LEE IMH 5.5mm Relief Valve
Reverse Flow

The Lee Company’s new miniature, poppet-style Pressure Relief Valve provides a faster opening rate and more stable flow than typical ball style relief valves. Measuring just 5.5mm in diameter and 16.6mm long, the new valve weighs only 1.7 grams.

Simple to install, the new Relief Valve uses Lee’s field-proven insert principle that provides secure retention and eliminates the need for threads, o-rings or in-house designs. To install, simply insert the relief valve into a drilled hole and drive the expansion pin flush to seal and lock the valve in place. Designed for reliable operation, the new Relief Valve features robust, all stainless steel construction and 100% performance testing to ensure consistent, long term performance.

The new Relief Valve’s compact size, superior performance, and ease of installation make it ideal for high volume applications in automotive, off-road, and other industrial hydraulic systems.

### PERFORMANCE

- **Lohm Rate:** 650 Lohms*
- **Uprun Leak:** Valve will flow less than 1.0 cc/min at 90% of cracking pressure
- **Flow Point:** Valve will flow more than 2.5 LPM at 125% of nominal cracking pressure
- **Reseat:** Valve will flow less than 0.05 LPM at 88% of nominal cracking pressure
- **Maximum Working Pressure:**
  - 280 Bar (4,060 psid) (Checked Direction)
  - 140 Bar (2,030 psid) (Relief Flow Direction)
- **Materials:** Stainless Steel
- **All flows specified on hydraulic fluid at 80°F**

* Lohm is a measure of flow resistance. See back page for more information.
LOHMS LAWS (liquids)

Every engineer will be interested in our simple system of defining the fluid resistance of Lee hydraulic components.

Just as the OHM is used in the electrical industry, we find that we can use a liquid OHM or "Lohm" to good advantage on all hydraulic computations.

When using the Lohm system, you can forget about coefficients of discharge and dimensional tolerances on drilled holes. These factors are automatically compensated for in the Lohm calculations, and confirmed by testing each component to establish flow tolerances. The resistance to flow of any fluid control component can be expressed in Lohms.

The Lohm has been selected so that a 1 Lohm restriction will permit a flow of 100 gallons per minute of water with a pressure drop of 25 psi at a temperature of 80°F.

LIQUID FLOW FORMULA

The following formulas are presented to extend the use of the Lohm laws to many different liquids, operating over a wide range of pressure conditions.

These formulas introduce compensation factors for liquid density and viscosity. They are applicable to any liquid of known properties, with minimum restrictions on pressure levels or temperature.

The units constant (K) eliminates the need to convert pressure and flow parameters to special units.

\[
L = \frac{KH}{S} \quad \text{Lohms} \\
I = \frac{KV}{w} \quad \text{Liquid flow rate: Volumetric} \\
w = \frac{LV}{w} \quad \text{Liquid flow rate: Gravimetric}
\]

\[
L = 5.5 \text{mm Relief Valve – Reverse Flow}
\]

SIMPLE TO INSTALL

Insert the relief valve into a drilled installation hole. Drive the expander pin flush to within 0.25mm (0.010") above flush of the relief valve body. Use a maximum installation force of 625 KgF (1,380 lbs. force).

The installation tool can bottom on the insert body with no consequence. Lee Installation Tool part number CCRT0900120S is available.

NOMENCLATURE

- L = Lohms
- S = Specific gravity*
- H = Differential pressure
- V = Viscosity compensation factor**
- I = Liquid flow rate: Volumetric
- w = Liquid flow rate: Gravimetric
- K = Units Constant – Liquid (see chart below)
  *S = 1.0 for water at 80°F.
  **V = 1.0 for water at 80°F.

(For other fluids and temperatures, contact your Lee Sales Engineer or visit us at www.leeimh.com)

LIQUID FLOW – UNITS CONSTANT K

<table>
<thead>
<tr>
<th>Flow Units</th>
<th>Pressure Units</th>
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<tbody>
<tr>
<td>GPM</td>
<td>20</td>
</tr>
<tr>
<td>L/min</td>
<td>75.7</td>
</tr>
<tr>
<td>ml/min</td>
<td>75 700</td>
</tr>
<tr>
<td>in³/min</td>
<td>4 620</td>
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<tr>
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</thead>
<tbody>
<tr>
<td>PPH</td>
<td>10 000</td>
</tr>
<tr>
<td>gm/min</td>
<td>75 700</td>
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