

# Clippard

## M-ES SERIES ELECTRONIC VALVES



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

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.

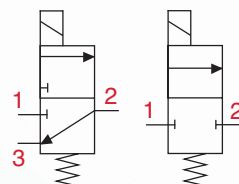
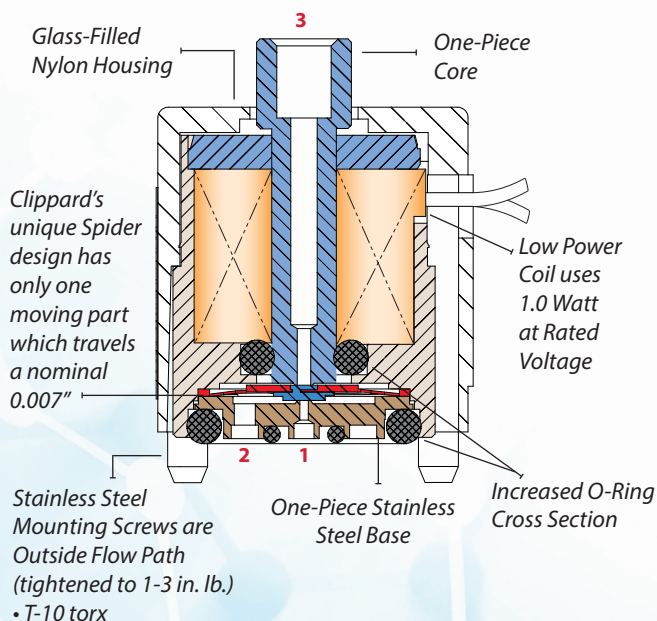
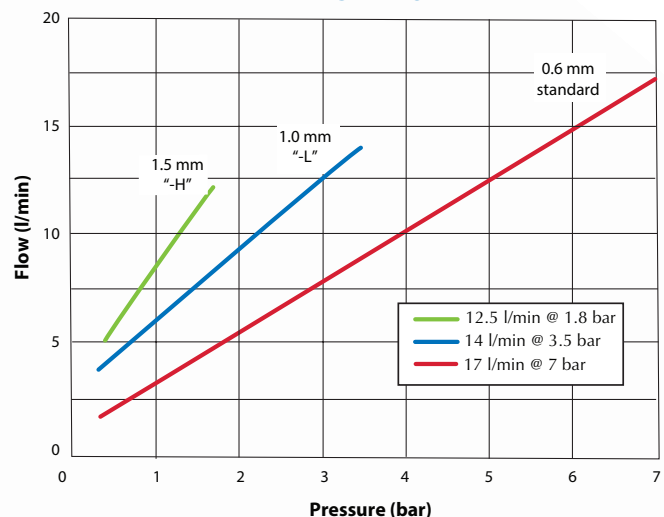
The M-ES series features large cross sectional o-rings, minimal leak points, and proven poppet designs. All mounting hardware is outside of the flow path for the M-ES, and no parts are threaded during assembly to reduce the possibility for contamination. The M-ES has the best performance-to-price ratio 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) Nitrile Seals
M-	Metric	ESO-	Universally-Ported	3 3/2	W Wire Leads, 18" (26 AWG)	-12 12 VDC	V Viton Seals
						-24 24 VDC	E EPDM Seals

<b>Orifice</b>	(blank) 0.6 mm (7.2 bar max)
L	1.0 mm (3.4 bar max)
H	1.5 mm (1.7 bar max)

<b>Options</b>	(blank) Nitrile Seals
V	Viton Seals
E	EPDM Seals

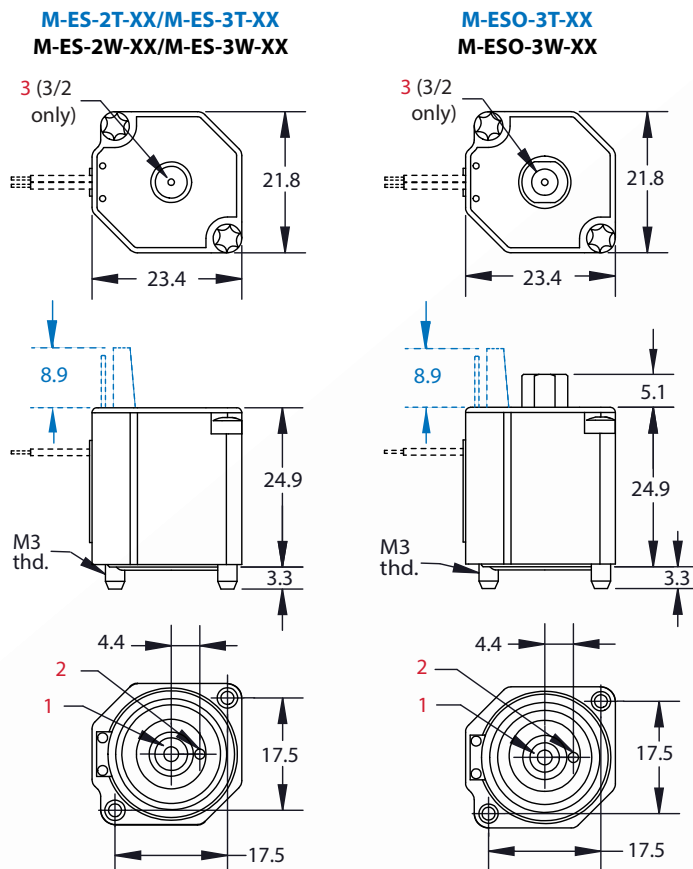
  

<b>Accessory</b>	<b>C3-RXB18</b> Wire Lead Connector, 450 mm (TE Connectivity #S-103956-2)
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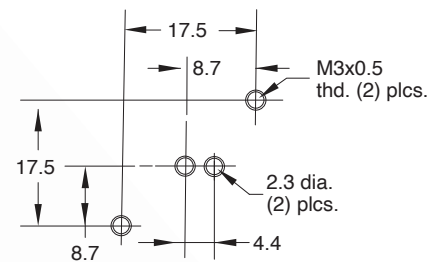
  

<b>Example Part No.</b>	M-ES-2T-12-V
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## Valves



## 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](http://clippard.com/products/electronic-valve-es-manifolds)

