

HVAC CONTROL PRODUCTS

Valves

Plant Valves

VG7000

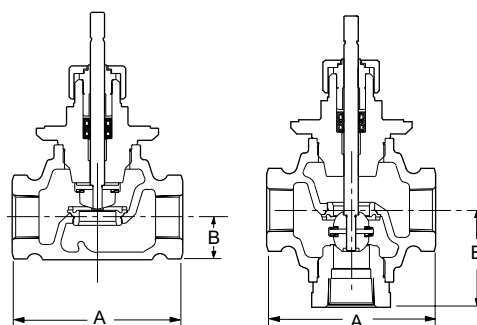
DN15...50, PN16

VG7000 Series Bronze Control Valves are designed primarily to regulate the flow of water and steam in response to the demand of a controller in Heating, Ventilating and Air Conditioning (HVAC) systems.

These valves are available in Push-Down-To-Close (PDTC), Push-Down-To-Open (PDTO), and three-way mixing configurations. Both electric and pneumatic actuators are available for factory or field mounting.

Features

- DN15 through DN50 bronze valves, in two-way PDTC, PDTO and three-way mixing configurations
- Wide range of electric actuators available for all valves
- Every valve tested for tight shutoff
- Uses Standard Johnson Controls U-cup Packing
- Flexible features-and-options ordering template
- Standard Bonnet and stem design
- Leakage
 - Brass Trim: 0.01% of Maximum Flow per EN60534-4, Class IV
 - Stainless Steel Trim: 0.05% of Maximum Flow
- Inherent Flow Characteristics
 - Equal Percentage: 2-way Valves
 - Linear: 3-way Valves in compliance with EN 600534
- Rangeability
 - 25:1 at 0.25...1 kvs and 100:1 at 1.6...40 kvs
 - In accordance with EN 60534-2-4
- Maximum Recommended Operating Pressure Drop
 - 240 kPa for DN15 and DN32 - 200 kPa for DN40 to DN50
- Fluid Temperature Operating Limits
 - Valves with Brass Trim:
 - With V-3801 and VA-731x Actuators: 2 °C to 120 °C water / 100 kPa Saturated Steam
 - With all other Actuators: 2 °C to 140 °C water / 260 kPa Saturated Steam
 - Valves with Stainless Steel Trim: 2 to 170 °C / 690 kPa Saturated Steam



Dimensions in mm

Body Size	A	B		
		2-way PDTC	2-way PDTO	3-way
DN15	76	21	39	46
DN20	81	24	41	54
DN25	104	29	44	65
DN32	119	34	51	70
DN40	130	55	70	85
DN50	150	53	72	95

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Ordering Codes for Valve Bodies

VG7

Stem Type

T

Standard threaded stem

S

Slotted stem and small bonnet (for VA-7310 electric and V-3801 pneumatic actuators only, only available for DN15 and DN20 valves with brass trim)

Size

Flow Coefficient K_{VS}

A

DN15

0.25

B

DN15

0.4

C

DN15

0.63

D

DN15

1.0

E

DN15

1.6

F

DN15

2.5

G

DN15

4.0

L

DN20

6.3

N

DN25

10

P

DN32

16

R

DN40

25

S

DN50

40

Body

Configuration

Trim Type

Inherent Flow Characteristics

1

2-way

Brass trim

Equal percentage

2

3-way mixing

Brass trim

Linear in both ports

3

2-way

Stainless steel trim

Equal percentage

4

3-way mixing

Stainless steel trim

Linear in both ports

5

3-way mixing

Brass trim

Equal percentage in control port, linear in bypass port (only available for VG7x1... valves with BSPP male connection)

End Connection

0

BSP Parallel Female Threaded

1

BSP Parallel Male Threaded (only DN15 and DN20, with Brass Trim)

Body Configuration

2

2-way PDTC (Normally Open)

4

2-way PDTO (Normally Closed)

8

3-way Mixing

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Maximum Close-off Pressures (in kPa), for Valves with Brass Trim and Electric Actuators

Size	VA-731x	VA-715x	VA-77xx	VA-720x	VA78xx
DN15	1600	1600		---	
DN15	700	1600		---	
DN15	400	1490		---	
DN20	250	950		---	
DN25	---	595		1235	
DN32	---	360		750	
DN40	---	235		480	
DN50	---	145		310	

Maximum Close-off Pressures (in kPa), for Valves with Stainless Steel Trim and Electric Actuators

Size	VA-731x	VA-715x	VA-77xx	VA-720x	VA78xx
DN15	---	1600		1600	
DN15	---	1600		1600	
DN15	---	930		1600	
DN20	---	595		1220	
DN25	---	370		770	
DN32	---	230		470	
DN40	---	145		300	
DN50	---	90		190	

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Plant Valves VG7000

Maximum Close-off Pressures (in kPa), for Valves with Brass Trim and Pneumatic Actuators

Actuator	Valves	2-way PDTC or 3-way Valves with 138 kPa air supply		2-way PDO or 3-way Valves with 0 kPa air supply	
	Size	Spring Range kPa *			
		21 to 42	63 to 91	21 to 42	63 to 91
V-3801	DN15	1600	1600	580	1600
	DN15	1180	530	165	715
	DN15	670	300	90	405
	DN20	430	190	55	255
V-3000	DN15	1600	1600	1430	1600
	DN15	1600	1100	405	1450
	DN15	1310	620	230	820
	DN20	835	390	145	525
	DN25	520	240	85	315
	DN32	320	145	50	195
	DN40	200	95	35	125
	DN50	130	60	20	85
V-400	DN25	1600	985	400	1275
	DN32	1220	600	240	780
	DN40	785	385	160	495
	DN50	500	250	95	315

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Maximum Close-off Pressures (in kPa), for Valves with Stainless Steel Trim and Pneumatic Actuators

Actuator	Valves	2-way PDTC or 3-way Valves with 138 kPa air supply		2-way PDTO or 3-way Valves with 0 kPa air supply	
	Size	Spring Range kPa *			
		21 to 42	63 to 91	21 to 42	63 to 91
V-3000	DN15	1600	1600	1090	1600
	DN15	1600	825	300	1085
	DN15	980	470	170	615
	DN20	630	295	110	395
	DN25	385	180	60	240
	DN32	240	110	35	145
V-400	DN15	1600	1600	1600	1600
	DN15	1600	1600	1345	1600
	DN15	1600	1600	760	1600
	DN20	1600	1175	485	1520
	DN25	1510	740	295	960
	DN32	925	450	185	585
	DN40	595	290	115	370
	DN50	380	185	75	240

Note

* The recommended spring ranges for use with a V-9502 Positioner are: 21 to 42 kPa for PDTC valves, 63 to 91 kPa for PDTO valves and 63 to 91 kPa for three way valves.