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.

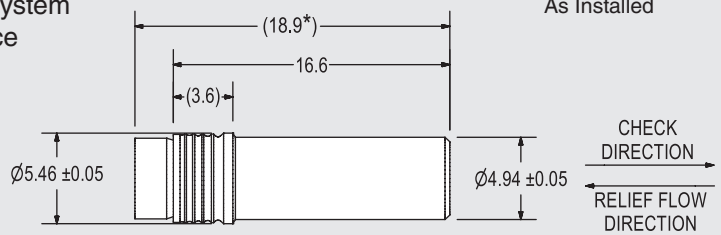
The new Relief Valve's compact size, superior performance, and ease of installation make it ideal for high volume applications in *automotive, off-road, and other industrial hydraulic systems.*

- Fast Opening Rate
  - Stable Flow
  - Minimizes System Stress
- 100% Tested
  - Improves System Level Yield Rates
- Small Size
  - Saves Space and Weight
- All Stainless Steel Construction
  - Compatible With Most Fluids
- Low Hysteresis
  - Improves System Performance

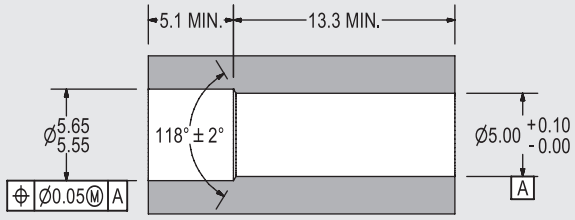
ACTUAL SIZE

As Installed

5.5mm RELIEF VALVE

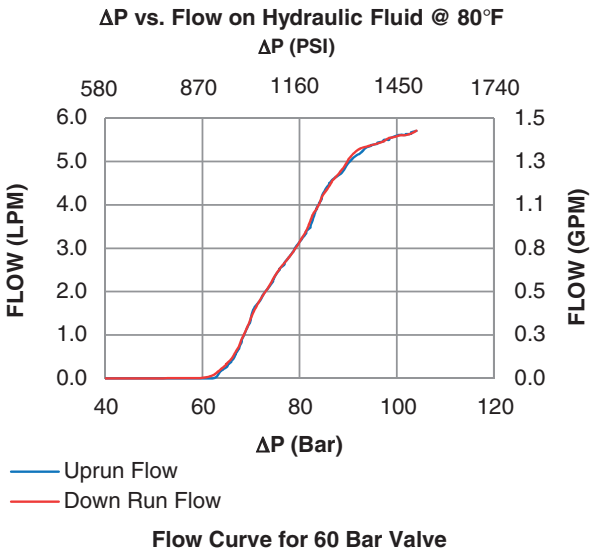


INSTALLATION HOLE



**LOA before installation. All dimensions in millimeters, except where noted.*

PART NUMBER	NOMINAL CRACKING PRESSURE
PCHR5510020S	20 Bar (290 psi)
PCHR5510040S	40 Bar (580 psi)
PCHR5510060S	60 Bar (870 psi)
PCHR5510080S	80 Bar (1,160 psi)
PCHR5510100S	100 Bar (1,450 psi)



Flow Curve for 60 Bar Valve

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.*

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Fax: Order Entry: 860-399-7058 / Technical Info.: 860-399-7037
www.leeimh.com

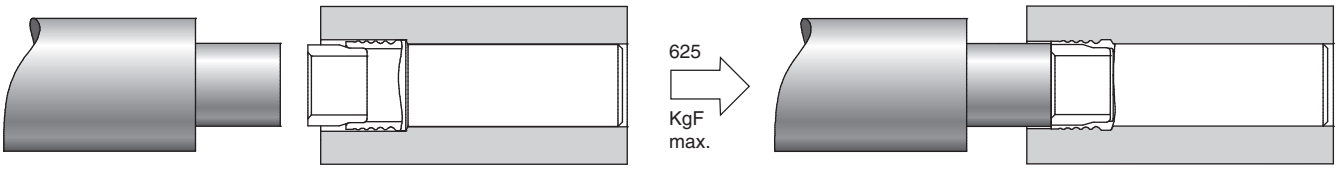
Innovation in Miniature

LEE IMH 5.5mm Relief Valve – Reverse Flow

SIMPLE TO INSTALL

Insert the relief valve into a drilled installation hole. Drive the expander pin flush to within 0.25 mm (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.



LOHM LAWS

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.

Volumetric Flow Units $L = \frac{KV}{I}\sqrt{\frac{H}{S}}$

Gravimetric Flow Units $L = \frac{KV}{w}\sqrt{HS}$

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

VOLUMETRIC FLOW UNITS			
	Pressure Units		
Flow Units	psi	bar	kPa
GPM	20	76.2	7.62
L/min	75.7	288	28.8
ml/min	75 700	288 000	28 800
in^3/min	4 620	17 600	1 760

GRAVIMETRIC FLOW UNITS			
	Pressure Units		
Flow Units	psi	bar	kPa
PPH	10 000	38 100	3 810
gm/min	75 700	288 000	28 800

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