Model GFR VELO–ECOH Upright
(SIN R6553) Standard Response

Features
1. Provides Extended Coverage Ordinary Hazard protection to 400 ft² (37.2 m²) per sprinkler.
2. Very Extra Large Orifice of Nominal K=14.0 (200) results in low pressures.
3. 212°F (100°C) and 165°F (74°C) temperature rating.
4. Available in brass, chrome, black plated and polyester coated finishes.
5. Can be used for all editions of NFPA 13.

Listings & Approvals
1. Listed by Underwriters Laboratories, and UL certified for Canada (cULus)
2. NYC MEA 258-93-E

UL Listing Category
Sprinklers, Automatic and Open Extended Coverage Sprinklers— Ordinary Hazard Occupancy

UL Guide Number
VNIV

Product Description
The Reliable Model VELO-ECOH Extended Coverage Sprinkler has a very extra large orifice, Nominal K=14.0 (200). It can provide Ordinary Hazard protection to 400 ft² (37.2 m²) at lower pressures than an XLO which has a K=11.2 (160.2).

The Model GFR VELO-ECOH Sprinklers provide protection in Ordinary Hazard Group 1 and 2 Occupancies to 400 ft² (37.2 m²) per sprinkler when the system is designed to NFPA 13 hydraulic density requirements.

Model GFR VELO-ECOH Upright Sprinklers are to be installed according to the design criteria shown in this bulletin. The use of ECOH sprinklers can provide opportunities for lower system installation costs by requiring fewer sprinklers, less piping and reduced labor.

Model GFR VELO-ECOH Sprinklers use a levered fusible alloy solder link.

Design Criteria
Reliable Model GFR VELO-ECOH sprinklers are to be used in systems designed and installed in accordance with NFPA 13 and all other local codes and ordinances. The following design criteria also apply:

• Minimum sprinkler spacing is 12’ (3.6 m).
• Minimum flow requirement is shown in the Flow Requirements Table on the reverse side.
• ECOH sprinklers are only to be used in systems hydraulically designed per NFPA 13, and for a minimum area of 1,500 ft² (139.4 m²) or 5 sprinklers, whichever is greater.
• Deflector to commodity clearance shall be a minimum of 18” (457mm).
• ECOH sprinklers shall be installed in unobstructed constructions as defined in NFPA 13.
• Sprinklers can be installed under a sloping ceiling not exceeding 2” (50.8mm) of rise in 12” (305mm).
• Maximum working pressure is 175 psi (12 bar) at the sprinkler.
## Technical Data

<table>
<thead>
<tr>
<th>Sprinkler Model</th>
<th>Thread Size</th>
<th>Orifice Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>GFR VELO–ECOH Upright</td>
<td>¾” NPT (R¾)</td>
<td>0.70” (18mm)</td>
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</table>

<table>
<thead>
<tr>
<th>Temperature Rating</th>
<th>Max. Ambient Temp.</th>
<th>Maximum Sprinkler Spacing</th>
<th>Maximum Coverage Area</th>
<th>Approvals</th>
<th>Sprinkler Identification Number (SIN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>°F</td>
<td>°C</td>
<td>°F</td>
<td>°C</td>
<td>ft</td>
<td>ft²</td>
</tr>
<tr>
<td>165</td>
<td>74</td>
<td>100</td>
<td>38</td>
<td>20</td>
<td>400</td>
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<tr>
<td>212</td>
<td>100</td>
<td>150</td>
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</table>

(1) Minimum Spacing Between GFR VELO–ECOH Upright Sprinklers is 12 feet (3.6m).

## Minimum Flow Requirements

### Spacing Coverage Area

<table>
<thead>
<tr>
<th>Spacing (1) Coverage Area</th>
<th>Flow Rate</th>
<th>Flow Rate</th>
<th>Flow Rate</th>
<th>Flow Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GPH/FT²</td>
<td>GPH/FT²</td>
<td>GPH/FT²</td>
<td>GPH/FT²</td>
</tr>
<tr>
<td></td>
<td>(6.1L/M²)</td>
<td>(6.1L/M²)</td>
<td>(6.1L/M²)</td>
<td>(6.1L/M²)</td>
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<tr>
<td></td>
<td>PSI</td>
<td>PSI</td>
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<td>PSI</td>
</tr>
<tr>
<td></td>
<td>(BAR)</td>
<td>(BAR)</td>
<td>(BAR)</td>
<td>(BAR)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flow Rate</th>
<th>Flow Rate</th>
<th>Flow Rate</th>
<th>Flow Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.15</td>
<td>0.20</td>
<td>0.16</td>
<td>0.19</td>
</tr>
<tr>
<td>GPH/FT²</td>
<td>GPH/FT²</td>
<td>GPH/FT²</td>
<td>GPH/FT²</td>
</tr>
<tr>
<td>(6.1L/M²)</td>
<td>(8.1L/M²)</td>
<td>(6.5L/M²)</td>
<td>(7.7L/M²)</td>
</tr>
<tr>
<td>PSI</td>
<td>PSI</td>
<td>PSI</td>
<td>PSI</td>
</tr>
<tr>
<td>(BAR)</td>
<td>(BAR)</td>
<td>(BAR)</td>
<td>(BAR)</td>
</tr>
</tbody>
</table>

(1) For spacing and coverage areas less than 20 ft x 20 ft (6.1m x 6.1m) and 400 ft² (37.2m²) the flows and pressures for the 20 ft x 20 ft (6.1m x 6.1m) spacing and 400 ft² (37.2m²) area must be used.

## Maintenance

Model GFR VELO–ECOH Upright Extended Coverage Sprinklers should be inspected and the sprinkler system maintained in accordance with NFPA 25. Do not clean sprinklers with soap and water, ammonia or any other cleaning fluids. Remove dust by using a soft brush or gentle vacuuming. Remove any sprinkler that has been painted (other than factory applied) or damaged in any way. A stock of spare sprinklers should be maintained to allow quick replacement of damaged or operated sprinklers. Prior to installation, sprinklers should be maintained in the original cartons and packaging until used to minimize the potential for damage to sprinklers that would cause improper operation or non-operation.

## Ordering Information

**Specify:**
1. Sprinkler Model
2. Temperature Rating
3. Sprinkler Finish

### Finishes

**Standard Finishes**
- Bronze
- Chrome Plated

(1) Other colors and finishes are available on special order. Consult factory for details.

## Model H Sprinkler Wrench

Use Model H Wrench for Model GFR VELO–ECOH Upright Sprinkler removal and installation.

## Patents: U.S. Patent No. 6,446,732

The equipment presented in this bulletin is to be installed in accordance with the latest published Standards of the National Fire Protection Association, Factory Mutual Research Corporation, or other similar organizations and also with the provisions of governmental codes or ordinances whenever applicable. Products manufactured and distributed by Reliable have been protecting life and property for over 90 years, and are installed and serviced by the most highly qualified and reputable sprinkler contractors located throughout the United States, Canada and foreign countries.