings to apply additional lubricant to the exterior surface.**

Lubricant Compatibility for HDPE Pipe

Lubricant	Compatibility with Grade "E2" EPDM Gaskets and HDPE Pipe
Soap-Based Solutions, Glycerin, Silicone Oil, or Silicone Release Agent	Good
Corn Oil, Soybean Oil, Hydrocarbon-Based Oils, or Petroleum-Based Greases	Not Recommended

Due to variations in pipe, always consult with the pipe manufacturer for lubricant compatibility requirements for non-metallic pipe. **DO NOT USE VICTAULIC LUBRICANT ON HDPE PIPE.**

WARNING

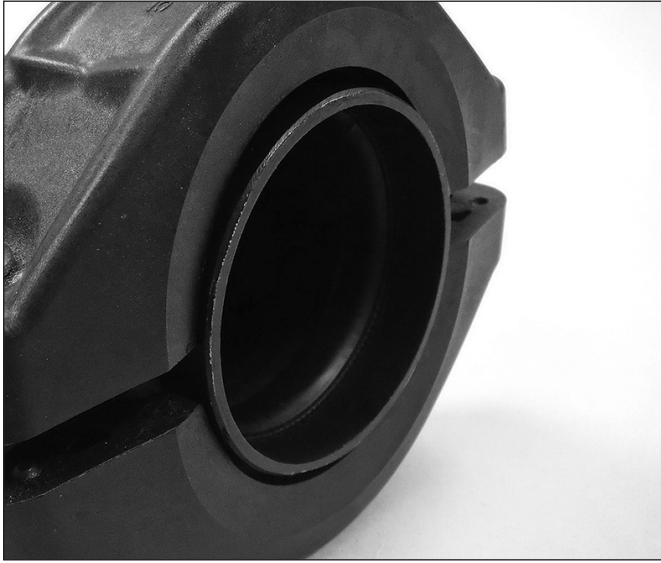


- Never leave a Style 171 Coupling partially assembled. A partially assembled Style 171 Coupling poses a drop hazard or a burst hazard during testing.
- Keep hands away from the pipe/fitting ends and the openings of the coupling when attempting to insert the grooved pipe/fitting ends into the coupling.

Failure to follow these instructions could cause serious personal injury and/or property damage.

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4. INSTALL COUPLING OVER PIPE/FITTING END: Position the coupling over the grooved pipe/fitting end. Make sure the coupling and gasket do not overhang the pipe/fitting end.



4a. Align and bring the two pipe/fitting ends together. Slide the coupling into position so that the coupling keys align with the groove in each pipe/fitting. A visual check is required to ensure the coupling keys align with the grooves in the pipe/fitting. **NOTE:** The coupling may be rotated to ensure the gasket is seated properly.

NOTE: When assembling Style 171 Couplings onto end caps, take additional care to ensure the end cap is seated fully in the coupling.

WARNING

- Nuts must be tightened evenly by alternating sides until full bolt-pad to bolt-pad contact occurs.
- **DO NOT** exceed 60 ft-lbs/81 N•m of torque on the nuts during assembly.
- Keep hands away from coupling openings during tightening.

Failure to follow these instructions could cause joint failure, serious personal injury, and property damage.



5. TIGHTEN NUTS: Tighten the nuts evenly by alternating sides until full bolt-pad to bolt-pad contact occurs. Make sure the housings' keys engage the groove in each pipe/fitting completely. **DO NOT exceed 60 ft-lbs/81 N•m of torque on the nuts during assembly.** **NOTE:** It is important to tighten the nuts evenly by alternating sides to prevent gasket pinching. An impact wrench or standard socket wrench can be used to bring the bolt pads into full contact. Refer to the "Impact Wrench Usage Guidelines" section.

Style 171 Helpful Information

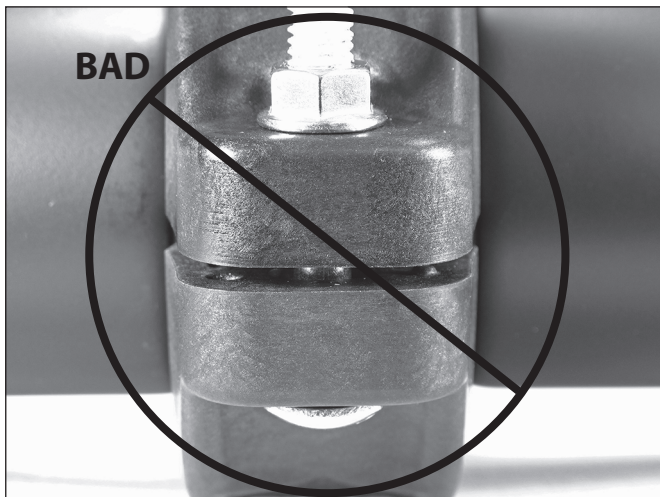
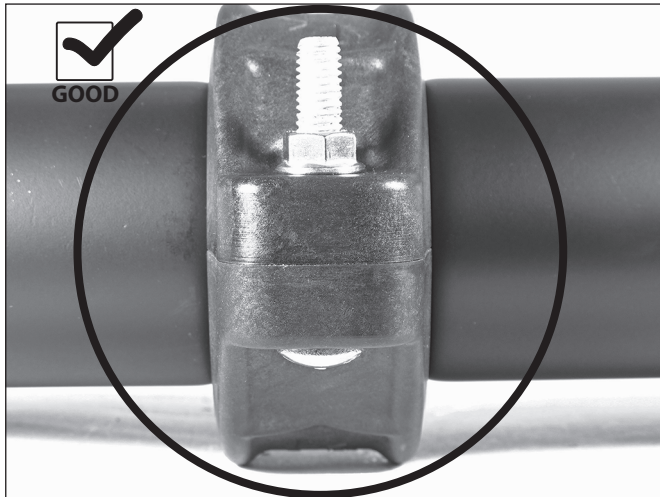
Size		Nut Size	Socket Size
Nominal Size inches or mm	Actual Pipe Outside Diameter inches/mm	inches/ Metric	inches/ Metric
1 ½ - 2 ½	1.900 - 2.875 48.3 - 73.0	¾ M10	1 ¼ 17
3 - 4	3.500 88.9	½ M12	¾ 22

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NOTICE

- Visual inspection of each joint is critical. Improperly assembled joints must be corrected before the system is placed in service.



6. Visually inspect the bolt pads at each joint to ensure full bolt-pad to bolt-pad contact is achieved.

INSTRUCTIONS FOR RE-INSTALLATION OF STYLE 171 COUPLINGS

⚠ WARNING



- Make sure the system is depressurized and drained completely before attempting to disassemble any couplings.
- Failure to follow this instruction could cause serious personal injury and/or property damage.

Since the coupling housings conform to the outside diameter of the pipe/fitting during an initial installation, direct installation of grooved pipe ends/fittings into the coupling may not be possible upon re-installation. If this is the case, refer to the following steps for re-installing the coupling.

1. Make sure the system is depressurized and drained completely before attempting to disassemble any couplings.
2. Follow steps 2 – 3 of the “Instructions for the Initial Installation of Style 171 Couplings” section.



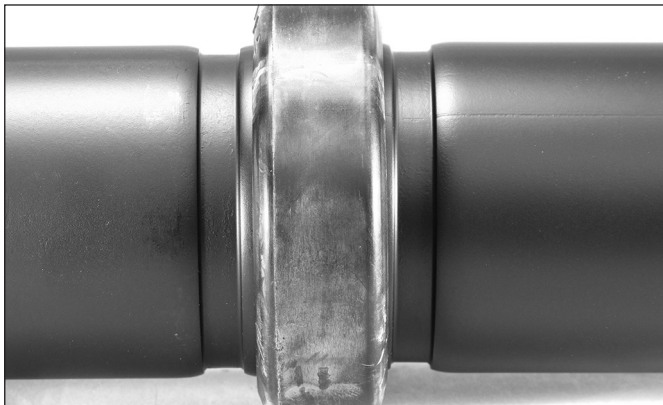
3. **LUBRICATE GASKET:** Apply a thin coat of lubricant to the gasket sealing lips and exterior. Refer to step 3A of the “Instructions for the Initial Installation of Style 171 Couplings” section for lubricant compatibility information. **NOTE:** It is normal for the gasket surface to have a hazy white appearance after it has been in service.



- 3a. **POSITION GASKET:** Position the gasket over the grooved pipe/fitting end. Make sure the gasket does not overhang the pipe/fitting end.

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4. JOIN PIPE/FITTING ENDS: Align and bring the two pipe/fitting ends together. Slide the gasket into position and center it between the groove in each pipe/fitting end. Make sure no portion of the gasket extends into the groove in either pipe/fitting end.



5. INSTALL HOUSINGS: Install the housings over the gasket. Make sure the housings' keys engage the grooves properly on both pipe/fitting ends.



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

7. TIGHTEN NUTS: Follow steps 5 and 6 of the "Instructions for the Initial Installation of Style 171 Couplings" section to complete the assembly.

IMPACT WRENCH USAGE GUIDELINES

⚠ WARNING

- Nuts must be tightened evenly by alternating sides until bolt-pad to bolt-pad contact occurs.
- **DO NOT** continue to use an impact wrench after the visual installation guidelines for the coupling are achieved.

Failure to follow these instructions could cause gasket pinching and coupling damage, resulting in joint failure, serious personal injury, and property damage.

Due to the speed of assembly when using an impact wrench, the installer should take extra care to ensure nuts are tightened evenly by alternating sides until proper assembly is complete. Always refer to the specific product installation instructions for complete installation requirements.

Impact wrenches do not provide the installer with direct "wrench feel" or torque to judge nut tightness. Since some impact wrenches are capable of high output, it is important to develop a familiarity with the impact wrench to avoid damaging or fracturing bolts or coupling bolt pads during installation. **DO NOT** continue to use an impact wrench after the visual installation guidelines for the coupling are achieved.

If the battery is drained or if the impact wrench is under-powered, a new impact wrench or a new battery pack must be used to ensure the visual installation guidelines for the coupling are achieved.

Perform trial assemblies with the impact wrench and check the assemblies with socket or torque wrenches to help determine the capability of the impact wrench. Using the same method, periodically check additional nuts throughout the system installation.

For safe and proper use of impact wrenches, always refer to the impact wrench manufacturer's operating instructions. In addition, verify that proper impact grade sockets are being used for coupling installation.

For complete contact information, visit www.victaulic.com

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