



ZJHM Pneumatic Diaphragm Sleeve Regulating Valve

Design Features

- European style finely made, precise control, good sealing performance, advanced design, excellent quality
- Exquisite technology, superior structure, stable flow, quick response, replace import
- Small pressure drop loss, stable output force, large flow coefficient, equal channel smooth cross-section
- Wide regulation range, high flow characteristic precision, top guide structure, easy handwheel operation

Overview

The ZJHM pneumatic diaphragm sleeve regulating valve is composed of a pneumatic diaphragm multi spring actuator and a small sleeve valve. The main features are as follows: 1. Adopt balanced valve core to allow large pressure difference and stable operation under unbalanced force. 2. The large guiding surface of the valve core can improve oscillations caused by eddy currents and impacts. 3. Compared to ordinary single and double seat regulating valves, the noise is reduced by about 10dB. 4. Simple structure, easy to assemble, disassemble, and maintain.

Model Description

-Z	-JH	-M	-D	-4	-Y	-40	-40	-16	-D	-K
Control valve category	Structure form	Trim type	Bonnet type	Connection mode	Sealing material	Nominal diameter	Valve core size	Nominal pressure	Flow characteristics	Action mode

Technical parameters & performance -- Valve body

Type	Straight through cast ball shape valve									
Nominal diameter	25, 32, 40, 50, 65, 80, 100, 125, 150, 200, 250, 300mm									
Nominal pressure	PN16, 40, 64bar									
Flange standard	JB/T79.1-94, 79.2-94, etc.									
Material	Cast steel (ZG230-450), Stainless steel (ZG1Cr18Ni9Ti, ZG1Cr18Ni12Mo2Ti), etc.									
Top bonnet	Standard type: -17~230°C Heat sink type: 230~450°C Low temperature type: -60~-196°C Bellows seal type: -40~350°C									
Bonnet type	Bolt tightened type									
Packing	V-shaped PTFE, PTFE impregnated asbestos, asbestos textile, graphite									
Structure form	See Figure 1~4 for details									

Technical parameters & performance -- Valve trim

Valve core type	Pressure balanced type
Flow characteristic	EQ%, Linear
Material	Stainless steel (1Cr18Ni9Ti, 1Cr18Ni12Mo2Ti, 17-4PH, 9Cr18, 316L), Stainless steel surfacing STL, Titanium corrosion-resistant alloy, etc.

Technical parameters & performance -- Actuator

Type	ZHA/B Multi spring diaphragm actuator				
Model	ZHA/B-22	ZHA/B-23	ZHA/B-34	ZHA/B-45	ZHA/B-56
Effective area (cm ²)	350	350	560	900	1400
Stroke (mm)	10,16	25	40	40,60	100
Spring range (KPa)	20~100 (standard), 20~60, 60~100, 40~200, 80~240				
Diaphragm material	NBR with nylon cloth, EPDM with nylon cloth				
Air supply pressure	140~400KPa				
Air source interface	RC1/4"				
Ambient temperature	-30~70°C				

Valve action mode: Air to close (B) - Air failure valve position open (FO); Air to open (K) - Air failure valve position closed (FC)

Accessories: Positioner, air filter regulator, position holding valve, stroke switch, valve position transmitter, handwheel mechanism, etc.

ZJHM Pneumatic Diaphragm Sleeve Regulating Valve

Performance

Item			Without positioner	With positioner
Basic error %			±5.0	±1.0
Return difference %			≤3.0	≤1.0
Deadband %			≤3.0	≤0.4
Start & end point deviation %	Air to open	Start	±2.5	±1.0
		End	±5.0	±1.0
	Air to close	Start	±5.0	±1.0
		End	±2.5	±1.0
Rated stroke deviation %			≤2.5	
Leakage rate l/h			0.01% * Valve rated capacity	
Regulating range R			30:1	

Rated flow coefficient Kv, rated stroke, matching actuator model

Nominal diameter DN (mm)	25	32	40	50	65	80	100	125	150	200	250	300
Valve seat diameter (mm)	25	32	40	50	65	80	100	125	150	200	250	300
Rated flow coefficient Kv	Linear	11	17.6	27.5	44	69	110	176	275	440	690	1000
	EQ%	10	16	25	40	63	100	160	250	400	630	900
Rated stroke L (mm)	16	25		40			60			100		
Matching actuator model	ZHA/B-22		ZHA/B-23		ZHA/B-34			ZHA/B-45			ZHA/B-56	

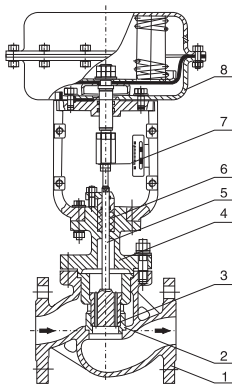


Figure 1 ZJHM Standard type

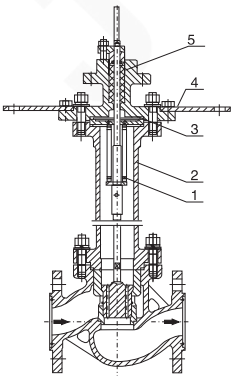


Figure 2 ZJHM-D Low temperature type

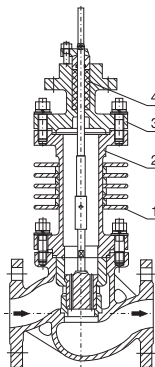


Figure 3 ZJHM-G Heat sink type

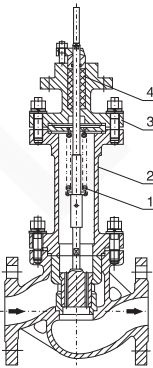


Figure 4 ZJHM-W Bellow seal type

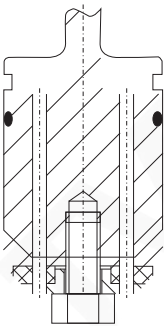


Figure 5 ZJHM-Q Regulating cut-off type valve core (Single seat seal)

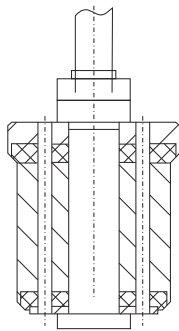


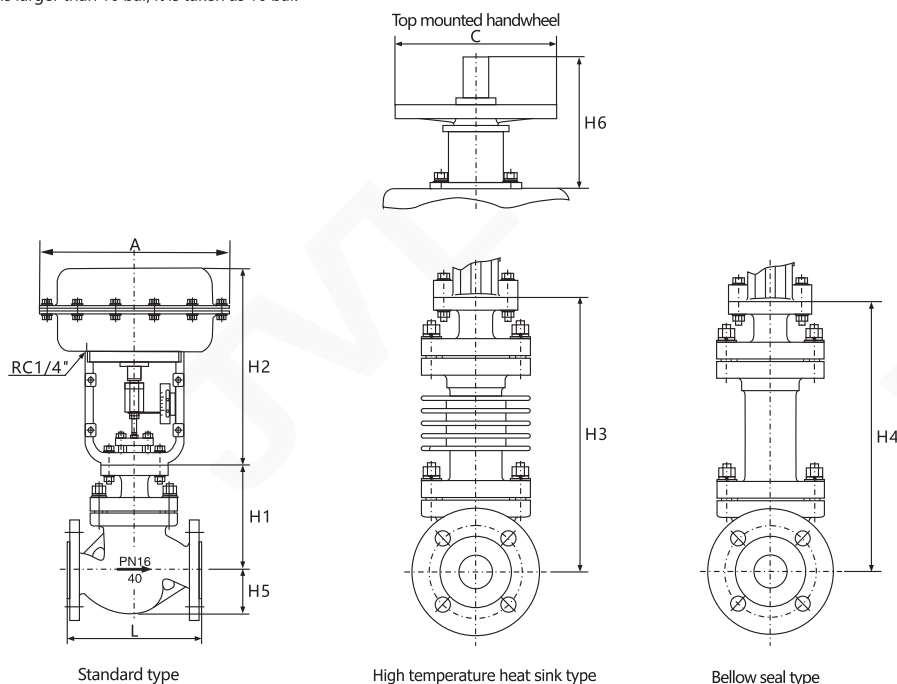
Figure 6 ZJHM-Q Regulating cut-off type valve core (Double seat seal)

ZJHM Pneumatic Diaphragm Sleeve Regulating Valve

Allowable differential pressure

Nominal diameter DN (mm)			25	32	40	50	65	80	100	125	150	200	250	300
Valve seat diameter (mm)			25	32	40	50	65	80	100	125	150	200	250	300
Actuator			ZHA/B-22	ZHA/B-23			ZHA/B-34			ZHA/B-45			ZHA/-56	
Action mode	Air source pressure (Kpa)	Spring range (Kpa)	Allowable differential pressure Δ (bar)											
Air to close	140	20~100	30	22.5	22.5	19.5	23.6	20.4	16.7	14.1	14.1	14.1	6.5	5.5
	250	20~100	64	64	64	64	64	64	64	64	64	64	15.5	14
	400	40~200	64	6.4	64	64	64	64	64	64	64	64	40.8	40.8
Air to open	140	20~100	15	11.3	11.3	9.8	11.8	10.2	8.4	7.1	7.1	5.7	6.5	5.5
	250	40~200	45	33.8	33.8	29.3	35.4	30.6	25.1	21.2	21.2	17.1	18	15.5
	400	80~240	64	64	64	64	64	64	58.5	49.4	49.4	40	40.8	36.5

Note: For bellows sealed regulating valves, the max. allowable differential pressure is 10 bar. If the value in the table is less than 10 bar, it remains unchanged. If it is larger than 10 bar, it is taken as 10 bar.



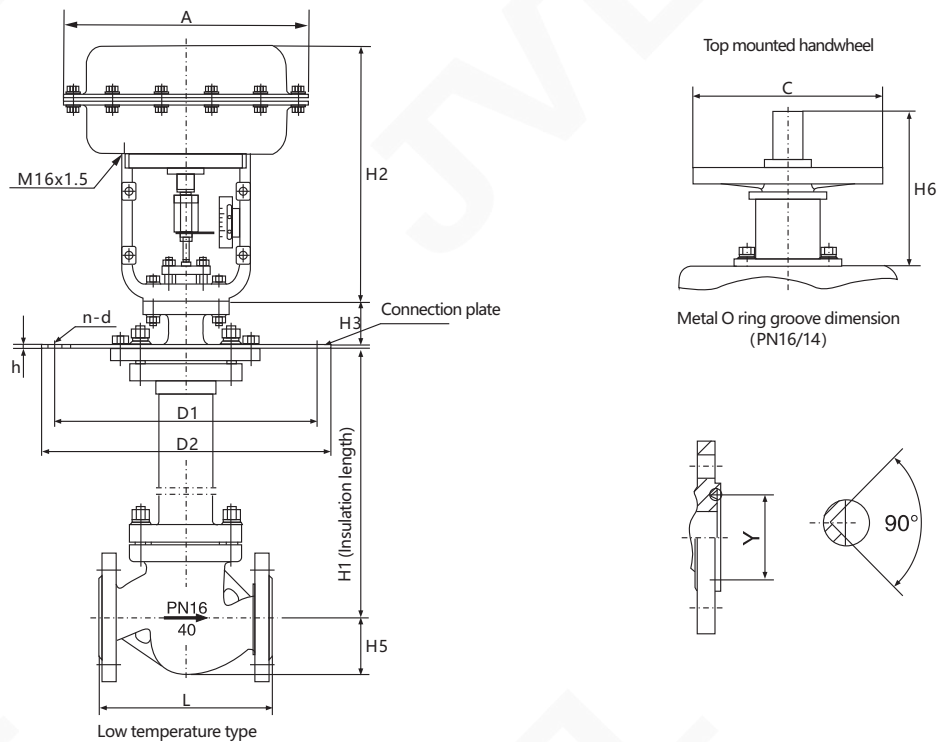
Outline dimensions & weight

Unit: mm

Nominal diameter		25	32	40	50	65	80	100	125	150	200	250	300
L	PN16/40	184	220	222	254	276	298	352	410	451	600	730	850
	PN64	210	251	251	286	311	337	394	457	508	650	775	900
A		285	285	285	285	360	360	360	470	470	470	580	580
H1	PN16/40	128	152	152	160	205	205	208	273	330	364		
	PN64	140	160	160	180	210	210	220	290	340	370		
H2		298	298	298	298	380	380	380	510	510	510		
H3	PN16/40	208	224	228	228	334	334	342	408	453	482		
	PN64	220	240	240	240	350	350	360	420	470	500		
H4		338	402	402	405	627	628	635	698	702	728		
H5	PN16/40	58	68	73	80	90	98	108	123	140	168		
	PN64	68	75	83	88	100	105	125	148	170	203		
C		220	220	220	220	270	270	270	320	320	320		
H6		180	180	180	180	236	236	236	310	310	310		
Weight (kg)	PN16/40	22	24	32	38	62	67	83	132	160	245		
	PN64	25	30	42	52	78	82	102	170	190	285		

- Note: 1. The weight in the table is for standard type without accessories. Side mounted handwheels can be installed.
- 2. The valve flange and flange face to face dimension can be manufactured according to user specified standards, such as ANSI, JIS, DIN standards.

ZJHM Pneumatic Diaphragm Sleeve Regulating Valve


Outline dimensions & weight

Unit: mm

Nominal diameter	25	32	40	50	65	80	100	125	150	200	250	300
L	PN16/40	184	220	222	254	276	298	352	410	451	600	850
	PN64/100	210	251	251	286	311	337	394	457	508	650	900
A		285	285	285	285	360	360	360	470	470	470	
H1		700	700	700	700	700	700	700	700	700	700	
H2		298	298	298	298	380	380	380	510	510	510	
H3		88	88	88	88	94	94	940	110	110	110	
H5	PN16/40	58	68	73	80	90	98	108	123	140	168	
	PN64/100	68	75	83	88	100	105	125	148	170	203	
D1	PN16/40	230	250	270	305	342	375	430	490	556	665	
	PN64/100	270	305	342	375	430	490	556	665	665	765	
D2	PN16/40	310	335	355	390	430	465	520	585	660	770	
	PN64/100	355	390	430	465	520	585	600	770	770	890	
h		15	15	15	15	18	18	18	20	20	20	
n-d	PN16/40	8-12	8-12	8-14	8-14	10-14	10-14	12-16	14-16	16-16	18-16	
	PN64/100	8-14	8-14	10-14	10-14	12-16	14-16	16-16	18-16	18-16	18-16	
Y		45	60	65	75	90	104	135	165	195	245	
C		220	220	220	220	265	265	265	315	315	315	
H6		180	180	180	180	240	240	240	304	304	304	
Weight(kg)		48	52	60	68	90	105	143	210	282	315	

- Note: 1. The data is based on 700mm insulation length and the weight takes PN16 spec as an example. Side mounted handwheels can be installed.
- 2. The valve flange and flange face to face dimension can be manufactured according to user specified standards, such as ANSI, JIS, DIN standards.