

A

GENERAL SPECIFICATIONS

The following specifications apply to all HDI Platform solenoid valves, unless otherwise noted.

Leakage

Maximum of 50 μLPM of air at 70°F with pressure applied to the common port. See individual product pages for specific pressure conditions.

Internal Volume

2-Port: Plug-In:	28 μL	3-Port: Plug-In:	40 μL
Face Mount:	34 μL	Face Mount:	72 μL
		Soft Tube Ported:	77 μL

Weight

2-Port: less than 2.5 grams

3-Port: less than 4.5 grams

Cycle Life

The cycle life of the HDI Platform solenoid valves will vary depending on the seal material and application conditions. Unless otherwise specified, under standard conditions on air, valves with a silicone seal will typically operate across a minimum of 10 million cycles, while valves with an FKM seal will typically operate across a minimum of 250 million cycles.

Operating Pressure

The valves will operate within the specified pressure range when supplied with the rated voltage $\pm 5\%$. The normally closed port (Port B) seal is spring loaded, so the pressure applied to this port should not exceed the pressure on the common port or the normally open port (Port A) unless otherwise indicated.

Valve Proof Pressure: 2X Normal Rated Pressure

Valve Burst Pressure: 3X Normal Rated Pressure

Operating Temperature

- Ambient operating temperature range is 40°F to 120°F (4°C to 49°C), unless otherwise noted.
- LHQ Series ambient operating temperature range is 60°F to 120°F (16°C to 49°C).
- Increasing the operating temperature tends to limit coil performance. The valve duty cycle and energized time must be evaluated for conformance with the maximum recommended operating and coil temperatures.

MEAN POWER (mW)	SELF-HEATED COIL TEMPERATURE AT 100% DUTY, 72°F AMBIENT ENVIRONMENT
550	165°F (74°C)
750	185°F (85°C)
850	195°F (90°C)

- Maximum coil temperature not to exceed 250°F (121°C).

Storage Conditions

- Temperature: -40°F to 175°F (-40°C to 80°C)
- Relative humidity: 85% max., non-condensing

Response Time

- Typical response times in milliseconds are as follows:

FLUID	AT RATED VOLTAGE (10 psig)	
	ENERGIZE	DE-ENERGIZE
Air	3	4
Water	4	5

- Response times can be enhanced with the use of high speed drive circuits. Refer to Engineering Reference Section, pages R33-36. Since the Lo-Lohm design requires a spike and hold drive, response times may be faster than those listed above.
- The Quiet Operation design (LHQ Series) will have a slightly slower response time due to the damping operation. Particularly after periods of inactivity, first actuation and latch-out response may be longer than the typical dynamic response. If first response is critical in your application, a warm-up cycle may be necessary after periods of inactivity. If faster response or oxygen service is required, please contact The Lee Company to discuss our alternative quiet operation design options.
- Response times are dependent upon system conditions, power, environment, etc. The response time will typically increase as the ambient temperature decreases. Extended periods of inactivity may also have an impact on the initial response time of the valve.

Compatibility

The HDI Platform solenoid valves feature various material offerings for a wide range of applications. Standard seal material offerings are silicone and FKM, while others such as FFKM, are also available upon request. For the armature and plunger stop, 430 SS is typically used for air and mild gas applications but models with FeCr alloy also allow for additional corrosion resistance, and are therefore optimized for saline or mild liquid compatibility. While The Lee Company can offer material recommendations based on your flow media, it is important and necessary to verify compatibility of our products with the fluid media and conditions of your specific application.

Filtration

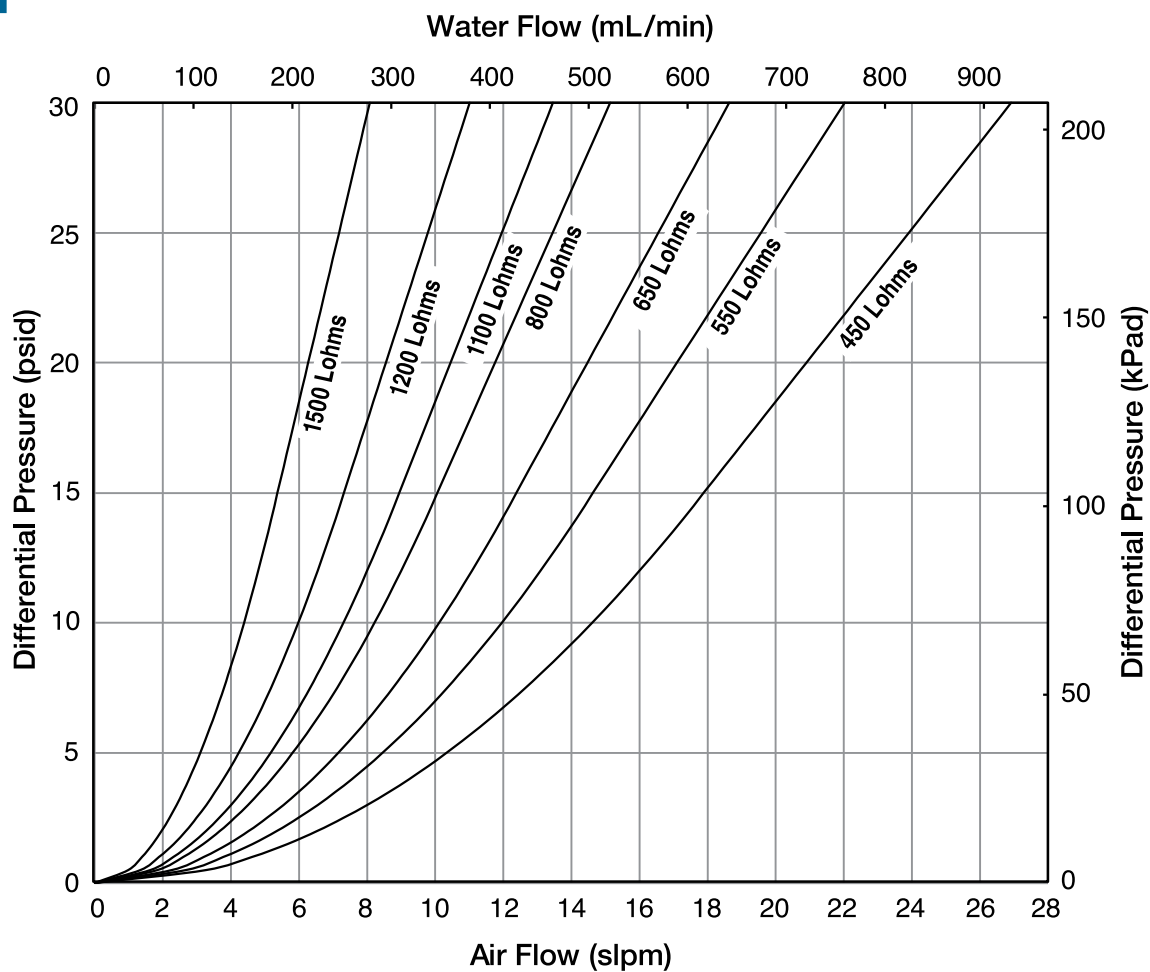
Filtration of 35 microns or finer is required. Refer to Engineering Reference Section, page R30 for additional information.

Electrical Characteristics

The following table describes the basic electrical characteristics for the HDI Platform solenoid valves at room temperature. The valves are intended for operation at the rated voltage $\pm 5\%$. Refer to Engineering Reference Section, pages R33-38 for drive circuit schematic recommendations.

POWER AT RATED VOLTAGE (mW)	VOLTAGE (Vdc)	COIL RESISTANCE (ohms)	INDUCTANCE (mH)
550	5	46	30
	12	262	155
	24	1042	665
750	5	33	20
	12	193	130
	24	766	460
850	5	30	12
	12	170	70
	24	675	340

A

**Typical Flow Characteristics
HDI Platform**

Notes

A