**IMPORTANT INSTALLATION INFORMATION**

- **Victaulic® FireLock™ Automatic Sprinklers** shall be installed according to current, applicable Factory Mutual (FM) standards, VdS standards, CEA 4001 standards, National Fire Protection Association (NFPA 13, 13D, 13R, etc.) standards or equivalent standards. Deviations from these standards or alterations to sprinklers (including painting and coating) 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.

- Refer to the specific Victaulic product submittal for applications and listing information. Submittals can be downloaded at victaulic.com.

- Transport and store sprinklers in a cool, dry environment in their original packaging. To prevent damage, DO NOT empty sprinklers into bags or buckets.

- DO NOT install sprinkler system piping through heating ducts.

- DO NOT connect sprinkler system piping to domestic hot water systems.

- DO NOT install sprinklers where they will be exposed to temperatures that exceed the maximum ambient temperature rating for the sprinkler and sprinkler fittings.

- DO NOT install sprinklers that have been dropped or struck by another object, even if they do not appear damaged. Never install glass bulb sprinklers if the bulb is cracked or if there is a loss of liquid from the bulb. Discard and replace any sprinklers that are damaged or show signs of corrosion.

- Before installation, verify that the sprinkler is the proper model, orifice size, and temperature rating for the intended application.

- Protect wet piping systems from freezing temperatures.

- Size the piping system to provide the minimum required flow rate for the sprinkler system.

- To avoid damage, install sprinklers into the fittings only after the sprinkler system piping is in place.

- Per NFPA requirements, flush the system to remove foreign material. Continue to flush the system until water runs clear.

- DO NOT paint, coat, plate, or alter sprinklers. Sprinklers that have been altered from their manufactured condition may not function properly and will void any agency listings and/or approvals.

- DO NOT test sprinklers with a heat source. The glass bulb can weaken or shatter if exposed to a heat source during testing.

- DO NOT clean sprinklers with soapy water, detergents, ammonia, cleaning fluids, or other chemicals. Remove any dust, lint, etc. with a soft, dry cloth.

- Sprinklers that have operated SHALL NOT be reassembled or reused. When replacing sprinklers, use new sprinklers of the same type, orifice, temperature, and response.

- Inspect sprinklers on a regular basis for corrosion, mechanical damage, obstructions, etc. The frequency of inspections may vary due to corrosive atmospheres/water supplies and activities around the sprinklers.

- DO NOT hang anything from or attach anything to sprinklers. Obstructing the discharge pattern will affect the sprinkler’s performance in the event of a fire.

- If construction is altered, the building owner or their representative is responsible for referencing applicable standards to determine if additional sprinklers or other system adjustments are required.

- The building owner or their representative 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**

- **Victaulic® FireLock™ Automatic Sprinklers** 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.

**WARNING**

- Replacement/relocation of Victaulic® FireLock™ Automatic Sprinklers 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 follow this instruction could affect system performance during a fire, resulting in death or serious personal injury and property damage.
STANDARD SPRINKLER INSTALLATION

Each Victaulic® FireLock™ Automatic Sprinkler is shipped with a bulb protector, which protects the glass bulb from damage during shipment and installation. Bulb protectors shall remain installed until the sprinkler system is ready to be placed into service, or as instructed in step 6 on this page.

1. Inspect the sprinkler for any signs of physical damage and the glass bulb for cracks and loss of fluid. DO NOT install a sprinkler that has been dropped or damaged during handling.

2. FOR RECESSED PRODUCT: Install the collar onto the sprinkler. Verify that the collar is tightened completely up against the wrench boss, as shown above.

3. Apply two to three wraps of tape or a non-hardening pipe-joint compound to the male threads only.

4. Install the sprinkler in its intended orientation only. Thread the sprinkler into the fitting by hand, then tighten the sprinkler into the fitting by using the proper model sprinkler wrench (refer to the “Available Sprinkler Wrenches” table). Verify that the sprinkler wrench engages ONLY the wrench boss of the sprinkler and not the frame, deflector, or bulb. To obtain a proper seal, tighten the sprinkler securely to prevent leakage. DO NOT exceed the maximum assembly torque values listed in the “Maximum Assembly Torque Values” table.

5. FOR RECESSED PRODUCT: Install the escutcheon by centering it over the sprinkler. Push the escutcheon onto the recess collar until it contacts the ceiling.

   **WARNING**
   - Sprinklers cannot operate properly with bulb protectors in place.
   - Bulb protectors shall be removed from all sprinklers before the sprinkler system is placed into service.
   - DO NOT use any tools to remove bulb protectors.

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

6. Remove the bulb protector from all sprinklers carefully by hand before the sprinkler system is placed into service. NOTE: Bulb protectors on all upright sprinklers, or on any sprinklers installed more than 10 feet/3 meters above the floor, can be removed immediately following installation.

### MAXIMUM ASSEMBLY TORQUE VALUES

<table>
<thead>
<tr>
<th>Orifice Size</th>
<th>Maximum Torque ft-lbs/N•m</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2-inch NPT</td>
<td>14</td>
</tr>
<tr>
<td>1-inch NPT</td>
<td>30</td>
</tr>
<tr>
<td>3/4-inch NPT</td>
<td>20</td>
</tr>
</tbody>
</table>

### AVAILABLE SPRINKLER WRENCHES

<table>
<thead>
<tr>
<th>Frame Style</th>
<th>Sprinkler Wrench Style/Sprinkler Wrench Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open End</td>
<td>V25 V27 V27-2 V39 V29 V33 V34 V36 V38 V39 V40 V44 V46 K1 V10</td>
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<tr>
<td>Recessed</td>
<td></td>
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<tr>
<td>Concealed</td>
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<tr>
<td>Tee-Handle</td>
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### HOLE SIZES FOR ESCUTCHEONS

<table>
<thead>
<tr>
<th>Sprinkler Model(s)</th>
<th>Hole Sizes for Escutcheons inches/millimeters</th>
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<tbody>
<tr>
<td>Minimum</td>
<td>Maximum</td>
</tr>
<tr>
<td>V24/V27/V34/V36/V40 Recessed</td>
<td>2 51 60</td>
</tr>
<tr>
<td>V27 Conceled</td>
<td>2 3/4 60 2 1/2 71</td>
</tr>
<tr>
<td>V31/V33 Conceled</td>
<td>2 2/3 67 2 1/2 70</td>
</tr>
<tr>
<td>V36/V40 Plain, Extended, and Flush</td>
<td>1 1/2 38 2 1/2 63</td>
</tr>
<tr>
<td>V36/V40 Sleeve/Skirt</td>
<td>1 1/8 44 2 1/2 63</td>
</tr>
<tr>
<td>V38 Conceled</td>
<td>2 1/2 60 2 1/2 68</td>
</tr>
</tbody>
</table>

### WARNING

- DO NOT allow sealing material to enter the sprinkler’s orifice or to contact the bulb or seal.
- DO NOT handle sprinklers by the deflector.
- DO NOT exceed the specified assembly torques.
- Verify that the sprinkler wrench engages ONLY the wrench boss of the sprinkler and not the frame, deflector, or bulb.

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

- Victorulic FireLock Dry Sprinklers shall be installed in accordance with current, applicable NFPA (NFPA 13, 13D, 13R, etc.) standards, or equivalent standards, and in accordance with applicable building and fire codes.
- Apply two to three wraps of tape or a non-hardening pipe-joint compound to the male threads only.
- Install Model V36 Dry Sprinklers by using a pipe wrench on the outside of the tube closest to the threads. Install Model V40 Dry Sprinklers by using a wrench on the brass inlet fitting. When these installation methods are not possible, the proper sprinkler wrench can be used with extreme care for dry sprinkler lengths up to 18 inches/457 mm.
- DO NOT use excessive torque during installation. Excessive torque can distort the sprinkler frame. When a Model V36 Sprinkler Wrench is used with a Model V36 Dry Sprinkler, or when a Model V34 Sprinkler Wrench is used with a Model V40 Dry Sprinkler, do not exceed 30 ft-lbs/41 N•m. When a pipe wrench is used on the outer tube, do not exceed 40 ft-lbs/54 N•m.

DRY SYSTEMS: Dry sprinklers shall be installed only into the outlet of a fitting (excluding elbows) or welded outlet that meets the dimensional requirements of ANSI B16.3 and ANSI B16.4, Class 125 and Class 150. Use a sample fitting to confirm proper engagement and to verify that there is no interference between the sprinkler and fitting. To ensure unobstructed flow during operation, and for applications where systems are subjected to freezing temperatures, the dry sprinkler shall be installed into a fitting that will prevent condensation from accumulating above the seal.

WET SYSTEMS: The inlet of the dry sprinkler SHALL NOT bottom out in the fitting. DO NOT install dry sprinklers into any threaded elbow, thread-by-thread coupling, or fitting that interferes with thread penetration. Dry sprinklers can be installed into the outlets of Style 920/Style 920N Mechanical-T Bolted Branch Outlets and Style 922 FireLock® Outlet-T products. Dry Sprinklers can be installed into CPVC fittings (excluding elbows) that do not interfere with thread penetration. Use a sample fitting to confirm proper engagement. Verify that the exposed minimum barrel length in the heated space is measured and maintained in accordance with the table below.

EXPOSED BARREL AMBIENT TEMPERATURE (F/°C)

<table>
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<tr>
<th>Ambient Temperature</th>
<th>“C” – Exposed Minimum Barrel Length inches/mm</th>
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<tbody>
<tr>
<td>40°F/4°C</td>
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<tr>
<td>50°F/10°C</td>
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<tr>
<td>60°F/16°C</td>
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</tbody>
</table>

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

TYPICAL SLEEVE AND SKIRT CONFIGURATION FOR EXAMPLE ONLY – REFER TO THE SPECIFIC PRODUCT SUBMITTAL FOR COMPLETE INFORMATION

NOTE: The “A” dimension of a dry sprinkler, which extends into a freezer from a wet piping system, shall take into account the wall or ceiling thickness of the freezer. The minimum length of the dry sprinkler should not be less than the lengths specified in the following table, plus the thickness of the freezer’s wall or ceiling (”A” = “C” + “D”). Refer to the drawing above for a representation of the “A” dimension. DO NOT attempt to modify dry sprinklers, since they are manufactured to this specific “A” dimension.
**SPRINKLER GUARD INSTALLATION**

**WARNING**
- Sprinkler guards shall be installed AFTER the sprinkler is installed and before the system is tested.
- Avoid damage to the frame, deflector, and bulb during sprinkler guard installation.
Failure to follow these instructions could cause improper sprinkler operation, resulting in death or serious personal injury and property damage.

**NOTICE**
- The photo below is intended only to show the clarity of guard and sprinkler features. Sprinkler guards shall be installed AFTER the sprinkler is installed properly into the fitting.

1. Install the guard onto the sprinkler. Verify that the tabs on the guard engage the recess between the wrench boss and the threads of the sprinkler.
2. Insert the two screws (provided) and tighten evenly.

**SPRINKLER REPLACEMENT**

**WARNING**
- Depressurize and drain the piping system immediately prior to removal and replacement of any Victaulic sprinklers.
- Any activities that require taking the valve out of service may eliminate the fire protection provided. A fire patrol is strongly recommended for the affected areas.
- Before servicing or testing the system, notify the authority having jurisdiction.

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

1. **THE SYSTEM SHALL BE TAKEN OUT OF SERVICE IMMEDIATELY PRIOR TO REPLACEMENT OF SPRINKLERS.** Notify the authority having jurisdiction in the affected area that the fire protection system is being taken out of service and organize a fire patrol for the affected area.
2. Refer to the appropriate installation, maintenance, and testing manual for the system valve to relieve all pressure and drain all water from the system.
3. Remove the old sprinkler by using the proper sprinkler wrench. Install the new sprinkler in accordance with the instructions in the “Standard Sprinkler Installation” section on page 2 or the “Dry Sprinkler Installation” section on page 3. Verify that sprinklers are replaced with the proper model, style, orifice size, temperature rating, and response.
4. Place the system back in service by following the instructions in the appropriate installation, maintenance, and testing manual for the system valve.
5. Check the system for leaks and make any repairs immediately.
6. **SPRINKLER SYSTEMS THAT HAVE BEEN SUBJECTED TO A FIRE SHALL BE RETURNED TO SERVICE AS SOON AS POSSIBLE.** The entire system shall be inspected for damage and obstructions. Any damaged system components or any sprinklers that have operated shall be replaced. Sprinklers that have been exposed to corrosive, combustible products or high ambient temperatures shall be replaced. Contact the authority having jurisdiction in the local area for replacement requirements.

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**VdS Approval Information**

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<th>SIN</th>
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For complete contact information, visit victaulic.com

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