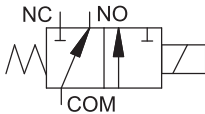


## QUIET OPERATION HIGH DENSITY INTERFACE (HDI) 3-PORT SOLENOID VALVE

The Lee Company's LHQ Series Quiet Operation HDI is a miniature 3-port solenoid valve designed to significantly reduce actuation noise. A typical solenoid valve has an inherent clicking sound when energized, which is caused by the metal-to-metal contact of the moving armature and stationary core. This Quiet Operation design uses whisper technology to significantly reduce actuation noise by 50%, providing a sound level measurement of less than 37 dBA when measured at a distance of 12 inches and a valve cycle frequency of 10 Hz. Refer to the table below for relative sound pressure levels.

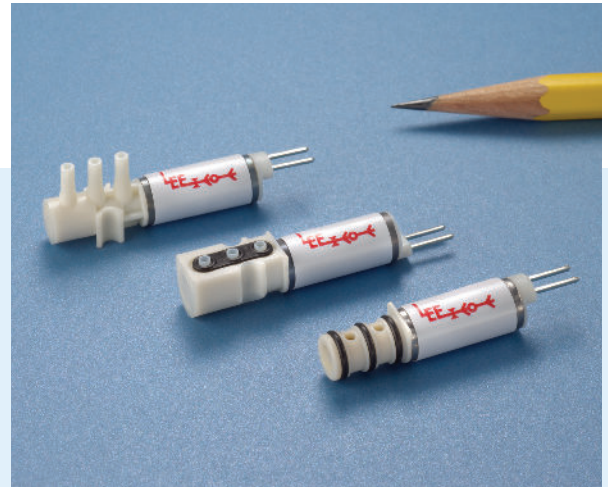
This valve joins the expansive HDI valve product platform and is ideal for medical applications flowing air or compatible gases such as patient simulators, dialysis machines, patient monitors, and other bedside medical devices.

Performance parameters can be optimized for specific applications. Contact your Lee Sales Engineer for technical assistance and additional information regarding quiet design options.

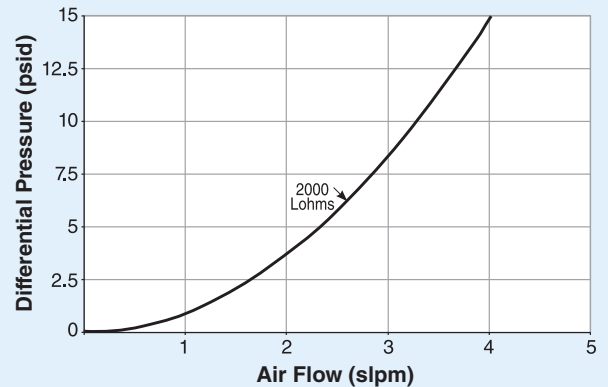


ISO 1219 SOLENOID VALVE SYMBOL

- Low Actuation Noise
- 50% Quieter Than Our Already Best in Class HDI Design: ≤ 37 dBA
- Compact Size
- Light Weight: Less Than 4.5 grams
- Leakage: Less Than 50  $\mu$ LPM at 15 psid (air)
- Operating Temperature Range: 60°F to 120°F
- Electrical Connection: 0.025" Sq. Pin
- Cycle Life: 25 Million Cycles Minimum
- Wetted Materials: Housing (PBT), Plunger Head (PPA), Seal (FKM), Armature/Stop (430 SS), Spring (316 SS), Damping Fluid\* and Epoxy



### FLOW PERFORMANCE CHARACTERISTICS (Discharge to Atmosphere)



The Lohm is a measure of flow resistance. Additional information can be found at [www.theleeco.com](http://www.theleeco.com).

STYLE	PART NUMBER <sup>1</sup>	OPERATING PRESSURE RANGE	LOHM RATE ON AIR AT 70°F (21°C)	POWER CONSUMPTION AT 70°F (21°C)
Plug-In	LHQA__11220H	Supply 0-45 psig Differential 15 psid (max)	2000 Lohms (4 SLPM at 15 psid; Cv = .01)	900 mW
Face Mount	LHQA__21220H			
Ported	LHQA__31220H			

NOTES: (1) Quiet Operation Solenoid Valves are available in 5, 12 and 24 Vdc configurations. Other voltages are available upon request.

LHQA\_\_11220H

Coil Voltage: 05 = 5 Vdc / 12 = 12 Vdc / 24 = 24 Vdc

### SOUND PRESSURE LEVEL SCALE (dBA)

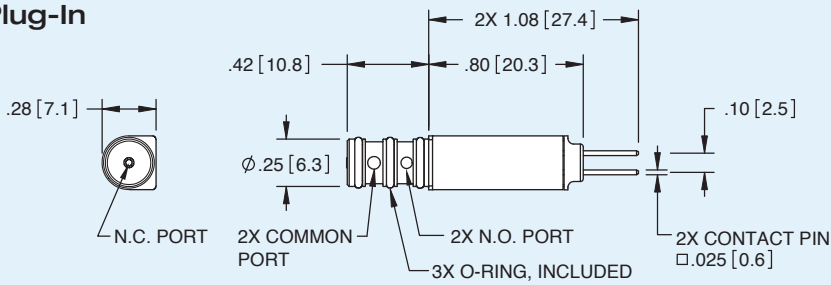
THRESHOLD OF HEARING	QUIET OFFICE INTERIOR OR WATCH TICKING	ORDINARY CONVERSATION	PASSING BUS OR TRUCK AT 10 FT. OR FOOD BLENDER AT 3 FT.	THRESHOLD OF PAIN
0	30	60	90	120

\* Synthetic hydrocarbon fluid.

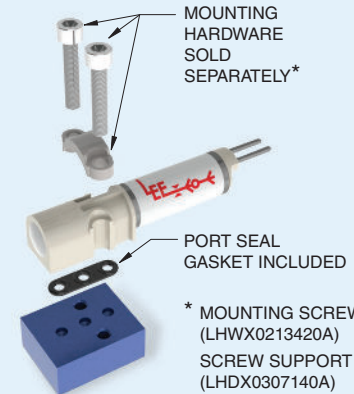
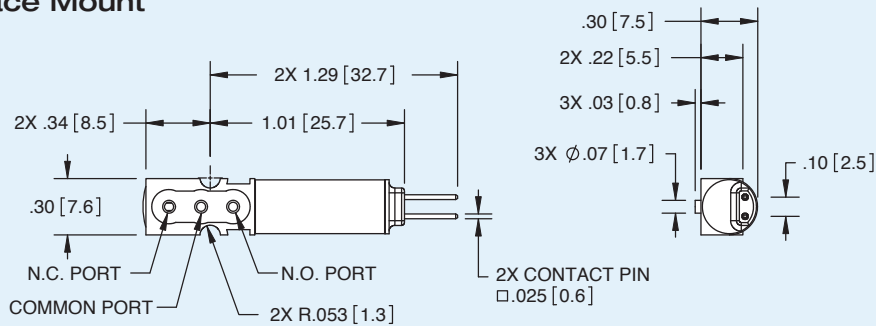
See dimensional drawings on reverse.

# QUIET OPERATION HDI SOLENOID VALVE

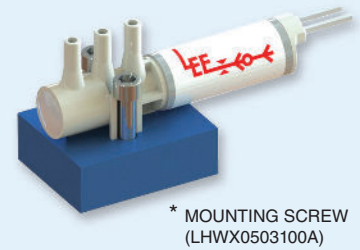
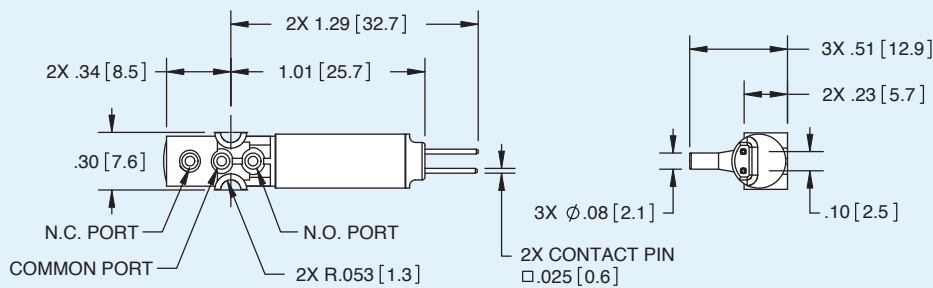
## Plug-In



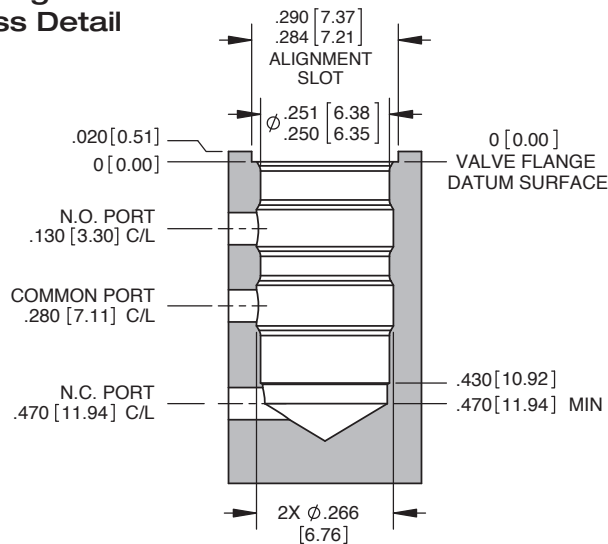
## Face Mount



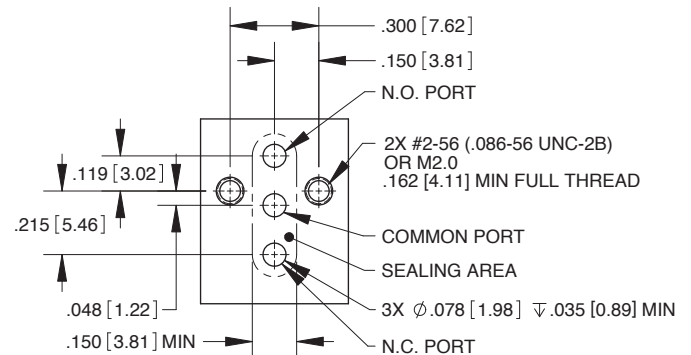
## Soft Tube Ported



## Plug-In Boss Detail



## Face Mount Boss Detail



Reference Drawing Number LCFX0300100B for Plug-In Boss Details.  
Valve Boss may be created using Lee Co. cutting tool Part Number TTTA0000180B.

Reference Drawing Number LFIX1001150A for Face Mount Boss Details.  
*NOTE: Boss detail drawings not to scale.  
All dimensions are in inches [mm].*