

8 mm POPPET PRESSURE RELIEF VALVE

The Lee Company's new 8 mm Poppet Pressure Relief Valve is the latest addition to our line of miniature safety pressure relief valves designed for high pressure and high flow applications. Offering superior performance and reliability, this valve is ideal for demanding hydraulic systems and provides faster opening rates and more stable flow than traditional ball pressure relief valves. It is well-suited for high volume applications in automotive, off-road, and other industrial hydraulic systems.

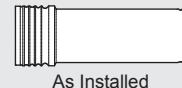
Featuring relief pressures up to 280 bar (4061 psi), the valve's compact design allows for high flow capacity while maintaining a small envelope size. The valve's locking end uses the field-proven Lee Controlled Expansion Principle to provide secure retention and eliminate the need for threads, O-rings, or secondary retainers. Designs are available in forward and reverse flow configurations to allow engineers more flexibility. To install, simply insert the relief valve into a drilled installation hole and drive the expansion pin flush to seal and lock the valve in place.

As system pressures increase, weight and size become critical factors to consider. Our 8 mm Poppet Pressure Relief Valve offers faster opening rates and quicker response times for safety and performance, with stable flow to ensure consistent system operation. Robustly designed using all-stainless steel construction, this relief valve is 100% tested to ensure long-term performance. For more information or to discuss your specific needs, please contact your local Lee Sales Engineer.

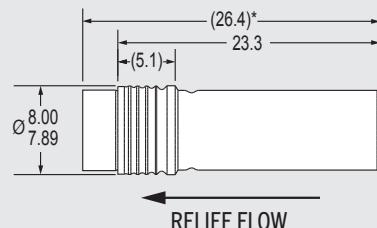
- Provides quick opening speeds and consistent flow, ensuring quiet operation while minimizing safety risks
- 100% performance tested on hydraulic oil to ensure quality
- Compact design saves space and weight
- Simple, proven installation method provides secure retention and eliminates the potential for bypass leakage



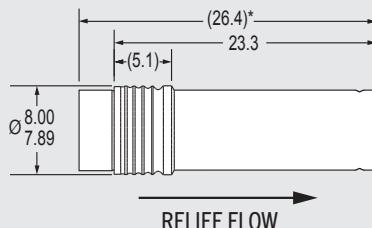
ACTUAL SIZE



REVERSE FLOW

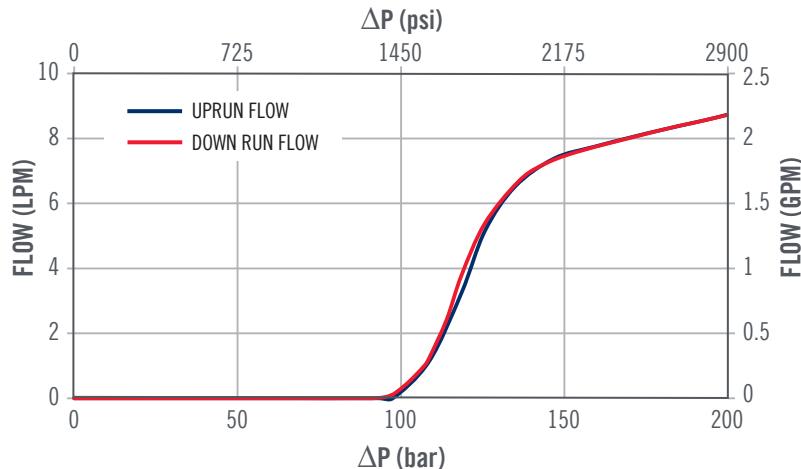


FORWARD FLOW



**Overall length before installation. All dimensions are in millimeters.*

ΔP vs. FLOW ON HYDRAULIC FLUID AT 45°C (113°F)



TYPICAL FLOW CURVE FOR 100 bar VALVE

PERFORMANCE

Upturn Leakage, Flow Point, Reseat Pressure, and Lohm Rates	See reverse side
Maximum Working Pressure Differential	400 bar (5802 psi)
Materials	Stainless Steel
Approximate Weight	4.5 grams



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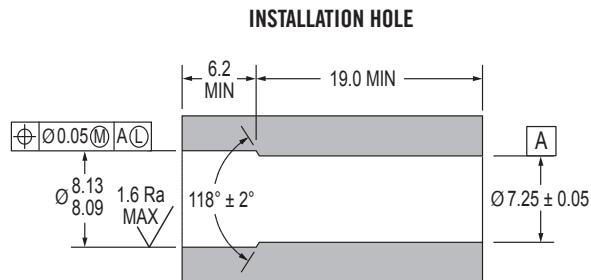
PART NUMBER		NOMINAL CRACKING PRESSURE	FULL OPEN LOHM* RATE	UPRUN LEAKAGE		VALVE FLOW POINT		RESEAT PRESSURE (bar)
FORWARD FLOW	REVERSE FLOW			MAX. LEAKAGE (CCM)	PRESSURE (bar)	MIN. FLOW (LPM)	PRESSURE (bar)	
PCHF8010020S	PCHR8010020S	20 bar 290 psi	150	5	18	6	28	17.6
PCHF8010040S	PCHR8010040S	40 bar 580 psi	150	5	36	12	52	35.2
PCHF8010060S	PCHR8010060S	60 bar 870 psi	150	5	54	18	78	52.8
PCHF8010080S	PCHR8010080S	80 bar 1160 psi	550	5	72	3	104	70.4
PCHF8010100S	PCHR8010100S	100 bar 1450 psi	550	5	90	3.25	130	88
PCHF8010140S	PCHR8010140S	140 bar 2030 psi	750	5	126	3.5	182	123.2
PCHF8010180S	PCHR8010180S	180 bar 2610 psi	750	5	162	4	234	158.4
PCHF8010220S	PCHR8010220S	220 bar 3191 psi	750	5	198	4.5	286	193.6
PCHF8010240S	PCHR8010240S	240 bar 3481 psi	450	10	216	5	312	211.2
PCHF8010260S	PCHR8010260S	260 bar 3771 psi	450	10	234	5	338	228.8
PCHF8010280S	PCHR8010280S	280 bar 4061 psi	450	10	252	7	364	246.4

All flows are specified on hydraulic fluid at 45°C (113°F).

*Lohm is a measure of flow resistance. Visit thel eco.com/Lohm to learn more.

INSTALLATION

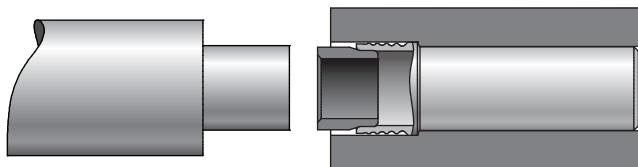
After placing the valve into a drilled installation hole, use the installation tool to drive the expansion pin to within 0.25 mm above flush of the valve body. The installation force and tool travel should be monitored for proper installation.



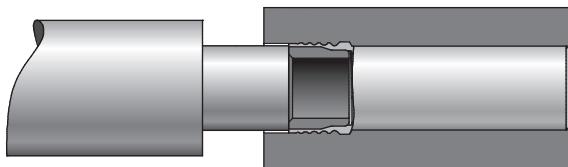
The required installation force is a function of boss material, installation hole dimensions, and boss geometry. It is important to establish the correct force to achieve the necessary pin flushness with your unique housing material, geometry, and installation press.

BOSS MATERIAL	HARDNESS	TYPICAL INSTALLATION FORCE*
6061 Aluminum	40 HRA	4380 N
303 Stainless Steel	23 HRC	4360 N
4140 Steel	43 HRC	4335 N

* Typical installation force in a nominal installation hole. Please contact your local Lee Sales Engineer for installation support or review Installation Procedure IP PCHF/R 8.0 for more information.



Installation
Force



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