

PRODUCT CAPABILITY SHEET

FILL AND DRAIN VALVE

The Lee Company's new Fill and Drain Valve is the latest addition to our product line of mechanically-actuated check valves. This valve is ideal for filling and draining applications. Because a separate pilot tool is used to open the valve prior to launch, its in-flight configuration is extremely small and light weight. Multiple options for the wetted materials are available, making the valve compatible with a wide range of fluids. This product utilizes many of the same details mass-produced for our standard aircraft product lines, enabling us to keep costs low even on smaller programs.

Two standard system integration options are available: a traditional aerospace standard threaded boss mount or a tube stub that can be welded on to provide a leak-tight seal. For either option, the pilot tool can be used to mechanically open the check valve to drain the system.

GENERAL PERFORMANCE						
CHARACTERISTIC	SPECIFICATION					
Cracking Pressure	8 psid maximum					
Free Flow	500 Lohms maximum					
Actuated Flow	1250 Lohms maximum					
Internal Leakage	10 ⁻⁵ sccs of helium at 1000-4000 psid					
External Leakage (Reference)	10 ⁻⁷ sccs of helium at 4000 psid with cap and gasket installed					
Nominal System Pressure	4000 psi					
Fitting Proof Pressure	6000 psi					

- Separate pilot tool to reduce weight
- Weight as low as 38 grams (55 grams with cap and gasket installed)
- Leakage less than 10⁻⁷ sccs of helium at 4000 psid with cap and gasket installed
- A variety of materials are available for fluid compatibility
- Custom interfaces available
- Built under aerospace quality standard AS9100



TUBE STUB INTERFACE



BOSS MOUNT INTERFACE



PART NUMBERS		SEVI			
TUBE STUB	BOSS MOUNT	MECHANICAL Pilot tool	MATERIAL	OTHER MATERIALS	
CSLX0514600B	CSLX0514900B	AAJX0512000B	PTFE	316, 304, 17-7PH, 17-4PH, 15-5PH (CRES)	
CSLX0514700B	CSLX0515000B	AAJX0502500B	EPDM*		
CSLX0514800B	CSLX0515100B	AAJX0502200B	FKM*		
CSLX0517200B	CSLX0517400B	AAJX0512200B	FKM	Monel	
CSLX0517300B	CSLX0517500B	AAJX0512100B	PTFE	316 CRES, A286, Cobalt Alloy	

* Back pressure sufficient to limit the pressure differential to 100 psid recommended when opening the valve to drain in order to ensure the integrity of the seals.

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FLUID COMPATIBILITY								
	CSLX0514600B	CSLX0514700B	CSLX0514800B	CSLX0517200B	CSLX0517300B			
	CSLX0514900B	CSLX0515000B	CSLX0515100B	CSLX0517400B	CSLX0517500B			
Helium	 ✓ 							
Hydrocarbon Fuels	~	~	~	 ✓ 	~			
Isopropyl Alcohol	~	~	~	~	~			
Nitrogen	~	~	~	~	~			
Noble Gas (Ar, Kr, Xe)	~	~	~	~	~			
Ammonia		~						
Hydrogen Peroxide			~					
Oxygen				~				
Hydrogen					~			

FILL AND DRAIN TOOL OPTIONS

Having a separate piloting tool is critical to keeping the valve itself as small and lightweight as possible. The mechanically-actuated tool offers a simple actuation utilizing a rotating handle that extends a piston to open the valve. This solution can be used for system pressures up to 4000 psi. The other option is a pneumatically-actuated tool that utilizes a pressurized gas, such as shop air, to extend the piston and open the valve. This solution is rated for 8000 psi systems and can allow for automation of the test setup. For more information on the operation of these tools, please refer to Lee Process Specification J2633.



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