

10 & 15 MM MINIATURE VALVES

All of the benefits of Clippard quality and reliability are available in these 10 mm and 15 mm miniature valves. Offered in both Normally-Open or Normally-Closed models, these 2-Way and 3-Way valves are perfect for small areas where compact electronically-controlled pneumatics are needed.

A high strength, engineered lightweight glass-filled nylon body—along with stainless steel, FKM and nitrile—makes this series suitable for a broad range of applications. With exceptional life and reliability, this versatile miniature valve is a smart choice for many types of systems across many different industries.



10 MM STANDARD

Direct operating valves well-suited for single- or multiple-valve mounting in small spaces.

(90° connector shown)



15 MM STANDARD

Direct operating valves well-suited for single- or multiple-valve mounting in small spaces.

(DIN connector shown)



10 MM LATCHING

A short pulse of current shifts this valve which “latches” indefinitely; another pulse returns the valve.

(Wire leads shown)



15 MM LATCHING

A short pulse of current shifts this valve which “latches” indefinitely; another pulse returns the valve.

(Wire lead shown)



10 MM HIGH FLOW 2-WAY

Specialty series for high flow applications.

(In-line connector shown)



15 MM HIGH FLOW 2-WAY

Specialty series for high flow applications.

(In-line connector shown)

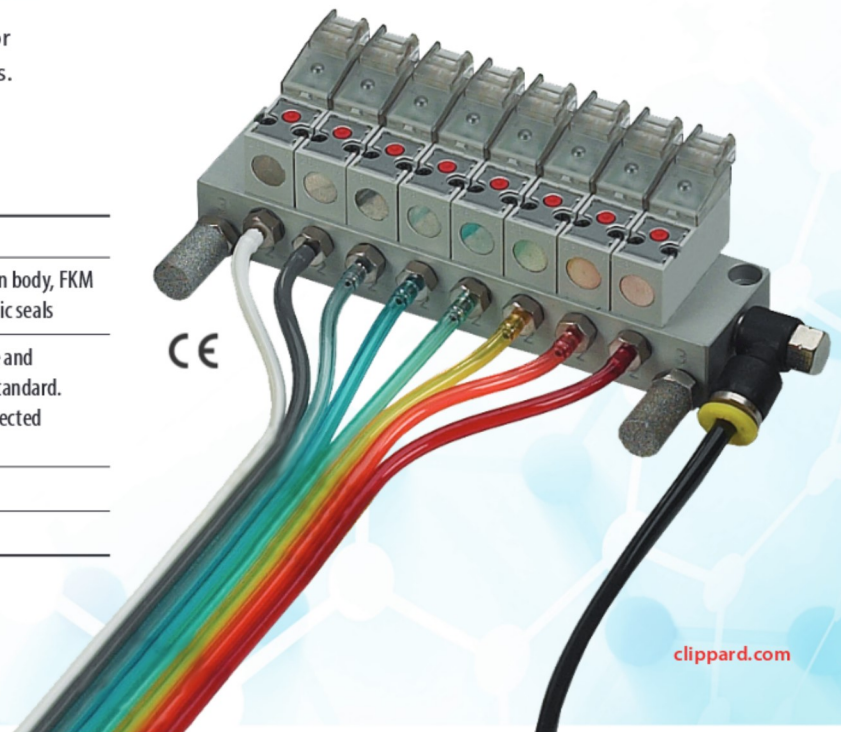


10 MM ISO 15218 SERIES

Conforms to ISO standard for mounting and port locations.

(90° connector shown)

Medium	Air, gas, or other compatible fluids
Material	Stainless steel core and springs, Nylon body, FKM dynamic seals, nitrile gasket and static seals
Electrical	The coil is constructed of copper wire and insulated according to the class "F" standard. All circuitry and connections are protected from corrosion
CE, RoHS Compliant	
More Details	clippard.com/link/10-15mm



10 MM MINIATURE VALVES

LATCHING 10 MM MINIATURE VALVES

Clippard's Latching series features a careful balance of forces—through the precise placement of a permanent magnet in the valve core—produces a bi-stable valve. A short pulse of current opens the valve, which “latches” open indefinitely after the current stops. A subsequent pulse of current in the opposite direction closes the valve. The valve consumes less energy and produces less heat than a standard solenoid valve.

Working Pressure	0 to 100 psig
Flow Rate	30 l/min @ 100 psig
Orifice	0.030"
Electrical Connection	2-Wire reverse polarity, 300 mm, 24 AWG
Wattage	2.0 watts
Voltage Tolerance	±10%
Connector	Wire leads



- 2-Way & 3-Way Normally-Closed configurations
- Pulse-actuated (on or off)
- Polarity reverse required
- Stable latch

Minimum order quantities may apply.

Type	Part No.	Voltage
2-Way	E2L10C-7W012	12 VDC
	E2L10C-7W024	24 VDC
3-Way	E3L10C-7W012	12 VDC
	E3L10C-7W024	24 VDC

HIGH FLOW 2-WAY 10 MM MINIATURE VALVES

Working Pressure	0 to 40 psig
Flow Rate	35 l/min @ 40 psig
Orifice	0.055"
Power Consumption	3.5 watts in-rush phase; 0.35 watts maintenance phase
Voltage Tolerance	±10%



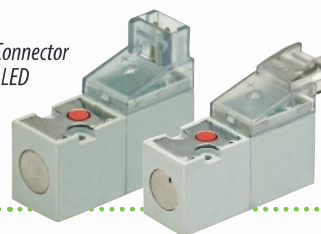
10 MM HIGH FLOW SINGLE-STATION MANIFOLD

Spare hardware available.

Part No.	Description
E10HM-01	10 mm Single-Station Manifold

Part No.	Connector	Voltage
E210H-3L012	90° Connector with LED	12 VDC
E210H-3L024		24 VDC
E210H-3C012	In-Line Connector with LED	12 VDC
E210H-3C024		24 VDC

90° Connector with LED



In-Line Connector with LED

ISO 15218 10 MM 3-WAY MINIATURE VALVES

Working Pressure	0 to 100 psig
Flow Rate	42 l/min @ 100 psig
Orifice	0.043" (inlet to outlet), 0.051" (outlet to exhaust)
Power Consumption	3.5 watts in-rush phase; 0.35 watts maintenance phase
Voltage Tolerance	±10%



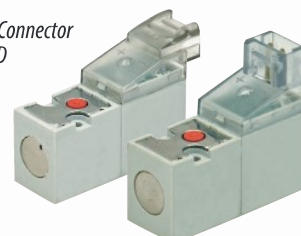
10 MM SINGLE-STATION ISO MANIFOLD

Spare hardware available.

Part No.	Description
E10LM-01	ISO 10 mm Single-Station Manifold

Part No.	Connector	Voltage
E311E-3L012	90° Connector with LED	12 VDC
E311E-3L024		24 VDC
E311E-3C012	In-Line Connector with LED	12 VDC
E311E-3C024		24 VDC

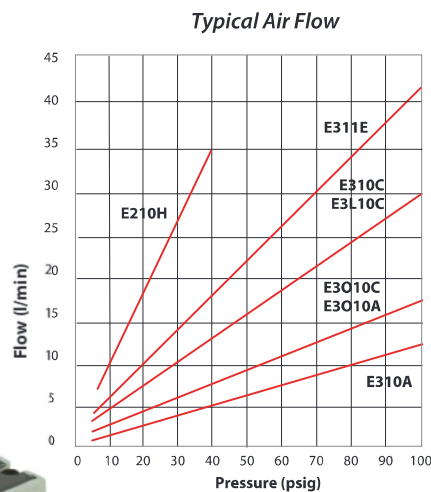
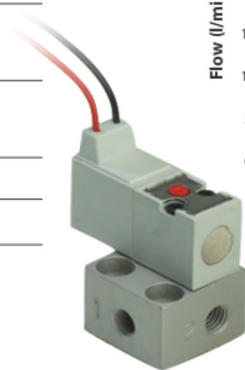
In-Line Connector with LED



90° Connector with LED

10 MM MINIATURE VALVES

Medium	Air, gas, or other compatible fluids
Flow Rate	0.020" Orifice: 13 l/min @ 100 psig 0.030" Orifice: 30 l/min @ 100 psig 0.028" Orifice: 17 l/min @ 100 psig
Response Time	0.6 Watts: 10 ms nominal 1.3 Watts: 8 ms nominal
Voltage Tolerance	±10%
Power Consumption	0.6 or 1.3 watts <i>Dependent on orifice size and pressure</i>
Material	Stainless steel core and springs, nylon body, FKM dynamic seals, nitrile gasket and static seals
Coil Insulation Class	F 311°F
Temperature Range	14 to 122°F (If below 32°F, must use clean, dry air)
CE, RoHS Compliant	



**For more details,
visit clippard.com/link/10-15mm**

ELECTRONIC VALVES

Type	Base Part No.*	Connector	Orifice	Wattage	Working Pressure
2-Way Normally-Closed 	E210A-1E □□□	90° Connector	0.020"	0.6 watts	0 to 100 psig
	E210C-2E □□□		0.030"	1.3 watts	0 to 100 psig
	E210A-1L □□□	90° Connector with LED	0.020"	0.6 watts	0 to 100 psig
	E210C-2L □□□		0.030"	1.3 watts	0 to 100 psig
	E210A-1F □□□	In-Line Connector	0.020"	0.6 watts	0 to 100 psig
	E210C-2F □□□		0.030"	1.3 watts	0 to 100 psig
	E210A-1C □□□	In-Line Connector with LED	0.020"	0.6 watts	0 to 100 psig
	E210C-2C □□□		0.030"	1.3 watts	0 to 100 psig
E210A-1W □□□	Wire Leads, 11.8"	0.020"	0.6 watts	0 to 100 psig	
E210C-2W □□□		0.030"	1.3 watts	0 to 100 psig	
3-Way Normally-Closed 	E310A-1E □□□	90° Connector	0.020"	0.6 watts	0 to 100 psig
	E310C-2E □□□		0.030"	1.3 watts	0 to 100 psig
	E310A-1L □□□	90° Connector with LED	0.020"	0.6 watts	0 to 100 psig
	E310C-2L □□□		0.030"	1.3 watts	0 to 100 psig
	E310A-1F □□□	In-Line Connector	0.020"	0.6 watts	0 to 100 psig
	E310C-2F □□□		0.030"	1.3 watts	0 to 100 psig
	E310A-1C □□□	In-Line Connector with LED	0.020"	0.6 watts	0 to 100 psig
	E310C-2C □□□		0.030"	1.3 watts	0 to 100 psig
E310A-1W □□□	Wire Leads, 11.8"	0.020"	0.6 watts	0 to 100 psig	
E310C-2W □□□		0.030"	1.3 watts	0 to 100 psig	
3-Way Normally-Open 	E3010A-1E □□□	90° Connector	0.020"	0.6 watts	0 to 100 psig
	E3010C-2E □□□		0.028"	1.3 watts	0 to 100 psig
	E3010A-1L □□□	90° Connector with LED	0.020"	0.6 watts	0 to 100 psig
	E3010C-2L □□□		0.028"	1.3 watts	0 to 100 psig
	E3010A-1F □□□	In-Line Connector	0.020"	0.6 watts	0 to 100 psig
	E3010C-2F □□□		0.028"	1.3 watts	0 to 100 psig
	E3010A-1C □□□	In-Line Connector with LED	0.020"	0.6 watts	0 to 100 psig
	E3010C-2C □□□		0.028"	1.3 watts	0 to 100 psig
E3010A-1W □□□	Wire Leads, 11.8"	0.020"	0.6 watts	0 to 100 psig	
E3010C-2W □□□		0.028"	1.3 watts	0 to 100 psig	

*Add voltage choice to the end of each base part number
12 VDC (012) or 24 VDC (024), Example: E210A-1C012

15 MM MINIATURE VALVES

CONNECTOR OPTIONS

Terminal Connector



Industrial form C connector ordered separately (p. 44)

DIN Connector



DIN connector ordered separately (p. 44)

In-Line Connector with LED



90° Connector with LED



Wire Leads

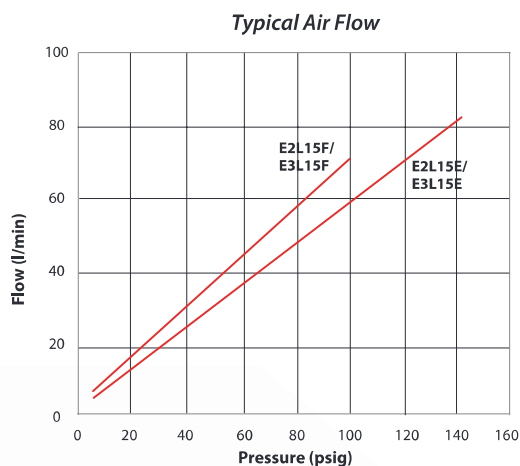


LATCHING 15 MM MINIATURE VALVES

Through the precise placement of a permanent magnet in the valve core, a careful balance of forces produces a bi-stable valve. A short pulse of current to the brown lead opens the valve, which “latches” open indefinitely after the current stops. A subsequent pulse of current to the blue lead closes the valve. The valve consumes less energy and produces less heat than a standard solenoid valve.

- Flow Rate** **0.043" Orifice:** 84 l/min @ 145 psig
0.063" Orifice: 73 l/min @ 100 psig
- Electrical Connection** 3-Wire molded cord, 300 mm, 24 AWG 4.5 mm external jacket; tinned copper wires; silicone jacket and conductor insulation
- Voltage Tolerance** ±10%
- Wattage** 4.0 watts

Type	Part No.	Orifice	Voltage	Pressure
2-Way	E2L15E-4W012	0.043"	12 VDC	0 to 145 psig
	E2L15E-4W024	0.043"	24 VDC	0 to 145 psig
	E2L15F-4W012	0.063"	12 VDC	0 to 100 psig
	E2L15F-4W024	0.063"	24 VDC	0 to 100 psig
3-Way	E3L15E-4W012	0.043"	12 VDC	0 to 145 psig
	E3L15E-4W024	0.043"	24 VDC	0 to 145 psig
	E3L15F-4W012	0.063"	12 VDC	0 to 100 psig
	E3L15F-4W024	0.063"	24 VDC	0 to 100 psig



- 2-Way & 3-Way Normally-Closed configurations
- Pulse-actuated (on or off)
- 3-wire coil—no polarity reverse required
- Stable latch
- Minimum order quantities may apply

HIGH FLOW 2-WAY N.C. 15 MM VALVES

- Working Pressure** 0 to 50 psig
- Maximum Flow Rate** 140 l/min @ 50 psig
- Orifice** 0.118"
- Voltage Tolerance** ±10%
- Power Consumption** 2.5 watts

Part No.	Connector	Voltage
E215H-3L012	90° Connector	12 VDC
E215H-3L024	with LED	24 VDC
E215H-3C012	In-Line Connector	12 VDC
E215H-3C024	with LED	24 VDC



15 MM HIGH FLOW SINGLE-STATION MANIFOLD

Spare hardware available.

Part No.	Description
E15HM-01	15 mm Single-Station Manifold

90° Connector with LED

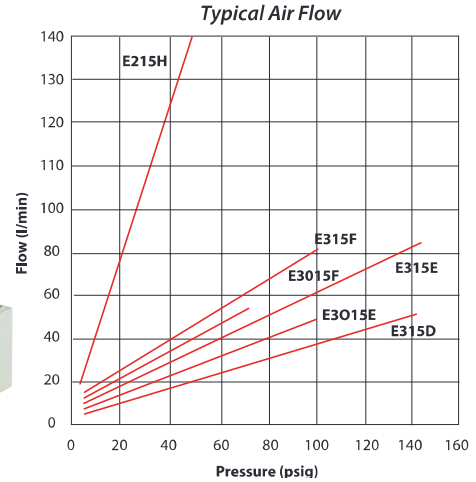
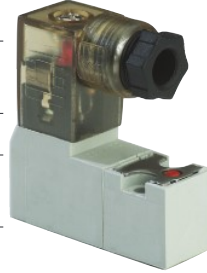


In-Line Connector with LED



15 MM MINIATURE VALVES

Medium	Air, gas, or other compatible fluids
Flow Rate	0.032" Orifice: 44 l/min @ 145 psig 0.043" Orifice: 84 l/min @ 145 psig, 50 l/min @ 100 psig 0.063" Orifice: 85 l/min @ 100 psig
Response Time	1 Watt: 8 ms nominal; 2 Watts: 6 ms nominal; 2.5 Watts: 6 ms nominal
Voltage Tolerance	±10%
Power Consumption	1.0, 2.0 or 2.5 watts <i>Dependent on orifice size and pressure</i>
Material	Stainless steel core and springs, nylon body, FKM seals, nitrile gasket
Coil Insulation Class	H 356°F / F 311°F



Type	Base Part No.*	Connector	Voltage					Orifice	Wattage	Working Pressure
			12 VDC	24 VDC	24 VAC	110 VAC	220 VAC			
2-Way Normally-Closed 	E215D-1T	Terminal		•				0.032"	1.0	0 to 145 psig
	E215E-2T		•	•	•			0.043"	2.0	0 to 145 psig
	E215F-2T		•	•	•			0.063"	2.5	0 to 100 psig
	DIN Connector	E215D-1D		•				0.032"	1.0	0 to 145 psig
		E215E-2D	•	•	•	•	•	0.043"	2.0	0 to 145 psig
		E215F-2D	•	•	•	•	•	0.063"	2.5	0 to 100 psig
	Wire Leads, 11.8"	E215D-1W		•				0.032"	1.0	0 to 145 psig
		E215E-2W	•	•	•			0.043"	2.0	0 to 145 psig
		E215F-2W	•	•	•			0.063"	2.5	0 to 100 psig
	90° Connector with LED	E215D-1L		•				0.032"	1.0	0 to 145 psig
		E215E-2L	•	•				0.043"	2.0	0 to 145 psig
		E215F-2L	•	•				0.063"	2.5	0 to 100 psig
In-Line Connector with LED	E215D-1C		•				0.032"	1.0	0 to 145 psig	
	E215E-2C	•	•				0.043"	2.0	0 to 145 psig	
	E215F-2C	•	•				0.063"	2.5	0 to 100 psig	
3-Way Normally-Closed 	E315D-1T	Terminal		•				0.032"	1.0	0 to 145 psig
	E315E-2T		•	•	•			0.043"	2.0	0 to 145 psig
	E315F-2T		•	•	•			0.063"	2.5	0 to 100 psig
	DIN Connector	E315D-1D		•				0.032"	1.0	0 to 145 psig
		E315E-2D	•	•	•	•	•	0.043"	2.0	0 to 145 psig
		E315F-2D	•	•	•	•	•	0.063"	2.5	0 to 100 psig
	Wire Leads, 11.8"	E315D-1W		•				0.032"	1.0	0 to 145 psig
		E315E-2W	•	•	•			0.043"	2.0	0 to 145 psig
		E315F-2W	•	•	•			0.063"	2.5	0 to 100 psig
	90° Connector with LED	E315D-1L		•				0.032"	1.0	0 to 145 psig
		E315E-2L	•	•				0.043"	2.0	0 to 145 psig
		E315F-2L	•	•				0.063"	2.5	0 to 100 psig
In-Line Connector with LED	E315D-1C		•				0.032"	1.0	0 to 145 psig	
	E315E-2C	•	•				0.043"	2.0	0 to 145 psig	
	E315F-2C	•	•				0.063"	2.5	0 to 100 psig	
3-Way Normally-Open (110 psig max.) 	E3015E-2T	Terminal	•	•	•			0.043"	2.0	0 to 100 psig
	E3015F-2T		•	•	•			0.063"	2.5	0 to 72 psig
	DIN Connector	E3015E-2D	•	•	•	•	•	0.043"	2.0	0 to 100 psig
		E3015F-2D	•	•	•	•	•	0.063"	2.5	0 to 72 psig
	Wire Leads, 11.8"	E3015E-2W	•	•	•			0.043"	2.0	0 to 100 psig
		E3015F-2W	•	•	•			0.063"	2.5	0 to 72 psig
	90° Connector with LED	E3015E-2L	•	•				0.043"	2.0	0 to 100 psig
		E3015F-2L	•	•				0.063"	2.5	0 to 72 psig
	In-Line Connector with LED	E3015E-2C	•	•				0.043"	2.0	0 to 100 psig
E3015F-2C		•	•				0.063"	2.5	0 to 72 psig	

*Add voltage choice to end of base part number: 12 VDC (012), 24 VDC (024), 24 VAC (24A), 110 VAC (110), or 220 VAC (220). Example: E315D-1C012

10 & 15 MM STANDARD MANIFOLDS, COVER PLATES & CONNECTORS

STANDARD MANIFOLDS

Standard manifolds are available for one to 16 valves with ported exhaust. Spare hardware and cover plates also available.



10 mm	15 mm	Description
E10M-01	E15M-01	Single-Station Manifold
E10M-02	E15M-02	2-Station Manifold
E10M-04	E15M-04	4-Station Manifold
E10M-06	E15M-06	6-Station Manifold
E10M-08	E15M-08	8-Station Manifold
E10M-10	E15M-10	10-Station Manifold
E10M-12	E15M-12	12-Station Manifold
E10M-14	E15M-14	14-Station Manifold
E10M-16	E15M-16	16-Station Manifold

STANDARD VALVE COVER PLATES

Includes plate, gasket and two screws.

Part No.	Description
E10M-CP	10 mm Cover Plate
E15M-CP	15 mm Cover Plate



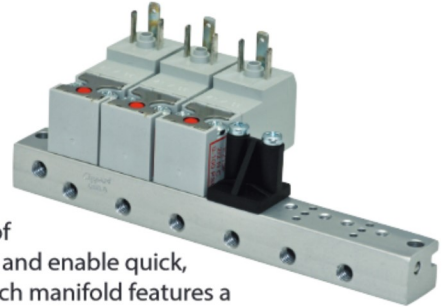
CONNECTORS

Wire connector must be ordered separately. 24 AWG. Stranding 7/32.

Part No.	Description
C2A-RB300	Connector with Cable, 11.8"
C2A-RB500	Connector with Cable, 19.7"
C2A-RB1000	Connector with Cable, 39.4"

MINIATURE MANIFOLDS

Small, compact manifolds provide efficient grouping of 10 or 15 mm valves and enable quick, easy installation. Each manifold features a common inlet, individually ported outlets, and exhaust to atmosphere.



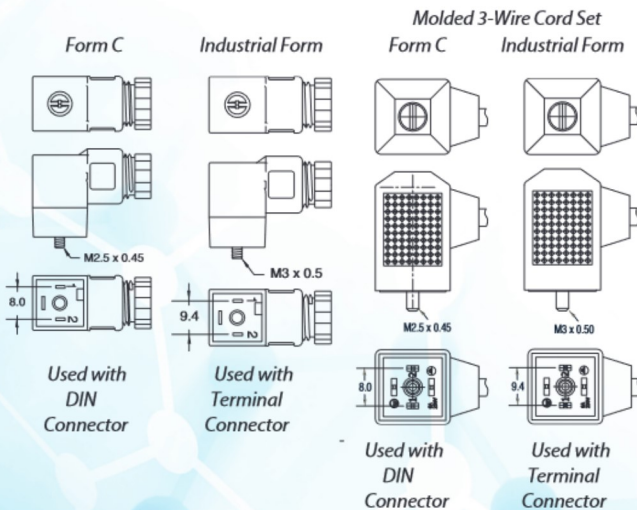
10 mm	15 mm	Description	Supply Ports
E10SM-02	E15SM-02	2-Station Manifold	1
E10SM-04	E15SM-04	4-Station Manifold	1
E10SM-06	E15SM-06	6-Station Manifold	1
E10SM-08	E15SM-08	8-Station Manifold	1
E10SM-10	E15SM-10	10-Station Manifold	2
E10SM-12	E15SM-12	12-Station Manifold	2
E10SM-14	E15SM-14	14-Station Manifold	2
E10SM-16	E15SM-16	16-Station Manifold	2

Note: When using these multi-station manifolds with Normally-Open valve configurations, they cannot be used with Normally-Closed valves on the same manifold.

DIN CONNECTORS

For use with 15 mm valves only

DIN 43650 Form C connectors with 8 mm spade center spacing mate with the 15 mm DIN connector coil. Industrial Form connectors with 9.4 mm spade center spacing are designed to connect to 15 mm terminal coils. Both are available with or without surge suppression, and PVC molded three-wire cord set.



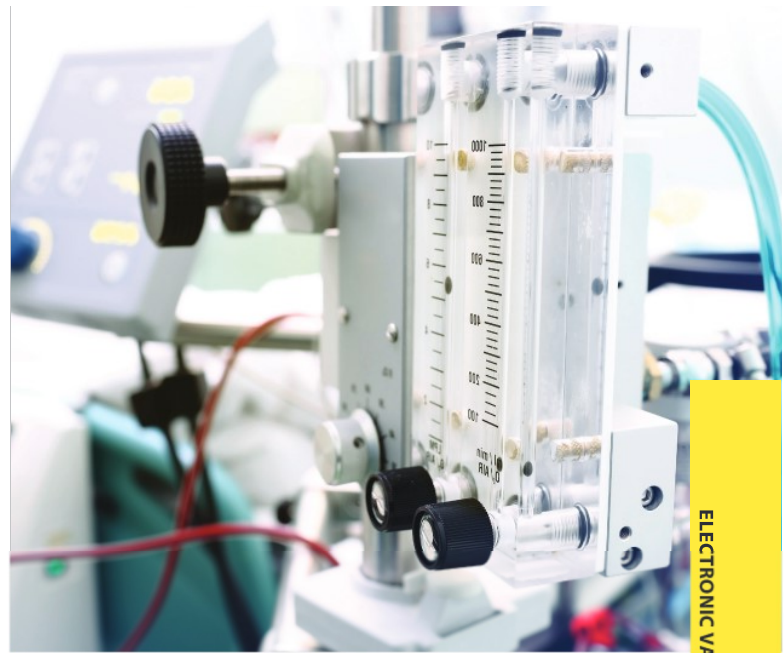
Form C Part No.	Industrial Form Part No.	Volts	LED	Cord
CC-C	CC-I	6-240	no	-
CC-C-P6	CC-I-P6	6-240	no	6'
CC-C-P15	CC-I-P15	6-240	no	15'
CC-CLL	CC-ILL	6-24	yes	-
CC-CLL-P6	CC-ILL-P6	6-24	yes	6'
CC-CLL-P15	CC-ILL-P15	6-24	yes	15'
CC-CLM	CC-ILM	48-110	yes	-
CC-CLM-P6	CC-ILM-P6	48-110	yes	6'
CC-CLM-P15	CC-ILM-P15	48-110	yes	15'

PROBLEM

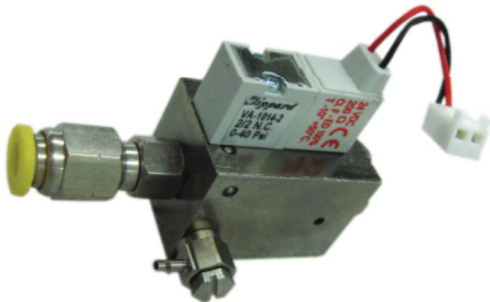
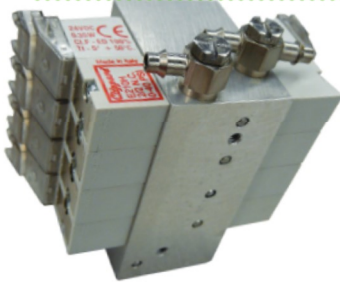
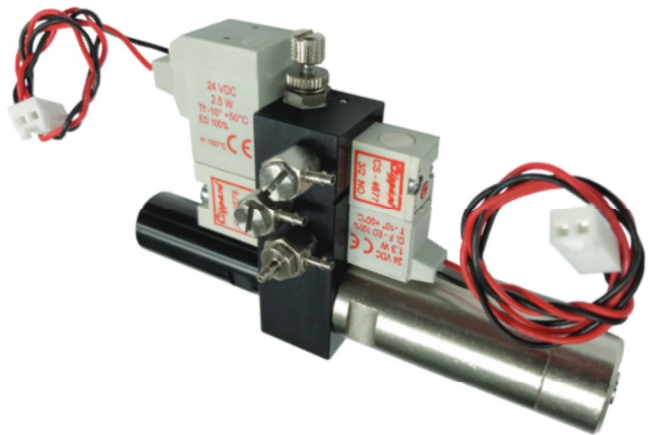
In many situations, an existing supplier may be providing an adequate solution from a product standpoint, yet other aspects of the relationship leave much to be desired. Often, this is related to problems with deliverability. This particular application needed to handle a variety of different medicaments while maintaining a tight flow tolerance at a specific pressure. Additionally, the OEM needed the solution to fit the existing footprint within their equipment.

SOLUTION

Clippard was able to design a special assembly utilizing standard miniature 10 mm and 15 mm electronic valves to meet the requirements of this application. Using standard Clippard catalog products, the OEM was assured that the valves would always be available for quick delivery. This drop-in solution not only proved to be an excellent value, but also enhanced the performance of the OEM's system.



ELECTRONIC VALVES



"Clippard's staff are great people—we have been working with them for years. That longevity speeds up problem solving because they know how the system works and can provide options to better solve particular issues."

CLIPPARD DISTRIBUTOR

WHAT CAN CLIPPARD DO FOR YOU?

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