

SHANGHAI
DATIAN VALVE PIPE
ENGINEERING
CO.,LTD.

DATIAN

大田阀门

Shanghai DaTian Valve Pipe Engineering Co., Ltd.

Control Valve Manual

上海大田阀门-气动调节阀



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ZJHP (M) Mini-type pneumatic diaphragm single seat (sleeve) control valve

ZJHP (M) pneumatic single seat (sleeve) control valve is made up of pneumatic multi spring diaphragm actuator and lower flow resistance straight single seat valve(sleeve). The single valve is connected directly with its guiding structure on the cap; with its core is ram structure, which is smaller and lighter than normal single seat valve and its flux is bigger than normal sleeve valve. It is widely applied in industry process and automatic controlling system.

1. Body

Body type: Straight line single seat (sleeve) foundry valve S style

DN: DN1/2"~12"

PN: PN150LB 300LB 600LB

Connecting way: Flange style JB78-59 JB/T79.2-94 concave style

Material: HT200 ZG230—450 ZG1Cr18Ni9Ti ZG0Cr18Ni12Mo2Ti

Back cover: Normal temperature -20~+200°C

Heat elimination type -40~+450°C

Packing: V-pattern PTFE, soft graphite, stainless steel bellows

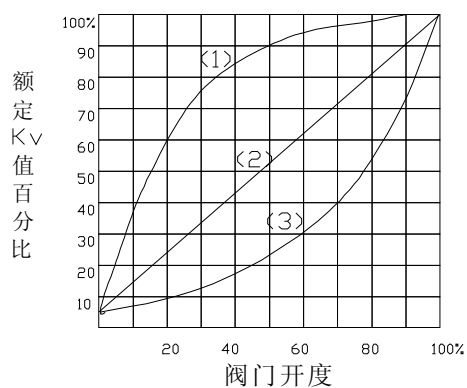
2. inside groupware

Corn type: Upper-operated single seat (sleeve) ram core

Flow characteristics: linearity, percentage character or quick opening character

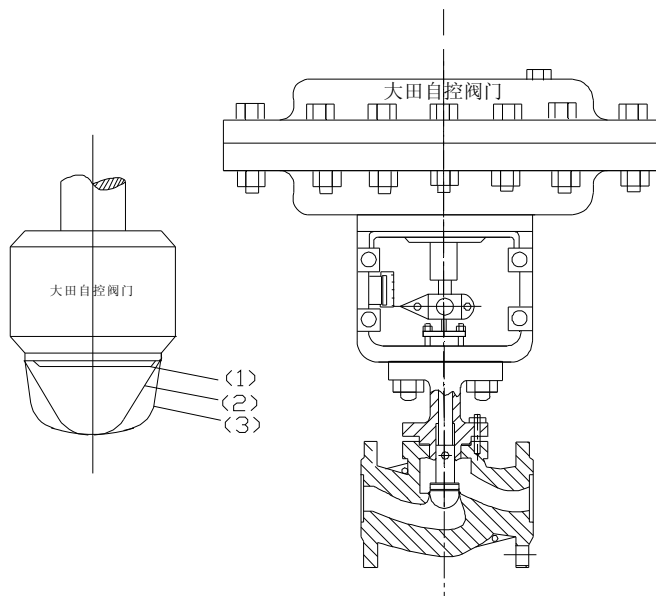
Material: 1Cr18Ni9Ti 0Cr18Ni12Mo2Ti

3. Flow characteristics



(1)为快开特性;(2)为直线特性;
(3)为等百分比特性理想流量特性

(1) Quick opening characteristics (2) Linearity line character
(3) Percentage character good flux character



4. Actuator:

Style: multi spring diaphragm actuator

Gasket: rubber asbestos board、1Cr18Ni9Ti

Film material: nitrile rubber Dacron

Spring: 60Si2Mn

Spring range: 20-100(40-200、80-240、20-60 Compress 60-100) KPa

Handspike: 2Cr13

Air pressure: 0.14 0.16 0.28Mpa

Film cap: A3

Air supply tie-in: inner worm M10X1

Liner cap: 2Cr13

Valve function type: ON/OFF

5. Technical parameter

DN (Inch)	Seat dia. (m m)	Rating flow rate Kv		Rated stroke (mm)	Film effective area cm ²	Fixed adjust able	Environme nt temperature ℃	Basic error	Back differe nce	Dead zone	Rati ng flo w rate Kv	Lea kag e
		Straig ht line	Percen tage									
1/2	3	0.08		10	220	50:1	-40~+85	with localizer ±5%	with localizer ± 3%	with localizer ±3%	± 10%	Single seat 10 ⁻⁴ rated capability(sleeve 10 ⁻³ rated capability)
	4	0.12										
	5	0.20										
	6	0.32										
	7	0.50										
	8	0.80										
3/4	10	1.8	1.6	10	350	50:1	-40~+85	with localizer ±5%	with localizer ± 3%	with localizer ±3%	± 10%	Single seat 10 ⁻⁴ rated capability(sleeve 10 ⁻³ rated capability)
	12	2.8	2.5									
	15	4.4	4									
	20	6.9	6.3									
1	25	11	10	16	560	50:1	-40~+85	with localizer ±1%	with localizer ± 1%	with localizer ±0.4%	± 10%	Single seat 10 ⁻⁴ rated capability(sleeve 10 ⁻³ rated capability)
1-1/2	32	17.6	16	25								
	40	27.5	25									
2	50	44	40	40								
2-1/2	65	69	63									
	80	110	100									
4	100	176	160									
6	125	275	250	60	900	50:1	-40~+85	with localizer ±1%	with localizer ± 1%	with localizer ±0.4%	± 10%	Single seat 10 ⁻⁴ rated capability(sleeve 10 ⁻³ rated capability)
	150	440	400									
8	200	690	630	100								
10	250	1000	900									
12	300	1600	1440									

6. ZJHP pneumatic single seat controlling valve plan

unit: Mpa

	Actuator model	Spring range KPa	Air supply pressure reMPa	DN (seat dia.) mm												
				20				25	40	50	65	80	100	150	200	
				10	12	15	20									
C l o s e	ZHA-22	20-100	0.14	6.4	6.19	3.96	2.2	1.4								
		20-100	0.25	6.4	6.4	6.4	6.4	6.4								
		40-200	0.4	6.4	6.4	6.4	6.4	6.4								
	ZHA-23	20-100	0.14							0.56	0.35					
		20-100	0.25							3.64	2.30					
		40-200	0.4							5.04	3.18					
	ZHA-34	20-100	0.14									0.34	0.22	0.14		
		20-100	0.25									2.21	1.43	0.91		
		40-200	0.4									3.06	1.98	1.26		
	ZHA-45	20-100	0.14												0.10	0.06
		20-100	0.25												0.66	0.37
		40-200	0.4												0.92	0.52
O p e n	ZHB-22	20-100	0.14	4.64	3.09	1.98	1.11	0.7								
		40-100	0.25	6.4	6.4	5.94	3.3	2.1								
		80-240	0.4	6.4	6.4	6.4	6.4	4.9								
	ZHB-23	20-100	0.14							0.28	0.18					
		40-100	0.25							0.84	0.53					
		80-240	0.4							1.95	1.25					
	ZHB-34	20-100	0.14									0.17	0.11	0.07		
		40-100	0.25									0.51	0.33	0.21		
		80-240	0.4									1.18	0.78	0.5		
	ZHB-45	20-100	0.14												0.05	0.03
		40-100	0.25												0.15	0.09
		80-240	0.4												0.36	0.21

Explanation:

- 1.this plan is based on the standard actuator .let us know if the big work pressure difference exceed plan range.
- 2.This plan is based on valve close position. So that there will be more permitted pressure difference.

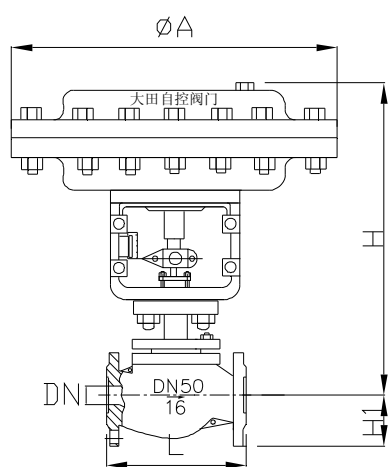
7. ZJHM ZJHM pneumatic sleeve control valve plan

ON/OFF	Actuator model	Spring range KPa	Air supply pressure MPa	DN (mm)									
				25	40	50	65	80	100	150	200		
OFF	ZHA-22	20-100	0.14	3.00									
		20-100	0.25	6.4									
		40-200	0.4	6.4									
	ZHA-23	20-100	0.14		2.25	1.95							
		20-100	0.25		6.4	6.4							
		40-200	0.4		6.4	6.4							
	ZHA-34	20-100	0.14				2.36	2.04	1.67				
		20-100	0.25				6.4	6.4	6.4				
		40-200	0.4				6.4	6.4	6.4				
	ZHA-45	20-100	0.14								1.41	1.14	
		20-100	0.25								6.4	6.4	
		40-200	0.4								6.4	6.4	
ON	ZHB-22	20-100	0.14	1.50									
		40-100	0.25	4.50									
		80-240	0.4	6.4									
	ZHB-23	20-100	0.14		1.13	0.98							
		40-100	0.25		3.38	2.93							
		80-240	0.4		6.4	6.4							
	ZHB-34	20-100	0.14				1.18	1.02	0.84				
		40-100	0.25				3.54	3.06	2.51				
		80-240	0.4				6.4	6.4	5.85				
	ZHB-45	20-100	0.14								0.71	0.57	
		40-100	0.25								2.12	1.71	
		80-240	0.4								4.94	4.00	

Explanation:

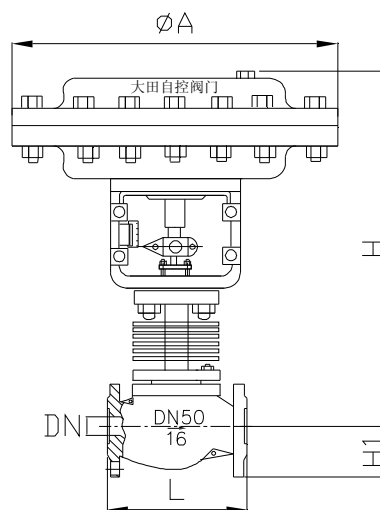
- 1、 this plan is based on the standard actuator .Let us know if the big work pressure difference exceed plan range.

8. ZJHP/M pneumatic control valve size plan



常温型

Normal temperature style



散热型

Heat elimination style

9. ZJHP/M Pneumatic diaphragm control valve size

DN	L(mm)			H(mm)		H1(mm)			Φ A (mm)	
	150LB	300LB	600LB	Normal	High T	150LB	300LB	600L B		
1/2"	120	120	120	253		31	31		236	
3/4"	181	194	206	398.5	548.5	45	52.5	65	285	
1"	184	197	210	410.5	560.5	50	57.5	70		
1-1/2"	222	235	251	455	620	65	75	85		
2"	254	267	286	457.5	627.5	70	82.5	90		
2-1/2"	276	292	311	610	790	80	92.5	102.5	360	
3"	298	317	337	622	8.7	95	100	107.5		
4"	352	368	394	640	850	105	110	117.5		125
6"	451	473	508	870	1130	132.5	142.5	150	172.5	470
8"	600	610	650	890	1150	160	170	187.5	207.5	
10"	730	730	775	1203	1523	202	225	225	235	
12"	850	850	890	1234	1554	230	257	257	265	

Note:

1. the flange of the valves according to ANSI B16.50
2. Face to face dimension according to ANSI B16.10

10. Model explanation

Z	J	H	P	150/300/600	C	G	K
Self-controlling valve	Actuator:	multi spring pneumatic film actuator	: Valve structure type:	PN:	Body material:	Temperature type:	: Function way:
	J: J: mini-type		P: P: single seat	150lb	C : C: Carbon steel	G: G: middle type normal temperature omit	K: K: air opening type
			N : N: Double seat	300lb	P : P: stainless steel		B : B: Air close
			M: M: sleeve valve	600lb	F46: F46: body liner Fl		

11. Points of orders

1. Product model and name

2. DN (mm)

3. PN

4. Flow characteristics

5. Body material

6. Rated flow rate

7. Medium type and temperature range

8. Valve pressure (back and front)(pressure difference)

9. Control single

10. Other special requirements