

Cartridge Cage Valves

VCZA; VCZB Two-way Cartridge Cage Valves



These 2-position (open/closed) hydronic valves are intended for use in a normal indoor environment to control the flow of hot and/or cold water, or glycol solution to 50% concentration. These valves are designed for on-off "zone" control of heating/cooling systems, or to control individual fan coil, baseboard radiator or convector applications. Depending on the model selected they can be controlled by either a low or line voltage SPST or SPDT controller, such as a room thermostat, aquastat or flow switch.



For trouble-free operation of the product, good installation practice must include initial system flushing, chemical water treatment, and the use of a 50 micron (or finer) system side stream filter(s). Remove all filters before flushing.

Do not use boiler additives, solder flux and wetted materials which are petroleum based or contain mineral oil, hydrocarbons, or ethylene glycol acetate. Compounds which can be used, with minimum 50% water dilution, are diethylene glycol, ethylene glycol, and propylene glycol (antifreeze solutions).

Body Pattern: Two-way
Valve Type: Unitary
Controlled Medium: Water w/max of 50% Glycol
Ambient Temperature Range: 32 F to 150 F (0 C to 65 C)
Fluid Temperature Range: 36 F to 230 F (1 C to 95 C)
Timing (sec, min)
when used with VC series Actuator: On, off models: 6 sec
 Floating and modulating models: 2 min.
Maximum Close-Off Pressure: 60 psi (4 Bar)

Maximum Operating Pressure: 300 psi (20 Bar)
Approvals:
Canadian Standards Association: CSA Certified
Materials:

Body	Stem	Packing/O-Rings	Cartridge
Bronze	Stainless Steel	EPDM rubber	Ryton™, Noryl™ engineering plastic

Product Number	Nominal Pipe Size	Capacity		Flow Characteristics	Pipe Connections	Valve Action	Fitting Size	Comments	Includes
		Cv	Kv						
VCZAA1100	1/2 in.	3.5 Cv	3 Kv	Linear	Sweat	Stem up to close A port	—	characterized cartridge for use with floating and modulating actuators. It can be controlled by either a low or a line voltage spdt or spst or floating controller	Cartridge changing tool
VCZAA1400	1/2 in.	2.9 Cv	2.5 Kv	Equal Percentage	Sweat	Stem up to close A port	—	characterized cartridge for use with floating and modulating actuators. It can be controlled by either a low or a line voltage spdt or spst or floating controller	Cartridge changing tool
VCZAA1500	1/2 in.	0.7 Cv	0.6 Kv	Equal Percentage	Sweat	Stem up to close A port	—	characterized cartridge for use with floating and modulating actuators. It can be controlled by either a low or a line voltage spdt or spst or floating controller	Cartridge changing tool
VCZAA1600	1/2 in.	1.3 Cv	1.1 Kv	Equal Percentage	Sweat	Stem up to close A port	—	characterized cartridge for use with floating and modulating actuators	Cartridge changing tool
VCZAD1100	1/2 in.	3.1 Cv	2.6 Kv	Linear	Flare	Stem up to close A port	5/8 in.	characterized cartridge for use with floating and modulating actuators. It can be controlled by either a low or a line voltage spdt or spst or floating controller	—
VCZAE1100	1/2 in.	3.2 Cv	2.7 Kv	Linear	Inverted Flare	Stem up to close A port	5/8 in.	characterized cartridge for use with floating and modulating actuators. It can be controlled by either a low or a line voltage spdt or spst or floating controller	—
VCZAL1100	3/4 in.	4.7 Cv	4 Kv	Linear	Female NPT	Stem up to close A port	—	characterized cartridge for use with floating and modulating actuators. It can be controlled by either a low or a line voltage spdt or spst or floating controller	—
VCZAL1400	3/4 in.	3.9 Cv	3.4 Kv	Equal Percentage	Female NPT	Stem up to close A port	—	characterized cartridge for use with floating and modulating actuators. It can be controlled by either a low or a line voltage spdt or spst or floating controller	—

* TRADELINE models • SUPER TRADELINE models

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Product Number	Nominal Pipe Size	Capacity		Flow Characteristics	Pipe Connections	Valve Action	Fitting Size	Comments	Includes
		Cv	Kv						
VCZAM1100	3/4 in.	4.6 Cv	3.9 Kv	Linear	Sweat	Stem up to close A port	—	characterized cartridge for use with floating and modulating actuators. It can be controlled by either a low or a line voltage spdt or spst or floating controller	Cartridge changing tool
VCZAM1400	3/4 in.	3.9 Cv	3.4 Kv	Equal Percentage	Sweat	Stem up to close A port	—	characterized cartridge for use with floating and modulating actuators. It can be controlled by either a low or a line voltage spdt or spst or floating controller	Cartridge changing tool
VCZAR1100	1 in.	6.6 Cv	5.7 Kv	Linear	Female NPT	Stem up to close A port	—	characterized cartridge for use with floating and modulating actuators. It can be controlled by either a low or a line voltage spdt or spst or floating controller	—
VCZAR1400	1 in.	4.2 Cv	3.6 Kv	Equal Percentage	Female NPT	Stem up to close A port	—	characterized cartridge for use with floating and modulating actuators. It can be controlled by either a low or a line voltage spdt or spst or floating controller	—
VCZAS1100	1 in.	6.6 Cv	5.7 Kv	Linear	Sweat	Stem up to close A port	—	characterized cartridge for use with floating and modulating actuators. It can be controlled by either a low or a line voltage spdt or spst or floating controller	Cartridge changing tool
VCZAS1400	1 in.	4.2 Cv	3.6 Kv	Equal Percentage	Sweat	Stem up to close A port	—	It can be controlled by either a low or a line voltage spdt or spst or floating controller characterized cartridge for use with floating and modulating actuators	Cartridge changing tool
VCZBB1100	1/2 in.	3.5 Cv	2.7 Kv	Linear	Female NPT	Stem up to close A port	—	characterized cartridge for use with floating and modulating actuators. It can be controlled by either a low or a line voltage spdt or spst or floating controller	—
VCZBB1400	1/2 in.	2.9 Cv	2.5 Kv	Equal Percentage	Female NPT	Stem up to close A port	—	characterized cartridge for use with floating and modulating actuators. It can be controlled by either a low or a line voltage spdt or spst or floating controller	—
VCZBB1500	1/2 in.	0.7 Cv	0.6 Kv	Equal Percentage	Female NPT	Stem up to close A port	—	characterized cartridge for use with floating and modulating actuators	—
VCZBB1600	1/2 in.	1.3 Cv	1.1 Kv	Equal Percentage	Female NPT	Stem up to close A port	—	characterized cartridge for use with floating and modulating actuators	—
VCZBD1100	1 1/4 in.	7 Cv	6 Kv	Linear	Female NPT	Stem up to close A port	—	characterized cartridge for use with floating and modulating actuators. It can be controlled by either a low or a line voltage spdt or spst or floating controller	—
VCZBE1100	1 1/4 in.	7 Cv	6 Kv	Linear	Sweat	Stem up to close A port	—	characterized cartridge for use with floating and modulating actuators. It can be controlled by either a low or a line voltage spdt or spst or floating controller	Cartridge changing tool

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