MODULAR
MCV-N & FCV-N SERIES

CLEAN AGENT FIRE SUPPRESSION SYSTEMS
The FCV (Frame/Cylinder/Valve Assembly) Series is a stand alone Clean Agent Fire Suppression System. The FCV is designed for integration with current fire alarm control panels (agent releasing capable). The electric solenoid is prewired to Notifier FCM-1-REL module or termination block.

**COMPATIBLE COMPONENTS**

- i3 Series Detector
- NBG - 12LR Releasing Station
- P2R Horn/Strobe
- N-ANN-80 Annunciator

The MCV (Modular/Cylinder/Valve Assembly) Series is an integrated Clean Agent Fire Suppression System equipped with the Notifier RP 2002 agent releasing control panel that is prewired and preprogrammed. The electric actuator, piezo alarm, horn/strobe, and maintenance disable switch are prewired to the agent releasing control panel allowing for minimal remote devices to be wired.

**COMPATIBLE COMPONENTS**

- NFS - 320 Releasing Control Panel
- System Sensor Detectors
- NBG - 12LX Releasing Station
- P2R Horn/Strobe

Each MCV and FCV Series comes equipped with SEVO 1230 Clean Agent Fire Suppression system filled with 3M™ Novec™ 1230 Fire Protection Fluid. Systems are available with standard 360 psi (25 bar) storage pressure, with sizes available to cover between 424 - 15,850 ft³.

**KEY FEATURES**

- Simple and quick installation
- No piping installation required
- Standard low voltage connection to control circuits
- Available as pre-engineered or engineered
3M™ Novec™ 1230 Fire Protection Fluid

3M’s Blue Sky™ Warranty is a 20-year protection against regulatory bans or restrictions on the use of 3M™ Novec™ 1230 Fire Protection Fluid

A long-term, sustainable technology

With zero ozone depletion potential, extremely low global warming potential and short atmospheric lifetime, Novec 1230 Fluid is the first chemical halon replacement to offer a viable, long-term, sustainable technology for special hazards fire protection.

<table>
<thead>
<tr>
<th>ENVIRONMENTAL PROPERTIES</th>
<th>NOVEC 1230</th>
<th>Halon 1301</th>
<th>HFC-125</th>
<th>HFC-227ea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone Depletion Potential¹</td>
<td>0.0</td>
<td>12.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Global Warming Potential²</td>
<td>1</td>
<td>7140</td>
<td>3500</td>
<td>3220</td>
</tr>
<tr>
<td>Atmospheric Lifetime (Years)</td>
<td>0.014 (5 Days)</td>
<td>65</td>
<td>34.2</td>
<td>29</td>
</tr>
<tr>
<td>SNAP (Yes/No)</td>
<td>Yes</td>
<td>N/A</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

¹ World Meteorological Organization (WMO) 1998, Model-Derived Method
² Intergovernmental Panel on Climate Change (IPCC) 2007 Method, 100-year ITH

Today’s largest margin of safety

Because its use concentration is much lower than its No Observable Adverse Effects Level (NOAEL), Novec 1230 fluid offers the largest margin of safety of any chemical halon replacement available on the market today. Note: Industry standards require egress from a protected enclosure prior to system discharge.

<table>
<thead>
<tr>
<th>SAFETY MARGIN</th>
<th>NOVEC 1230</th>
<th>Halon 1301</th>
<th>HFC-125</th>
<th>HFC-227ea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use Concentration</td>
<td>4-6%</td>
<td>5%</td>
<td>8.7-12.1%</td>
<td>7-8.7%</td>
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<tr>
<td>NOAEL²</td>
<td>10%⁴</td>
<td>5%</td>
<td>7.5%</td>
<td>9%</td>
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<tr>
<td>Safety Margin</td>
<td>71-138%</td>
<td>Nil</td>
<td>Nil</td>
<td>3-20%</td>
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</tbody>
</table>

³ NOAEL for Cardiac Sensitization
⁴ NOAEL for acute toxicity, including cardiac sensitization

3M™ Novec™ 1230 Fire Protection Fluid is based on sustainable technology, designed to balance industry concerns for human safety, performance, and the environment. This unique agent is an advanced replacement for halon and first generation halon alternatives.

For more information on the benefits of Novec 1230 Fluid, please visit 3M.com/Novec 1230fluid.
SEVO Systems distribution is established in over 55 countries, on six continents.

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