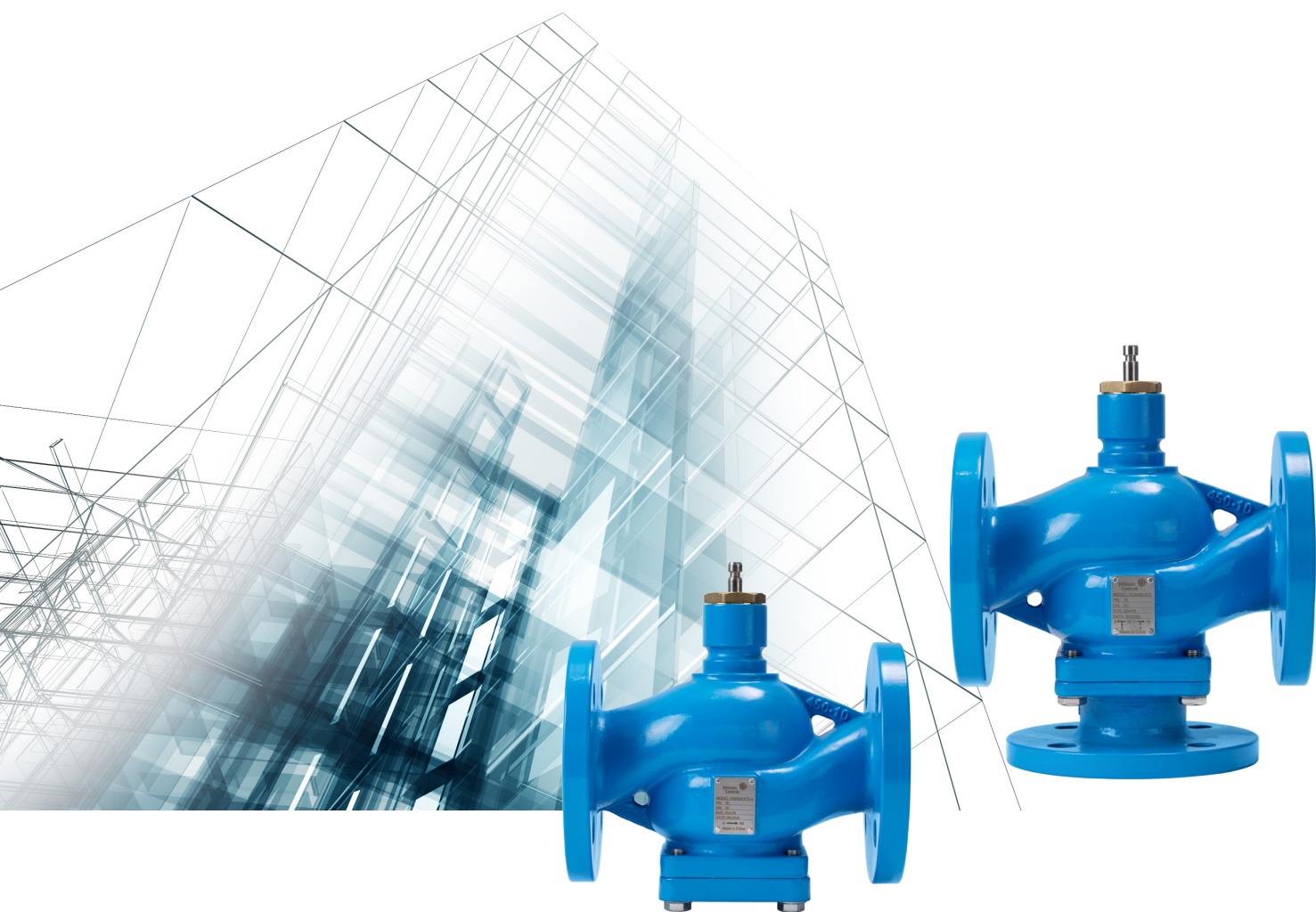


VGA8000 FLANGED GLOBE VALVE



The power behind **your mission**

Johnson
Controls 

VGA8000

Series Flanged Globe Valve



2-way Flanged VGA82xx Series



3-way Flanged VGA88/89xx Series

Features

- 1: DN15 to DN250 available
- 2: Kvs 0.63 to 700 m³/h
- 3: High-grade ductile iron QT450-10 for valve body
- 4: Standard flange connection of ISO7005-2
- 5: Fitted with VAP-B, VAF series actuator with various ΔP available for different applications

Technical Data

Rated pressure	PN16
Flange connection	ISO7005-2
Media	Water, glycol solutions (<50%)
Temperature range	-10~120°C
Valve Characteristics	DN25-80 equal percentage at full range DN15-20, DN100-250 equal percentage at 0~40%, modified equal percentage at 40~100% For 3-Way bypass port, Linear at all sizes and opening
Leakage rage	≤0.01% of Kvs
Rangibility	>50:1

Note: When media temperature is below 2 °C, a stem heater is required. Please order “VGA-H1” for DN15 to DN65 while “VGA-H2” for DN80 to DN250.





Material

Valve body	Ductile iron of QT450-10
Valve trim	Stainless steel
Valve stem	Stainless steel
Sealing structure	V model sealing gland + stainless steel spring self-compensation
Stem sealing	PTFE+VITON

Model List

Size	2-way	3-way mixing	3-way diverting	Stroke (mm)	Kvs (m ³ /h) at control port	Kvs (m ³ /h) at bypass port (for 3-way only)
DN15	VGA8201AC	VGA8803AC	VGA8903AC	20	0.63	0.63
	VGA8201AD	VGA8803AD	VGA8903AD	20	1	1
	VGA8201AE	VGA8803AE	VGA8903AE	20	1.6	1.6
	VGA8201AF	VGA8803AF	VGA8903AF	20	2.5	2.5
	VGA8201AG	VGA8803AG	VGA8903AG	20	4	4
DN20	VGA8201BL	VGA8803BL	VGA8903BL	20	6.3	6.3
DN25	VGA8201CN	VGA8803CN	VGA8903CN	20	10	10
DN32	VGA8201DP	VGA8803DP	VGA8903DP	20	16	16
DN40	VGA8201ER	VGA8803ER	VGA8903ER	20	25	25
DN50	VGA8201FS	VGA8803FS	VGA8903FS	20	40	40
DN65	VGA8201GT	VGA8803GT	VGA8903GT	20	63	63
DN80	VGA8201HU	VGA8803HU	VGA8903HU	30	100	100
DN100	VGA8201JV	VGA8803JV	VGA8903JV	40	160	160
DN125	VGA8201NW	VGA8803NW	VGA8903NW	40	250	250
DN150	VGA8201PX	VGA8803PX	VGA8903PX	40	350	350
DN200	VGA8201RY	VGA8803RY	VGA8903RY	40	520	-
DN250	VGA8201SZ	VGA8803SZ	VGA8903SZ	40	700	-

Selection Table

VGA8000 DN15-DN250 2 Way Globe Valves with Electrical Actuators			Non Spring Return			
			VAP600S	VAP1000S	VAP1000L	VAP3000L
						
Position Feedback						
0 (2) to 10 VDC or 0 (4) to 20 mA			■	■	■	■
Power Requirement						
24 VAC /VDC			■	■	■	■
220 VAC+/-15% 50/60 Hz						
Electrical Connections						
Screw terminal			■	■	■	■
DN	Kvs	2-way	Close-off Pressure (kPa)			
DN15	0.63	VGA8201AC	1300	1600		
DN15	1	VGA8201AD	1300	1600		
DN15	1.6	VGA8201AE	1300	1600		
DN15	2.5	VGA8201AF	1300	1600		
DN15	4	VGA8201AG	1300	1600		
DN20	6.3	VGA8201BL	1300	1600		
DN25	10	VGA8201CN	850	1300		
DN32	16	VGA8201DP	550	900		
DN40	25	VGA8201ER-N	1000	1600		
DN50	40	VGA8201FS-N	1000	1600		
DN65	63	VGA8201GT-N			1600	
DN80	100	VGA8201HU-N			1600	
DN100	160	VGA8201JV-N				1600
DN125	250	VGA8201NW-N				1600
DN150	350	VGA8201PX-N				1600
DN200	520	VGA8201RY-N				1600
DN250	700	VGA8201SZ-N				1600
			VAP600S-24-B	VAP1000S-24-B	VAP1000L-24-B	VAP3000L-24-B

Bold numbers for close-off pressure indicate preferred value for HVAC application



VGA8000 DN15-DN150 3 Way Globe Valves with Electrical Actuators



Non Spring Return

VAP600S

VAP1000S

VAP3000L



Floating
0 (2) to 10 VDC
0 (4) to 20 mA

Floating
0 (2) to 10 VDC
0 (4) to 20 mA

Floating
0 (2) to 10 VDC
0 (4) to 20 mA

Position Feedback

0 (2) to 10 VDC or 0 (4) to 20 mA



Power Requirement

24 VAC /VDC



220 VAC+/-15% 50/60 Hz

Electrical Connections

Screw terminal



Close-off Pressure (kPa)

DN	Kvs		Mixing	Diverting	Close-off Pressure (kPa)					
	Control	By-pass			Mixing	Diverting	Mixing	Diverting	Mixing	Diverting
DN15	0.63	0.63	VGA8803AC	VGA8903AC	1000	500				
DN15	1	1.0	VGA8803AD	VGA8903AD	1000	500				
DN15	1.6	1.6	VGA8803AE	VGA8903AE	1000	500				
DN15	2.5	2.5	VGA8803AF	VGA8903AF	1000	500				
DN15	4	4	VGA8803AG	VGA8903AG	1000	500				
DN20	6.3	6.3	VGA8803BL	VGA8903BL	1000	500				
DN25	10	10	VGA8803CN	VGA8903CN	850	425				
DN32	16	16	VGA8803DP	VGA8903DP	550	275	900	450		
DN40	25	25	VGA8803ER	VGA8903ER	350	175	600	300		
DN50	40	40	VGA8803FS	VGA8903FS	240	120	400	200		
DN65	63	63	VGA8803GT-N	VGA8903GT-N					750	375
DN80	100	100	VGA8803HU-N	VGA8903HU-N					500	250
DN100	160	160	VGA8803JV-N	VGA8903JV-N					325	160
DN125	250	250	VGA8803NW-N	VGA8903NW-N					200	100
DN150	350	350	VGA8803PX-N	VGA8903PX-N					140	70

VAP600S-24-B

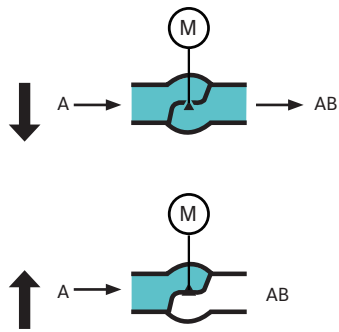
VAP1000S-24-B

VAP3000L-24-B

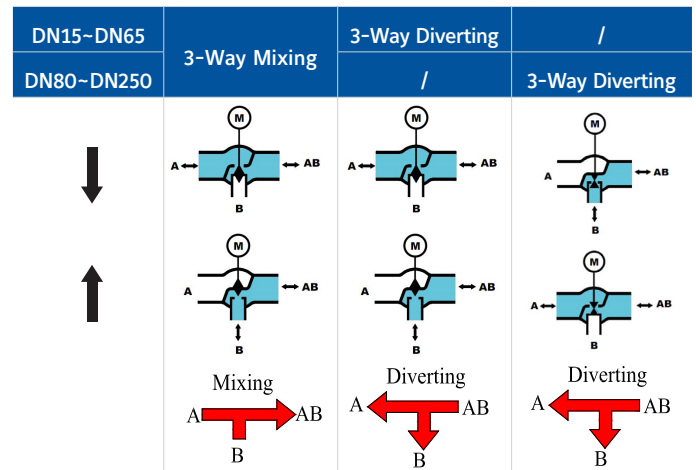
Bold numbers for close-off pressure indicate preferred value for HVAC application

Mechanical Design

2-way VGA82xx



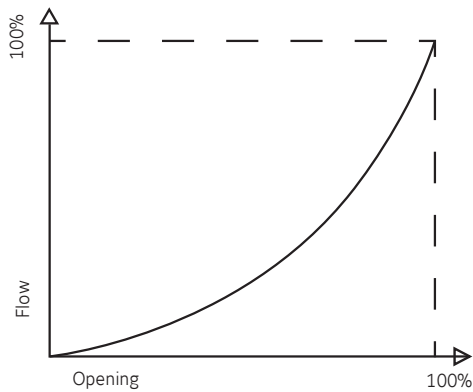
3-way VGA88xx/89xx



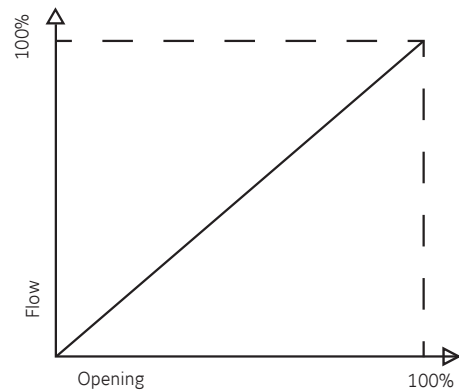
Flow Characteristic

A - AB: DN25-DN80, Equal percentage

DN15-20, DN100-250, Equal percentage at 0-40%, while modified equal percentage at 40-100%;



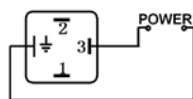
B - AB: Linear



Accessory (Stem Heater)

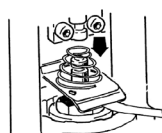


VGA-H1/H2 Stem Heater

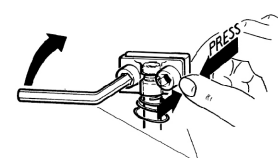
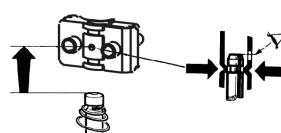


Wiring Diagram

Model	Stroke	Power Supply	Power Consumption	Heating Temperature
VGA-H1	20mm	24VAC/DC	15w	80-120°C
VGA-H2	30mm/40mm	24VAC/DC	15w	80-120°C

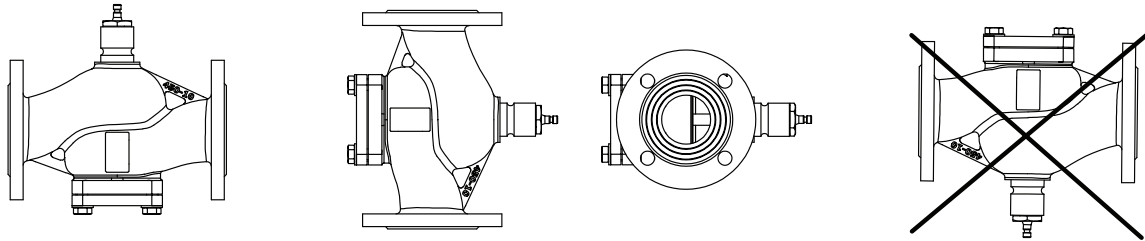


Note: the side with "24V 15W" shall be placed to face down





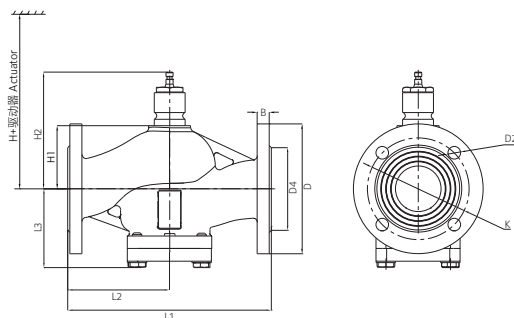
Installation



- The valves are to be installed by skilled personnel and in strict accordance with the installation instructions and local regulations. Johnson Controls assumes no responsibility for damages or injuries resulting from non-compliance with installation instructions or standard good practice when mounting, operating or maintaining the valve, even if not explicitly mentioned herein.
- The valve and the pipes must be free of dirt, welding beads, etc.
- The valves are designed for a fluid temperature range, flow direction, as well as for a maximum pressure, as shown in this installation instruction.
- There should be no mechanical tension in the pipe work when the valve is fitted.

Dimensions

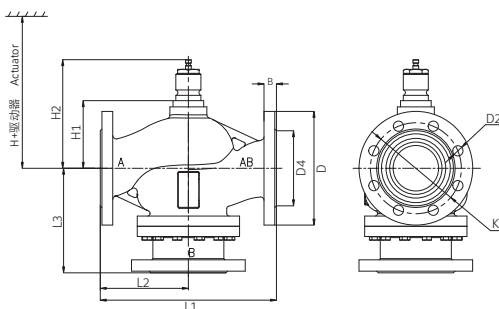
2-way VGA82xx:



DN	B mm	D mm	D2 mm	D4 mm	K mm	L1 mm	L2 mm	L3 mm	H1 mm	H2 mm	Weight kg	H-1 mm	H-2 mm	H-3 mm
15	14	95	4-14	46	65	130	65	70	41	117	3.6	296	/	/
20	16	105	4-14	56	75	150	75	70	46	122	4.6	301	/	/
25	16	115	4-14	65	85	160	80	75	48	124	5.2	303	/	/
32	18	140	4-19	76	100	180	90	80	59	135	7.4	314	/	/
40	18	150	4-19	84	110	200	100	82	50	126	9.4	305	/	/
50	20	165	4-19	99	125	230	115	98	60	136	13	315	/	/
65	20	185	4-19	118	145	290	145	112	90	166	20	/	365	375
80	22	200	8-19	132	160	310	155	130	120	196	31	/	395	405
100	23	220	8-19	156	180	350	175	150	136	212	46	/	/	421
125	24	250	8-19	184	210	400	200	175	157	233	59	/	/	442
150	25	285	8-23	211	240	480	240	200	171	247	77	/	/	456
200	26	340	12-23	266	295	500	250	238	185	261	122	/	/	470
250	31	405	12-28	319	355	600	300	264	205	281	185	/	/	490

Note: H-1 for 600N(VAP600S)/1000N(VAP1000S) Actuator, H-2 for 1000N(VAP1000L) Actuator, H-3 for 3000N/(VAP3000L) Actuator

3-way VGA88xx/89xx:



DN	B mm	D mm	D2 mm	D4 mm	K mm	L1 mm	L2 mm	L3 mm	H1 mm	H2 mm	Weight kg	H-1 mm	H-2 mm
15	14	95	4-14	46	65	130	65	106	41	117	4.5	296	/
20	16	105	4-14	56	75	150	75	106	46	122	5.7	301	/
25	16	115	4-14	65	85	160	80	111	48	124	6.3	303	/
32	18	140	4-19	76	100	180	90	121	59	135	9.4	314	/
40	18	150	4-19	84	110	200	100	122	50	126	11.7	305	/
50	20	165	4-19	99	125	230	115	136	60	136	15.6	315	/
65	20	185	4-19	118	145	290	145	156	90	166	24	/	375
80	22	200	8-19	132	160	310	155	185	120	196	34	/	405
100	23	220	8-19	156	180	350	175	202	164	241	49	/	449
125	24	250	8-19	184	210	400	200	240	157	233	63	/	442
150	25	285	8-23	211	240	480	240	270	171	247	82	/	456
200	26	340	12-23	266	295	500	250	315	185	261	129	/	470
250	31	405	12-28	319	355	600	300	370	205	281	195	/	490

Note: H-1 for 600N(VAP600S)/1000N(VAP1000S) Actuator, H-2 for 3000N(VAP3000L) Actuator

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