8 mm ZERO LEAK REVERSE CHECK VALVE

The new 8 mm Zero Leak Reverse Check Valve is a miniature cartridge-style check valve specifically designed for installation into metal manifolds and fittings. This valve uses a soft seat that ensures efficient and leak-free operation in both hydraulic and pneumatic systems.

The valve's robust design and 100% performance testing guarantees long-term operation in a range of applications. It uses our field-proven Controlled Expansion Principal that provides secure retention and eliminates the need for threads, O-rings, or secondary retainers. To install, simply insert the valve into a drilled installation hole and drive the expansion pin flush to seal and lock the valve in place.

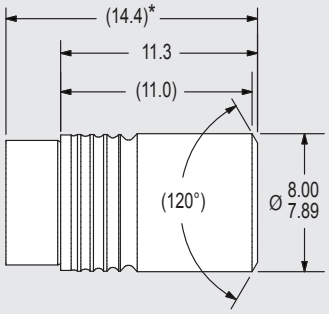
Standard offerings are available with either FKM or EPDM seals for a range of fluid and temperature compatibility. If the standard seal materials are not suitable for your application, other seal materials are available upon request. Please contact your local Lee Sales Engineer for more information.

- Soft seat ensures efficient and leak-free operation in hydraulic and pneumatic systems
- 100% performance tested to eliminate rework
- Simple installation method provides a secure retention and eliminates the potential for bypass leakage

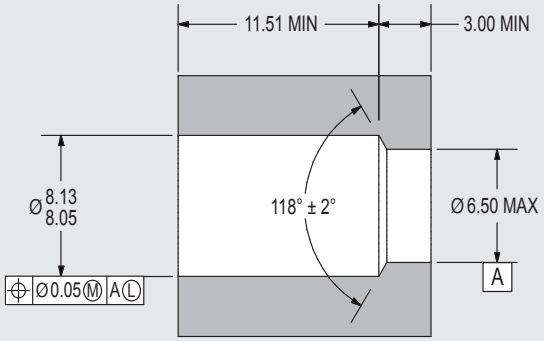
ACTUAL SIZE

(As Installed)

CHECK VALVE



INSTALLATION HOLE



FLOW DIRECTION

CHECKED DIRECTION

**Overall length before installation*

All dimensions are in millimeters, except where noted.

SEAL MATERIAL	PART NUMBER	CRACKING PRESSURE
FKM	CZRM8001004S	4 ± 3 kPa (0.6 ± 0.4 psid)
	CZRM8001007S	7 ± 5 kPa (1 ± 0.7 psid)
	CZRM8001014S	14 ± 10 kPa (2 ± 1.4 psid)
	CZRM8001040S	40 ± 30 kPa (6 ± 4.4 psid)
	CZRM8001069S	69 ± 48 kPa (10 ± 7.0 psid)
EPDM	CZRM8002004S	4 ± 3 kPa (0.6 ± 0.4 psid)
	CZRM8002007S	7 ± 5 kPa (1 ± 0.7 psid)
	CZRM8002014S	14 ± 10 kPa (2 ± 1.4 psid)
	CZRM8002040S	40 ± 30 kPa (6 ± 4.4 psid)
	CZRM8002069S	69 ± 48 kPa (10 ± 7.0 psid)

PERFORMANCE	
Lohm Rate	250 Lohms*
Checked Direction Leakage	Zero drops/minute on hydraulic fluid. Verified on air (0.05 SCCM maximum at 150 kPa)
Maximum Working Pressure in Checked Direction	40 MPa (5800 psid)
Maximum Working Pressure in Flow Direction	4 MPa (580 psid)
Materials	Ball, body, cage, pin, and spring are all stainless steel. Seal material is part number dependent. See table on left.

** The Lohm is a measure of flow resistance. Additional information can be found on the reverse side and at theleeco.com/Lohm.*

8 mm ZERO LEAK REVERSE CHECK VALVE

INSTALLATION

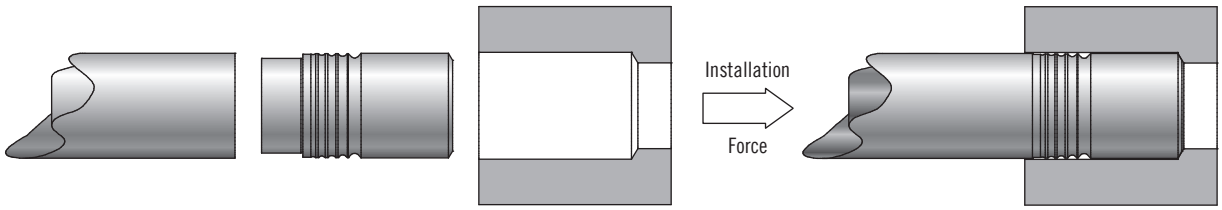
After placing the valve into a drilled installation hole, use the installation tool to drive the expansion pin to within 0.25 mm above flush of the check valve body. Installation force and tool travel should be monitored to verify proper installation.

The required installation force is a function of boss material, installation hole dimensions and boss geometry. A boss constructed with thick or robust materials necessitates a greater installation force compared to one crafted from softer materials or possessing thinner walls. It is important to establish the correct force to achieve the necessary pin flushness with your unique housing material, geometry, and installation press.

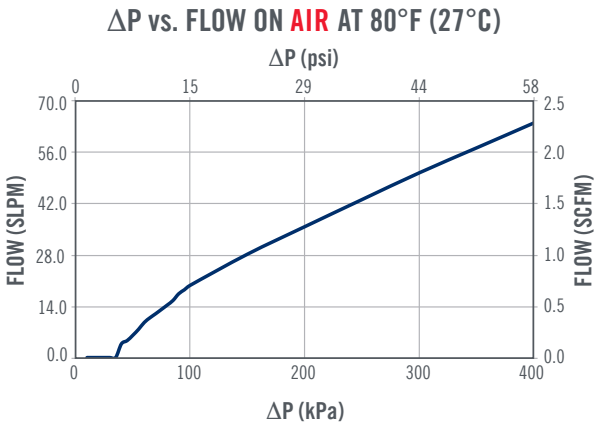
Typical forces for common boss materials are listed below.

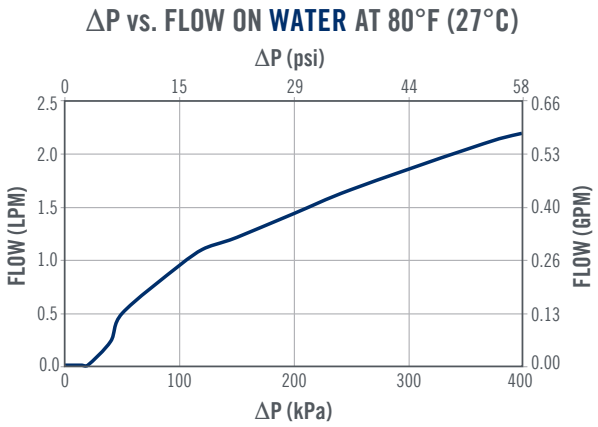
BOSS MATERIAL	HARDNESS	TYPICAL INSTALLATION FORCE
6061 Aluminum	40 HRA	3900 N (875 lbf)
303 Stainless Steel	23 HRC	4250 N (955 lbf)
A2 Steel	57 HRC	4150 N (930 lbf)

Please contact your local Lee Sales Engineer for installation support or review installation procedure “IP CZRM 8.0” for more information.



FLOW PERFORMANCE





TYPICAL FLOW CURVE FOR 40 kPa VALVE

LEE LOHM LAWS

WORKING WITH LIQUIDS & GASES

Engineers will be interested in our simple method of defining and measuring the resistance to fluid flow for hydraulic and pneumatic components. Just as the Ohm is used in electrical engineering, we find that we can use a liquid Ohm or “Lohm” to good advantage on all hydraulic and pneumatic computations.

When using the Lohm, 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 our testing of each component to establish flow tolerances. The resistance to flow of any fluid component can be expressed in Lohms.

Due to the differences in fluid properties between gases and liquids, the equations for calculating the relationship between flow restriction, pressure differential, and flow rate are different.

For more information on Lohms, contact your local Lee Sales Engineer or visit theleeco.com/Lohm.