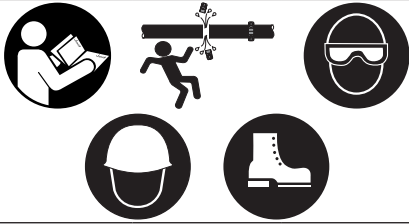


# Style 109 FireLock™ Installation-Ready™ Rigid Coupling



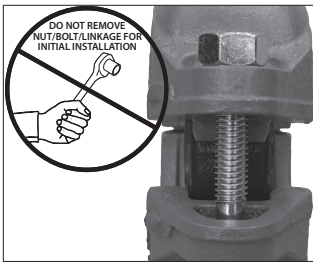
## ⚠ WARNING



- Read and understand all instructions before attempting to install any Victaulic products.
  - Always verify that the piping system has been completely depressurized and drained immediately prior to installation, removal, adjustment, or maintenance of any Victaulic products.
  - Wear safety glasses, hardhat, and foot protection.
- Failure to follow these instructions could result in death or serious personal injury and property damage.

- The Style 109 Victaulic® FireLock™ Installation-Ready™ Rigid Coupling shall be used only in fire protection systems that are designed and installed in accordance with current, applicable National Fire Protection Association (NFPA 13, 13D, 13R, etc.) standards, or equivalent standards, and in accordance with applicable building and fire codes. These standards and codes contain important information regarding protection of systems from freezing temperatures, corrosion, mechanical damage, etc.
  - These installation instructions are intended for an experienced, trained installer. The installer shall understand the use of this product and why it was specified for the particular application.
  - The installer shall understand common industry safety standards and potential consequences of improper product installation.
- Failure to follow installation requirements and local and national codes and standards could compromise system integrity or cause system failure, resulting in death or serious personal injury and property damage.

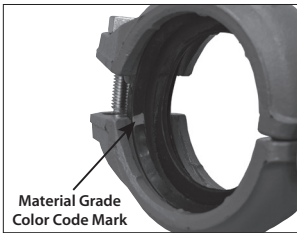
## INSTRUCTIONS FOR THE INITIAL INSTALLATION OF STYLE 109 COUPLINGS



**1. DO NOT DISASSEMBLE THE COUPLING:** Style 109 FireLock™ Installation-Ready™ Rigid Couplings are designed so that the installer does not need to remove the nut, bolt, or linkage for installation. This facilitates installation by allowing the installer to directly insert the grooved end of mating components into the coupling.

**2. CHECK MATING COMPONENT ENDS:** The outside surface of the mating components, between the groove and the mating component ends, shall be generally free from indentations, projections, weld seam anomalies, and roll marks to ensure a leak-tight seal. All oil, grease, loose paint, dirt, and cutting particles shall be removed.

The mating components' outside diameter ("OD"), groove dimensions, and maximum allowable flare diameter shall be within the tolerances published in current Victaulic Original Groove System (OGS) Specifications, publication 25.01, which can be downloaded at [victaulic.com](http://victaulic.com).



**3. CHECK GASKET:** Check the gasket to verify that it is suitable for the intended service. The color code identifies the material grade. Refer to Victaulic publication 05.01 for the color code chart, which can be downloaded at [victaulic.com](http://victaulic.com), and the "NOTICE" in the following column for important gasket information.



**3a.** If any conditions listed in the "NOTICE" are met, apply a thin coat of a compatible lubricant, such as Victaulic Lubricant or silicone lubricant, only to the gasket sealing lips.

## ⚠ CAUTION

- If any conditions listed in the "NOTICE" are met, a thin coat of a compatible lubricant shall be applied only to the gasket sealing lips to prevent pinching, rolling, or tearing during installation.
- Failure to use a compatible lubricant may cause gasket damage, resulting in joint leakage and property damage.

## NOTICE

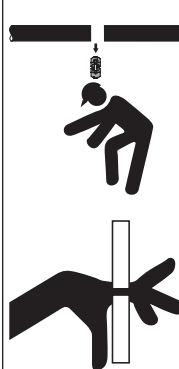
- Gaskets for Style 109 Couplings are provided with *Vic-Plus*. Additional lubrication is not required for the initial installation of wet pipe systems that are installed at or continuously operating above 0°F/-18°C. Refer to Victaulic publication 05.03 for the *Vic-Plus* Safety Data Sheet (SDS), which can be downloaded at [victaulic.com](http://victaulic.com).

Supplemental lubrication is required only if any of the following conditions exist. Apply a thin coat of a compatible lubricant to the gasket sealing lips, as noted in step 3a on this page. It is not necessary to remove the gasket from the housings to apply additional lubricant to the exterior surface.

- If the installation or continuous operating temperature is below 0°F/-18°C
- If the gasket has been exposed to fluids prior to installation
- If the surface of the gasket does not have a hazy appearance
- If the gasket is being installed into a dry pipe system
- If the system will be subjected to air tests prior to being filled with water
- If the gasket was involved in a previous installation

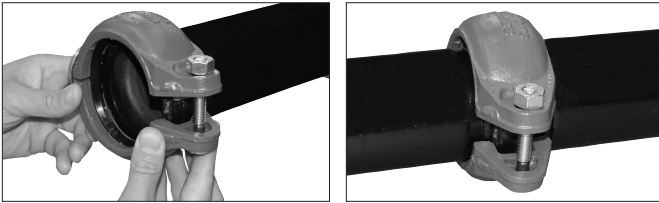
Lubricated gaskets will not enhance sealing capabilities on adverse mating component conditions. Mating component condition and preparation shall conform to the requirements listed in these product installation instructions (refer to step 2 on this page).

## ⚠ WARNING



- Never leave a Style 109 Coupling partially assembled on mating component ends. ALWAYS TIGHTEN THE HARDWARE IMMEDIATELY. A partially assembled coupling poses a drop or fall hazard during installation and a burst hazard during testing.
- Keep hands away from the mating component ends and the openings of the coupling when attempting to insert grooved mating component ends into the coupling.
- Keep hands away from coupling openings during tightening.

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



**4. ASSEMBLE JOINT:** Assemble the joint by inserting the grooved end of a mating component into each opening of the coupling. The grooved mating component ends shall be inserted into the coupling until contact with the center leg of the gasket occurs.

A visual check is required to verify that the coupling keys align with the groove in each mating component and that the gasket is seated properly. **NOTE:** The coupling may be rotated to verify that the gasket is seated properly on the mating component ends and within the coupling housings.

**IMPORTANT INFORMATION FOR USE OF STYLE 109 COUPLINGS WITH END CAPS AND FITTINGS:**

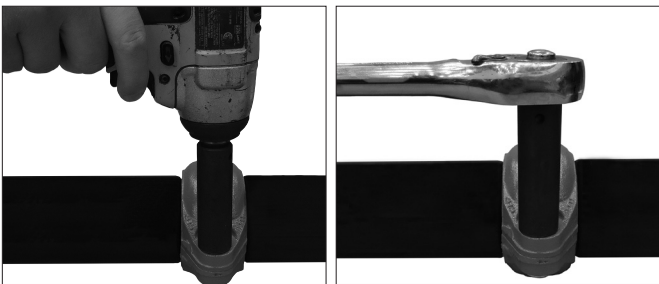
- When assembling Style 109 Couplings onto end caps, take additional care to verify that the end cap is seated fully against the center leg of the gasket.
- Use only FireLock No. 006 End Caps containing the “EZ” marking on the inside face or No. 60 End Caps containing the “EZ QV” marking on the inside face.
- Always read and follow the I-ENDCAP instructions, which can be downloaded at victaulic.com.
- Victaulic recommends the use of Victaulic fittings with Style 109 Couplings.

**WARNING**

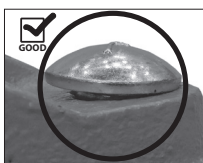
- The nut shall be tightened until metal-to-metal contact occurs at the bolt pads.

Failure to follow instructions for tightening coupling hardware could result in:

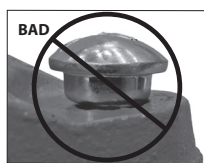
- Personal injury or death
- Bolt damage or fracture
- Damaged or broken bolt pads or coupling fractures
- Joint leakage and property damage
- A negative impact on system integrity



**5. TIGHTEN NUT:** Using an impact wrench or a standard socket wrench with an 1/16-inch/17-mm deep well socket, tighten the nut until metal-to-metal contact occurs at the bolt pads. Verify that the oval neck of the bolt seats properly in the bolt hole. DO NOT continue to tighten the nut after metal-to-metal bolt pad contact is achieved. **If you suspect that any hardware has been over-tightened (as indicated by a bend or crack in the bolt, etc.), the coupling assembly shall be replaced immediately.** Refer to the “Impact Wrench Usage Guidelines” section.



OVAL NECK OF BOLT SEATED PROPERLY



OVAL NECK OF BOLT NOT SEATED PROPERLY

**NOTICE**

- An impact wrench or standard socket wrench with a deep-well socket can be used to bring the bolt pads into metal-to-metal contact.
- Refer to the “Impact Wrench Usage Guidelines” section.

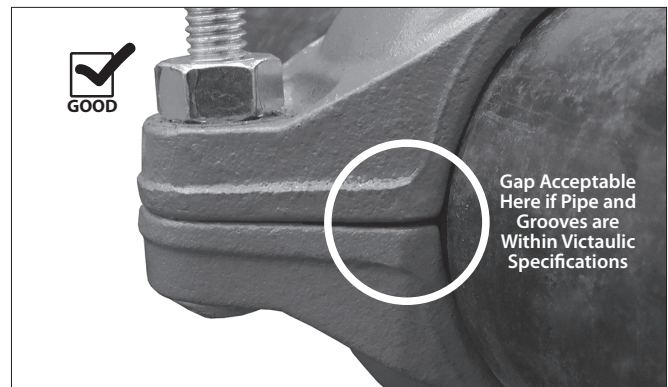
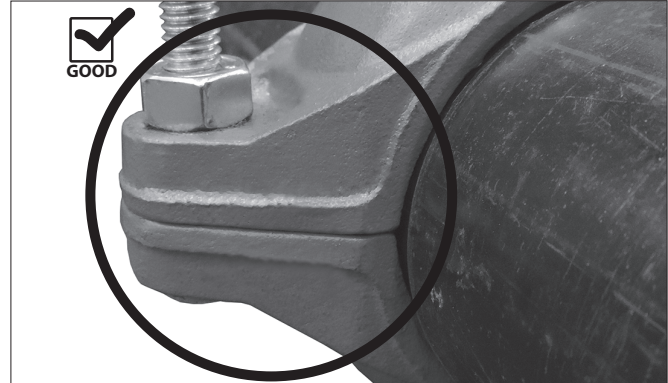
**WARNING**

- Visual inspection of each joint is required.
- Improperly assembled joints shall be corrected before the system is tested or placed into service.
- Any components that exhibit physical damage due to improper assembly shall be replaced.

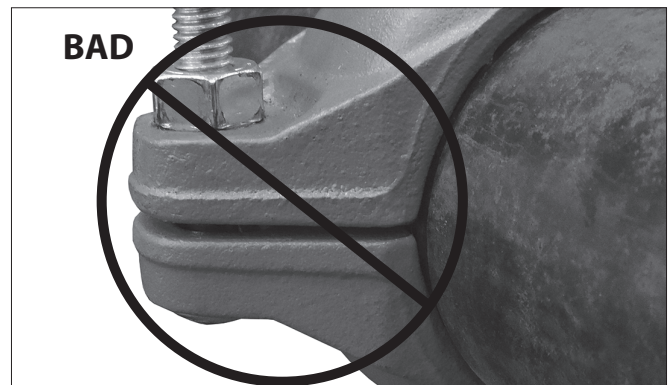
Failure to follow these instructions could cause joint failure, resulting in death or serious personal injury and property damage.

6. Visually inspect the bolt pads at the joint to verify that metal-to-metal contact is achieved, in accordance with step 5.

**Good Installations with Mating Components and Grooves Within Victaulic Specifications and Metal-to-Metal Contact at the Bolt Pads**

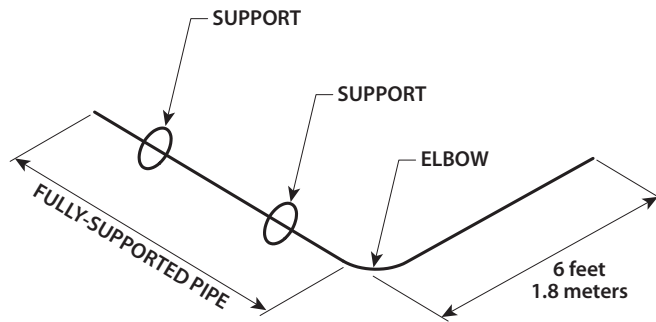
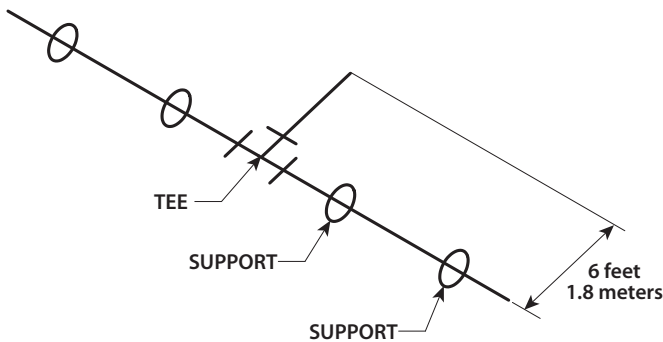
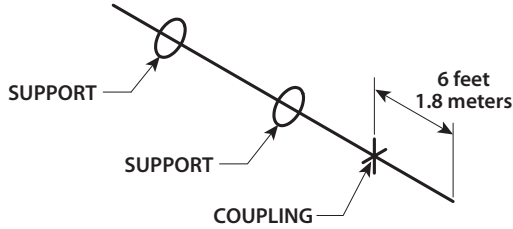


**Bad Installation with Bolt Pad Gap**



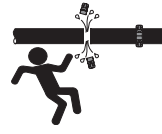
## PIPE SUPPORT REQUIREMENTS DURING CONSTRUCTION PHASE

Style 109 Couplings require pipe support during construction of the piping system to prevent coupling or joint damage, which can reduce or eliminate rigidity of the finished assembly. Listed below are maximum allowable unsupported overhung pipe lengths. Pipe lengths longer than what is listed below shall be supported per the “Rigid Systems Hanger Spacing” section of the Victaulic I-100 Field Installation Handbook.



## INSTRUCTIONS FOR REASSEMBLY OF STYLE 109 COUPLINGS

### ⚠ WARNING



- Always verify that the piping system has been completely depressurized and drained immediately prior to installation, removal, adjustment, or maintenance of any Victaulic products.

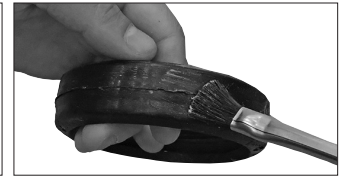
Failure to follow this instruction could result in death or serious personal injury and property damage.

1. Verify that the system is depressurized and drained completely before attempting to disassemble any couplings.
2. Loosen the nut of the coupling assembly to permit removal of the coupling from the mating component ends.
3. Remove the nut, bolt, gasket, and linkage from the housings. Inspect all components for any damage or wear. If any damage or wear is present, use a new Victaulic-supplied coupling assembly.
4. Check mating component ends, as described in step 2 on page 1.

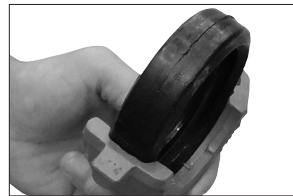
### ⚠ CAUTION

- A thin coat of a compatible lubricant shall be used to prevent the gasket from pinching, rolling, or tearing during reassembly.

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



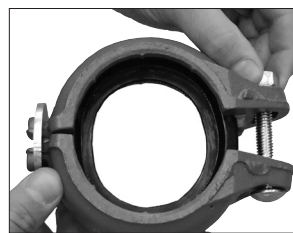
5. **FOR REASSEMBLY OF STYLE 109 COUPLINGS, LUBRICATE GASKET:** Apply a thin coat of a compatible lubricant, such as Victaulic Lubricant or silicone lubricant, to the gasket sealing lips and exterior. For gaskets that are being reused, it is normal for the gasket surface to have a hazy white appearance after it has been in service.



6. **INSTALL GASKET INTO FIRST COUPLING HOUSING:** Install the gasket into one of the housings. Verify that the gasket is seated fully in the housing's pocket.



7. **INSTALL SECOND COUPLING HOUSING AND LINKAGE:** Install the second coupling housing. Verify that the gasket is seated in the housings' pockets. Install the linkage onto the housings, as shown to the left.



8. **INSTALL BOLT AND NUT:** Install the bolt, and thread a nut onto the bolt. **NOTE:** Verify that the oval neck of the bolt seats properly in the bolt hole. **DO NOT** tighten the nut completely. The bolt pads need to be set at a gap for reinstallation of the coupling. The nut should be flush with the top of the bolt to provide the proper gap.

9. Follow steps 4 – 6 on page 2 to complete the assembly.

## Style 109 FireLock™ Installation-Ready™ Rigid Coupling

### IMPACT WRENCH USAGE GUIDELINES

#### WARNING

- The nut shall be tightened until metal-to-metal contact occurs at the bolt pads.
- **DO NOT** continue to tighten the nut after the visual installation guidelines for the coupling, described in steps 5 – 6 on page 2, are achieved.

**Failure to follow these instructions could cause joint failure, resulting in death or serious personal injury and property damage.**

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 the bolt or the coupling’s bolt pads during installation. Always choose the right size impact wrench that has enough power, but **DO NOT continue to tighten the nut after the visual installation guidelines for the coupling, described in steps 5 – 6 on page 2, are achieved. If you suspect that any hardware has been over-tightened (as indicated by a bend or crack in the bolt, etc.), the entire coupling assembly shall be replaced immediately.**

If the battery is drained or if the impact wrench is under-powered, a new battery pack or new impact wrench shall be used to ensure that the visual installation guidelines for the coupling, described in steps 5 – 6 on page 2, are achieved. **Visual inspection of each joint is required for verification of proper assembly.**

Perform trial assemblies with the impact wrench and check the assemblies with a torque wrench to help determine the suitability of the impact wrench. Using the same method, periodically check assemblies 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.

#### WARNING

**Failure to follow instructions for tightening hardware could result in:**

- Personal injury or death
- Bolt damage or fracture
- Damaged or broken bolt pads or fractures to housings
- Joint leakage and property damage
- A negative impact on system integrity