


Victaulic® VicFlex™ Style AQC-U Sprinkler Fitting for Cleanroom Applications

⚠ WARNING



- Read and understand all instructions before attempting to install any Victaulic® VicFlex™ products.
- Wear safety glasses, hardhat, and foot protection.
- These installation instructions are intended for an experienced, trained installer.
- The user shall understand the purpose of these products, common industry standards for safety, and the potential consequences of improper product installation.
- It is the system designer’s responsibility to verify suitability of stainless steel flexible hose for use with the intended fluid media within the piping system and external environment.
- The effect of chemical composition, pH level, operating temperature, chloride level, oxygen level, and flow rate on the stainless steel flexible hose shall be evaluated by the material specifier to confirm system life will be acceptable for the intended service.

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

Victaulic® VicFlex™ Style AQC-U Sprinkler Fittings connect the branch line directly to the sprinkler and are FM Approved for use with the M+W Zander Facility Engineering GmbH* and SBB Gorilla Grid† cleanroom ceiling systems. Other cleanroom ceilings can be evaluated on a case-by-case basis by contacting Victaulic.

Maximum Working Pressure:

200 psi/14 Bar/1379 kPa (FM Approval)

Maximum Ambient Temperature Rating:

225° F/107° C

Connection to Branch Line:

1 inch/25 mm NPT/BSPT

Minimum Bend Radius:

6 inch/152 mm (FM Approval)

Maximum K-Factor of Sprinkler to be Connected to the Style AQC-U:

5.6 US/80 metric

Maximum Number of 90° Bends:

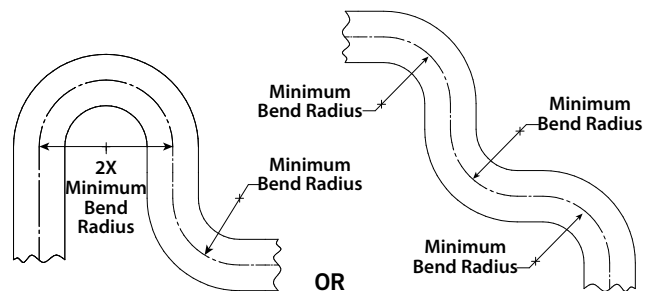
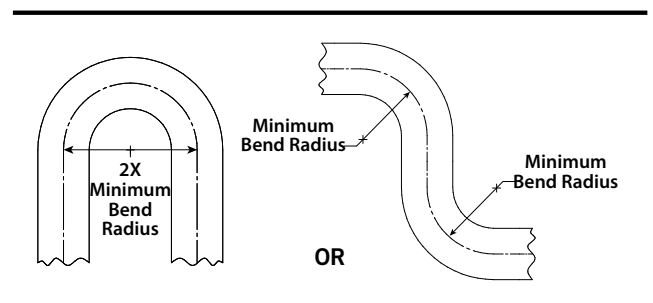
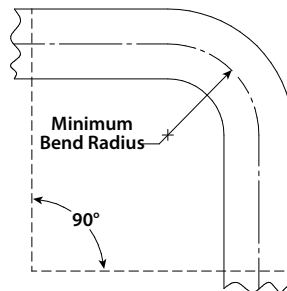
Refer to the “Style AQC-U Friction Loss Data” section below

Style AQC-U Friction Loss Data

Length inches/mm	NPT/BSPT Sprinkler End inches	Maximum Number of 90° Bends	Equivalent Length of 1-inch/33.7-mm Schedule 40 Pipe feet/meters
36 915	½	2	24.0 7.3
48 1220	½	3	31.5 9.6
72 1830	½	4	46.6 14.2

Flexible Hose Bend Characteristics:

NOTE: For out-of-plane (three-dimensional) bends, care shall be taken to avoid imparting torque on the flexible hose.



* M+W Zander Facility Engineering GmbH is a company of the M+W Group

† SBB Gorilla Grid is a product of SBB, Inc.

IMPORTANT INSTALLATION INFORMATION

- The installer shall wear proper cleanroom attire during installation of the Victaulic® VicFlex™ Style AQC-U. Contact the building owner or their representative to confirm requirements for the specific cleanroom application.
- Victaulic® VicFlex™ products shall be installed according to current, applicable National Fire Protection Association (NFPA 13, 13D, 13R, etc.) standards or equivalent standards. Victaulic® VicFlex™ products are intended to be installed in wet, dry, or preaction actuated systems. Deviations from these standards or alterations to Victaulic® VicFlex™ products or sprinklers will void any Victaulic warranty and will impact system integrity. Installations shall meet the provisions of the local authority having jurisdiction and local codes, as applicable.
- Victaulic® VicFlex™ Style AQC-U Sprinkler Fittings shall not be intermixed with other manufacturer's flexible sprinkler products.
- **Refer to the specific Victaulic product submittal for applications and listing information. In addition, when installing Victaulic FireLock® Automatic Sprinklers with Victaulic® VicFlex™ Sprinkler Fittings, refer to the I-40 Installation and Maintenance Instructions for details on sprinkler installation requirements. Submittals and installation instructions can be downloaded at victaulic.com.**
- Size the piping system to provide at least the minimum required flow rate for the sprinkler system.
- Per NFPA requirements, flush the system to remove foreign material. Continue to flush the system until water runs clear.
- **DO NOT** install sprinkler system piping through heating ducts.
- **DO NOT** connect sprinkler system piping to domestic hot water systems.
- **DO NOT** install sprinklers and sprinkler fittings where they will be exposed to temperatures that exceed the maximum ambient temperature rating for the sprinkler and sprinkler fittings.
- The flexible hose shall not be bent or fluctuated up-and-down or side-to-side when it is pressurized.
- **Flexible hose and fittings have limited flexibility* and are intended only to be installed with bends not less than their respective minimum bend radii. DO NOT install flexible hose in a straight configuration.**
- Protect wet piping systems from freezing temperatures.
- If construction is altered, refer to applicable standards to determine if additional sprinklers are required.
- The owner is responsible for maintaining the fire protection system in proper operating condition.
- For minimum maintenance and inspection requirements, refer to NFPA 25 and any other applicable NFPA standards that describe the care and maintenance of sprinkler systems. In addition, the authority having jurisdiction may have additional maintenance, testing, and inspection requirements that shall be followed.

WARNING

- **Relocation of Victaulic® VicFlex™ products SHALL be performed by qualified personnel familiar with the system's original design criteria, sprinkler listings/approvals, and state and local codes (including NFPA 13 standards).**

Failure to relocate this Victaulic® VicFlex™ product properly could affect its performance during a fire, resulting in serious personal injury and property damage.

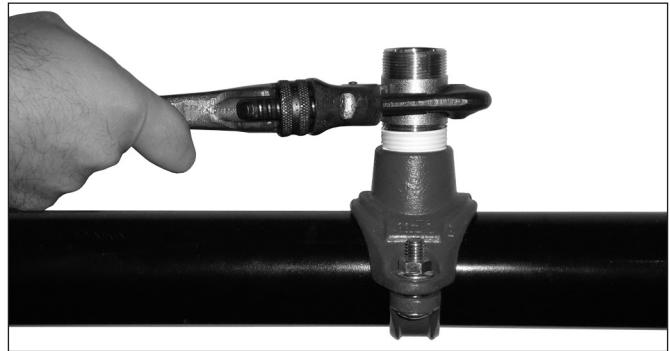
* Reference UL 2443: Section 25.1

CONNECTION TO THE SPRINKLER PIPING USING AN ADAPTER NIPPLE AND A STYLE AQC-U SPRINKLER FITTING

WARNING

- **The flexible hose shall not be bent or fluctuated up-and-down or side-to-side when it is pressurized for test.**

Failure to follow this instruction could cause improper sprinkler operation, serious personal injury, and/or property damage.



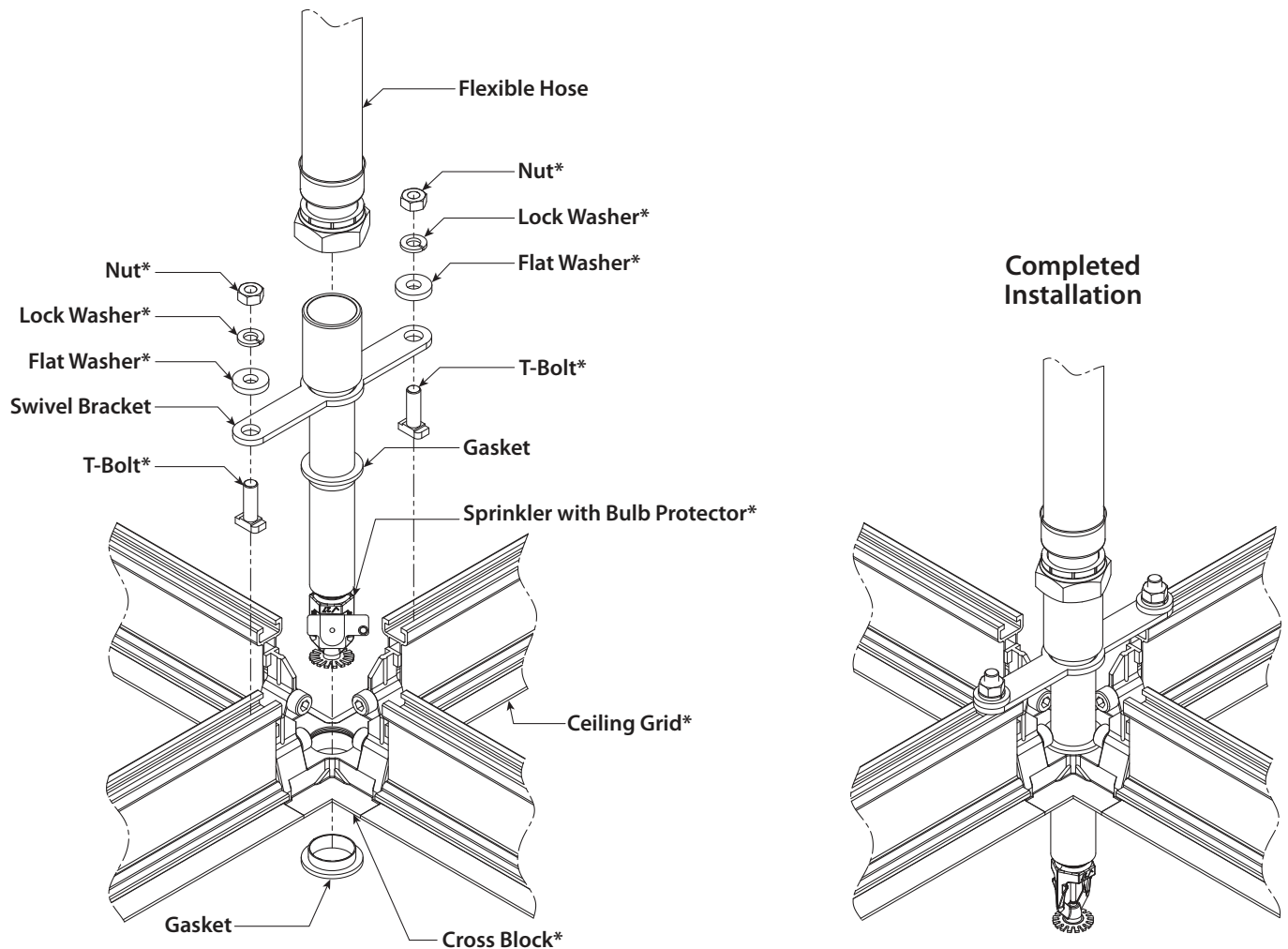
1. Apply pipe joint compound or PTFE thread sealant tape to the tapered threads of the adapter nipple, in accordance with the pipe joint compound or tape manufacturer's instructions. Using a pipe wrench, tighten the adapter nipple into the sprinkler piping.



2. Confirm that the seal inside the nut of the Style AQC-U is in place and is free from damage prior to installation. Connect the nut to the adapter nipple, as shown above.
 - **DO NOT** use pipe joint compound or PTFE thread sealant tape on the threads of the adapter nipple. The seal inside the nut of the Style AQC-U provides the leak-proof connection.
 - Tighten the connection nut to a torque of 40ft-lbs/54N•m (approximately ½ to ¾ of a turn past hand-tight). **NOTE:** To prevent damage to the seal, tighten the assembly by applying torque only to the connection nut and **DO NOT** exceed the specified torque.

ATTACHING THE STYLE AQC-U TO THE CLEANROOM CEILING GRID

Exploded View of Installation Components



* Components provided by ceiling grid manufacturer or others.

NOTICE

- If the sprinkler deflector or bulb protector appears too large to pass through the cross block location, it may be necessary to install the sprinkler after the Style AQC-U is tightened to the ceiling grid.

1. Slide a T-Bolt (supplied with the ceiling grid) into the slot of the two opposing ceiling grid sections, as shown in the drawing above.
2. Insert the Victaulic® VicFlex™ Style AQC-U assembly into the cross block location.
3. Align the holes in the swivel bracket of the Victaulic® VicFlex™ Style AQC-U with the T-Bolts. Secure the swivel bracket to the ceiling grid by installing a flat washer, lock washer, and nut (supplied with the ceiling grid) onto the end of each T-Bolt. To ensure a rigid connection, tighten each nut until the lock washer is flattened completely.
4. Position the two gaskets, indicated in the drawing above, to seal the ceiling penetration.
5. Install any ceiling grid face plates, sprinkler escutcheons, elastic decorative rings or covers, etc. Use caution to prevent damage to the sprinkler during installation of any accessories.
6. After installation is complete, test the system for leaks in accordance with NFPA guidelines.

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For complete contact information, visit victaulic.com

I-VICFLEX.AQC-U 9353 REV B UPDATED 06/2018 Z000AQC-U00

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