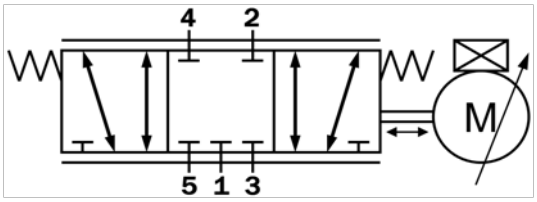
Product Overview

Enfield Technologies LS-V05s model proportional valves are the newest addition to 5-Ported, 4-Way valve product offering. While compact, they remain big on versatility, with a rugged design specifically designed for in-line or custom manifold mounting. The bi-directional linear force motor and spool & sleeve combination ensure the valve's ability to precisely follow a command signal.

LS-V05s Pneumatic Control Valve



LS-V05s Valve Diagram (ISO 1219-1:1991)

Features

- 5/3 Bi-Directional Proportional Flow Control
- Linear Force Motor
- Infinitely Variable Valve Positioning (3 Extreme Positions)
- Fast Shifting Time (t_s < 2.4 ms)
- High Bandwidth* (f_{BW} = 109 Hz)
- Low Hysteresis (less than 5% of full scale range)
- Low Leakage

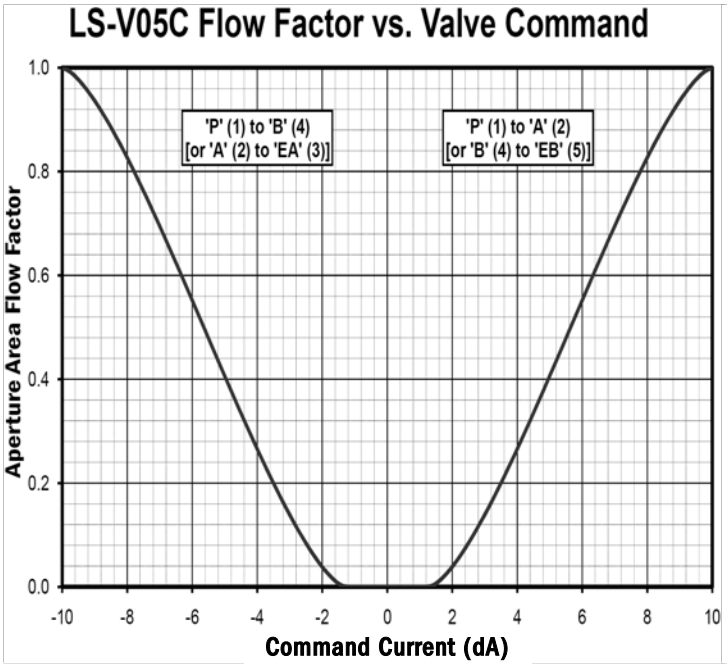
Typical Applications

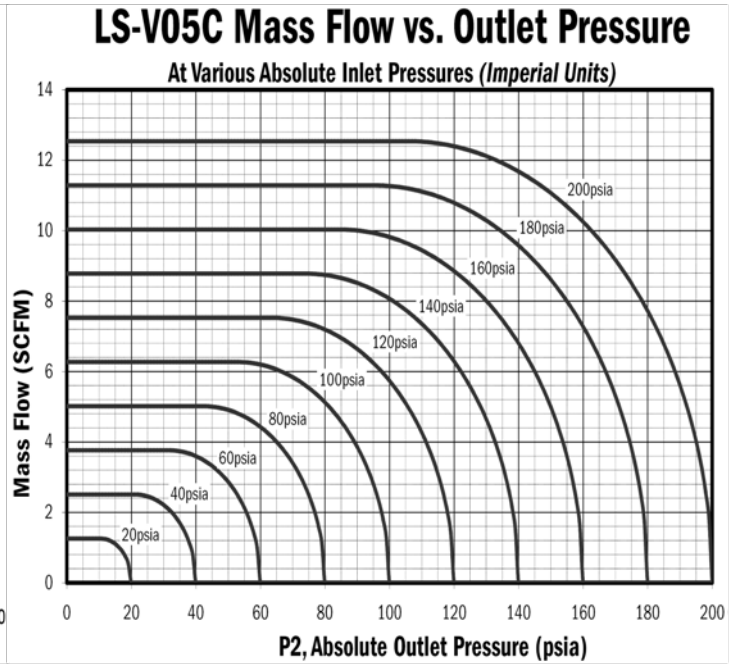
- High-performance Open and Closed-Loop Systems:
  - Position Control
  - Motion Control
  - Flow Control
  - Force Control
  - Pressure Control
  - Ultra-Fast Switching (< 4.8 ms)

Industries

- Laboratory Test & Measurement
- Industrial Automation
- Animatronics
- Medical Equipment/Devices

*1Hz = One cycle through all three valve positions





Enfield Technologies
35 Nutmeg Drive
Trumbull, CT 06611 USA

t. +1 203 375 3100
f. +1 203 286 2414

toll free North America
1-800-504-3334

info@enfieldtech.com
www.enfieldtech.com

DS1001; rev 20100203

Specification	Value	
Physical Characteristics	**SI Units**	**Imperial Units**
Mass (Weight)	0,158 kg	(5.6 oz)
Approximate Physical Dimensions (L x W x H)	71.4 mm x 40.6 mm x 25.4 mm	2.81" x 1.60" x 1.00"
Materials	Aluminum, Nitrile, 440C SS, 316 SS, Nickel Plated Steel	
Valve Function	5-Port Bi-Directional Flow Control Valve, Normally Closed Center	
Valve Type	Lapped Spool and Sleeve	
Valve Actuation	Direct-Acting, Linear Force Motor	
Ports	10-32 UNF 3B	
Mounting Direction	Any	
Performance Characteristics		
Shifting Time (ISO 12238)	2.4 ms	
Bandwidth	109 Hz	
Pressure (at any port)	Vacuum → 1.03 MPa (10.3 bar)	Vacuum → 150 psig
Maximum Effective Aperture	5 mm^2	0.008 in^2
Flow Capacity and Critical Pressure Ratio (ISO 6358)	C = $3.0x10^{-8}$ $s \cdot m^4/kg$; b ≈ 0.35	C_v = 0.13, K_v = 0.11
Flow Rate of Air at 20 °C (68°F) and 65% RH (refer to Mass Flow Graphs)	3.5 g/s (6.0 bar → 5.0 bar)	6.0 SCFM (170 SLPM) (80 psig → atm)
Leakage Rate (150psig → atm)	3.13 SCFH (1.49 SLPM)	
Turndown Ratio	190:1	
Electrical Characteristics		
Power	3.6W Nominal	
Current	1.0A Max	
Electrical Connection	M8 3-Pin (Male)	
Environmental Characteristics		
Environmental Protection Class	IP54 (IEC 60529)	
Temperature	0°C – 50°C	32°F – 122°F
Humidity	5% - 95% RH	

Filtration Requirements

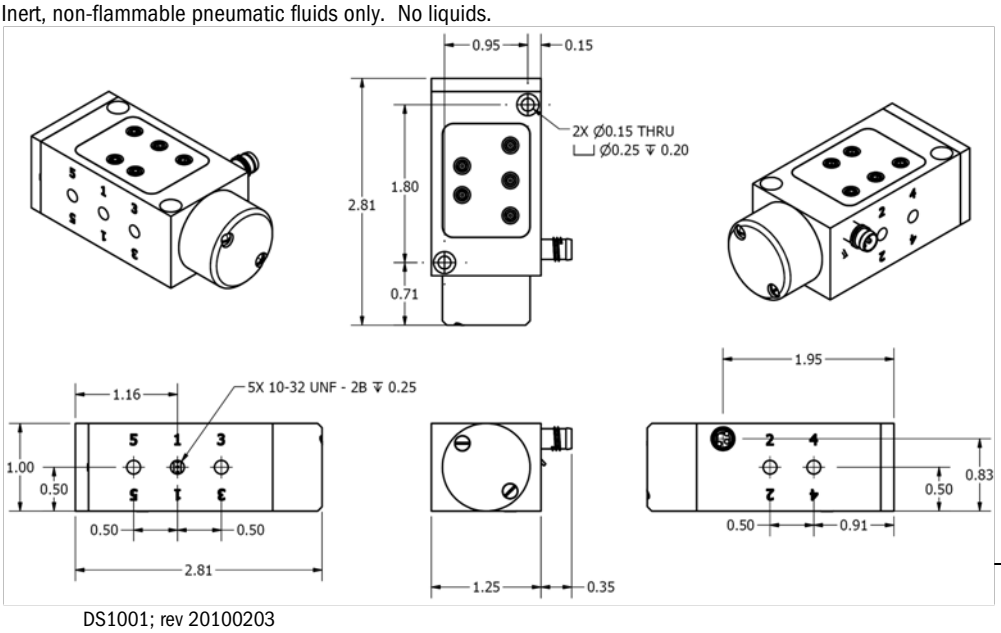
Clean, dry, non-lubricated air; 5 µm particulate and 0.3 µm coalescing filters recommended

Lubrication Requirements

Lubrication is not recommended and may void warranty.

Operating Fluids

Inert, non-flammable pneumatic fluids only. No liquids.



M8 3-Pin Male Connector

not used
valve +
valve -

toll free North America
1-800-504-3334
info@enfieldtech.com
www.enfieldtech.com