

VCZA,B,M,N Series

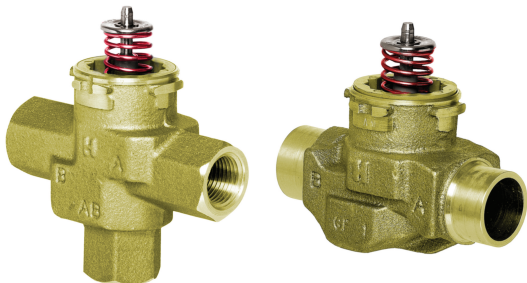
Cartridge Valve for Use with VC Series

The VC hydronic valve consists of a valve body and replaceable characterized cartridge assembly.

Depending on the valve model selected, they can be used with a VC2114 or VC8114 series actuator to provide on-off flow control, or with a VC6930 or VC7930 series actuator to provide proportional flow control. Two way bodies may be plumbed in either direction. Three-way bodies may be used in either diverting or mixing applications.

Replacing the cartridge rebuilds the valve. The valve body should be able to stay in the pipes indefinitely.

VC actuators, ordered separately, use cam-operated cartridge travel to resist water hammer. Limit switches prevent motor overrun.



SPECIFICATIONS

The specifications following are nominal and conform to generally accepted industry standards. Honeywell is not responsible for damages resulting from misapplication or misuse of its products or non-workmanlike installation practices.

Operating Ambient:

32 to 150°F [0 to +65°C].
5-95% RH (non-condensing)

Fluid temperatures:

34 to 203°F [1 to 95°C]

Shipping and Storage Temperature:

-40 to 150°F [-40 to +65°C]

Atmosphere:

Non-corrosive, non-explosive.

Valve Materials:

Body of bronze Cartridge of Ryton™ (polyphenylene sulphide) and Noryl™ (polyphenylene oxide)
O-ring seals of EPDM rubber
Stem of stainless steel

Pressure Rating:

Static - 300 psig [20 Bar] maximum.
Burst - 1500 psig [100 Bar]
Operating Differential and Close-off - 60 psi maximum [4 bar]

Stem Travel:

0.4 inches [10 mm]

Flow Characteristics:

Linear or equal percentage, per Table 2.

Spring Force:

1000 and 6000 Series(Silver): 14 lbf.

3000 and 7000 Series(Red): 20 lbf.

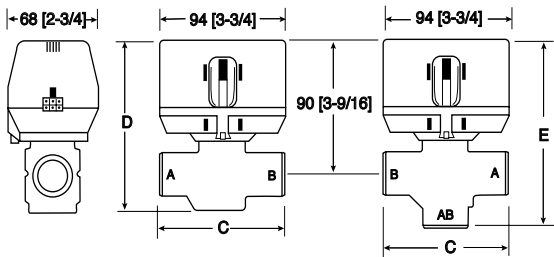


Figure 1 - Nominal dimensions in inches [millimetres]

[1] Pipe Fitting Sizes	Dimension C		Dimension D		Dimension E	
	mm	Inches	mm	Inches	mm	Inches
1/2" SWEAT	89	3-1/2	111	4-3/8	130	5-1/8
1/2" NPT (int.)	98	3-7/8			136	5-11/32
3/4" NPT (int.)					130	5-1/8
3/4" SWEAT					132	5-3/16
1" NPT (int.)	94	3-11/16	113	4-7/16	136	
1" SWEAT						5-11/32
1-1/4" SWEAT						
1-1/4" NPT (int.)	110	4-5/16	118	4-5/8	142	5-5/8

[1] All models not available in all countries

Table 1: VC Valve assembled dimensions

Accessories and Replacement Parts:

40007029-002: Cartridge installation wrench (included with all VCZZ replacement cartridges)

272866B: Valve caps for system flushing (10 per pack)

2-way Replacement Cartridges:

- VCZZ1000: quick open
- VCZZ1100: high Cv, linear flow
- VCZZ3100: high Cv, linear flow
- VCZZ3400: medium-high Cv, equal percentage flow
- VCZZ3500: low Cv, equal percentage flow
- VCZZ3600: medium-low Cv, equal percentage flow
- VCZZ3800: medium Cv, equal percentage flow

MODELS:

BODIES: VCA,B,M,N ..., per table: 2

ACTUATORS (ORDER SEPARATELY)

2-way Valve Number	Cartridge		1000	1100 [1]	3100	3400	3500	3600	3800 [5]
Pipe Fitting Sizes [2]	Nominal Cv Rating								
VCZ AA	1/2" SWEAT	3.5	3.3	3.3	2.3	0.6	1.3	1.9	
VCZ BB	1/2" NPT (int.)								
VCZ AL	3/4" NPT (int.)	6.2	4.7	4.7	3.9			3.2	
VCZ AM	3/4" SWEAT								
VCZ AR	1" NPT (int.)	7.0	6.6	6.6		0.7	1.5		
VCZ AS	1" SWEAT				4.2			3.5	
VCZ BE	1-1/4" SWEAT	8.3	7.0	7.0					
VCZ BD	1-1/4" NPT (int.)								
Flow characteristic		Quick Open	Linear		Equal Percentage				
Application		2-position	Proportional Control [4]						

[1] "1200" series cartridge has the same Cv/kV rating as "1100" series. Suitable for use in potable water situations
[2] Models are country specific. Not all models are available in all markets. Cv values in greyed-out boxes are listed for reference only:
[3] A port is 5% higher, and B port is 5% lower in mixing configuration. B port is 5% higher, and A port is 5% lower in diverting configuration

Table 2: VC Series Valve Bodies

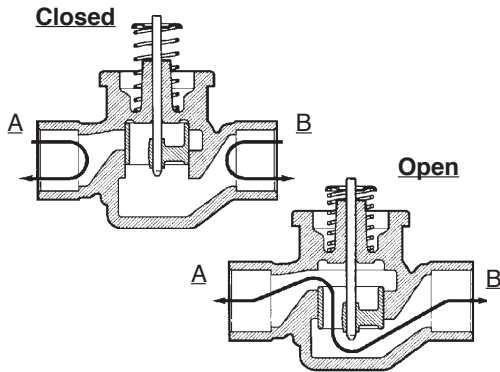


Figure 2 - Fluid flow of 2-way valves

3-way Replacement Cartridges:

- VCZZ6000: quick open
- VCZZ6100: high Cv, linear flow
- VCZZ7100: high Cv, linear flow
- VCZZ7400: medium-high Cv, linear flow
- VCZZ7500: low Cv, linear flow
- VCZZ7600: medium-low Cv, linear flow
- VCZZ7800: medium Cv, linear flow

3-way Valve Number	Cartridge Pipe Fitting Sizes [2]	6000	6100	7100	7400	7500	7600	7800 [5]
		Nominal Cv Rating [3]						
VCZ MA	1/2" SWEAT	4.2	3.8	3.8	2.7	0.7	1.3	2.2
VCZ NB	1/2" NPT (int.)							
VCZ MK	3/4" NPT (int.)	8.0	6.6	6.6	4.2			3.4
VCZ ML	3/4" SWEAT							
VCZ MR	1" NPT (int.)	9.0	7.4	7.4		0.8	1.5	
VCZ MS	1" SWEAT				5.2			4.2
VCZ NE	1-1/4" SWEAT	9.9	8.3	8.3				
VCZ ND	1-1/4" NPT (int.)							
Flow characteristic		Quick Open	Linear					
Application		2-position		Proportional Control [4]				

[4] Divide Cv value by 0.4 to obtain rangeability
[5] -800 Cartridge Cv ratings in larger bodies sizes are estimates at time of printing.
[6] O.S. Example: 1/2" 2-way NPT, 3.3Cv, for proportional control is VCZBB body with 3100 cartridge = VCZBB3100.

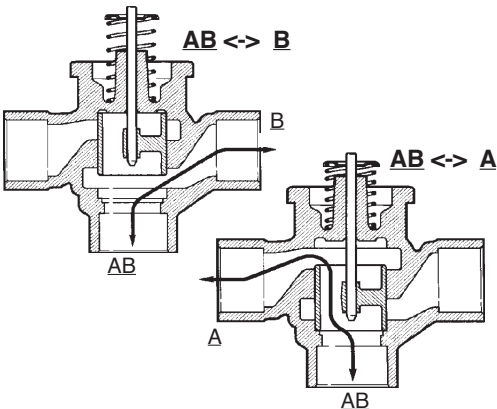


Figure 3 - Fluid flow of 3-way