

LEE IMH Chek™ Valve - 855 LC2 Series Press-In

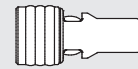
The Lee Company's Industrial Micro-Hydraulics Group (IMH) introduces the newest addition to our line of miniature cartridge-style check valves specifically designed for installation into plastics. The new 855 LC2 Series Press-In Chek Valve offers more than a 65% increase in flow capacity over the existing 8.0 mm CCPI series check valve. This new valve features all stainless steel construction, providing compatibility with a wide range of fluids and gases.

Its unique barbed design provides easy "press-in" installation, ensures retention and prevents any bypass leakage around the valve. A high quality metal to metal seat provides low leakage and highly repeatable cracking pressure. This robust design and 100% functional testing ensures consistent long term performance.

- 100% Tested
 - Eliminates Rework
- Bidirectional Installation
 - Provides Forward or Reverse Flow Capabilities
 - Design Flexibility
- Press-in Design
 - Simple Installation
- Leak Tight
 - Efficient System Performance

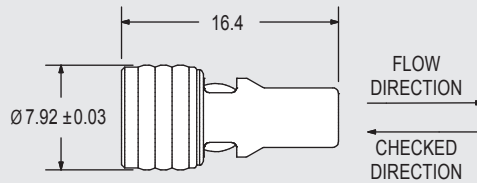


ACTUAL SIZE

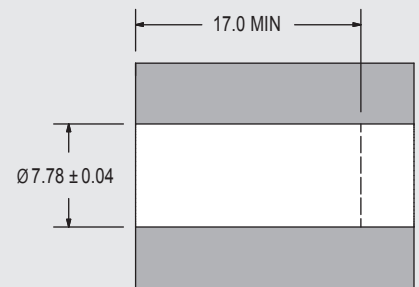


(As Installed)

CHEK VALVE

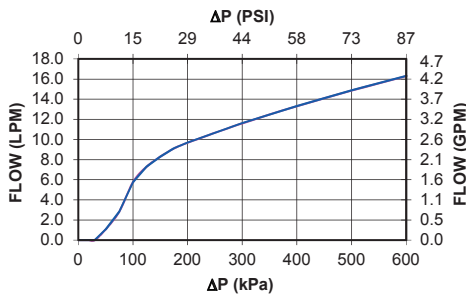


INSTALLATION HOLE



All dimensions in millimeters, except where noted.

ΔP vs. Flow on Water @80°F (27°C)



Flow Curve for 40 kPa Valve

PERFORMANCE

- Lohm Rate: 45 Lohms*
- Leakage: 20 sccm/min. (max.) @ 172 kPa (25 psid) on air
1 Drop/min. (max.) on water
- Materials: Body, Cage, Ball and Spring are Stainless Steel.

The valve's maximum working pressure is dependent on housing material, configuration and operating conditions.

* Lohm is a measure of flow resistance. See back page for more information.

LEE PART NUMBER	CRACKING PRESSURE
CLCP8010000S	0 kPa (No Spring)
CLCP8010004S	4 kPa ± 3 kPa (0.6 ± 0.4 psid)
CLCP8010007S	7 kPa ± 5 kPa (1 ± 0.7 psid)
CLCP8010014S	14 kPa ± 5 kPa (2 ± 0.7 psid)
CLCP8010040S	40 kPa ± 15 kPa (6 ± 2.2 psid)
CLCP8010069S	69 kPa ± 17.3 kPa (10 ± 2.5 psid)

LEE PART NUMBER	CRACKING PRESSURE
CLCP8010100S	100 kPa ± 15 kPa (14.5 ± 2.2 psid)
CLCP8010200S	200 kPa ± 30 kPa (29 ± 4.4 psid)
CLCP8010300S	300 kPa ± 45 kPa (43.5 ± 6.6 psid)
CLCP8010400S	400 kPa ± 60 kPa (58 ± 8.8 psid)
CLCP8010500S	500 kPa ± 75 kPa (72.5 ± 10.9 psid)

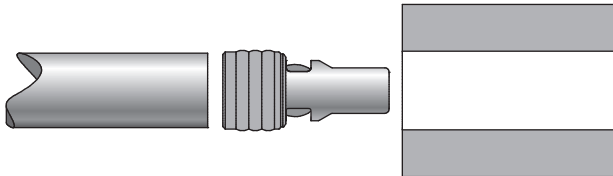
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SIMPLE TO INSTALL

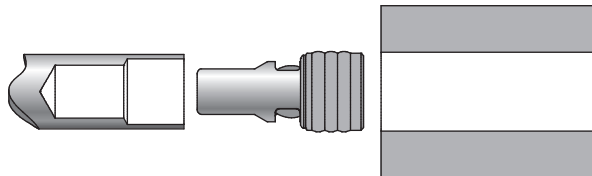
To install, simply press the valve into a plastic installation hole until the valve is flush minimum with the top of the installation hole.

The valve can be installed in either direction, providing forward or reverse flow capabilities. Lee installation tools for each flow orientation are available as follows: Installation Tool Part

FORWARD FLOW INSTALLATION

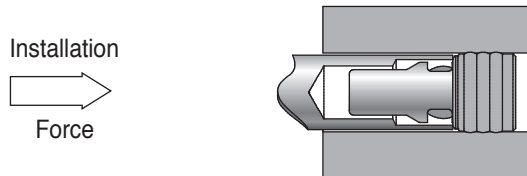
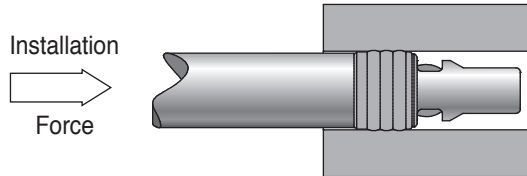


REVERSE FLOW INSTALLATION



Number: CCRT0065726S for reverse flow orientation installations, Tool Part Number: CCRT0900180S for forward flow orientation installations.

† These valves can be pressed directly into plastics that have sufficient elongation such as Nylon, Polyethylene, Polypropylene, Acetal and PEEK.



† For installation into other plastics contact your Lee Sales Engineer for more information. 855 LC2 Press-In Chek Valves are not designed to be installed into metal.

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.

$$\text{Volumetric Flow Units } L = \frac{KV}{I} \sqrt{\frac{H}{S}} \quad \text{Gravimetric Flow Units } L = \frac{KV}{w} \sqrt{HS}$$

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			
Flow Units	Pressure Units		
	psi	bar	kPa
GPM	20	76.2	7.62
L/min	75.7	288	28.8
ml/min	75700	288000	28800
in ³ /min	4620	17600	1760

GRAVIMETRIC FLOW UNITS			
Flow Units	Pressure Units		
	psi	bar	kPa
PPH	10000	38100	3810
gm/min	75700	288000	28800