

Style 107N QuickVic™ Installation-Ready™ Rigid Coupling

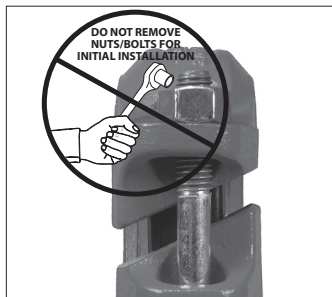


WARNING

- 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.
- 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.

INSTRUCTIONS FOR THE INITIAL INSTALLATION OF STYLE 107N COUPLINGS



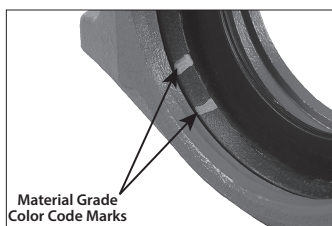
1. DO NOT DISASSEMBLE THE COUPLING: Style 107N QuickVic™ Installation-Ready™ Rigid Couplings are designed so that the installer does not need to remove the nuts and bolts for initial installation. This facilitates installation by allowing the installer to directly insert the grooved end of mating components into the coupling.

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.

NOTICE

- Victaulic does not recommend the use of any furnace butt-welded pipe in sizes NPS 2" | DN150 and smaller with Victaulic gasketed joint products. This includes, but is not limited to, ASTM A53 Type F pipe.



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.

CAUTION

- A thin coat of a compatible lubricant shall be applied only to the gasket sealing lips to help prevent pinching, rolling, or tearing during installation.
- 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.



4. LUBRICATE GASKET: Apply a thin coat of a compatible lubricant, such as Victaulic Lubricant or an EPDM-compatible lubricant, only to the gasket sealing lips. Silicone grease may be used (silicone spray is not a compatible lubricant). **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.

WARNING

- Never leave a Style 107N 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.



5. 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 107N COUPLINGS WITH END CAPS AND FITTINGS:

- When assembling Style 107N 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 End Caps containing the “QV” or “EZ QV” marking on the inside face.
- Always read and follow the I-ENDCAP instructions, which can be downloaded at victaulic.com.
- 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 fittings with Style 107N Couplings.

⚠ WARNING

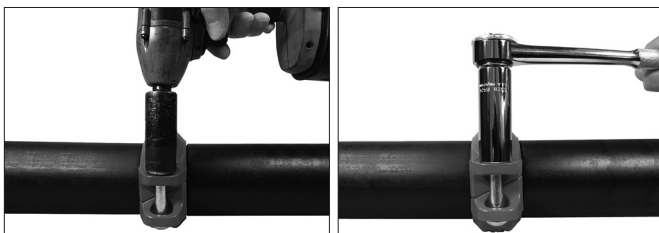
- Nuts shall be tightened evenly by alternating sides until metal-to-metal contact occurs at the angled bolt pads, as indicated in steps 6 and 7.
- Equal and positive or neutral offsets shall be present at the angled bolt pads, as indicated in steps 6 and 7.
- **DO NOT** overtighten coupling hardware.

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

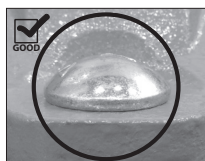
- Personal injury or death
- Bolt damage or fracture
- Damaged or broken bolt pads or coupling fractures
- Joint leakage and property damage
- A negative impact on system integrity

NOTICE

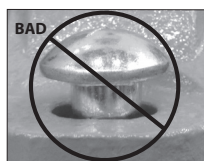
- It is important to tighten the nuts evenly by alternating sides to prevent gasket pinching.
- An impact tool or standard socket wrench with a deep-well socket can be used to bring the bolt pads into metal-to-metal contact.
- Refer to the “Helpful Information” and “Impact Tool Usage Guidelines” sections.



6. TIGHTEN NUTS: Using an impact tool or a standard socket wrench with a deep well socket, tighten the nuts evenly by alternating sides until metal-to-metal contact occurs at the angled bolt pads. Equal and positive or neutral offsets shall be present at the bolt pads. Verify that the oval neck of each bolt seats properly in the bolt holes. **DO NOT** continue to tighten the nuts after metal-to-metal bolt pad contact is achieved. **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 pad, etc.), the entire coupling assembly shall be replaced immediately.** Refer to the “Helpful Information” and “Impact Tool Usage Guidelines” sections.



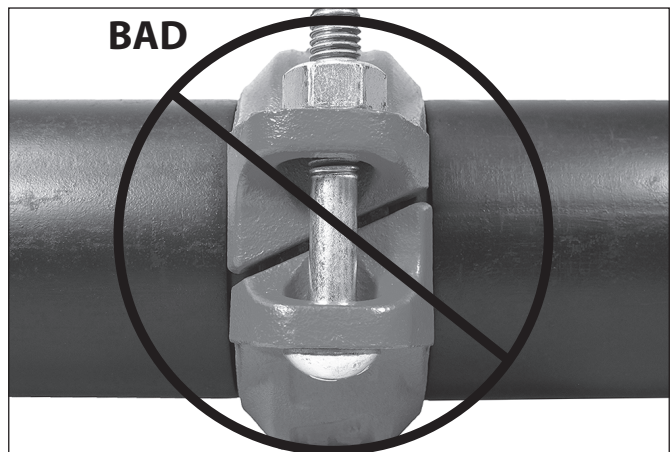
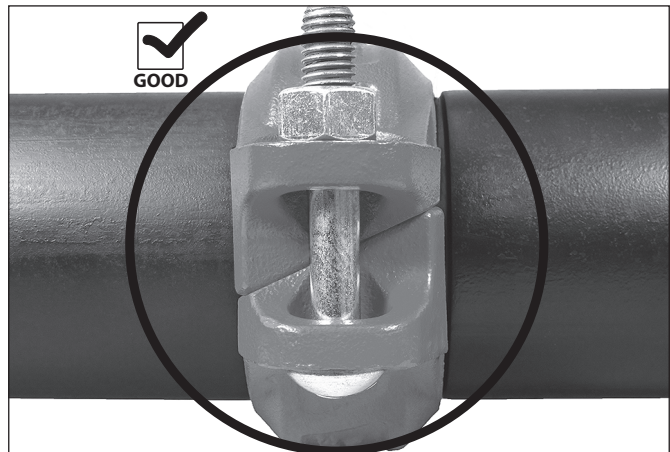
OVAL NECK OF BOLT SEATED PROPERLY



OVAL NECK OF BOLT NOT SEATED PROPERLY

HELPFUL INFORMATION

Nominal Size inches/DN	Actual Pipe Outside Diameter inches/mm	Nut Size inches/ Metric	Deep-Well Socket Size inches/mm
2 – 4 DN50 – DN100	2.375 – 4.500 60.3 – 114.3	½ M12	⅞ 22
	5.250 133.0	⅝ M16	1 ⅛ 27
DN125	5.500 139.7	⅝ M16	1 ⅛ 27
5	5.563 141.3	⅝ M16	1 ⅛ 27
	6.250 – 6.500 159.0 – 165.1	⅝ M16	1 ⅛ 27
6 DN150	6.625 168.3	⅝ M16	1 ⅛ 27
	8.515 216.3	¾ M20	1 ¼ 32
8 DN200	8.625 219.1	¾ M20	1 ¼ 32
10 – 12 DN250 – DN300	10.528 – 12.750 267.4 – 323.9	⅞ M22	1 ⅛ 36



7. Visually inspect the bolt pads at each joint to verify that metal-to-metal contact is achieved across the entire bolt pad section. Equal and positive or neutral offsets shall be present at each bolt pad, in accordance with step 6.

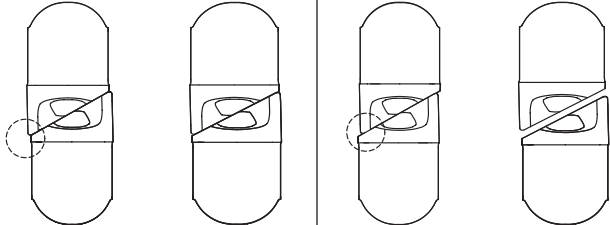
⚠ WARNING

- 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 before the system is tested or placed into service.

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

✔ GOOD

⊘ BAD



<p>PROPERLY ASSEMBLED JOINT</p> <p>POSITIVE OFFSET WITH BOLT PAD CONTACT</p>	<p>PROPERLY ASSEMBLED JOINT</p> <p>NEUTRAL OFFSET WITH BOLT PAD CONTACT</p>	<p>IMPROPERLY ASSEMBLED JOINT</p> <p>NEGATIVE OFFSET</p>	<p>IMPROPERLY ASSEMBLED JOINT</p> <p>BOLT PAD GAP</p>
---	--	---	--

- “Negative” bolt pad offsets can occur when the nuts are not tightened evenly, which produces over-tightening of one side and under-tightening of the other side. In addition, “negative” offsets can occur if both nuts are under-tightened.

INSTRUCTIONS FOR REASSEMBLY OF STYLE 107N 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.

- 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 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 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 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 107N COUPLINGS, LUBRICATE GASKET:** Apply a thin coat of a compatible lubricant, such as Victaulic Lubricant or an EPDM-compatible lubricant, to the gasket sealing lips and exterior. Silicone grease may be used (silicone spray is not a compatible lubricant).

NOTICE

Two methods can be followed for reassembly of Style 107N Couplings.



- **METHOD 1 FOR REASSEMBLY:** The coupling can be reassembled into its “installation-ready” condition by installing the gasket into the housings, then inserting the bolts and threading a nut onto each bolt until 2 – 3 threads are exposed, as shown to the left. If this method is chosen, steps 1 – 5 on this page, along with steps 5 – 7 on pages 1 and 2, shall be followed.

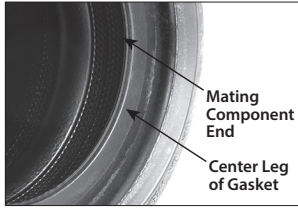
OR

- **METHOD 2 FOR REASSEMBLY:** The gasket and housings can be assembled onto the mating component ends by following steps 1 – 5 on this page, along with all steps in the “Method 2 for Reassembly” section on the following page.

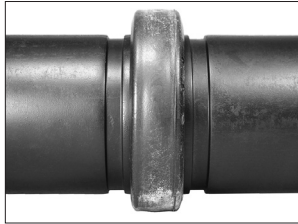
Style 107N QuickVic™ Installation-Ready™ Rigid Coupling

METHOD 2 FOR REASSEMBLY

1. Verify that steps 1 – 5 in the “Instructions for Reassembly of Style 107N 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.



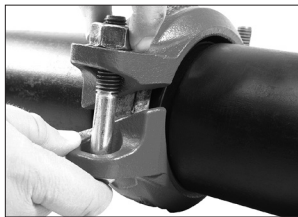
3. **JOIN MATING COMPONENTS:** Align the centerlines of the two grooved mating component ends. Insert the other mating component end into the gasket until it contacts the center leg of the gasket. **NOTE:** Verify that no portion of the gasket extends into the groove of either mating component.



4. **TO FACILITATE REASSEMBLY:** One bolt can be inserted into the housings with the nut threaded loosely onto the bolt to allow for the “swing-over” feature, as shown. **NOTE:** The nut should be backed off no further than flush with the end of the bolt.



5. **INSTALL HOUSINGS:** Install the housings over the gasket. Verify that the housings’ keys engage the grooves completely on both mating components.



6. **INSTALL REMAINING BOLT/ NUT:** Install the remaining bolt, and thread the nut finger-tight onto the bolt. **NOTE:** Verify that the oval neck of each bolt seats properly in the bolt hole.

7. **TIGHTEN NUTS:** Follow steps 6 – 7 of the “Instructions for the Initial Installation of Style 107N Couplings” section to complete the assembly.

IMPACT TOOL USAGE GUIDELINES

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-shifting and/or over-torquing, which may damage or fracture the bolts or the coupling’s bolt pads during installation.

Assemble couplings per these installation instructions. Continue to tighten the nuts until the visual installation requirements are achieved. Visual inspection of each joint is required for verification of proper assembly. **For angled-bolt-pad couplings:** Equal and positive or neutral offsets shall be present at the angled bolt pads.

Conditions that may result in over-shifting and/or over-torquing include, but are not limited to, the following:

- **Uneven tightening of hardware** – Nuts shall be tightened evenly by alternating sides until metal-to-metal contact occurs at the bolt pads.
- **Over-shifting of the angled bolt pad, which occurs when the hardware at one angled bolt pad is tightened and results in an offset that prevents metal-to-metal contact and equal and positive or neutral offset at the opposite angled bolt pad** – In this case, the hardware for the angled bolt pads shall be loosened and then re-tightened to achieve equal and positive or neutral offsets at both angled bolt pads.
- **Out-of-specification grooved pipe end dimensions (particularly shallow grooves)** – If proper visual assembly is not achieved, remove the coupling and confirm that all grooved pipe end dimensions are within Victaulic specifications.
- **Continued tightening of the nuts after the visual installation requirements are achieved** – DO NOT continue to tighten the nuts after visual inspection requirements are achieved. Continued tightening may cause excessive stresses that compromise the long-term integrity of the bolts, resulting in joint failure, serious personal injury, and property damage.
- **Pinched gaskets**
- **Coupling was not assembled per these installation instructions**– Adherence to these installation instructions will help to avoid the above-listed conditions

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.).

If the battery is drained or if the impact tool is under-powered, a new battery pack or correctly-sized impact tool shall be used for installation.

Perform trial coupling assemblies with the impact tool. Check the trial coupling assemblies with a torque wrench to help determine the suitability of the impact tool and adjustment settings. Using the same method, periodically check bolt/nut torque on coupling assemblies throughout the system installation.

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
- Personal injury or death