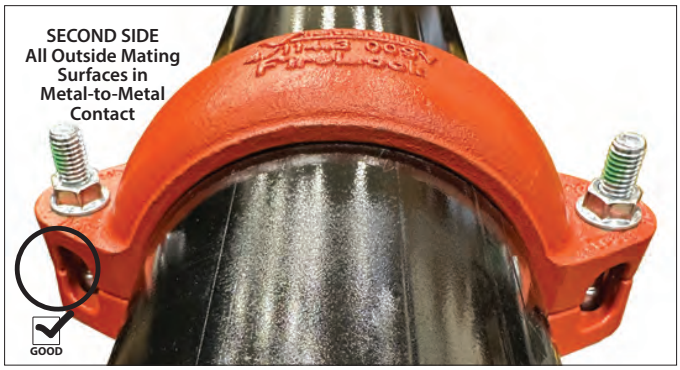
Style 009V FireLock™ Installation-Ready™ Rigid Coupling Quick Installation Guide

The information on this page is intended as a quick installation guide for typical assemblies and experienced installers. This does not replace the full installation instructions located later in this document. Always reference the full instructions for safety warnings and important information regarding pipe preparation, gasket lubrication, hardware tightening, and joint inspection requirements. This summary page only covers coupling assemblies with carbon steel hardware and gaskets that do not require supplemental lubrication. Always read the full instructions before attempting to assemble any Victaulic products.

STEP 1 – ASSEMBLE JOINT

Assemble the joint by inserting the grooved end of a mating component into each opening of the coupling until contact with the center leg of the gasket occurs.

STEP 2 – TIGHTEN NUTS (ONE-TOUCH METHOD)

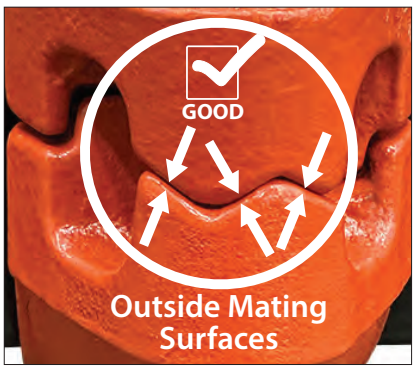


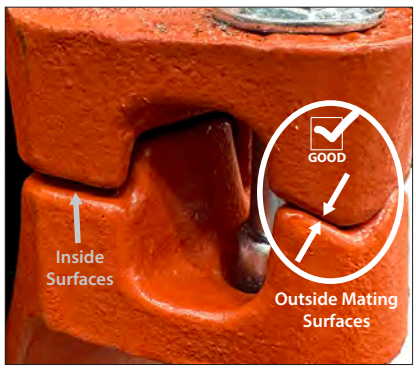
Visual contact at all outside mating surfaces is an indication of proper bolt torque and assembly.

DO NOT continue to tighten the nuts after visual, metal-to-metal contact of all outside mating surfaces is achieved.

DO NOT exceed the "Maximum Allowable Bolt Torque" values listed in the table on page 3 for either bolt.

STEP 3 – INSPECT EACH BOLT PAD LOCATION AT EVERY JOINT





PROPERLY ASSEMBLED JOINT SHOWN

METAL-TO-METAL CONTACT AS INDICATED AT ALL OUTSIDE MATING SURFACES

If metal-to-metal contact of all outside mating surfaces is not achieved at either bolt pad location, tighten the nuts until metal-to-metal contact occurs at all outside mating surfaces.

NOTE: The inside surfaces will not reach metal-to-metal contact.

Style 009V FireLock™ Installation-Ready™ Rigid Coupling

(With Zinc-Electroplated Carbon Steel or Stainless Steel Hardware)

⚠ 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.**
- **Confirm that any equipment, branch lines, or sections of piping that may have been isolated for/during testing or due to valve closures/positioning are identified, 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 009V 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 and disassembly.**

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 009V COUPLINGS WITH ZINC-ELECTROPLATED CARBON STEEL HARDWARE

1. DO NOT DISASSEMBLE THE COUPLING: Style 009V FireLock™ Installation-Ready™ Rigid Couplings are designed so that the installer does not need to remove the nuts and bolts for initial installation. This facilitates installation by allowing the installer to directly insert the grooved end of mating components into the coupling after proper mating component end preparation in accordance with Victaulic's instructions.

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.

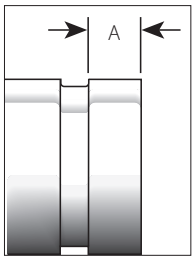
The mating components' outside diameter ("OD"), groove dimensions, and maximum allowable flare diameter shall be within the tolerances published in current Victaulic Original Groove System (OGS) specifications, publication 25.01, which can be downloaded at victaulic.com.

2a. ADDITIONAL REQUIREMENTS FOR PAINTED PIPE:

Pipe for use with Style 009V Couplings shall be grooved to Victaulic OGS specifications **BEFORE** it is painted.

If pipe is supplied painted prior to being grooved, additional inspection is required to ensure that the paint remains intact after the pipe is grooved.

- If any damage results, all paint shall be removed completely from the "A" dimension (gasket seating area), shown below.
- When removing damaged paint from the "A" dimension, care shall be taken not to negatively alter or damage that area. Reference the photos below for examples of unacceptable painted pipe ends.
- The pipe end can then be re-painted, if required. **NOTE:** The coating thickness applied to the "A" dimension and within the groove on the pipe exterior shall not exceed 0.010 inch/0.25 mm.



GOOD
PIPE END DOES NOT CONTAIN ANY DAMAGED PAINT ON THE "A" DIMENSION

BAD
PIPE END CONTAINS SEVERELY CHIPPED PAINT ON THE "A" DIMENSION

BAD
PIPE END CONTAINS PUCKERED/ WAVY PAINT ON THE "A" DIMENSION

BAD
PIPE END CONTAINS A LARGE INDENTATION IN THE PAINT ON THE "A" DIMENSION

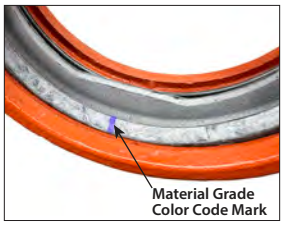
Important Information for Use of Style 009V Couplings with End Caps and Fittings

⚠ WARNING

- **Always read and follow the I-ENDCAP instructions, which can be downloaded at victaulic.com.**

Failure to follow the I-ENDCAP instructions could result in death or serious personal injury and property damage.

- When assembling Style 009V Couplings onto end caps, take additional time to inspect and verify that the end cap is seated fully against the center leg of the gasket.
- Use only Victaulic FireLock™ No. 006 End Caps containing the "EZ" marking on the inside face or Victaulic End Caps containing the "QV" or "EZ QV" marking on the inside face.
- **Always confirm that any equipment, branch lines, or sections of piping that may have been isolated for/during testing or due to valve closures/positioning are identified, depressurized, and drained immediately prior to working with an end cap.**
- Victaulic recommends the use of Victaulic FireLock™ fittings with Style 009V Couplings.



3. CHECK GASKET: Check the gasket to verify that it is suitable for the intended service. The color code identifies the material grade. **For the color code chart and complete compatibility information, reference Victaulic publications 05.01 and GSG-100, which can be downloaded at victaulic.com.**

NOTE: The gasket pre-lubrication will appear white to slightly amber in color. The color will not impact gasket or coupling performance.

Gasket Lubrication Requirements for Initial Installation

If the gasket is being installed into a wet pipe system, 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. Proceed to step 4 on this page.

Apply a thin coat of a compatible lubricant only to the gasket sealing lips, as shown to the right, if any of the following conditions exist. Reference the "Lubricant Compatibility for Gaskets" table below.

- If the gasket is being installed into a dry pipe system
- 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 has a dark black or shiny appearance
- If the system will be subjected to air tests prior to being filled with water
- If the gasket was involved in a previous installation

GOOD - THIN COAT OF LUBRICANT

BAD - EXCESSIVE LUBRICANT

⚠ CAUTION

- **For any of the conditions listed below, a thin coat of a compatible lubricant shall be applied only to the gasket sealing lips to help prevent the gasket from pinching, rolling, or tearing during installation.**
- **DO NOT use an incompatible lubricant.**
- **DO NOT use excessive lubricant on the gasket sealing lips.**

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

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 the previous page.

Lubricant Compatibility for Gaskets

The following recommendations are for the gasket materials listed. Commercial lubricants may contain multiple ingredients. Always refer to the lubricant manufacturer's recommendations for material compatibility.

	Victaulic Lubricant*	Soap-Based Solutions	Glycerin	Silicone Grease	Silicone Spray	Corn Oil	Soybean Oil	Hydrocarbon-Based Oils	Petroleum-Based Greases
Compatible with EPDM Gaskets?	Yes*	Yes	Yes	Yes	NO	NO	NO	NO	NO

*Victaulic Lubricant shall not be mixed with Poly Olester (POE) Oil during installation.

⚠ WARNING

- **Never leave a Style 009V Coupling partially assembled on mating component ends. ALWAYS TIGHTEN THE HARDWARE IMMEDIATELY, IN ACCORDANCE WITH THESE INSTRUCTIONS. 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 of each mating component and that the gasket is seated properly. **NOTE:** Prior to tightening, the coupling may be rotated to verify that the gasket is seated properly on the mating component ends and within the coupling housings.

4a. FOR VERTICAL INSTALLATIONS, REFERENCE PAGE 9 FOR IMPORTANT INFORMATION.

5. TIGHTEN NUTS: Using an impact tool or a standard socket wrench with a deep-well socket, tighten the nuts according to one of the methods detailed on page 4 or 5. **DO NOT** exceed the "Maximum Allowable Bolt Torque" values listed in the table on this page for either bolt. Always reference the "Impact Tool Usage Guidelines" and "Impact Tool Selection" sections on page 8.

NOTE: For ⅜-inch/M10 and smaller hardware sizes, Victaulic recommends the use of a ¼-inch impact driver for installation.

OVAL NECK OF BOLT
SEATED PROPERLY

OVAL NECK OF BOLT
NOT SEATED PROPERLY

5a. Verify that the oval neck of each bolt seats properly in the bolt holes.

⚠ WARNING

- **When using assembly Method 1 (One-Touch) technique detailed on page 4, it is the contractor's/installer's responsibility to use this method ONLY for Style 009V Couplings. All other Victaulic couplings shall be installed per the requirements published in their specific installation instructions.**
- **A coupling shipped with a tag attached to the bolt pads identifies a coupling that contains stainless steel hardware. Refer to page 6 for specific installation instructions.**
- **When completing the installation, DO NOT exceed the "Maximum Allowable Bolt Torque" values shown in the table below.**

Failure to tighten nuts as instructed will cause increased loading of the hardware, resulting in the following conditions:

- **Excessive bolt torque required to assemble the joint (incomplete assembly)**
- **Damage to the assembled joint (damaged or broken bolt pads or fractures to housings)**
- **Bolt fracture or damage that makes the bolt more susceptible to fracture**
- **Joint leakage and property damage**
- **A negative impact on system integrity**
- **Voiding of the Victaulic warranty**
- **Personal injury or death**

DO NOT continue to tighten the nuts after the visual bolt pad inspection requirements are achieved (per step 6 on page 5).

- **Failure to follow this instruction could result in the conditions listed above.**

NOTICE

- **An impact tool or standard socket wrench can be used to tighten the hardware. Always use deep-well sockets for installation.**
- **For ⅜-inch/M10 and smaller hardware sizes, Victaulic recommends the use of a ¼-inch impact driver for installation.**
- **Refer to the table below, along with the "Impact Tool Usage Guidelines" and "Impact Tool Selection" sections on page 8.**

FOR STYLE 009V PRODUCTS CONTAINING ZINC-ELECTROPLATED CARBON STEEL HARDWARE

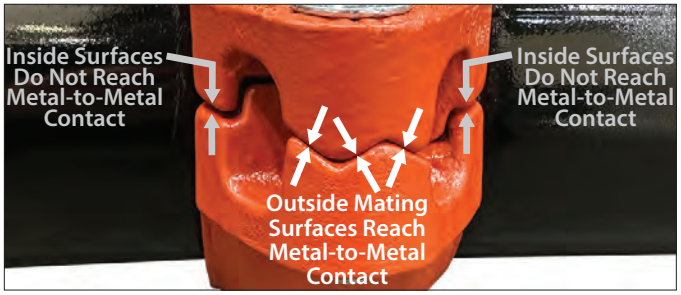
Nominal Pipe Size inches/DN	Nut Size inches/Metric	Deep-Well Socket Size inches/mm	Typical Assembly Bolt Torque*	Maximum Allowable Bolt Torque**	LPCB and VdS Minimum Allowable Bolt Torque***
1 ¼ – 4 DN32 – DN100	⅜ (Flange Nut) M10	9⁄16 15	30 ft-lbs/41 N•m (First Side) 45 ft-lbs/61 N•m (Second Side)	55 ft-lbs 75 N•m	55 ft-lbs 75 N•m
6 DN150	½ (Flange Nut) M12	¾ 18	50 ft-lbs/68 N•m (First Side) 100 ft-lbs/136 N•m (Second Side)	135 ft-lbs 183 N•m	120 ft-lbs 163 N•m
8 DN200	⅝ (Flange Nut) M16	15⁄16 24	130 ft-lbs/176 N•m (First Side) 235 ft-lbs/319 N•m (Second Side)	280 ft-lbs 380 N•m	235 ft-lbs 319 N•m
10 – 12 DN250 – DN300	⅞ (Heavy Hex Nut) M22	1 7⁄16 36	130 ft-lbs/176 N•m (First Side) 295 ft-lbs/400 N•m (Second Side)	675 ft-lbs 915 N•m	350 ft-lbs 475 N•m

* Typical Assembly Bolt Torques for nominal groove/pipe flare conditions and first side hardware torque at initial metal-to-metal bolt pad contact:

- If the assembly bolt torques exceed these values, check the groove dimensions ("C" diameter and pipe-end flare) and the initial bolt torque on the first side hardware.
  - Keep the groove dimensions toward their minimum values ("C" diameter and pipe-end flare) and **DO NOT** over-torque the first side hardware beyond initial metal-to-metal contact of the outside mating surfaces. This will noticeably reduce installation torque for this product.
  - Excessive initial tightening of the first side hardware (beyond initial metal-to-metal contact of the outside mating surfaces) will not increase the performance/sealing of the joint and will unnecessarily increase assembly torque on the second side hardware.

** Maximum allowable bolt torque values have been derived from actual test data. **These values apply ONLY to the Style 009V.**

*** LPCB and VdS compliant assemblies shall meet the Minimum Allowable Bolt Torque, as noted in the table above, for both sets of hardware.



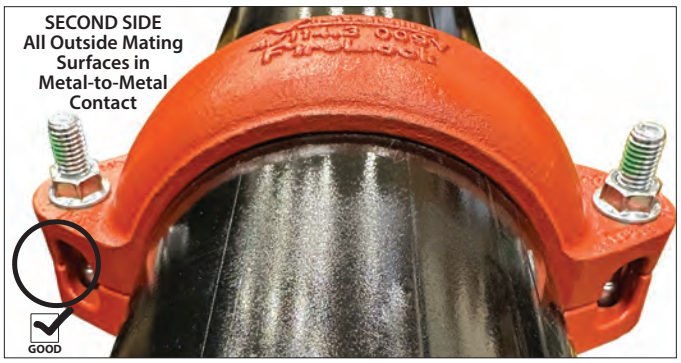
NOTICE

- **The photo to the left identifies the surfaces of the bolt pads that will be mentioned throughout the following installation steps.**

METHOD 1 (ONE-TOUCH) – FOR COUPLINGS WITH ZINC-ELECTROPLATED CARBON STEEL HARDWARE ONLY:

Style 009V Coupling hardware may be fully assembled/closed on one side before proceeding to the other side. It is the contractor's/installer's responsibility to use this installation "Method 1" ONLY for the Style 009V Coupling. All other Victaulic couplings shall be installed per the requirements published in their specific installation instructions. **NOTE: Method 1 (One-Touch) shall not be used to assemble Style 009V Couplings that contain stainless steel hardware.**

- When assembling/closing the first side, **DO NOT** continue to tighten the nuts after visual, metal-to-metal contact of all outside mating surfaces is achieved. **NOTE:** The inside surfaces will not reach metal-to-metal contact.



- When assembling/closing the second side, nuts shall be tightened until visual, metal-to-metal contact of all outside mating surfaces is achieved. **DO NOT** continue to tighten the nuts after visual, metal-to-metal contact of all outside mating surfaces is achieved. **NOTE:** The inside surfaces will not reach metal-to-metal contact.

- Visually inspect the bolt pads at the first side after tightening the second side. If metal-to-metal contact of all outside mating surfaces is not maintained at the first side, tighten the nuts until metal-to-metal contact occurs at all outside mating surfaces. **DO NOT** continue to tighten the nuts after metal-to-metal contact occurs at all outside mating surfaces.

NOTES:

- **DO NOT** exceed the "Maximum Allowable Bolt Torque" values listed in the table on page 3 for either bolt.
- Typical assembly bolt torques are listed in the table on page 3. If the assembly bolt torques exceed these values, check the groove dimensions ("C" diameter and pipe-end flare) and the initial bolt torque on the first side hardware.
  - Keep the groove dimensions toward their minimum values ("C" diameter and pipe-end flare) and **DO NOT** over-torque the first side hardware beyond initial metal-to-metal contact of the outside mating surfaces. This will noticeably reduce installation torque for this product.
  - Excessive initial tightening of the first side hardware (beyond initial metal-to-metal contact of the outside mating surfaces) will not increase the performance/sealing of the joint and will unnecessarily increase assembly torque on the second side hardware.
- If you suspect that any hardware has been over-tightened (as indicated by a bend in the bolt, bulging of the nut at the bolt pad interface, or damage to the bolt pads, etc.), the entire coupling assembly shall be replaced immediately.

METHOD 2 (ALTERNATING SIDES) – FOR COUPLINGS WITH ZINC-ELECTROPLATED CARBON STEEL OR STAINLESS STEEL HARDWARE:

As an alternative to Method 1, Style 009V Coupling hardware may be tightened evenly by alternating sides, maintaining nearly uniform bolt pad gaps, until metal-to-metal contact occurs at all outside mating surfaces of each bolt pad location. **DO NOT** continue to tighten the nuts after visual, metal-to-metal contact of all outside mating surfaces is achieved. **DO NOT** exceed the torque value listed in the "Maximum Allowable Bolt Torque" column in the table on page 3 (carbon steel hardware) or page 6 (stainless steel hardware) for the applicable hardware size. **NOTE: Method 2 (Alternating Sides) can be used to assemble Style 009V Couplings that contain either zinc-electroplated carbon steel or stainless steel hardware.**

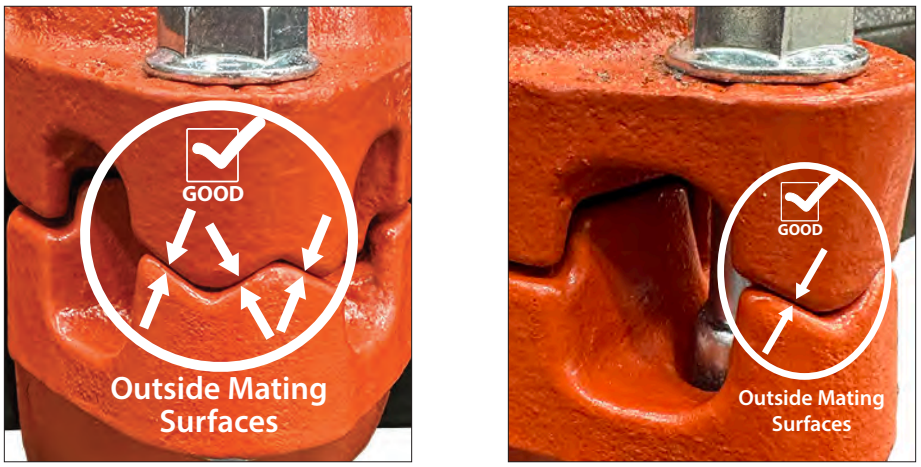
⚠ WARNING

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

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

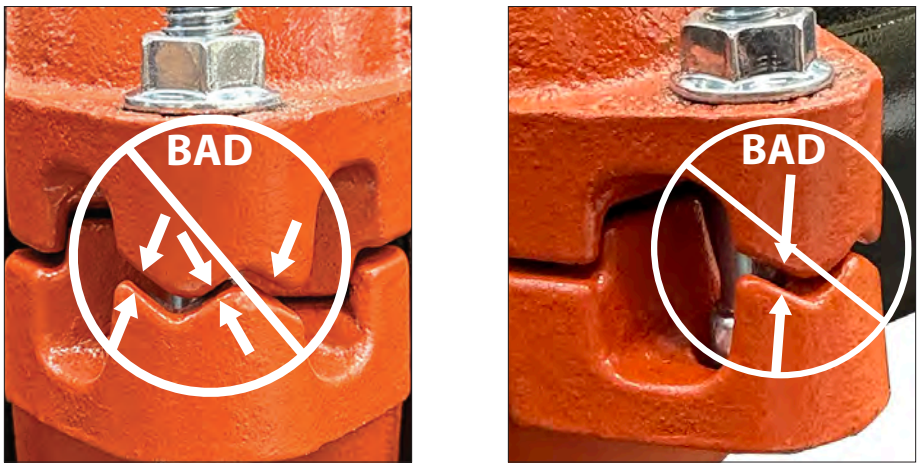
6. REQUIRED INSPECTION TECHNIQUE – VISUAL INSPECTION (ALL SIZES):

Visually inspect each bolt pad location at every joint to verify that metal-to-metal contact is achieved at all outside mating surfaces.



PROPERLY ASSEMBLED JOINT –
METAL-TO-METAL CONTACT AS INDICATED AT ALL OUTSIDE MATING SURFACES

NOTE: The inside surfaces will not reach metal-to-metal contact. Reference the previous page.



IMPROPERLY ASSEMBLED JOINT –
GAP AT OUTSIDE MATING SURFACES/UNDER-TIGHTENED

These photos represent improper assemblies, which could result in joint failure, property damage, serious personal injury, or death. Refer to the "Impact Tool Usage Guidelines" section on page 8.

INSTRUCTIONS FOR THE INITIAL INSTALLATION OF STYLE 009V COUPLINGS WITH STAINLESS STEEL HARDWARE

NOTICE

- **When stainless steel hardware is special ordered, the bolt head will contain a 316B, B8M, or A4-80 marking.**
- **Couplings with stainless steel hardware will contain a tag attached to the bolt pads. These couplings shall be installed ONLY by using the Method 2 (Alternating Sides) technique detailed below.**
- **Stainless steel bolts are provided with an anti-galling coating that shall not be tampered with or removed.**

1. Follow steps 1 – 4a on pages 1 – 2. Remove information tag immediately prior to tightening hardware.

2. TIGHTEN STAINLESS STEEL HARDWARE ONLY BY USING METHOD 2 (ALTERNATING SIDES): Using an impact tool or a standard socket wrench with a deep-well socket, tighten the nuts evenly by alternating sides, maintaining nearly uniform bolt pad gaps, until metal-to-metal contact occurs at all outside mating surfaces of each bolt pad location. **DO NOT** continue to tighten the nuts after visual, metal-to-metal contact of all outside mating surfaces is achieved. **DO NOT** exceed the torque value listed in the "Maximum Allowable Bolt Torque" column in the table below for the applicable stainless steel hardware size. Always reference the "Impact Tool Usage Guidelines" and "Impact Tool Selection" sections on page 8.
NOTE: For ⅜-inch/M10 and smaller hardware sizes, Victaulic recommends the use of a ¼-inch impact driver for installation.

3. Verify that the oval neck of each bolt seats properly in the bolt holes. Refer to step 5a on page 3.

4. Follow step 6 on page 5 to inspect the assembly.

FOR STYLE 009V PRODUCTS CONTAINING STAINLESS STEEL HARDWARE

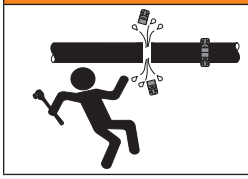
Nominal Pipe Size inches/DN	Nut Size inches/Metric	Deep-Well Socket Size inches/mm	Maximum Allowable Bolt Torque**
1 ¼ – 4 DN32 – DN100	⅜ (Flange Nut) M10	9⁄16 15	35 ft-lbs 47 N•m
6 DN150	½ (Flange Nut) M12	¾ 18	70 ft-lbs 95 N•m
8 DN200	⅝ (Flange Nut) M16	15⁄16 24	180 ft-lbs 244 N•m
10 – 12 DN250 – DN300	⅞ (Heavy Hex Nut) M22	1 7⁄16 36	440 ft-lbs 597 N•m

** Maximum allowable bolt torque values have been derived from actual test data. **These values apply ONLY to the Style 009V.**

- If the assembly bolt torques exceed these maximum allowable values, check the groove dimensions ("C" diameter and pipe-end flare) and keep the dimensions toward their minimum values.
- Replace the stainless steel hardware if the maximum allowable bolt torques are being reached but the visual inspection requirements of metal-to-metal bolt pad contact at all outside mating surfaces is not being achieved with mating components that meet Victaulic specifications.

INSTRUCTIONS FOR REASSEMBLY OF STYLE 009V COUPLINGS WITH ZINC-ELECTROPLATED CARBON STEEL OR STAINLESS STEEL HARDWARE

⚠ 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.**
- **Confirm that any equipment, branch lines, or sections of piping that may have been isolated for/during testing or due to valve closures/positioning are identified, depressurized, and drained immediately prior to installation, removal, adjustment, or maintenance of any Victaulic products.**

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

NOTICE

Two methods can be followed for reassembly of Style 009V Couplings.

- **METHOD "A" FOR REASSEMBLY: The coupling can be reassembled into its "pre-assembled" condition by installing the gasket into the housings and then inserting the bolts. Thread a nut onto each bolt until the top of the nut is flush with the end of the bolt, as shown to the left. If this method is chosen, steps 1 – 5 of this "Instructions for Reassembly of Style 009V Couplings" section, along with steps 4 – 6 on pages 2 – 5, shall be followed.**

OR

- **METHOD "B" FOR REASSEMBLY: The gasket and housings can be assembled onto the mating component ends by following all steps listed below.**

Follow these five steps for Method "A" or Method "B":

1. Verify that the system is depressurized and drained completely before attempting to disassemble any couplings.
2. Loosen the nuts of the coupling assembly to permit removal of the coupling from the mating component ends.
3. Remove the nuts, bolts, and gasket 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.

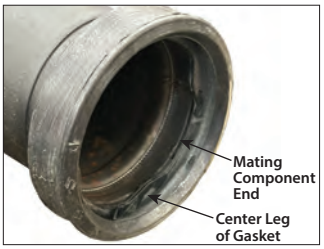
⚠ CAUTION

- **A thin coat of a compatible lubricant shall be used to help prevent the gasket from pinching, rolling, or tearing during reassembly.**
- **DO NOT use an incompatible lubricant.**
- **DO NOT use excessive lubricant on the gasket sealing lips and exterior.**

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

5. FOR REASSEMBLY OF STYLE 009V COUPLINGS, LUBRICATE GASKET: Apply a thin coat of a compatible lubricant to the gasket sealing lips and exterior. Refer to the "Lubricant Compatibility for Gaskets" table on page 2.

METHOD "B" FOR REASSEMBLY



1. Verify that steps 1 – 5 in the "Instructions for Reassembly of Style 009V Couplings" section have been followed.

2. INSTALL GASKET: Insert the grooved end of a mating component into the gasket until it contacts the center leg of the gasket. **NOTE: Use only gaskets marked with the 009V designation. Gaskets that do not contain the 009V designation are not compatible for use with the Style 009V.**

3. JOIN MATING COMPONENTS: Align the centerlines of the two grooved mating component ends. Insert the other mating component end into the gasket until it contacts the center leg of the gasket. **NOTE:** Verify that no portion of the gasket extends into the groove of either mating component.

4. INSTALL HOUSINGS: Install the housings over the gasket. Verify that the housings' keys engage the grooves completely on both mating components.

5. INSTALL BOLTS/NUTS: Install the bolts, and thread a nut onto each bolt until it is flush with the top of the bolt (reference photo in "NOTICE" above). **NOTE:** Verify that the oval neck of each bolt seats properly in the bolt hole.

6. TIGHTEN NUTS: Follow steps 5 – 6 on pages 3 – 5 to complete the assembly.

IMPACT TOOL USAGE GUIDELINES FOR STYLE 009V COUPLINGS

NOTICE

- **These guidelines are for Style 009V Couplings ONLY.**

Impact tools do not provide the installer with direct "wrench feel" to judge nut torque. Since some impact tools are capable of high output speed and torque, it is important to develop a familiarity with the impact tool to avoid over-torquing, which may damage or fracture the bolts or the coupling's bolt pads during installation.

⚠ WARNING

- **DO NOT exceed the "Maximum Allowable Bolt Torque" values specified in the table on page 3 (carbon steel hardware) or page 6 (stainless steel hardware) for the applicable hardware size.**

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

Assemble Style 009V Couplings per the instructions in this document. Tighten the nuts until the visual inspection requirements are achieved. Visual inspection of each joint is required for verification of proper assembly.

During the installation process, the installation torque shall not exceed the "Maximum Allowable Bolt Torque" values specified in the table on page 3 (carbon steel hardware) or page 6 (stainless steel hardware) for the applicable hardware size. Conditions that may result in bolt torques exceeding the "Maximum Allowable Bolt Torques":

- **Initial over-tightening of first side hardware for Method 1 (One-Touch for couplings with zinc-electroplated carbon steel hardware only)–** When assembling/closing the first side, **DO NOT** continue to tighten the nut after metal-to-metal contact of all outside mating surfaces is achieved. Additional tightening will result in excessive torque to complete installation of the second side.
- **Improperly-Sized Impact Tool –** Refer to the "Impact Tool Selection" section below.
- **Out-of-specification grooved pipe end dimensions –** If proper visual assembly is not achieved, or if the coupling assembly requires torques higher than the "Maximum Allowable Bolt Torques" shown in the table on page 3 (carbon steel hardware) or page 6 (stainless steel hardware), remove the coupling and confirm that all grooved pipe end dimensions are within Victaulic specifications. If grooved pipe end dimensions are not within Victaulic specifications, rework the pipe ends by following all instructions in the applicable pipe preparation tool's operating and maintenance manual.
- **Continued tightening of nuts after the visual inspection requirements are achieved – DO NOT** continue to tighten the nuts after the visual inspection requirements are achieved. Continuing to tighten the nuts after proper visual inspection requirements are achieved may cause joint failure, resulting in property damage, serious personal injury, or death. In addition, continued tightening may cause excessive stresses that compromise the long-term integrity of the bolts and may cause joint failure, resulting in property damage, serious personal injury, or death. Additional bolt torque will not provide a better installation; bolt torque that exceeds the "Maximum Allowable Bolt Torque" values specified in the table on page 3 (carbon steel hardware) or page 6 (stainless steel hardware) could damage or fracture the bolts and/or the coupling's bolt pads during installation.
- **Pinched gasket –** A pinched gasket could result in the inability to achieve proper visual inspection requirements. The coupling shall be disassembled and inspected to verify that the gasket is not pinched. If the gasket is pinched, a new gasket or coupling assembly shall be used.
- **Coupling was not assembled per the installation instructions –** Adherence to installation instructions will help to avoid the conditions covered in this section.

If you suspect that any hardware has been over-torqued, the entire coupling assembly shall be replaced immediately. (As indicated by a bend in the bolt, bulging of the nut at the bolt pad interface, or damage to the bolt pad, etc.)

Impact tools and the batteries that power them will decline in performance due to time and usage. It is the installer's responsibility to periodically assess the tool's performance and ensure that it continues to be capable of performing the installation requirements defined in this document.

IMPACT TOOL SELECTION FOR STYLE 009V COUPLINGS

Appropriate selection of an impact tool is required to ensure proper installation in accordance with these installation instructions. Improper impact tool selection could cause coupling mis-assembly and damage, resulting in property damage, serious personal injury, or death.

To determine the suitability of an impact tool, perform trial installation assemblies with a standard socket wrench or a torque wrench. These trial coupling assemblies shall meet the visual installation requirements listed in these installation instructions. After visual installation requirements are achieved, measure the torque applied to each nut with a torque wrench. Using the torque value measured, select an impact tool with a torque output or torque output setting that conforms to the measured value but generally does not exceed the "Maximum Allowable Bolt Torque" values specified in the table on page 3 (carbon steel hardware) or page 6 (stainless steel hardware).

NOTE: For ⅜-inch/M10 and smaller hardware sizes, Victaulic recommends the use of a ¼-inch impact driver for installation.

Selection of an Impact Tool:

Impact Tools with Single Output Torque – Selection of an impact tool with an output torque considerably higher than the required installation torque could result in hardware and/or coupling damage due to the possibility of hardware over-torque. Under no circumstances shall an impact tool be selected for use that has a torque output setting that generally exceeds the "Maximum Allowable Bolt Torque" values specified in the table on page 3 (carbon steel hardware) or page 6 (stainless steel hardware).

Impact Tools with Multiple Output Torque Settings – If an impact tool with multiple output torque settings is selected, the impact tool shall have at least one torque setting that satisfies the above requirements for an "Impact Tool with Single Output Torque."

Use of impact tools with excessive output torques creates installation difficulties for the installer due to the tool's unmanageable rotational speed and power.

Periodically check nut torque on coupling assemblies throughout the system installation process.

For safe and proper use of impact tools, always refer to the impact tool 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:

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

VERTICAL INSTALLATIONS

The guidelines listed below shall be reviewed before attempting to assemble a Style 009V in a vertical installation.

PHOTO 1 (UNACCEPTABLE) – EXCESSIVE INSERTION ANGLE

PHOTO 2 (UNACCEPTABLE) – PIPE HAS DISLODGED COUPLING

PHOTO 3 (UNACCEPTABLE) – HOUSINGS' KEYS NOT ALIGNED WITH PIPE GROOVES

PHOTO 4 (ACCEPTABLE) – HOUSINGS' KEYS ALIGNED WITH PIPE GROOVES

- Rigging of the upper pipe shall be done in a manner to ensure that the pipe is as plumb as possible without having an excessive insertion angle into the coupling. Reference Photo 1 for an example of this unacceptable condition.
- When lowering the upper pipe, use caution not to slam the pipe into the coupling housings or allow the coupling to be dislodged from the pipe. When inserting the upper pipe, the housings' keys shall maintain alignment with the the groove of each pipe. Reference Photos 2 and 3 for examples of these unacceptable conditions.
- Before tightening the nuts, verify that the housings' keys engage the grooves properly. It may be necessary to adjust the coupling to verify that the keys are aligned with the grooves. Reference Photo 4 for an example of proper pipe insertion into the coupling.

Style 009V FireLock™ Installation-Ready™ Rigid Coupling

(With Zinc-Electroplated Carbon Steel or Stainless Steel Hardware)

I-009V 20261 REV B UPDATED 12/2025 Z000009V00