## Typical Purge Flow rate at 60 PSI Supply

<table>
<thead>
<tr>
<th>Standard Systems</th>
<th>CF System**</th>
<th>LC System</th>
<th>Purge time</th>
<th>Relief Valve</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Continuous Flow</td>
<td>Leakage Compensation</td>
<td>Typical Max Purge Times for XYZ Purge Systems</td>
<td>Pressure Relief / Purge Outlet Valve</td>
</tr>
<tr>
<td><strong>Sub MiniPurge System</strong></td>
<td>0.4 – 8.0 SCFM</td>
<td>8 SCFM High Purge Rate</td>
<td>30 minutes for 4 volume changes at 60 Cubic Feet</td>
<td>RLV25*</td>
</tr>
<tr>
<td><strong>MiniPurge System</strong></td>
<td>8.8 – 16.0 SCFM</td>
<td>16 SCFM High Purge Rate</td>
<td>30 minutes for 4 volume changes at 120 Cubic Feet</td>
<td>RLV36*</td>
</tr>
<tr>
<td><strong>Super-MiniPurge System</strong></td>
<td>17.7 – 32.0 SCFM</td>
<td>32 SCFM High Purge Rate</td>
<td>30 minutes for 4 volume changes at 240 Cubic Feet</td>
<td>RLV52*</td>
</tr>
<tr>
<td><strong>Super-MiniPurge System 1800</strong></td>
<td>For enclosures or rooms needing a high continuous flow, we recommend the use of an Expo Fan Purge System</td>
<td>42 SCFM High Purge Rate</td>
<td>30 minutes for 4 volume changes at 320 Cubic Feet</td>
<td>RLV52*</td>
</tr>
<tr>
<td><strong>Super-MiniPurge System 3500</strong></td>
<td>88 SCFM High Purge Rate</td>
<td>30 minutes for 4 volume changes at 660 Cubic Feet</td>
<td>RLV75*</td>
<td></td>
</tr>
<tr>
<td><strong>Super-MiniPurge System 7000</strong></td>
<td>(Ask our Sales Office)</td>
<td>194 SCFM High Purge Rate</td>
<td>30 minutes for 4 volume changes at 1425 Cubic Feet</td>
<td>RLV104*</td>
</tr>
<tr>
<td><strong>Continuous Flow Outlet Orifice &amp; Spark Arrestor</strong></td>
<td>Yes, choose the flow rate required.</td>
<td>Nor Required</td>
<td>Please consult factory office for higher purge rate and times</td>
<td></td>
</tr>
</tbody>
</table>

* the RLV number is measured in mm so RLV25 is 25mm diameter hole.

Purge time is equal to the volume times 4 divided by the Purge Flow Rate

\[
\text{Purge time} = \frac{\text{Volume} \times 4}{\text{Purge Flow Rate}}
\]

Example: a 4 cubic foot enclosure using a sub MiniPurge @ 8 SCFM;

\[
\frac{4\text{ Cubic Feet} \times 4\text{ volume changes (NFPA 496)}}{8\text{ SCFM Purge Flow Rate}} = \frac{4\times4}{8} = 2\text{ minutes of purge time}
\]

Example: a 60 cubic foot volume enclosure using a Sub MiniPurge @ 8 SCFM

\[
\frac{60\text{ Cubic Feet} \times 4\text{ volume changes (NFPA 496)}}{8\text{ SCFM Purge Flow Rate}} = \frac{60\times4}{8} = 30\text{ minutes}
\]

Example: a 60 cubic foot enclosure will purge using a MiniPurge System in 15 minutes. The difference is the cost of the system used.

** Continuous Flow systems can be a strain on an air supply or compressor, therefore Expo suggests the usage of CF systems to enclosure of 12 cubic feet or less, unless the air supply is not going to be compromised or strained.

Since a CF (Continuous Flow) system can use different orifice plates, the purge time is related to the flow rate of the Orifice plate picked.

Example: a 4 cubic foot enclosure using a Sub MiniPurge CF system with a 0.4 SCFM Orifice plate

\[
\frac{3\text{ Cubic Feet} \times 4\text{ volume changes (NFPA 496)}}{0.4\text{ SCFM Purge Flow Rate}} = \frac{3\times4}{0.4} = 30\text{ minutes purge time}
\]

\[
\frac{3\text{ Cubic Feet} \times 4\text{ volume changes (NFPA 496)}}{2.3\text{ SCFM purge Flow Rate}} = \frac{3\times4}{2.3} = 5\text{ minutes purge time}
\]

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