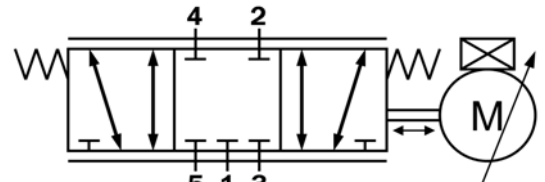


Product Overview

Enfield Technologies LS-V25s series continues in the long line of tradition for fast response and high flow, associated with the LS series sub-base mounted valves. The LS-V25s is a ¼” ported in-line valve, with a 1.0 Cv. Customers in the market for a low profile valve, with a 2.5 ms (or less) response time will no doubt find the new “s” Series valves from Enfield Technologies to be an important innovation.



LS-V25s Pneumatic Control Valve



LS-V25s 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 ($t_s = 2.8$ ms)
- High Bandwidth* ($f_{bw} = 88$ Hz)
- Low Hysteresis (less than 5% of full scale range)
- Low leakage

*1Hz = One cycle through all three valve positions

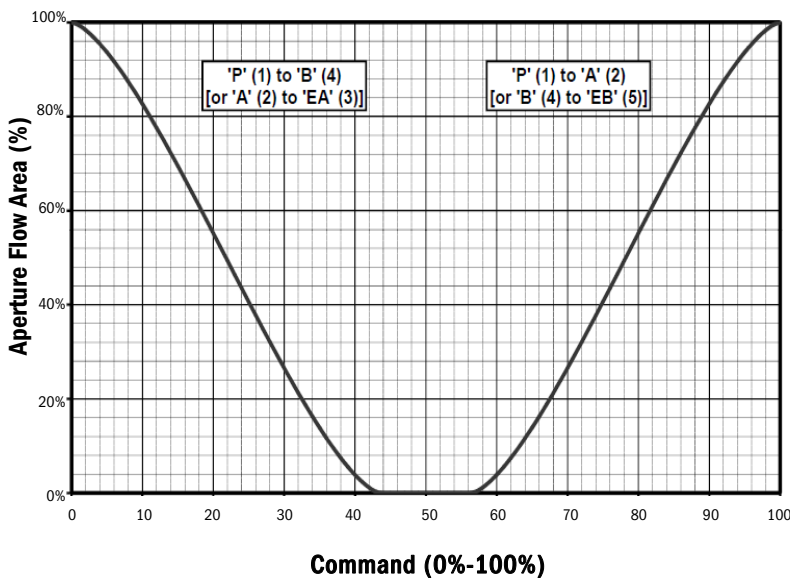
Typical Applications

- High-performance Open and Closed-Loop Systems:
 - Position Control
 - Motion Control
 - Flow Control
 - Force Control
 - Pressure Control
- Ultra-Fast Switching (<5.6ms)

Industries

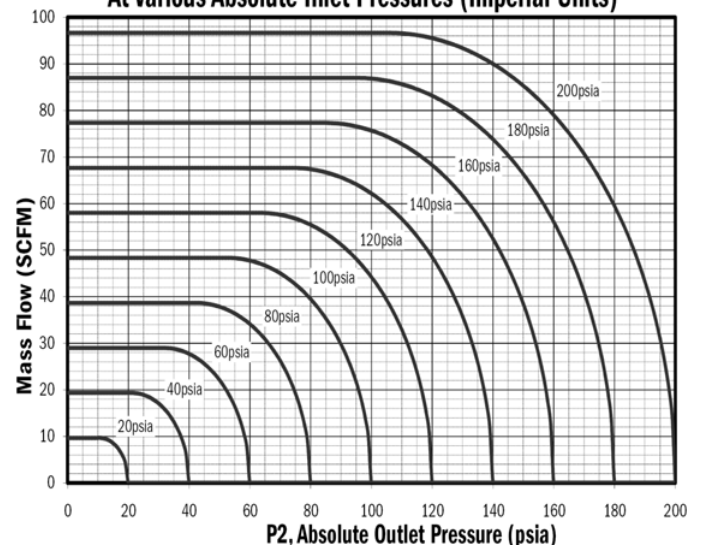
- Laboratory Test & Measurement
- Industrial Automation
- Animatronics
- Medical Equipment/Devices

LS-V25s Flow vs. Command



LS-V25s Mass Flow vs. Outlet Pressure

At Various Absolute Inlet Pressures (Imperial Units)



Specification	Value	
	SI Units	Imperial Units
Physical Characteristics		
Mass (Weight)	0,824 kg	(29.10 oz)
Approximate Physical Dimensions (L x W x H)	122.4 mm x 72.4 mm x 44.5 mm	4.82" x 2.85" x 1.75"
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	1/4" NPTF	
Mounting Direction	Any	
Performance Characteristics		
Shifting Time (ISO 12238)	2.8 ms	
Bandwidth	88 Hz	
Pressure (at any port)	Vacuum → 1.03 MPa (10.3 bar)	Vacuum → 150 psig
Maximum Effective Aperture	25 mm ²	0.039 in ²
Flow Capacity and Critical Pressure Ratio (ISO 6358)	C = 23.1x10 ⁻⁸ s·m ⁴ /kg; b ≈ 0.35	C _v = 1.0, K _v = 0.86
Flow Rate of Air at 20 °C (68°F) and 65% RH (refer to Mass Flow Graphs)	27.3 g/s (6.0 bar → 5.0 bar)	46 SCFM (1,314 SLPM) (80 psig → atm)
Leakage Rate (150psig → atm)	25.9 SCFH (12.2 SLPM)	
Turndown Ratio	200:1	
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 (Enfield Tech P/N: AAF25S5F3CF/RG).

M8 3-Pin Male Connector

Lubrication Requirements

Lubrication is not recommended and may void warranty.

Operating Fluids

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

