INTRODUCTION

**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.

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

The Style AB6 Assembly consists of a V36 Dry Sprinkler with additional mounting components and shall be installed only in applications where the minimum thickness of the ceiling or wall is 3 inches/76 mm and the strength and structure of the ceiling or wall is comparable to or stronger than thin-clad aluminum freezer panel.

Refer to Victaulic submittal publication 10.90 for details regarding Style AB6 Assembly weights. The ceiling or wall shall be designed to support the load of the Style AB6 Assembly. Victaulic submittal publication 10.90 can be downloaded at victaulic.com.

**TECHNICAL DATA FOR FLEXIBLE HOSES**

**WARNING**

- 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 product failure, resulting in serious personal injury and/or property damage.

<table>
<thead>
<tr>
<th>Flexible Hose</th>
<th>UL Listed</th>
<th>FM Approved</th>
</tr>
</thead>
<tbody>
<tr>
<td>AH2</td>
<td>With AB6</td>
<td>With AB6</td>
</tr>
<tr>
<td>AH2-CC</td>
<td>With AB6</td>
<td>With AB6</td>
</tr>
</tbody>
</table>

**NOTES:** Victaulic® VicFlex™ flexible hoses are City of Los Angeles (RR6595) Approved, accepted for use by the City of New York Department of Buildings (MEA 60-05-E), and have the OSHPD Pre-Approval (OPA-2255-07).

Victaulic® VicFlex™ flexible hoses are available in lengths from 31 - 72 inches/787 - 1829 mm with either 1/2-inch/DN15 or 3/4-inch/DN20 NPT or BSPT threaded outlets.
SERIES AH2 AND AH2-CC FLEXIBLE HOSE FRICTION LOSS DATA (FM AND UL)

<table>
<thead>
<tr>
<th>Model</th>
<th>Length of Flexible Hose inches/mm</th>
<th>Outlet Size# inches/Metric</th>
<th>Equivalent Length of 1-inch/DN25 Schedule 40 Pipe feet/meters</th>
<th>Maximum Number of 90° Bends§</th>
</tr>
</thead>
<tbody>
<tr>
<td>AH2-31</td>
<td>31</td>
<td>1/2 DN15</td>
<td>23.5 16.0</td>
<td>2 4</td>
</tr>
<tr>
<td>AH2-CC-31</td>
<td>790</td>
<td>1/2 DN15</td>
<td>7.2 4.9</td>
<td></td>
</tr>
<tr>
<td>AH2-36</td>
<td>36</td>
<td>1/2 DN15</td>
<td>14.9 17.0</td>
<td>2 5</td>
</tr>
<tr>
<td>AH2-CC-36</td>
<td>915</td>
<td>1/2 DN15</td>
<td>4.5 5.2</td>
<td></td>
</tr>
<tr>
<td>AH2-48</td>
<td>48</td>
<td>1/2 DN15</td>
<td>27.8 21.0</td>
<td>2 6</td>
</tr>
<tr>
<td>AH2-CC-48</td>
<td>1220</td>
<td>1/2 DN15</td>
<td>8.5 6.4</td>
<td></td>
</tr>
<tr>
<td>AH2-60</td>
<td>60</td>
<td>1/2 DN15</td>
<td>19.4 23.0</td>
<td>3 8</td>
</tr>
<tr>
<td>AH2-CC-60</td>
<td>1525</td>
<td>1/2 DN15</td>
<td>9.4 7.0</td>
<td></td>
</tr>
<tr>
<td>AH2-72</td>
<td>72</td>
<td>1/2 DN15</td>
<td>30.3 37.0</td>
<td>4 10</td>
</tr>
<tr>
<td>AH2-CC-72</td>
<td>1830</td>
<td>1/2 DN15</td>
<td>9.2 11.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1/4 DN20</td>
<td>5.9 7.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3/4 DN20</td>
<td>11.6 13.8</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1/2 DN15</td>
<td>33.9 46.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1/2 DN20</td>
<td>10.3 14.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1/2 DN15</td>
<td>42.4 46.0</td>
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<td>1/2 DN20</td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1/2 DN15</td>
<td>46.6 55.0</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>1/2 DN20</td>
<td>14.2 16.8</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>1/2 DN15</td>
<td>46.6 55.0</td>
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<tr>
<td></td>
<td></td>
<td>1/2 DN20</td>
<td>14.2 16.8</td>
<td></td>
</tr>
</tbody>
</table>

* 7-inch/178-mm minimum bend radius (tested with standard 5 3/4-inch/146-mm length straight reducer)
‡ 2-inch/50-mm minimum bend radius (tested and UL Listed only with standard 5 3/4-inch/146-mm length straight reducer)
# 3/4-inch/DN20 outlet data shown with K14.0 - For other K-factor friction loss data, refer to Victaulic submittal 10.85
§ A higher number of bends may be permitted, provided the sum of degrees is equal to or less than the total maximum allowable degrees of bends (e.g. Two 90° bends equal 180°. Three 90° bends equal 270°). The minimum bend radius and maximum number of 90° offset (bends), stated in these installation instructions, refer to the final installed condition of the hose.

For friction loss data for elbows, refer to Victaulic submittal 10.85.

NOTE: Differences in equivalent lengths are due to varying test methods, per UL 2443 and FM 1637 standards. Refer to these standards for additional information regarding friction loss test methods.
STYLE AB6 ASSEMBLY DRAWINGS

NOTE: UL has not evaluated the rubber plug (Item 5).

TECHNICAL DATA FOR STYLE V36 DRY SPRINKLERS

For technical information regarding the Style V36 Dry Sprinkler, refer to Victaulic submittal publication 10.90, which can be downloaded at victaulic.com. NOTE: The graphic shown below is an example of a typical flush configuration. Refer to the specific Victaulic submittal publication for complete information.

NOTE: Exposed minimum barrel lengths are inclusive up to 30-mph/48-kph wind velocities.

Temperature Maintained at 40°F/4°C Minimum

<table>
<thead>
<tr>
<th>Ambient Temperature Exposed to Discharge End of Sprinkler</th>
<th>“D” Freezer Ceiling or Wall Thickness</th>
<th>“A” Order Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Down to 20°F Down to -6.7°C</td>
<td>3 – 6 inches/76 – 152 mm</td>
<td>11 inches/279 mm</td>
</tr>
<tr>
<td>19°F to 0°F -7.2°C to -17.8°C</td>
<td>3 – 6 inches/76 – 152 mm</td>
<td>16 inches/406 mm</td>
</tr>
<tr>
<td>-1°F to -20°F -18.3°C to -28.9°C</td>
<td>3 – 6 inches/76 – 152 mm</td>
<td>20 inches/508 mm</td>
</tr>
<tr>
<td>-21°F to -30°F -29.4°C to -34.4°C</td>
<td>3 – 6 inches/76 – 152 mm</td>
<td>22 inches/559 mm</td>
</tr>
<tr>
<td>-31°F to -40°F -35.0°C to -40.0°C</td>
<td>3 – 6 inches/76 – 152 mm</td>
<td>28 inches/711 mm</td>
</tr>
<tr>
<td></td>
<td>7 – 12 inches/178 – 305 mm</td>
<td>24 inches/610 mm</td>
</tr>
<tr>
<td></td>
<td>7 – 12 inches/178 – 305 mm</td>
<td>26 inches/660 mm</td>
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<tr>
<td></td>
<td>7 – 12 inches/178 – 305 mm</td>
<td>28 inches/711 mm</td>
</tr>
<tr>
<td></td>
<td>7 – 12 inches/178 – 305 mm</td>
<td>30 inches/762 mm</td>
</tr>
</tbody>
</table>

NOTE: UL has not evaluated the rubber plug (Item 5).
ASSEMBLY WEIGHTS

The values in the table below are the total weight in pounds/kilograms for the V36 Dry Sprinkler, Series AH2-CC Flexible Hose (water-filled), and Style AB6 Assembly in relation to flush or sleeve/skirt style.

<table>
<thead>
<tr>
<th>V36 AB6 Order Length</th>
<th>AH2-CC-31-AB6 Weight lbs/kg</th>
<th>AH2-CC-36-AB6 Weight lbs/kg</th>
<th>AH2-CC-48-AB6 Weight lbs/kg</th>
<th>AH2-CC-60-AB6 Weight lbs/kg</th>
<th>AH2-CC-72-AB6 Weight lbs/kg</th>
</tr>
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<tbody>
<tr>
<td>10</td>
<td>8.9</td>
<td>9.2</td>
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<td>16</td>
<td>9.9</td>
<td>10.2</td>
<td>10.5</td>
<td>11.0</td>
<td>11.3</td>
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<td>10.2</td>
<td>10.5</td>
<td>10.8</td>
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<td>11.6</td>
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<tr>
<td>20</td>
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<td>11.1</td>
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<td>26</td>
<td>11.5</td>
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<td>28</td>
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<td>12.2</td>
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<tr>
<td>30</td>
<td>12.2</td>
<td>12.5</td>
<td>12.8</td>
<td>13.3</td>
<td>13.6</td>
</tr>
</tbody>
</table>

**CAUTION**

- It is the system designer's responsibility to verify that the wall and/or ceiling structure can support the weight of the V36 Dry Sprinkler with Integral Style AB6 Bracket Assembly, as detailed in the above table. Failure to follow this instruction could result in property damage.

**IMPORTANT INSTALLATION INFORMATION**

- 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™ Style AB6 Assemblies are intended to be installed in wet sprinkler systems. Deviations from these standards or alterations to Victaulic® VicFlex™ products or sprinklers will void any Victaulic warranty. In addition, installations shall meet provisions of the local authority having jurisdiction and local codes, as applicable.

- Victaulic® VicFlex™ Sprinkler Fittings and/or the Style AB6 Assembly shall not be intermixed with other manufacturer’s flexible sprinkler products.

- Refer to the specific product submittal for applications and listing information. These submittals are located in Sections 10 and 40 of the Victaulic G-100 Catalog or on the Victaulic website at victaulic.com. 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.

- 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.

- 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.

- 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 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.
INSTALLATION OF THE STYLE AB6 ASSEMBLY

**CAUTION**

- The hole cut into the ceiling or wall shall be deburred on both sides.
Failure to follow this instruction could cause sprinkler assembly leakage, resulting in property damage.

1. Using a 2¼-inch hole saw, drill a hole into the ceiling of the freezer. **THE HOLE SHALL BE DEBURRED ON BOTH SIDES OF THE CEILING OR WALL.**

**NOTICE**

- The following photos depict an installation in a freezer application where the Style AB6 Assembly is installed through the ceiling; however, the installation steps in this section can be applied to any installation orientation.
- The following steps require two people to install the Style AB6 through the ceiling of the freezer.
- The person below the freezer ceiling shall continue to support the Style AB6 until instructed otherwise.

2. With one person above the freezer ceiling to support the Style AB6, another person shall be below the freezer ceiling to insert the Style AB6 Assembly up through the hole deburred in step 1.
**NOTE:** When using the optional toggle assembly aid, refer to the instructions that start on page 10.

3. The person below the freezer ceiling shall continue to support the Style AB6 Assembly while the person above the freezer ceiling installs the rubber plug over the barrel and into the hole, as shown above.

4. The person below the freezer ceiling shall continue to support the Style AB6 Assembly while the person above the freezer ceiling installs the base plate over the barrel and rubber plug, as shown above.

5. The person below the freezer ceiling shall continue to support the Style AB6 Assembly while the person above the freezer ceiling installs the lock washer over the barrel and onto the base plate, as shown above.

6. The person below the freezer ceiling shall continue to support the Style AB6 Assembly until the person above the freezer ceiling installs the nut over the barrel and onto the lock washer/base plate, as shown above.

**NOTICE**

- A Style AB6 spacer kit, which contains a spacer and an additional lock washer, is available for applications where up to ½ inch/13 mm needs to be accommodated for freezer ceilings that are thinner than the manufacturer's suggested thickness. Refer to the photos above for the orientation of the lock washers and spacer.
7. Tighten the nut to a torque of 10–12 ft-lbs/14–16 N•m (approximately hand-tight, plus an additional ¾ of a turn past hand-tight) until full contact occurs between the base plate and freezer ceiling. DO NOT exceed the specified torque.

7a. Verify proper thread engagement. If several threads are not exposed, as shown above in the “GOOD” photo, the freezer ceiling or wall may exceed the thickness specified for use with this product. Confirm that the product has been assembled correctly and that the freezer ceiling or wall thickness is within specification.

7b. Verify that full contact has occurred between the sprinkler plate and freezer ceiling, as shown above.
1-INCH/DN25 IGS CONNECTION TO THE BRANCH LINE USING A SERIES AH2-CC FLEXIBLE HOSE

The Style 108 Coupling assembly of the Series AH2-CC shall be used ONLY on branch line connections that are prepared to Victaulic IGS (proprietary groove) specifications. DO NOT attempt to install the coupling on branch line connections that are prepared to any other groove specification. Refer to Victaulic publication 25.14, which can be downloaded at victaulic.com.

**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. **DO NOT DISASSEMBLE THE COUPLING:** The Style 108 Coupling assembly of the Series AH2-CC is designed so that the installer does not need to remove the bolt and nut for installation. This design facilitates installation by allowing the installer to directly insert the branch line's grooved end into the coupling.

2. **CHECK GROOVED END OF BRANCH LINE:** The outside surface of the branch line, between the groove and the end of the branch line, shall 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 shall be removed. The branch line's outside diameter ("OD"), groove dimensions, and maximum allowable flare diameter shall be within the tolerances published in Victaulic publication 25.14, which can be downloaded at victaulic.com.

3. **CHECK GASKET:** Check the gasket to ensure that it is suitable for the intended service. The color code identifies the gasket grade. Refer to Victaulic publication 05.01 for the color code chart, which can be downloaded at victaulic.com.

3a. **REFER TO THE NOTICE IN THE FOLLOWING COLUMN FOR IMPORTANT GASKET INFORMATION AND ADDITIONAL INSTALLATION INSTRUCTIONS.**

4. **ASSEMBLE JOINT:** Assemble the joint by inserting the grooved end of the branch line into the opening of the coupling. The grooved branch line shall be inserted into the coupling until contact with the center leg of the gasket occurs. A visual check is required to ensure that the coupling keys align with the groove in the branch line.
I-VICFLEX.AB6 / Victaulic® VicFlex™ Sprinkler Fittings / Installation Instructions

**WARNING**

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

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

5. **TIGHTEN NUT**: Using an impact wrench or standard socket wrench with an 11/16-inch/17-mm deep well socket, tighten the nut until metal-to-metal contact occurs at the bolt pads. Verify that the housings’ keys engage the branch line’s groove completely.

6. **INSPECT PADS**: Visually inspect the bolt pads at each joint to ensure that metal-to-metal contact is achieved in accordance with step 5.

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### CONNECTION TO THE BRANCH LINE USING AN ADAPTER NIPPLE AND A SERIES AH2 FLEXIBLE HOSE

**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 branch line.

2. Confirm that the seal inside the nut of the flexible hose 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 flexible hose provides the leak-proof connection.

- Tighten the connection nut to a torque of 40 ft-lbs/54 N•m (approximately 1/2 to 3/4 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.
INSTALLATION OF THE STYLE AB6 ASSEMBLY TO THE CONNECTION NUT OF THE FLEXIBLE HOSE

1. Confirm that the seal inside the nut of the flexible hose is in place and is free from damage prior to installation. Connect the nut to the top of the Style AB6 Assembly, as shown above.

- DO NOT use pipe joint compound or PTFE thread sealant tape on the threads of the inlet to the Style AB6 Assembly. The seal inside the nut of the flexible hose provides the leak-proof connection.

- Tighten the connection nut to a torque of 40 ft-lbs/54 N·m (approximately 1/2 to 3/4 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.

BULB PROTECTOR REMOVAL

! WARNING

- Sprinklers cannot operate properly with bulb protectors in place.
- Bulb protectors shall be removed from all sprinklers before the sprinkler system is placed in service.
- DO NOT use any tools to remove bulb protectors.
Failure to follow these instructions will cause improper sprinkler operation, resulting in death, serious personal injury, or property damage.

1. Remove the bulb protector from all sprinklers carefully by hand before the sprinkler system is placed in service.
USING THE OPTIONAL TOGGLE ASSEMBLY AID

An optional toggle assembly aid is available to facilitate installation by capturing the Style AB6 Assembly in the hole drilled into the freezer ceiling. The rubber plug, base plate, lock washer, and nut slide directly over the toggle assembly aid, as shown in the following steps.

**CAUTION**

- The hole cut into the ceiling or wall shall be deburred on both sides.
Failure to follow this instruction could cause sprinkler assembly leakage, resulting in property damage.

1. Using a 2 1/8-inch hole saw, drill a hole into the ceiling of the freezer. **THE HOLE SHALL BE DEBURRED ON BOTH SIDES OF THE CEILING OR WALL.**

**NOTICE**

- The following photos depict an installation in a freezer application where the Style AB6 Assembly is installed through the ceiling; however, the installation steps in this section can be applied to any installation orientation.
- When using the optional toggle assembly aid, one person can perform the following steps.

2. Thread the toggle assembly aid onto the end of the Style AB6 Assembly, as shown above.

3. Push the toggle assembly aid into the hole, drilled in step 1, until it is completely through to the other side. The toggle assembly aid will spring back to its normal, extended position and will engage with the ceiling surface around the hole, as shown above.

4. Pull the Style AB6 Assembly up to expose the threads. **NOTE:** A mark is provided on the barrel of the V36 Dry Sprinkler, which is an aid for aligning sprinkler frame arms.
5. While supporting the Style AB6 Assembly, install the rubber plug over the toggle assembly aid/barrel and into the hole, as shown above.

6. While supporting the Style AB6 Assembly, install the base plate over the toggle assembly aid/barrel/rubber plug, as shown above.

7. While supporting the Style AB6 Assembly, install the lock washer over the toggle assembly aid/barrel and onto the base plate, as shown above.

8. While supporting the Style AB6 Assembly, install the nut over the toggle assembly aid/barrel and onto the lock washer/base plate, as shown above.

9. Remove the toggle assembly aid from the Style AB6 Assembly.

10. To complete the assembly, follow steps 7 – 7b on page 6, along with the applicable branch line connection instructions on pages 7 – 8.

NOTICE

- A Style AB6 spacer kit, which contains a spacer and an additional lock washer, is available for applications where up to ½ inch/13 mm needs to be accommodated for freezer ceilings that are thinner than the manufacturer’s suggested thickness. Refer to the photos above for the orientation of the lock washers and spacer.