LPH11/LPG11–
Single–seat Control Valve

LAPAR
Lapar Control Valve

Code	Actuator	Action	Air Fail Position	Control	Structure	Body Material	Sealing Material	Core Material	Connection	DN	PN
LPH11– LPG11–	1 Pneumatic 2 Pneumatic & Handwheel 4 Electric C220V 5 Electric AC380V 0 Others	S Single–acting D Double–acting 0 Others	1 Normally Open 2 Normally Closed 4 Held 0 Others	B Control C Intelligent 0 Others	4 Low temperature type 5 Bellows type 6 High temperature type 7 Normal 0 Others	A CF3M B CF8M C CF8 D WCB I CF3 L CE3MN 2 Ti 5 WCC 0 Others	P PTFE Y FEP(F46) R BODY S Stellite 3 Gr 4 WC 0 Others	A CF3M B CF8M C CF8 I CF3 L CE3MN 2 Ti 0 Others	1 Flange 5 Weld 0 Others		

LPH11– Pneumatic Diaphragm Single Seat Control Valve
LPG11– Electric Single Seat Control Valve

Overview

LPH11/LPG11 single–seat control valves are designed for heavy duty service. The compact valve body, having a S–shape flow passage that features low pressure loss, allows a large flow capacity, range ability, and high accuracy flow characteristics. The valve plug is highly vibration–resistant as it is held by a top guide section which has a large sliding area. The flow shut–off performance complies with the IEC or JIS Standards. The actuator integrated with simplest mechanisms utilizes a compact yet powerful diaphragm actuator loaded with multiple springs.

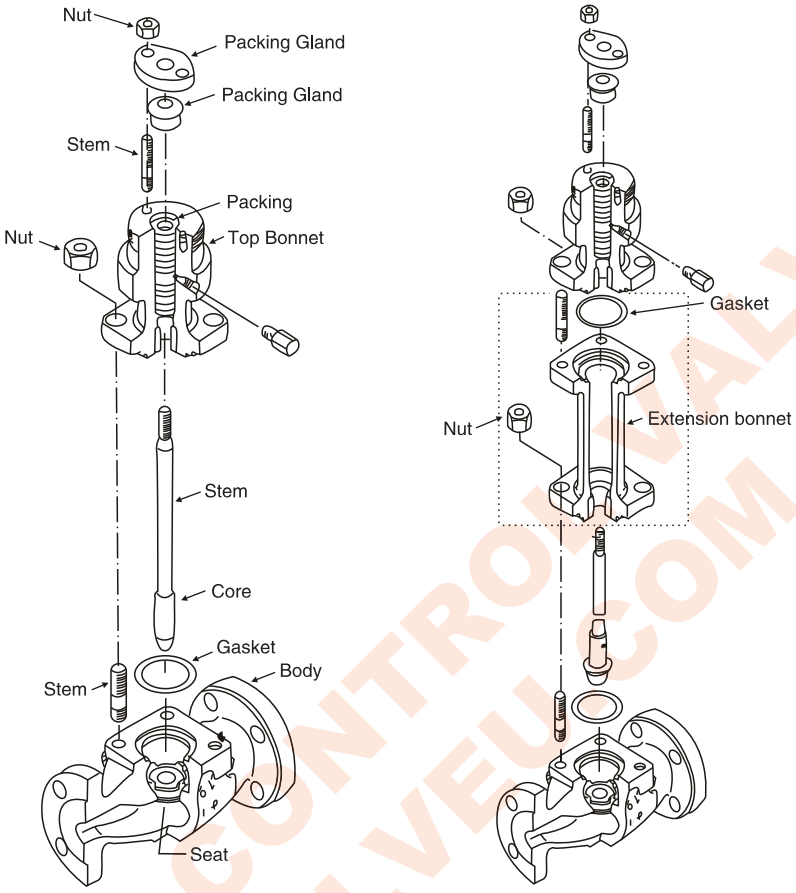
LPH11/LPG11 single–seat control valves are widely applicable for reliable control, with high shut–off performance, in high or low temperature, high pressure process lines.

Specifications

Body	Type: Straight–through, cast globe valve
Nominal size	20,25,40,50,65,80,100,150,200mm 3/4,1,1 1/2, 2, 2 1/2, 3, 4, 6, 8 inch
Pressure rating	JIS 10K, 16K, 20K, 30K, 40K ANSI Class 125, 150, 300, 600 PN1.6,4.0,6.4MPa
Connection	Flange:FF，RF，RJ，LG，MF Tongue and groove (groove), TG Male and female(female) Flanged end:JIS B2201–1984，ANSI B16.5–1981，GB/T 9112~9124–2000 Weld:SW（from 40–50mm），BW（from 65–200mm）
Body material	CF3M,CF8M,CF8,WCB,CF3,CE3MN,WCC,TI
Core material	304,316,304L,316L,CE3MN

Bonnet	Plain bonnet （–17~230℃） Extension bonnet Type I (–45~–17℃和230~566℃) Extension bonnet Type II （–100~–45℃） Extension bonnet Type III （–196 ~–100℃）
Packing / Grease	Grease not provided: When V shaped PTFE packing or PTFE yarn packing is used. Grease provided: When graphite packing is used.
Gasket	Type: Flat type, serrated type Material: Carbon steel (S15C), stainless steel (SUS316, SUS316L, SUS329J1), copper, aluminum, titanium, ASTM B574 (Hastelloy C–276 equivalent), or Alloy 20
Gland type	Bolted gland
Actuator	Pneumatic, electric: refer to the attachment.
Flow characteristics	Metal seat Equal percentage (%CF), Linear (LCF) Soft seat Equal percentage (%TF), Linear (LTF)
Performance	Inherent range ability 50 : 1 Leakage class： Metal seat：ANSI B16.104–1976 IV， Leakage less than 0.01% of maximum valve capacity. Soft seat：ANSI B16.104–1976 VI， Leakage less than 0.00001% of maximum valve capacity. Hysteresis error Without positioner: Within 3% F.S. With positioner: Within 1% F.S. Intrinsic error Without positioner: Within ±5% F.S. With positioner: Within ±1% F.S.

Exploded View



Normal Top Bonnet　　Heat Resistant Top Bonnet

Single Seated Control Valve (DN20–25)

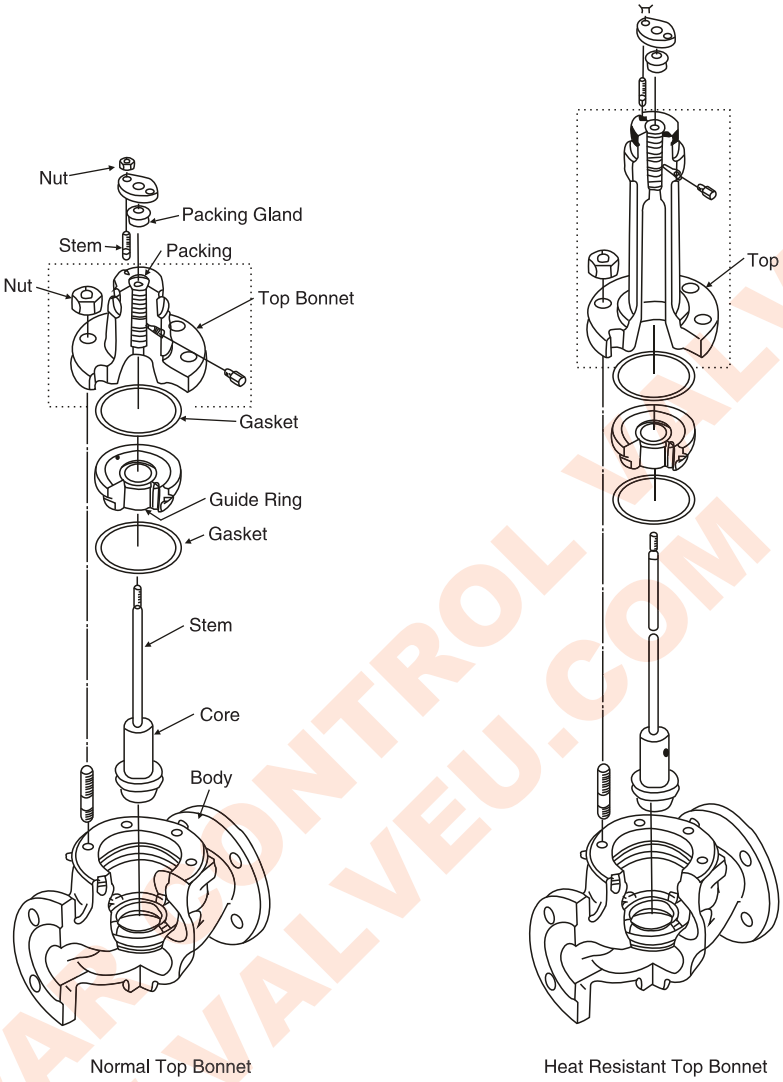
Cv Value and Travel

DN20–25　　mm

Valve core type	Valve seat and flow characteristics		Rated Travel	0.01	0.04	0.1	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0	6.3	10	14
Plunger valve core	Metal seat	Equal percentage	14.3					○	△	△	△	△	△	△	△	△	△
		Linear		○	○	○	○	○	△	△	△	△	△	△	△	△	△
	Soft seat	Equal percentage						○	○	○	○	○	○	○	○	○	○
		Linear				○	○	○	○	○	○	○	○	○	○	○	○
DN			20	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
			25	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

○ and △ represent valve specifications.
△ represents that valve flow characteristics conform to the IEC 534–1–1976 standard.

Exploded View



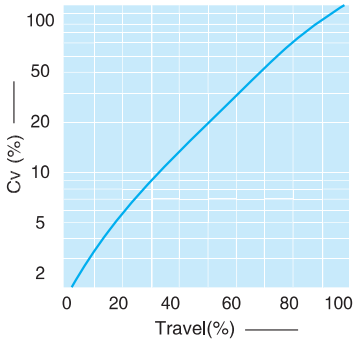
Single Seated Control Valve (DN40–200)

Cv value and travel

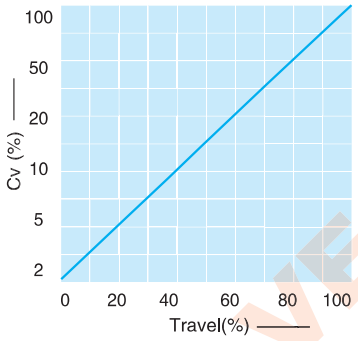
DN40–200 mm

DN	40			50			65			80			100			150			200		
Diameter	25	32	40	32	40	50	40	50	65	50	65	80	65	80	100	100	125	150	125	150	200
CV	10	17	24	17	24	44	24	44	68	44	68	99	68	99	175	175	275	360	275	360	640
Travel	25			25			38			38			38			50			75		

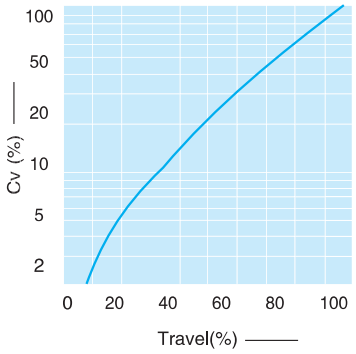
Characteristics



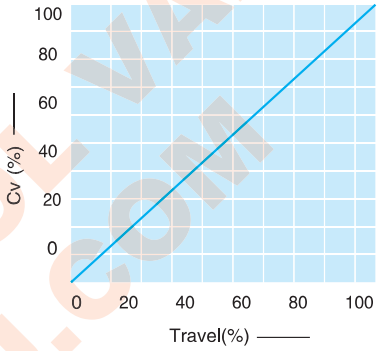
Equal percentage characteristics (%CF: Metal seat)



Linear characteristics (LCF: Metal seat)

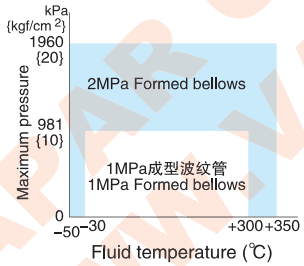


Equal percentage characteristics (%TF: Soft seat)

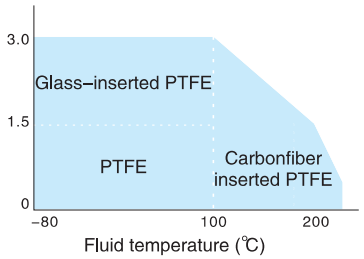


Linear characteristics (LTF: Soft seat)

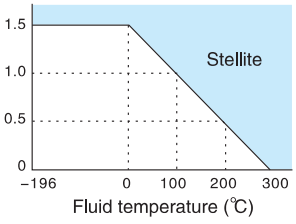
Temperature And Pressure Ranges



Bellows Type by
Temperature and Pressure Ranges



Temperature and maximum
differential pressure range of soft–seat type



Temperature/normal differential
pressureranges requiring Stellite

Note：When cavitation/flushing service, oil prohibitive service, or retention of valve–close performance is required, use of Stellite is recommended regardless of temperature or differential pressure.

Allowable Differential Pressure

Metal Seat(DN20–25)

Air–to–close

100KPa

Actuator	Supply pressure	Spring range	Positioner	Allowable differential pressure(DN20–25) CV									
				≤0.25	0.4	0.63	1.0	1.6	2.5	4.0	6.3	10	14
ZHA1D	1.4	0.2 ~ 1.0		40* 56	31	31	16	16	10	10	5.6	4.2	2.6
	1.6	0.2 ~ 1.0	With	40* 100	40* 100	40* 100	40* 84	40* 84	40* 52	40* 52	28	21	13
	4.0	0.8 ~ 2.4	With	—	—	—	—	—	40* 100	40* 100	40* 84	40* 84	39
ZHA2D	1.4	0.2 ~ 1.0		40* 100	40* 62	40* 62	32.6	32.6	20	20	10.9	8.2	5.0
	1.6	0.2 ~ 1.0	With	—	40* 100	40* 100	40* 100	40* 100	40* 100	40* 100	40* 54	40*	25.2
	4.0	0.8 ~ 2.4	With	—	—	—	—	—	—	—	40* 100	40* 100	40* 75

Air–to–open

100KPa

Actuator	Supply pressure	Spring range	Positioner	Allowable differential pressure(DN20–25) CV									
				≤0.25	0.4	0.63	1.0	1.6	2.5	4.0	6.3	10	14
ZHA1R	1.4	0.2 ~ 1.0		40* 56	31	31	16	16	10	10	5.6	4.2	2.6
	2.8	0.8 ~ 2.4	With	40* 100	40* 100	40* 100	40* 100	40* 100	40* 72	40* 72	39	29	18
1.4 ZHA2R	1.4	0.2 ~ 1.0		40* 100	40* 62	40* 62	32.6	32.6	20	20	10.9	8.2	5.0
	2.8	0.8 ~ 2.4	With	—	40* 100	40* 100	40* 100	40* 100	40* 100	40* 100	40* 76	40* 56	35

Note 1: Take care not to cause the maximum allowable differential pressure to exceed the maximum operating pressure designated by ANSI B 16. 34–1981 or JIS B2201–1984.

2. The upper figures denote the operating allowable differential pressure. The lower denote allowabledifferential pressure at full closure.
3. Allowable pressure differential with *, when the valve controls liquid, allowable pressure differential is only 3 MPa.
4. Column bordered with bold lines denote types provided with standard–type actuator

Metal Seat (DN40–200)

A. With type ZHA or ZVA actuator

Air–to–close

100KPa

Actuator	Supply pressure	Spring range	Positioner	Allowable differential pressure(DN40–200) Diameter									
				25	32	40	50	65	80	100	125	150	200
ZHA1D	1.4	0.2 ~ 1.0		3.3	2.0	1.4	0.8	—	—	—	—	—	—
	1.6	0.2 ~ 1.0	With	16	9.9	7.1	4.1	—	—	—	—	—	—
	4.0	0.8 ~ 2.4	With	40 48	29	21	12	—	—	—	—	—	—
ZHA2D	1.4	0.2 ~ 1.0		6.3	3.8	2.7	1.6	1.0	0.7	0.5	—	—	—
	1.6	0.2 ~ 1.0	With	31.6	19.3	13.7	7.8	5.1	3.5	2.0	—	—	—
	4.0	0.8 ~ 2.4	With	40 94	40 57	40 41	21.7	14.9	10.5	5.9	—	—	—
ZHA3D	1.4	0.2 ~ 1.0		11.2	6.8	4.8	2.8	1.7	1.2	0.7	0.4	0.3	—
	1.6	0.2 ~ 1.0	With	40 56	34.2	24.2	14	8.8	6.2	3.5	2.2	1.4	—
	4.0	0.8 ~ 2.4	With	40 100	40 100	40 72	40 42	26.5	18.7	10.5	6.7	4.1	—
ZHA4D	1.4	0.2 ~ 1.0		—	—	8.3	4.8	3.0	2.2	1.2	0.7	0.5	0.3
	1.6	0.2 ~ 1.0	With	—	—	40	24.2	15.2	10.7	6.1	3.9	2.4	1.5
	4.0	0.8 ~ 2.4	With	—	—	40 100	40 72	40 45	32.2	18.2	11.6	7.1	4.5
ZHA5D	1.4	0.2 ~ 1.0		—	—	—	—	4.2	2.9	1.6	1.1	0.6	0.4
	1.6	0.2 ~ 1.0	With					20.8	14.7	8.3	5.3	3.2	2.1

Air–to–open

100KPa

Actuator	Supply pressure	Spring range	Positioner	Allowable differential pressure (DN40–200) Diameter									
				25	32	40	50	65	80	100	125	150	200
ZHA1R	1.4	0.2 ~ 1.0		3.3	2.0	1.4	0.8	—	—	—	—	—	—
	2.8	0.8 ~ 2.4	With	22	13	9.9	5.7	—	—	—	—	—	—
ZHA2R	1.4	0.2 ~ 1.0		6.3	3.8	2.7	1.6	1.0	0.7	0.5	—	—	—
	2.8	0.8 ~ 2.4	With	40 44	27	14.1	11.1	6.9	4.9	2.8	—	—	—
ZHA3R	1.4	0.2 ~ 1.0		11.2	6.8	4.8	2.8	1.7	1.2	0.7	0.4	0.3	—
	2.8	0.8 ~ 2.4	With	40 78	40 47	34	19.6	12.3	8.7	4.9	3.1	1.9	—
ZHA4R	1.4	0.2 ~ 1.0		—	—	8.4	4.8	3.0	2.2	1.2	0.7	0.5	0.3
	2.8	0.8 ~ 2.4	With	—	—	40 58	31.5	21.3	15	8.5	5.4	3.3	2.1
ZVA5R	1.4	0.2 ~ 1.0		—	—	—	—	4.2	2.9	1.6	1.1	0.6	0.4
	2.8	0.8 ~ 2.4	With	—	—	—	—	29.2	20.6	11.6	7.4	4.5	2.9
ZVA6R	4 (*)	1.9 ~ 3.5	With	—	—	—	—	40 61	40 43	24.2	—	—	—
	1.6	0.2 ~ 1.0	With	—	—	—	—	—	—	24.2	15.5	9.5	—

Note 1. Take care not to cause the maximum allowable differential pressure to exceed the maximum operating pressure designated by ANSI B 16. 34–1981 or JIS B2201–1984.

2. The upper figures denote the operating allowable differential pressure. The lower denote allowable differential pressure at full closure.

3. (*) Applicable to valve sizes of 65、80、100mm , 2* Applicable to valve size of 150mm

4. Column bordered with bold lines denote types provided with standard–type actuator

B. With type ZVP actuator

100KPa

Actuator	Supply pressure	Positioner	Allowable differential pressure (DN40–200) Diameter					
			65	80	100	125	150	200
ZVP5	3	With	40 52	36.8	20.7	13.2	8	—
	4	With	40 70	40 49	27.8	17.8	10.8	—
	5	With	40 88	40 62	34.9	22.4	13.6	—
ZVP6	3	With	40 93	40 65	36.9	23.6	14.4	9.2
	4	With	40 100	40 88	40 49	31.8	19.3	12.4
	5	With	40 100	40 100	40 62	40	24.3	15.6
ZVP7	3	With	—	—	—	35.5	21.6	13.8
	4	With	—	—	—	40 47	29	18.6
	5	With	—	—	—	40 60	36.4	23.4

注 1. Take care not to cause the maximum allowable differential pressure to exceed the maximum operating pressure designated by ANSI B 16. 34–1981 or JIS B2201–1984.
2. The upper figures denote the operating allowable differential pressure. The lower denote allowable differential pressure at full closure.
3. When a backup system for pressure drop at the air source is used, select the allowable differential pressure from whichever is lower–constant supplied air pressure or backup system set pressure.

Metal Seat, Bellows Type

Air–to–close

100KPa

Actuator	Supply pressure	Spring range	Positioner	Allowable differential pressure(DN20–25) CV									
				≤0.25	0.4	0.63	1.0	1.6	2.5	4.0	6.3	10	14
ZHA2D	1.4	0.2 ~ 1.0		20 51	20 31	20 31	16.3	16.3	10	10	5.4	4.1	2.5
	1.6	0.2 ~ 1.0	With	–	20 50	20 50	20 50	20 50	20 50	20 50	20 27	20	12.6
	4.0	0.8 ~ 2.4	With	–	–	–	–	–	–	–	20 50	20 50	20 37.5

气开 Air–to–open

100KPa

Actuator	Supply pressure	Spring range	Positioner	Allowable differential pressure(DN20–25) CV									
				≤0.25	0.4	0.63	1.0	1.6	2.5	4.0	6.3	10	14
ZHA2R	1.4	0.2 ~ 1.0		20 51	20 31	20 31	16.3	16.3	10	10	5.4	4.1	2.5
	2.8	0.8 ~ 2.4	With	–	20 50	20 50	20 50	20 50	20 50	20 50	20 38	20 38	17.5

注：1. Take care not to cause the maximum allowable differential pressure to exceed the maximum operating pressure designated by ANSI B 16. 34–1981 or JIS B2201–1984.
2. The upper figures denote the operating allowable differential pressure. The lower denote allowable differential pressure at full closure.

Metal Seat, Bellows Type (DN40–200)

With type ZHA or ZVA actuator

Air–to–close

100KPa

Actuator	Supply pressure	Spring range	Positioner	Allowable differential pressure (DN40–200) 阀座直径Diameter									
				25	32	40	50	65	80	100	125	150	200
ZHA2D	1.4	0.2 ~ 1.0		3.1	1.9	1.4	0.8	0.5	0.35	0.25			
	1.6	0.2 ~ 1.0	With	16	9.5	6.5	3.9	2.5	1.7	1.0			
	4.0	0.8 ~ 2.4	With	20 47	20 29	20 20	11	7.5	5.5	3.0			
ZHA3D	1.4	0.2 ~ 1.0		5.6	3.4	2.4	1.4	0.8	0.6	0.35	0.2	0.15	
	1.6	0.2 ~ 1.0	With	20 28	17.1	12.1	7	4.4	3.1	1.75	1.1	0.7	
	4.0	0.8 ~ 2.4	With	20 50	20 50	20 36	20 21	13.2	9.8	5.2	3.3	2.05	
ZHA4D	1.4	0.2 ~ 1.0				4.1	2.4	1.5	1.1	0.6	0.35	0.25	0.15
	1.6	0.2 ~ 1.0	With			20	12	7.5	5.3	3.0	2.0	0.2	0.75
	4.0	0.8 ~ 2.4	With			20 50	20 36	20 22.5	16.1	9.1	5.8	3.5	2.25
ZVA5D	1.4	0.2 ~ 1.0						2.1	1.5	0.8	0.55	0.3	0.2
	1.6	0.2 ~ 1.0	With					10.4	7.3	4.1	2.6	1.6	1.05

Air–to–open

100KPa

Actuator	Supply pressure	Spring range	Positioner	Allowable differential pressure (DN40–200) Diameter									
				25	32	40	50	65	80	100	125	150	200
ZHA2R	1.4	0.2 ~ 1.0		3.1	1.9	1.3	0.8	0.5	0.35	0.25	–	–	–
	2.8	0.8 ~ 2.4	With	20 22	13.5	7.0	5.5	3.5	2.4	1.4	–	–	–
ZHA3R	1.4	0.2 ~ 1.0		5.6	3.4	2.4	1.4	0.8	0.6	0.35	0.2	0.15	–
	2.8	0.8 ~ 2.4	With	20 39	20 23.5	17	9.8	6.1	4.4	2.4	1.5	0.95	–
ZHA4R	1.4	0.2 ~ 1.0		–	–	4.2	2.4	1.5	1.1	0.6	0.35	0.25	0.15
	2.8	0.8 ~ 2.4	With	–	–	20 29	16.5	10.7	7.5	4.2	2.7	1.6	1.1
ZVA5R	1.4	0.2 ~ 1.0		–	–	–	–	2.1	1.5	0.85	0.55	0.3	0.2
	2.8	0.8 ~ 2.4	With	–	–	–	–	14.6	10.3	5.8	3.7	2.3	1.5
ZVA6R	4 (*)	1.9 ~ 3.5	With	–	–	–	–	20 30	20 21.5	12.1	–	–	–
	1.6	0.2 ~ 1.0	With	–	–	–	–	–	–	12.1	7.5	4.7	–

注：1. Take care not to cause the maximum allowable differential pressure to exceed the maximum operating pressure designated by ANSI B 16. 34–1981 or JIS B2201–1984.

2. The upper figures denote the operating allowable differential pressure. The lower denote allowable differential pressure at full closure.

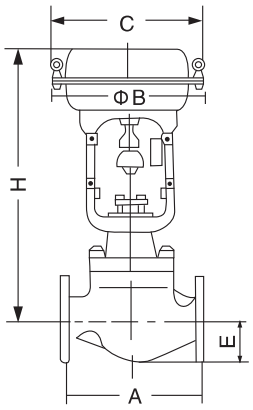
3. (*)Applicable to valve sizes of 65、80、100mm .

4. Column bordered with bold lines denote types provided with standard–type actuator.

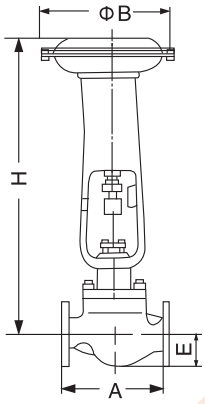
Allowable Differential Pressure for Electric Control Valve

mm

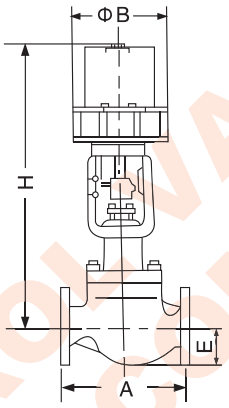
DN (mm)	20				25		40	50	65	80	100		150	200	250	300
Diameter (mm)	10	12	15	20	25	32	40	50	65	80	100	125	150	200	250	300
Allowable differential pressure(MPa)	6.4			5.6	3.7	3.4	2.1	1.40	1.4	0.9	0.50	0.47	0.33	0.19	0.18	0.13



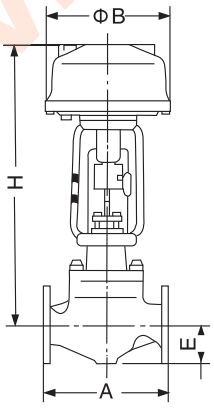
ZHA actuator



ZVA5 actuator



ZVA6 actuator



ZVP actuator

Dimensions

DN20–25

mm

DN	A										
	ANSI 125RF ANSI 150RF JIS 10K FFRF PN1.6	JIS 16K RF	ANSI 300RF JIS 20KRF JIS 30KRF PN4.0	ANSI 600RF JIS 40KRF PN6.4	ANSI 150 RJ	ANSI 300 RJ	ANSI 600 RJ	JIS 20K MF TG	JIS 30K MF TG	ANSI 300 LG	ANSI 600 SW、BW
20	184	190	194	206	—	206	206	198	208	203	206
25	184	193	197	210	197	210	210	198	212	206	210

Remark: Face–to–face is designed to meet IEC534–3–1976

DN40–200

mm

公称通径 DN	A							
	ANSI 125FF、PN1.6 ANSI 150RF JIS 10K FF RF	JIS 16K RF	ANSI 300 RF JIS 20、30K RF JIS 30K RF	ANSI 600 RF JIS 40K RF PN6.4	JIS 16K MF TG	JIS 20K MF TG	JIS 30K MF TG	JIS 40K MF TG
40	222	231	235	251	235	236	248	251
50	254	263	267	286	265	267	276	286
65	276	288	292	311	290	292	303	311
80	298	313	317	337	310	317	326	337
100	352	364	368	394	360	368	379	394
150	451	465	473	508	475	473	486	508
200	543	560	568	610	570	568	580	610

Remark: Face–to–face is designed to meet IEC534–3–1976

mm

DN	A						
	ANSI 150 RJ	ANSI 300 RJ	ANSI 600 RJ	ANSI 300 LG	ANSI 600 LG	ANSI 150 SW、BW	ANSI 150、600 SW、BW
40	235	248	251	244	248	251	251
50	267	283	289	276	283	286	286
65	289	308	314	302	308	311	311
80	311	333	340	327	333	337	337
100	365	384	397	378	391	394	394
150	464	489	511	483	505	473	508
200	556	584	613	578	606	568	610

mm

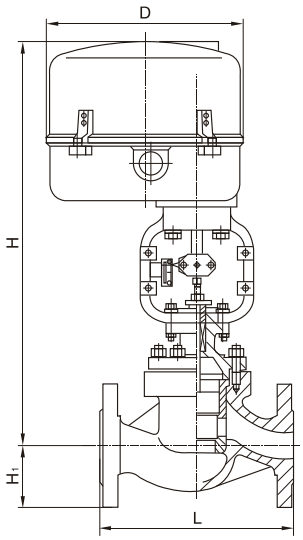
DN	Actuator	H				C	ϕ B	E
		Normal	Extension bonnet 1	Extension bonnet 2	Extension bonnet 3			
20–25	ZHA1D、R	375	525	685	900	230	218	40
	ZHA2D、R	450	600	760	975	281	267	
40	ZHA1D、R	425	590	705	945	230	218	70
	ZHA2D、R	500	665	780	1020	281	267	
	ZHA3D、R	590	760	875	1140	363	350	
50	ZHA1D、R	425	595	710	950	230	218	80
	ZHA2D、R	500	670	785	1025	281	267	
	ZHA3D、R	595	765	875	1140	363	350	
65	ZHA2D、R	575	745/755	880	1130	281	267	88
	ZHA3D、R	630	800/810	930	1180	363	350	
	ZHA4D、R	865	1035/1045	1165	1495	520	470	
80	ZHA2D、R	580	755/765	900	1135	281	267	98
	ZHA3D、R	635	810/820	955	1190	363	350	
	ZHA4D、R	870	1045/1055	1190	1505	520	470	
100	ZHA2D、R	610	810/870	915	1150	281	267	113
	ZHA3D、R	660	860/870	1020	1205	363	350	
	ZHA4D、R	890	1100/1110	1255	1520	520	470	
	ZVA5D	1300	1515	1710	1940	–	620	
	ZVA5R	1420	1635	1820	2050	–	620	
	ZVA6R	1160	1375	1560	1790	–	445	
	ZVP5	940	1155	1340	1570	–	345	
150	ZHA3D、R	785	1020/1045	1250	1385	363	350	170
	ZHA4D、R	955	1190/1215	1425	1570	520	470	
	ZVA5D	1360	1620	1870	2000	–	620	
	ZVA5R	1480	1740	1980	2110	–	620	
	ZVA6R	1220	1480	1720	1850	–	445	
	ZVP5	1000	1260	1500	1630	–	345	
	ZVP6	1210	1470	1710	1840	–	445	
	ZVP7	1290	1550	1790	1920	–	545	
200	ZHA4D、R	1090	1350	1580	1710	520	470	220
	ZVA5D	1475	1740	2025	2155	–	620	
	ZVA5R	1585	1850	2145	2275	–	620	
	ZVP5	1165	1425	1665	1795	–	345	
	ZVP6	1375	1635	1875	2005	–	445	
	ZVP7	1455	1715	1955	2085	–	545	

1. “H” dimensions are applicable when a hand wheel is not provided. When top–mounted hand wheel actuators or side–mounted hand wheel are used, add the hand wheel dimentsions.
2. “H” dimensions of Extended bonnet Type are as follows: The left side JIS 10K and ANSI 150, and the rightside for JIS 16K and ANSI 300 or over.

Weight

kg

DN	Actuator	Flange												Weld			
		ANSI 125、150 JIS 10K				ANSI 300 JIS 16、20、30K				ANSI 600 JIS 40K				ANSI 150、300、600 JIS 10、16、20、30K			
		P	E Ⅰ	E Ⅱ	E Ⅲ	P	E Ⅰ	E Ⅱ	E Ⅲ	P	E Ⅰ	E Ⅱ	E Ⅲ	P	E Ⅰ	E Ⅱ	E Ⅲ
20、25	ZHA1D、R	16	18	21	26	17	19	22	27	17	19	22	27	14	16	19	24
	ZHA2D、R	23	25	28	33	24	26	29	34	24	26	29	34	21	23	26	31
40	ZHA1D、R	24	27	30	32	29	32	35	37	37	40	43	45	29	32	35	37
	ZHA2D、R	31	34	37	39	36	39	42	44	44	47	50	52	36	39	42	44
	ZHA3D、R	43	46	49	51	48	51	54	56	56	59	62	64	48	51	54	56
50	ZHA1D、R	30	33	36	38	35	38	41	43	40	43	46	48	35	38	41	43
	ZHA2D、R	37	40	43	45	42	45	48	50	47	50	43	55	42	45	48	50
	ZHA3D、R	49	52	55	57	54	57	60	62	59	62	65	67	54	57	60	62
65	ZHA2D、R	43	47	51	53	48	52	56	58	65	69	73	75	48	52	56	58
	ZHA3D、R	55	59	63	65	60	64	68	70	77	81	85	87	60	64	68	70
	ZHA4D、R	86	90	94	96	91	95	99	101	108	112	116	118	91	95	99	101
80	ZHA2D、R	53	59	65	68	63	69	75	78	85	91	97	100	63	69	75	78
	ZHA3D、R	65	71	77	80	75	81	87	90	97	103	109	112	75	81	87	90
	ZHA4D、R	96	102	108	111	106	112	118	121	128	134	140	143	106	112	118	121
100	ZHA2D、R	63	73	78	81	78	88	93	96	113	123	128	131	75	85	90	93
	ZHA3D、R	75	85	90	93	90	100	105	108	125	135	140	143	87	97	102	105
	ZHA4D、R	106	116	121	124	121	131	136	139	156	166	171	174	118	128	133	136
	ZVA5D	208	218	223	226	223	233	238	241	258	268	273	276	220	230	235	238
	ZVA5R	233	243	248	251	248	258	263	266	283	293	298	301	245	255	260	263
	ZVA6R	248	258	263	266	263	273	278	281	298	308	313	316	260	270	275	278
	ZVP5	123	133	138	141	138	148	153	156	173	183	188	191	135	145	150	153
150	ZHA3D、R	157	172	179	182	187	202	209	212	237	252	259	262	177	192	199	202
	ZHA4D、R	188	203	210	213	218	233	240	243	268	283	290	293	208	223	230	233
	ZVA5D	290	305	312	315	320	335	342	345	370	385	392	395	310	325	332	335
	ZVA5R	315	330	337	340	345	360	367	370	395	410	417	420	335	350	357	360
	ZVA6R	330	345	352	355	360	375	382	385	410	425	432	435	350	365	372	375
	ZVP5	205	220	227	230	235	250	257	260	285	300	307	310	225	240	247	250
	ZVP6	280	295	302	305	310	325	332	335	360	375	382	385	300	315	322	325
	ZVP7	390	405	412	415	420	435	442	445	470	485	492	495	410	425	432	435
200	ZHA4D、R	268	288	298	303	318	338	348	353	438	458	468	473	308	328	338	343
	ZVA5D	370	390	400	405	420	440	450	455	540	560	570	575	410	430	440	445
	ZVA5R	395	415	425	430	445	465	475	480	565	585	595	600	435	455	465	470
	ZVP5	285	305	315	320	335	355	365	370	455	475	485	490	325	345	355	360
	ZVP6	360	380	390	395	410	430	440	445	530	550	560	565	400	420	430	435
	ZVP7	470	490	500	505	520	540	550	555	640	660	670	675	510	530	540	545



Dimensions and Weight of Electric Control Valve

mm

DN	L			H				H_1			D Normal/ Flameproof	(kg) Weight	
				Normal temperate		High temperature							
	PN1.6	PN4.0	PN6.4	PN1.6 PN4.0	PN6.4	PN1.6 PN4.0	PN6.4	PN1.6	PN4.0	PN6.4		PN1.6	PN4.0 PN6.4
20	181	194	206	547	558	700	706	52	52	65	260/280	14	18
25	185	197	210	564	575	712	724	57	57	70		15	19
40	222	235	251	720	730	8890	901	75	75	85	290/310	26	35
50	254	267	286	730	739	902	908	82	82	90		30	40
65	276	292	311	845	854	1025	1035	92	92	102		34	53
80	298	317	337	867	870	1045	1051	100	100	107		42	65
100	352	368	394	890	900	1070	1090	110	117	125		52	86
150	451	473	508	1190	1220	1330	1337	142	150	172	360	152	206
200	600	600	650	1258	1350	1380	1390	170	187	207		220	280
250	673	673	775	1350	1570	1480	1490	202	225	235		423	470
300	737	737	900	1460	1600	1590	1690	230	257	265		663	735