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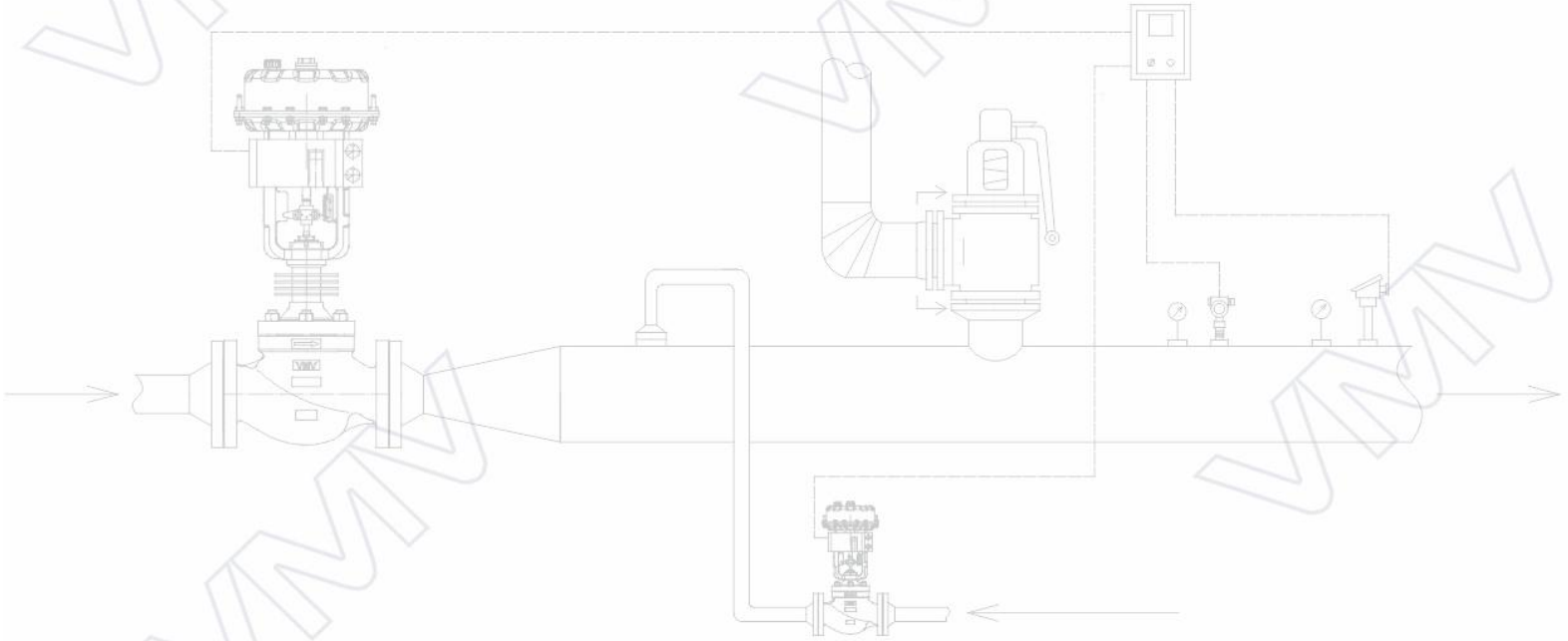


CONTROL VALVES SERIES

MT Series Pneumatic Diaphragm Actuator

MT SERIES PNEUMATIC
DIAPHRAGM ACTUATOR

MT SERIES PNEUMATIC DIAPHRAGM ACTUATOR

1.Product Introduction

The MT series pneumatic diaphragm actuator is designed with a single-spring or multi-spring structure, providing an axial output thrust. It is compact in structure, light in weight, small in size, performs highly, has a long service life, and delivers a significant output thrust. It is used in conjunction with GLOBE control valves, globe valves, and other straight-stroke valves, facilitating a tight and easy valve closure.

Working principle: The electrical signal from the control instrument, after being converted into air pressure by the positioner or solenoid valve, is input into the diaphragm chamber. This pressure acts on the diaphragm to generate thrust, causing the output shaft to move.

MT actuator has excellent versatility and interchangeability. In the field, the action mode can easily be reversed.by simply flipping the upper and lower diaphragm chambers, Its unique design, which requires no external air supply tubing, means air is supplied to the positioner and actuator through holes in the mounting bracket,eliminating the need for external tubing. Compared to traditional designs, this arrangement is more reliable and requires less space for control valves assembly. This method ensures a safe air supply to the actuator and significantly simplifies the assembly process of the positioner.

2. Specifications and Technical Data

Model specifications	MT1,MT2,MT3,MT4
Action type	Direct action (D): The air pressure increases and the output shaft drops. Reverse action (R): The air pressure increases and the o utput shaft rises.
Output force	See table below
Stroke	See table below
Air supply pressure	0.4~0.6MPa
Applicable media	Compressed air, nitrogen
Ambient temperature	Standard type :-20~70℃ Low temperature type:-40~70℃
Optional accessories	Handwheel mechanism, positioner, air filter pressure reducing valve, solenoid valve, limit switch, etc.
Performance	Hysteresis: < 1%FS Lineary: < ±1%FS

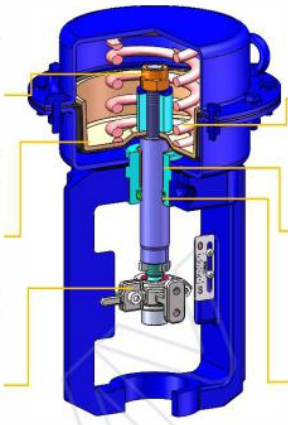
3. Structure and Characteristics

3.1MT1 actuator

Anti-loosening nut Structure
Prevent the push rod from loosening, and improve the stability of the connection

Ultra-high fatigue strength diaphragm material
Service life >200,000 cycles, ensuring long-term maintenance-free operation for customers.

Gating nut connection structure
Tightly connected without gaps, easy to disassemble, high regulating precision and stability.



Single spring structure
Compact structure, occupies small space, large output force.

Ultra-long self-lubricating bearing guided structure
Smooth operation, without random movement,low friction and high operational precision

dust-proof sealing ring structure
Double sealing, long-lasting seal without external leakage

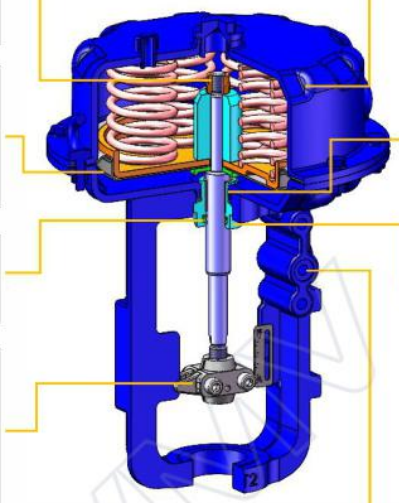
3.2MT2 and MT3 actuators

Anti-loosening nut structure
Prevents the push rod from loosening, enhancing connection stability

Ultra-high fatigue strength diaphragm material
Operational life of over 200,000 cycles,ensuring long maintenance-free periods for customers.

Dustproof sealing ring structure
Double sealing, long-lasting andleak-proof.

Opening and closing nut connection structure
Closely connected with no gaps, easy to disassemble, high adjustment precision, andhigh stability.



Embossed diaphragm cover structure
Enhances the pressure resistance of the diaphragm cover, and increases the output thrust of the actuator.

Ultra-long self-lubricating bearing guide structure
Operates smoothly without creep, low friction, and high action type precision.

External threaded connection structure
Enables quick interchangeability between direct and reverse action, improving the efficiency of on-site changeovers of operational modes for users.

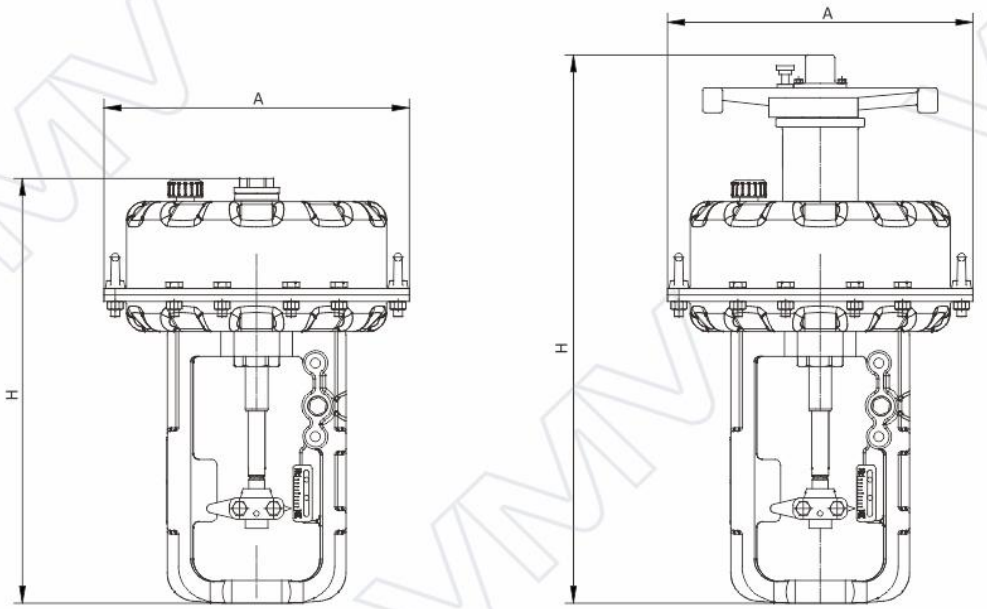
Built-in air intake hole structure
No external air source tubing required, reduces the space needed for positioner installation, and decreases the number of potential leak points, regulating more stable.

4. Output force of actuator

Model	Effective area of the diaphragm cm2	Stroke(mm)	Output force (N)	Weight	
				Without Hand wheel	With Hand wheel
MT1R	100	20	2000	8	15
MT1D	100	20	2000	8	15
MT2R	320	30	4800	18	28
MT2D	320	30	8000	18	28
MT3R	720	60	8500	46	65
MT3D	720	60	18000	46	65
MT4R	1500	100	13000	95	130
MT4D	1500	100	19500	95	130

MT SERIES PNEUMATIC DIAPHRAGM ACTUATOR

5. Overall Dimensions



Model	A	H	
		Without handwheel	With Handwheel
MT1R	180	300	450
MT1D	180	300	450
MT2R	270	398	651
MT2D	270	398	651
MT3R	400	610	950
MT3D	400	610	950
MT4R	620	1100	1700
MT4D	620	1100	1700

6. Model selection

No	Item	Code	Detailed explanation of code	Sizing case
1	Series	MT	Pneumatic diaphragm actuator	MT
2	Model	1	Effective area of diaphragm: 100cm^2	2
		2	Effective area of diaphragm: 320cm^2	
		3	Effective area of diaphragm: 720cm^2	
		4	Effective area of diaphragm: 1500cm^2	
3	Action type	R	Reverse action	R
		D	Direct action	
4	-	-	-	-
5	Temperature code	None	Standard type -29~70 (°C)	L
		L	Low temperature type -40~70 (°C)	
6	+	+	+	+
7	Handwheel code	None	Without hand wheel	S
		S	With top handwheel	

VMV Newton Systems®

ZHEJIANG NEWTON FLUID CONTROL CO.,LTD.

Headquarters (Wenzhou)
Zhiyi road,Lingxia industrial zone,Wuniu,Wenzhou,
Zhejiang, China.
Tel: 86-577-67978269
Fax:86-577-67376711
E-mail: vmv@vmv-valve.com

Shanghai R&D Center
Jiading District, Shanghai
Building 12A, No. 1818 Chengbei Road
Tel: 86-18057752663
E-mail: vmv8@vmv-valve.com

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www.vmvvalve.com