



M-ES SERIES ELECTRONIC VALVES



Valve Type	2/2 Bi-Directional or 3/2 Normally-Closed & Universally-Ported
Ports	Inlet and outlet through manifold 3/2: Exhaust through top of valve
Operating Pressure	700 mm Hg Vac to 7 bar
Voltage	6 VDC, 12 VDC or 24 VDC
Voltage Tolerance	90 to 120% of rated voltage
Wattage	1 watt at rated voltage
Temperature Range	0 to 65° C
Medium	Clean, dry air and compatible gases (40 micron filter recommended)
Material, Wetted	ENP Carbon Steel, 50/50 Nickel Iron, 300 Series Stainless Steel plus Seal Material
Material, Seals	Nitrile standard; FKM and EPDM available
More Details	clippard.com/link/es

Spider technology is renowned worldwide for exceptional leak resistance and long life. Clippard developed, patented and perfected this technology. Ideal applications have exceeded 1,000,000,000 cycles with Clippard's technology. The M-ES valve accomplishes this by utilizing a unique valving principle known as spider technology. This technology has one moving part which moves a mere 0.2 mm during operation. This single moving part with a short stroke enables the M-ES series to operate with exceptional reliability.

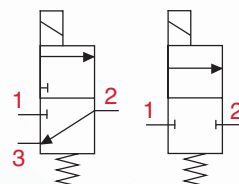
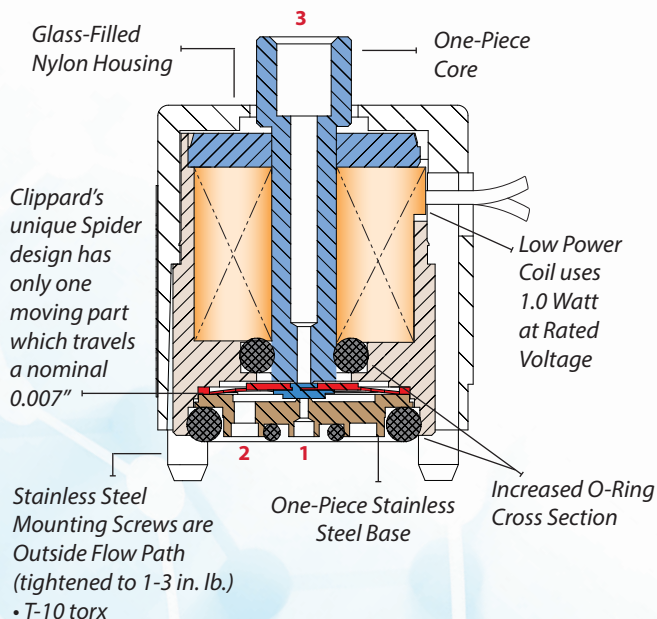
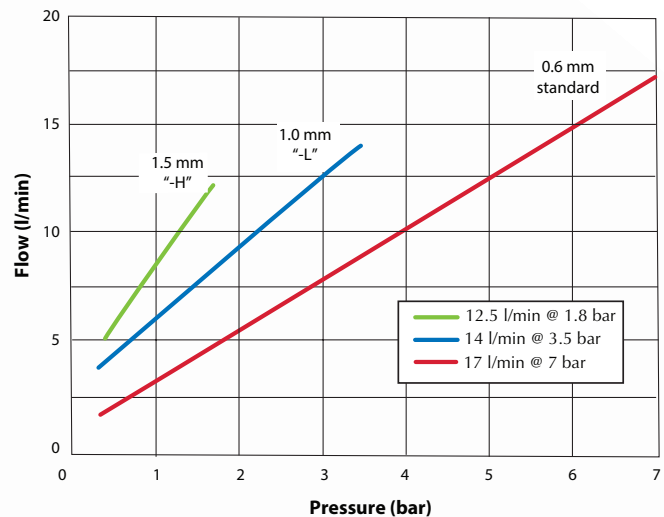
The M-ES series features large cross sectional o-rings, minimal leak points, and proven poppet designs. All mounting hardware is outside of the flow path for the M-ES, and no parts are threaded during assembly to reduce the possibility for contamination. The M-ES has the best performance-to-price ratio for low leak valves.

The compact footprint coupled with the long life, and exceptional leak resistance make the M-ES line suited to improve reliability in a wide range of applications including biomedical, dental, test equipment, oxygen control, textile, packaging, pressure control, automation and portable systems.

KEY FEATURES

- Over 1 billion cycles (under ideal conditions)
- 0.01 sccm leak rate
- No threads in flow path
- Fast response - 5 to 10 ms (nominal)
- Close mounting-22 mm on center. Overall height less than 25 mm
- No Anaerobic sealant
- Ideal for ultra-low leak applications

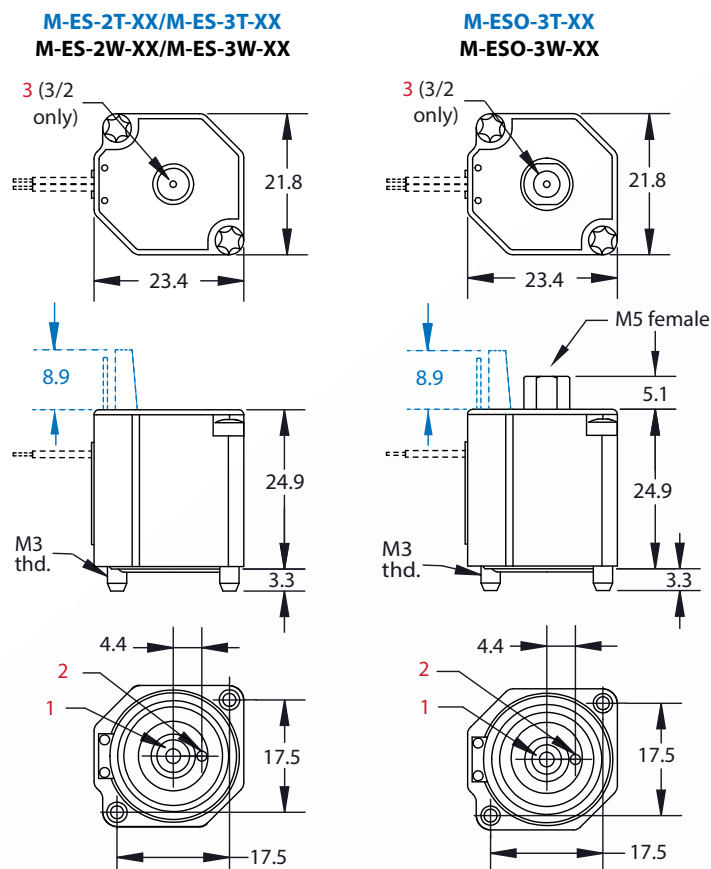
TYPICAL FLOW



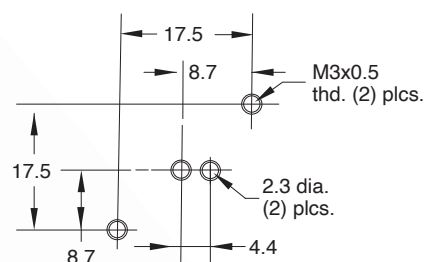
ORDERING INFORMATION

Unit		Type	Function	Connection	Voltage	Orifice	Options	
(blank)	Imperial	ES-	Normally-Closed	2 2/2	T Top Pin	-6 6 VDC	(blank) 0.6 mm	(blank) Nitrile Seals
M-	Metric	ESO-	Universally-Ported	3 3/2	W Wire Leads, 18" (26 AWG)	-12 12 VDC	(7.2 bar max)	V Viton Seals
						-24 24 VDC	L 1.0 mm	E EPDM Seals
							(3.4 bar max)	
							H 1.5 mm	
							(1.7 bar max)	
		Example Part No.			M-ES-2T-12-V			
		Accessory						
		C3-RXB18 Wire Lead Connector, 450 mm						
		(TE Connectivity #S-103956-2)						

Valves



Mounting Interface



Consult Clippard for custom manifold designs.

Manifolds

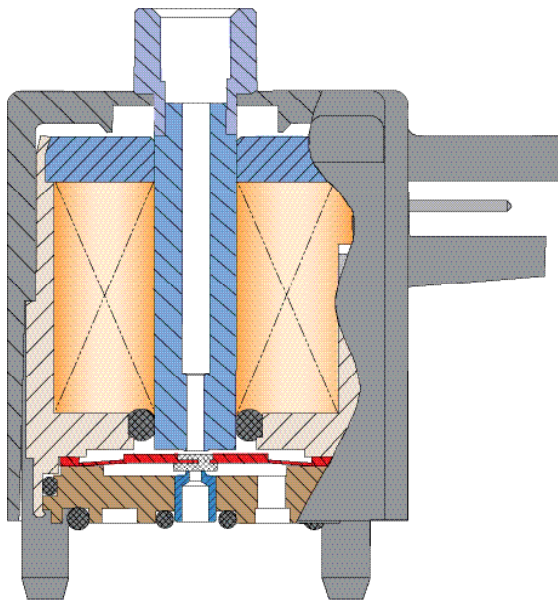
For a complete offering of single- and multi-station manifolds, see clippard.com/products/electronic-valve-es-manifolds



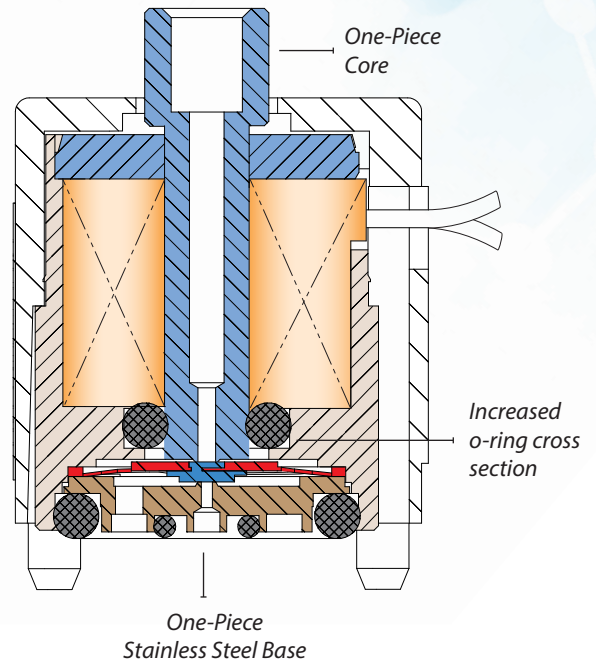
Clippard

M-ES & M-ESO SERIES ELECTRONIC VALVES

Original Design



New 2.0 Design



Medium	Clean, dry air (40 micron filter)
Power Consumption	1 watt at rated voltage
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Pressure Range	700 mm Hg Vac to 7 bar
Operating Range	90 to 120% of rated voltage
Response Time	5 to 10 ms (nominal)
Voltage	6 VDC, 12 VDC or 24 VDC
Ports	Inlet and outlet through manifold 3/2: Exhaust through top of valve
Seals	Nitrile standard; FKM, EPDM and silicone available
More Details	clippard.com/link/es

- The M-ES Line is now **IMPROVED!**
- The mounting dimensions are **NOT CHANGING**.
- The published specifications are **NOT CHANGING**.
- The o-rings are **CHANGING** to reduce leak points.
- The manufacturing and assembly processes are **CHANGING** to provide a better, more efficient valve.
- The exterior color is **CHANGING** for a cleaner, updated look!
- The mounting screws are **CHANGING** from Phillips to Torx.

