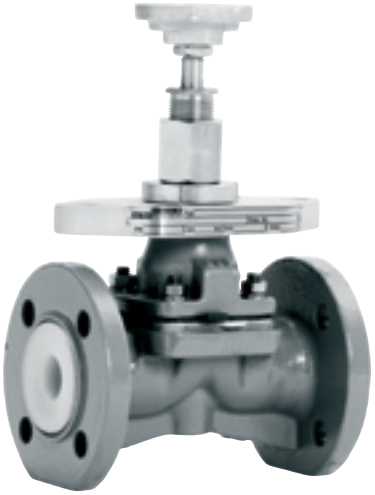
MV401-SERIES



Diaphragm valve

Actuator
– pneumatic
– electric

Nominal bores
– DN 15 to 200
– ANSI ½" to 8"

Pressure ratings
– PN 10/16
– ANSI Class 150

Table of contents:

Available on request:

Additional:

Features	Advantages
Fluidic optimal design of the body	■ Less wear ■ Less maintenance ■ Low pressure loss
Control connection on bonnet	■ Safety
Closing pressure limitation	■ Higher lifecycle of diaphragm
Spacer ring to relieve the diaphragm before initial operation	■ Diaphragm remains unstressed until first operation
Modular design	■ Various combinations of valves and actuators ■ Combinations of body materials – Cast steel (1.0619) – Non corrosive cast steel (1.4408) with body coatings – PFA / PFA AS (conductive) – Polypropylene and diaphragms – PTFE / EPDM, PTFE / FPM (Viton®), EPDM
Precise stem guiding	■ Precise guiding of the closing piston ■ Wiper protects from impurifies ■ No wear of sealings
Compact and robust construction	■ Space saving mounting ■ No stuffing box
High interchangeability of components	■ Low stock costs
Inner parts separated by diaphragm	■ No corrosion
Actuator pillar according to NAMUR	■ Easy and cost-saving mounting of accessories like control valve, limit switch, magnetic valve, etc.

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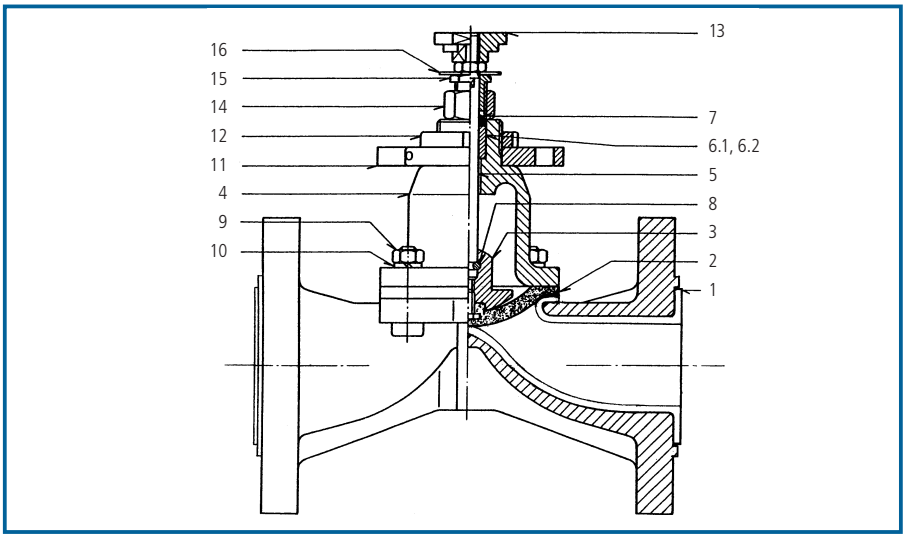
Applications

The diaphragm valves of the series 4 have been conceived for various industrial requirements in process technology.

Technical data

Nominal bores	■ DN 15 to 200 ■ ANSI ½" to 8"
Pressure ratings	■ PN 10/16 ■ ANSI Class 150
Characteristics	■ Quick open
Temperature range	■ −30° C to +150° C (dep. on version)
Flange	■ Raised face according to EN 1092-1, form B1 drilled according to PN 10/16

Materials



Item	Quantity	Description	Material
1	1	Body	1.0619 / 1.4408
		Lining	PFA / PFA-AS / PP
2	1	Diaphragm	PTFE-EPDM / PTFE-FPM
3	1	Closing piston	1.4408
4	1	Cover	1.0619
5	1	Stem	1.4305
6.1	1	Sliding bushing	Electro-plated steel
6.2	1	Insert	Bronze
7	1	Wiper	Nitrite rubber with steel ring
8	2	Grooved pin	A2
9	4	Stud screw and nut	A2
10	4	Spring ring	A2
11	1	Traverse	1.0114
12	1	Traverse nut	Zinc coated st. 5
13	1	Coupling	1.4308
14	1	Nut	1.0718 zinc coated
15	1	Setting screw	1.0718 zinc coated
16	1	Split pin	A2

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Examples of actuator layouts and permissible differential pressures Δp

Actuator Po
Spring closes

Minimum air pressure setting (bar)	1,4	2	3	4	5	5,5
Actuator size MA… and number of springs …S, …G	16 A6 2S	16 A6 3S	16 A6 4S	16 A6 6S	16 A6 7S	
	21 A6 2S	21 A6 3S	21 A6 4S	21 A6 6S	21 A6 7S	
	31 A6 2S	31 A6 3S	31 A6 4S	31 A6 5S	31 A6 7S	
	41 A6 4S	41 A6 5S	41 A6 8S	41 A6 10S	41 A6 12S	
	41 B6 4S	41 B6 5S	41 B6 8S	41 B6 10S	41 B6 12S	41 B6 14S
	60 G6 4S	60 G6 6S	60 G6 8S	60 G6 14S		
		60 A6 4G	60 A6 6G	60 A6 8G		

Valve

Nominal bores 15	20	25	32	40	50	65	80	100	125	150	200	Kvs	Cvs	Stroke mm	Actuator size MA…	Permissible differential pressures (in bar) for: A = EPDM diaphragm B = PTFE / EPDM or PTFE / FPM diaphragm											
																A	B	A	B	A	B	A	B	A	B	A	B
■												7,5	8,7	7	16 A6	3	1	7	6	10	10						
■															21 A6	10	10										
	■											9,2	10,7	7	16 A6	1	–	4	3	8	7	10	10				
	■														21 A6	7	6	10	10								
		■										13,5	15,7	7	16 A6	–	–	2	1	5	4	10	10				
		■													21 A6	4	3	10	10								
			■									21,5	24,9	11	16 A6	–	–	1	–	3	2	7	6	8	8		
			■												21 A6	2	1	6	5	10	10						
				■								35	41	18	16 A6	–	–	–	–	1	–	3	2	4	3		
				■											21 A6	–	–	2	1	5	4	10	10				
				■											31 A6	10	10										
					■							63	73	21	21 A6	–	–	1	–	2	1	6	6	7	7		
					■										31 A6	6	5	10	10								
					■										41 A6	10	10										
						■						72	84	23	31 A6	3	2	5	4	8	7	9	9	10	10		
						■									41 A6	10	10										
							■					123	143	27	31 A6	2	1	3	2	5	4	6	5	9	8		
							■								41 A6	6	6	8	8	10	10						
							■								60 G6	10	10										
								■				183	212	33	31 A6	–	–	1	1	2	2	3	3	5	4		
								■							41 A6	4	3	5	4	8	7	9	8	10	10		
								■							60 G6	9	9	10	10								
									■			295	342	45	41 B6	2	1	3	2	5	4	7	5	8	6	9	7
									■						60 G6	6	5	8	7	10	10						
										■		410	476	52	41 B6	1	–	1	–	2	1	3	2	4	2	5	3
										■					60 G6	3	2	5	3	7	4	8	5				
											■	585	697	70	60 A6	–	–	1	1	2	2	3	3				

**Detailed documentation is available on request –
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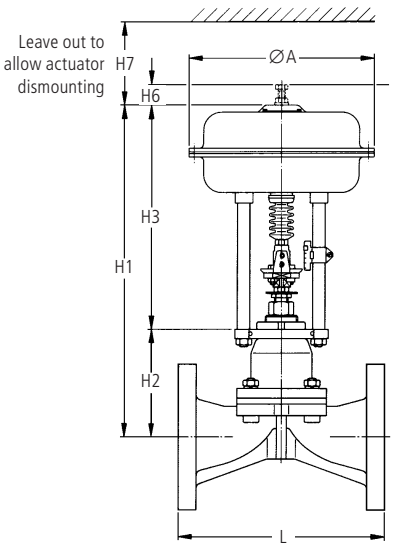
Examples of dimensions and weights



Pneumatic actuators

- Compact design, simple operation with multi-spring
- Diaphragm surfaces 110 to 2185 cm²
- Setting forces 0,26 to 139 kN
- Diaphragm made of polyamide weave with coating based on NBR
- Body made of steel plate coated on both sides with twin-pack epoxy resin, or in W1.4301
- Stem made of W1.4305, surface smoothed, o-ring seal
- Maximum air supply pressure 6 bar
- Permissible ambient temperature –30° C to +90° C
- Quick and simple to reverse Po ↔ Ps

Options

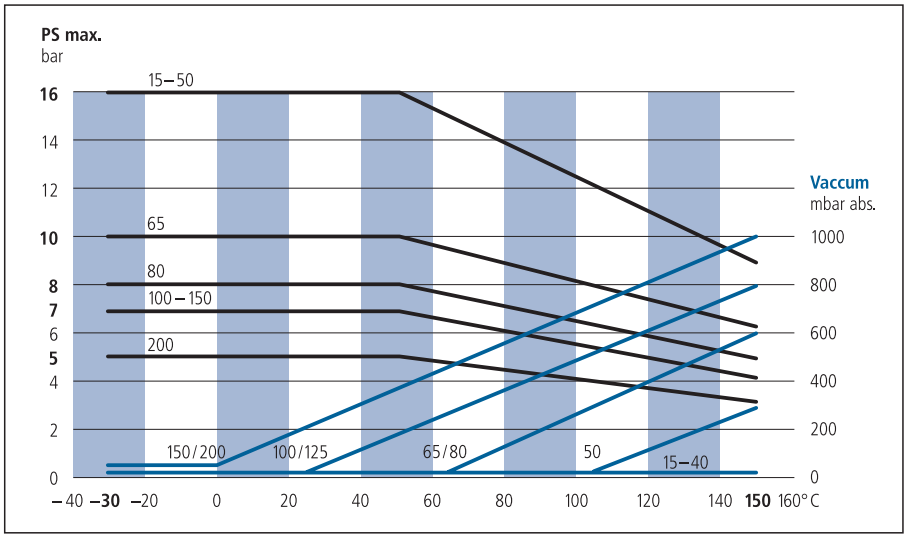
- Body made of W1.4301, on request electropolished
- Mechanical stroke limitation, simple to adjust
- Emergency manual adjustment

Accessories

- Pneumatic and electro-pneumatic positioner, also in ex-version
- Integrated mounting possible

Valve DN (mm)						15	20	25	32	40	50	65	80	100	125	150	200
L						130	150	160	180	200	230	290	310	350	400	480	600
H2						78	80	93	97	113	126	138	163	196	203	258	331
Weight approx. (kg)						2,5	3	3,8	5,2	7,4	9,7	13,5	18	30	43	66	122
Actuator MA…	Weight approx. (kg)	ØA (mm)	H3	H6	H7 (o. HB)	H1											
3.16 A6	4	162	266	30	40	344	346	359	363	379							
2.21 A6	7	210	343	42	40	421	423	436	440	456	469						
3.31 A6	16	310	372	42	40				469	485	498	510	535	568			
3.41 A6	51	415	436	38	40						562	574	599	632			
3.41 B6	58	415	472	38	40										675	730	
2.60 G6	160	598	643	42	55								806	839	846	901	
2.60 A6	192	598	822	83	55												1153

Permissible pressure temperature values



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