

ACTUATORS FOR SMALL CONTROL VALVE

MINI-TOP

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Aren't You Having Complaints with Air Valve?

Electronic valve is now challenging with its functionality!

Brushless assures long-life operation.

Adopting the brushless stepping motor has made the electronic valve as durable as pneumatic valve.

- Unaffected by pressure fluctuations.
- Starts by a small deviation.
- Built-in I/I positioner
- Built-in Electronic limiter
- 1/200 high resolution
- Direct or reverse easily selectable in field.



Now is the Time to Change to Long-Life Electronic Type.

Superb CPU against the harsh environment

Operating temperature -55 to +125°C

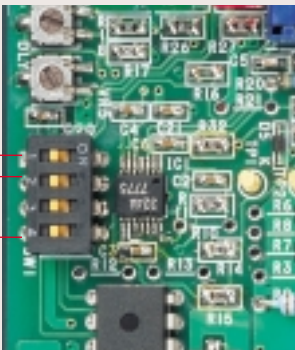
1/200 high resolution

Built-in I/I positioner

Starts by a small deviation.

Responds to even a small change of control signal. You can't expect that level of control performance with air valve.

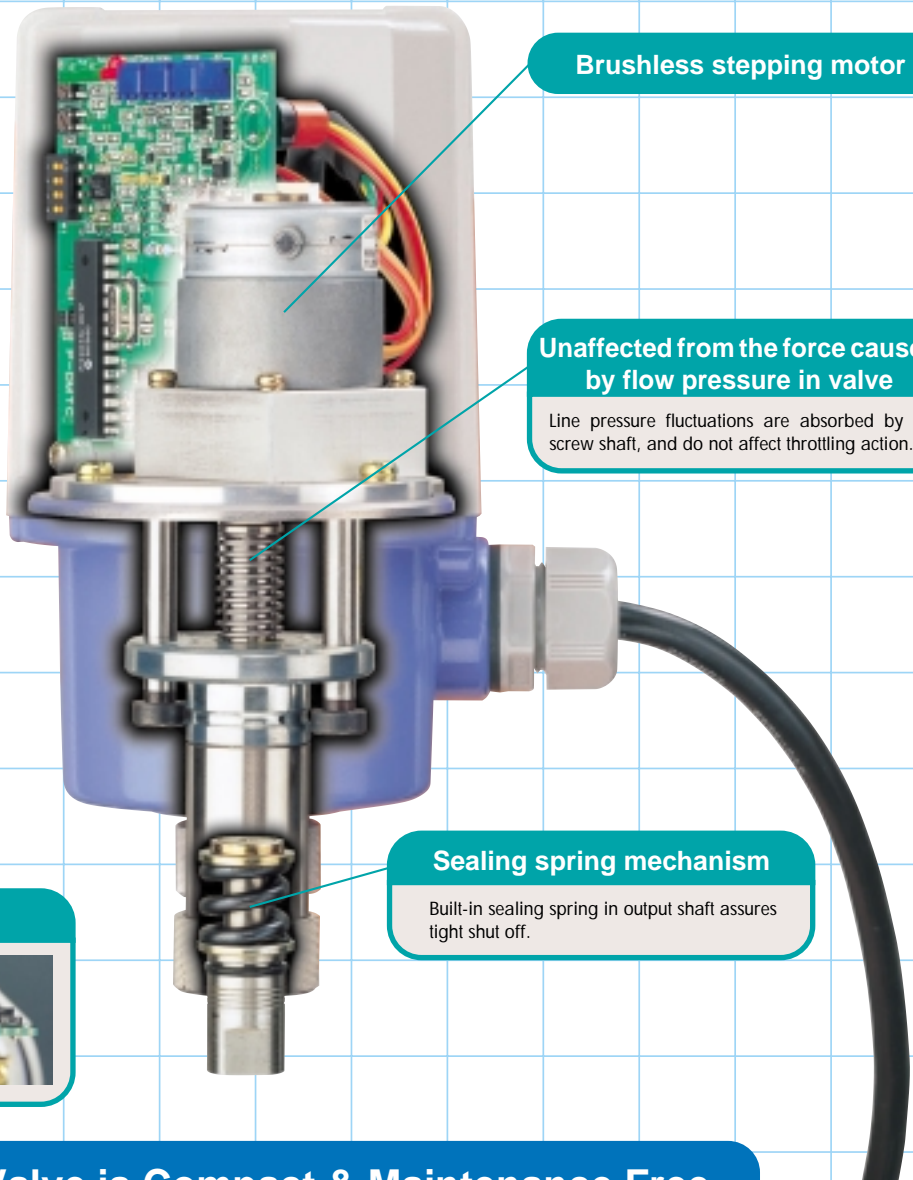
Direct or reserve easily selectable



Emergency action selector SW
Action selector SW

Built-in electronic limiter

Adjustments is simply by volumes



Brushless stepping motor

Unaffected from the force caused by flow pressure in valve

Line pressure fluctuations are absorbed by the screw shaft, and do not affect throttling action.

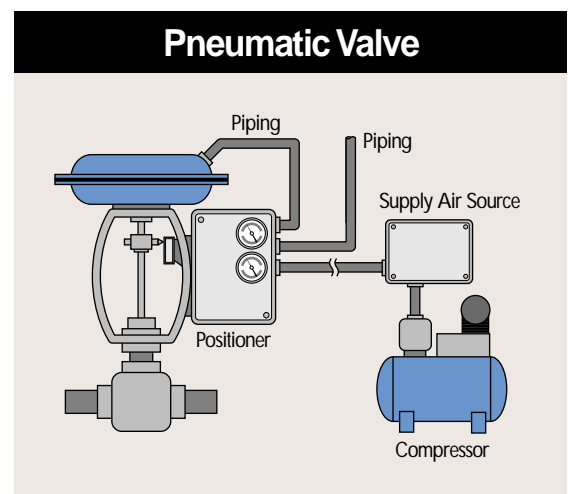
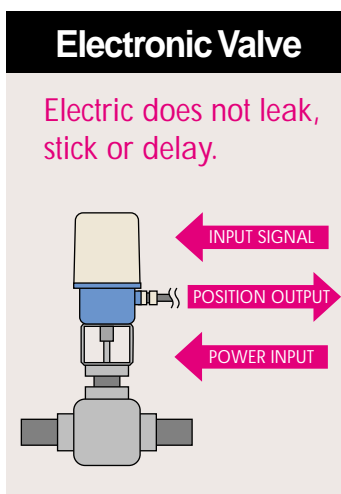
Sealing spring mechanism

Built-in sealing spring in output shaft assures tight shut off.

Electronic Valve is Compact & Maintenance Free.

Electronic type can simplify the system.

Unlike air valve, various maintenance cost can be eliminated by not using the positioner, air supply, and etc., significant cost down is possible.



GENERAL SPECIFICATIONS

Rotary Motion Type



Model	MRP4	MRP5	MRP6
Span	45 to 180°	45 to 90°	45 to 180°
Maximum torque	5 N·m	10 N·m	33 N·m
Environmental protection	IP 55		
Action	direct or reverse, user-selectable with DIP SW.		
Housing material	Aluminum alloy		
Wiring conduit	G 1/2 female		
Terminal block	Optional		
Motor	Stepping motor		
Input signal	4-20 mA DC, 1-5 V DC		
Adjustments	0-25 % for zero, 50-100 % for span, 0.5-5 % for deadband		
Position output	1-5 V DC (non-isolated), ≥5k Ω		
Power input	100-120 V AC*		
	200-240 V AC*		
	24 V DC		
Operating temperature	-5 to +55 °C (23 to 131 °F)		
Vibration	0.5 G max.		
EU norm	EN 50081-2, EN 50082-2		

*CE marking not available.

Linear Motion Type

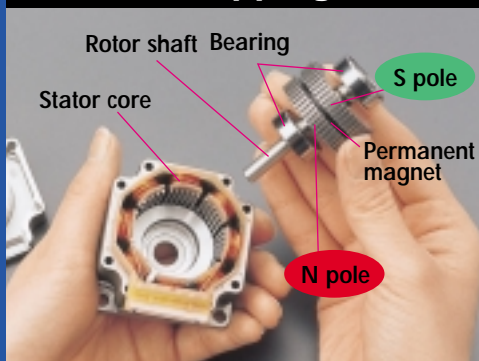


Model	MSP4	MSP5	MSP6
Maximum stroke	15 mm (0.59")	20 mm (0.79")	40 mm (1.57")
Maximum thrust	700 N	700 N	2500 N
Environmental protection	IP 55		
Action	direct or reverse, user-selectable with DIP SW.		
Housing material	Aluminum alloy		
Wiring conduit	G 1/2 female		
Terminal block	Optional		
Motor	Stepping motor		
Input signal	4-20 mA DC, 1-5 V DC		
Adjustments	0-25 % for zero, 50-100 % for span, 0.5-5 % for deadband		
Position output	1-5 V DC (non-isolated), ≥5k Ω		
Power input	100-120 V AC*		
	200-240 V AC*		
	24 V DC		
Operating temperature	-5 to +55 °C (23 to 131 °F)		
Vibration	0.5 G max.		
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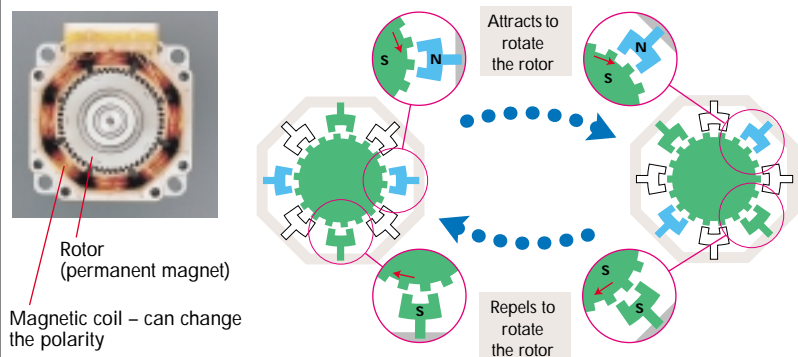
Brushless assures long-life operation

Built-in stepping motor



Since there are no brushes inside the motor, the life span of the motor is determined by the life span of the bearing, which means it is a very long lasting motor.

Mechanism that the motor works without the brush



Magnetic coils rotate the rotor by changing the polarity one step (1 pulse) at a time.

The rotor stops easily when the pulse excitation is removed.

M-SYSTEM WARRANTY

1. What is covered.

M-System Co., Ltd. ("M-System") warrants, to the original purchaser only of new M-System products purchased directly from M-System, or from M-System's authorized distributors or resellers, for its own use not for resale, that the M-System products shall be free from defects in materials and workmanship and shall conform to the specifications set forth in the product catalogue applicable to the M-System products for the Warranty Period (see Paragraph 5 below for the Warranty Period of each product).

THE ABOVE WARRANTY IS THE ONLY WARRANTY APPLICABLE TO THE M-SYSTEM PRODUCTS AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE.

2. What is not covered.

This warranty does not cover any M-System product which has been: (1) modified, altered or subjected to abuse, misuse, negligence or accident; (2) improperly installed or installed in conjunction with any equipment for which it was not designed; or (3) damaged or destroyed by disasters such as fire, flood, lightning or earthquake.

In no event shall M-System be liable for any special, incidental, consequential or other damages, costs or expenses (including, but not limited to, loss of time, loss of profits, inconvenience or loss of use of any equipment).

3. Remedies.

If a defective product is returned to M-System in accordance with the procedures described below, M-System will, at its sole option and expense, either: (1) repair the defective product; (2) replace the defective product; or (3) refund the purchase price for the defective product paid by the purchaser. Except as otherwise provided by applicable state law, these remedies constitute the purchaser's **sole and exclusive** remedies and M-System's sole and exclusive obligation under this warranty.

4. Warranty Procedure.

If the purchaser discovers a failure of the M-System products to conform to the terms of this warranty within the Warranty Period, the purchaser must promptly (and, in any event not more than 30 days after the discovery of such failure) notify the relevant party as described below either by telephone or in writing at the below address to obtain an Authorized Return (AR) number and return the defective product to the relevant party. The designated AR number should be marked on the outside of the return package and on all correspondence related to the defective product. The purchaser shall return, at purchaser's expense, defective products only upon receiving an AR number. In order to avoid processing delays, please be sure to include: copies of the original purchase order and sales invoice; the purchaser's name, address and phone number; the model and serial numbers of the returned product; and a detailed description of the alleged defect.

5. Warranty Period.

Signal Conditioner: 36 months from the date of purchase.

M-Rester: 12 months from the date of purchase.

Valve Actuator: 18 months from the date of shipment from M-System or 12 months from the date of its installation, whichever comes first.

Other Products: 12 months from the date of purchase.

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• Specifications subject to change without notice.

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EXTERNAL DIMENSIONS mm (inch)

