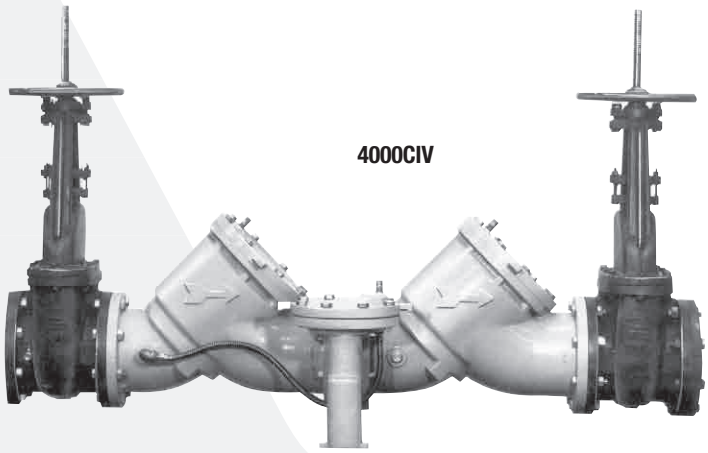
Series 4000CIV

Reduced Pressure Zone Assemblies

Sizes: 2½" – 10" (65 – 250mm)



Features

- Replaceable bronze seats
- Stainless steel internal parts
- No special tools required for servicing
- Captured spring check assemblies
- Fused epoxy coated & lined checks
- Industrial strength sensing hose
- Field reversible relief valve
- Air-in/water-out relief valve design provides maximum capacity during emergency conditions

Series 4000CIV Reduced Pressure Zone Assemblies are designed to provide cross-connection control protection of the potable water supply in accordance with national plumbing codes. This series can be utilized in a variety of installations, including health hazard cross-connections in plumbing systems or for containment at the service line entrance. With its exclusive patented relief valve design incorporating the "air-in/water-out" principle, it provides substantially improved relief valve discharge performance during the emergency conditions of combined backsiphonage and backpressure with both checks fouled.

Specifications

A Reduced Pressure Zone Assembly shall be installed at each cross-connection to prevent backsiphonage and backpressure backflow of hazardous materials into the potable water supply. The assembly shall consist of a pressure differential relief valve located in a zone between two positive seating check valves and captured springs. Backsiphonage protection shall include provision to admit air directly into the reduced pressure zone via a separate channel from the water discharge channel. The assembly shall include two tightly closing shutoff valves before and after the valve and test cocks. The assembly shall meet the requirements of ASSE Std. 1013; AWWA Std. C511-92; CSA B64.5; and UL Classified File No. EX3185. Listed by IAPMO (UPC). Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California. The assembly shall be an Ames Company Series 4000CIV.

Job Name _____ Contractor _____

Job Location _____ Approval _____

Engineer _____ Contractor's P.O. No. _____

Approval _____ Representative _____

Available Models

Suffix:

LG – without shut-off valves

NRS – non-rising stem resilient seated gate valves

OSY – UL/FM outside stem and yoke resilient seated gate valves

Note: The installation of a drain line is recommended. When installing a drain line, an air gap is necessary.

Pressure — Temperature

Temperature Range: 33°F-110°F (5°C-43°C) continuous, 140°F (60°C) intermittent

Maximum Working Pressure: 175psi (12.06 bar)

Standards

AWWA C511-92,
IAPMO PS 31, SBCCI (Standard Plumbing Code)
USC manual for Cross-Connection Control, 8th Edition

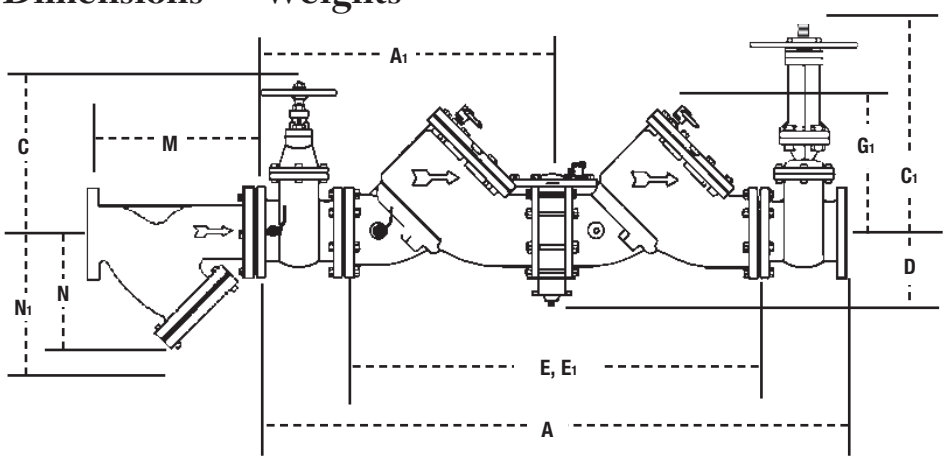
Approvals

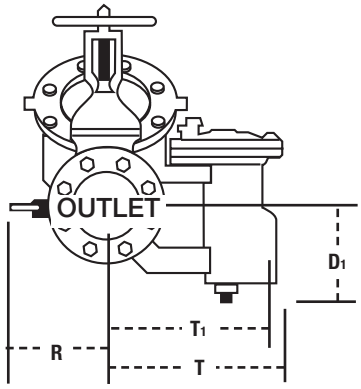
1013 B64.5

Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California.

IMPORTANT: *INQUIRE WITH GOVERNING AUTHORITIES FOR LOCAL INSTALLATION REQUIREMENTS*

Dimensions — Weights





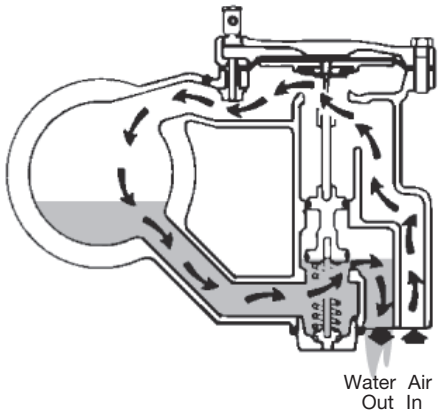
SIZE (DN)		DIMENSIONS								SERVICE CLEARANCE						SERVICE			
						C				for Gate OSY Open		for Gate NRS						Clearance For Check			
		A		A1		NRS		OSY*		C1		C2		D		E, E1		G1		M	
in.	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*
2½	65	41¼	1048	20⅝	524	11⅜	289	15⅞	403	16⅜	416	14	356	5¼	133	26⅛	663	11	279	10	254
3	80	42¼	1073	21¼	540	12¾	324	18½	470	18⅞	479	14	356	5¼	133	26⅛	663	11	279	10.125	257
4	100	55⅛	1400	27⅝	702	15⅜	603	23¾	603	22¾	578	17	432	6	152	37	940	14	356	12.125	308
6	150	65½	1664	32¾	832	19¾	825	32½	825	30⅛	765	21	533	6	152	44½	1130	16	406	18.5	470
8	200	78½	2000	39⅜	1000	24½	622	39¼	997	37¾	959	26	660	9¾	248	55¼	1403	21	533	21.625	549
10	250	93⅝	2378	46⅞	1190	29¼	743	48	1220	45¾	1162	32	813	9¾	248	67⅜	1711	21	533	26	660

SIZE		DIMENSIONS																WEIGHT	
		N1†		N		QT		R		R❖		T		T1		NRS		OSY	
in.	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lbs.*	*kgs.*	*lbs.*	*kgs.*
2½	65	10	254	6½	165	7	178	4	102	16	406	9 1/16	230	7⅝	194	195	88.4	198	89.8
3	80	10	254	7	178	7	178	5	127	16	406	9 1/16	230	7⅝	194	225	102	230	104
4	100	12	305	8¼	210	10	254	6	152	19¾	502	14⅜	365	12½	318	455	206	470	213
6	150	20	508	13½	343	15	381	11	279	26	660	14⅜	365	12½	318	718	326	798	362
8	200	22¾	578	15½	394	19	483	11¼	286	11¼	286	19¼	489	17⅜	441	1350	612	1456	660
10	250	28	711	18½	470	22	559	12½	318	12½	318	21	533	19⅛	486	2160	980	2230	1011

*UL, FM approved backflow preventers must include UL/FM approved OS&Y gate valves. **† – Dimension required for screen removal**

How It Operates

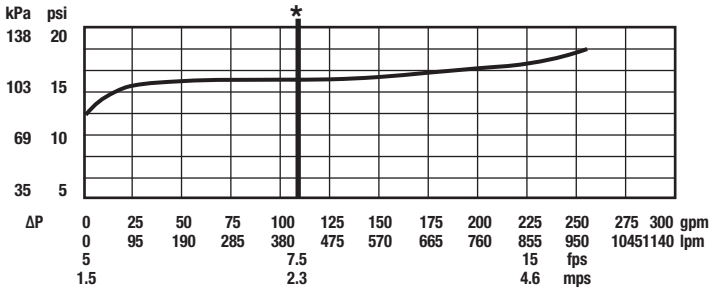
The unique relief valve construction incorporates two channels: one for air, one for water. When the relief valve opens, as in the accompanying air-in/water-out diagram, the right-hand channel admits air to the top of the reduced pressure zone, relieving the zone vacuum. The channel on the left then drains the zone to atmosphere. Therefore, if both check valves foul, and simultaneous negative supply and positive backpressure develops, the relief valve uses the air-in/water-out principle to stop potential backflow.



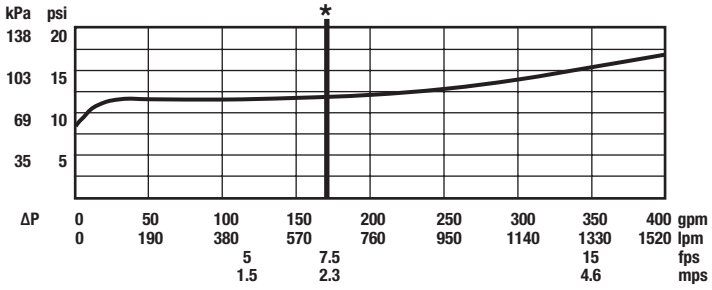
Capacity

*Typical maximum system flow rate (7.5 feet/sec.).

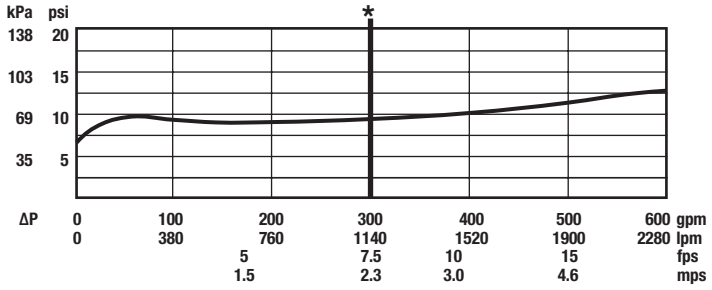
2½" (65mm)



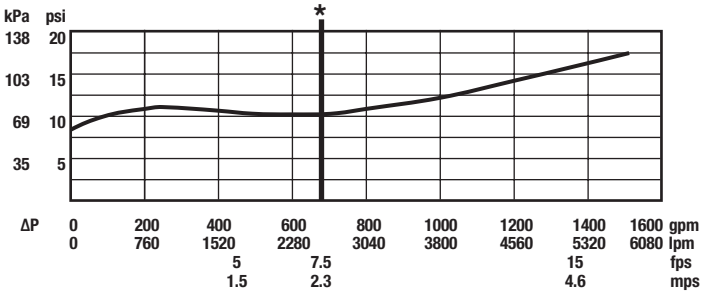
3" (80mm)



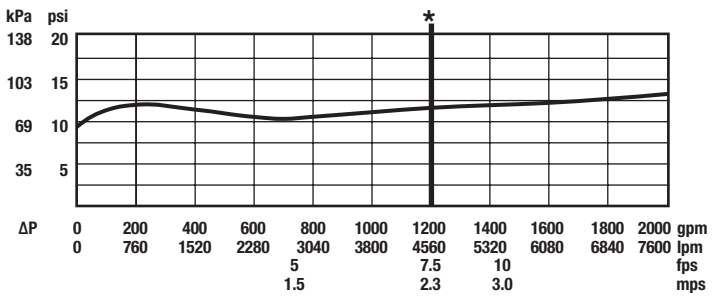
4" (100mm)



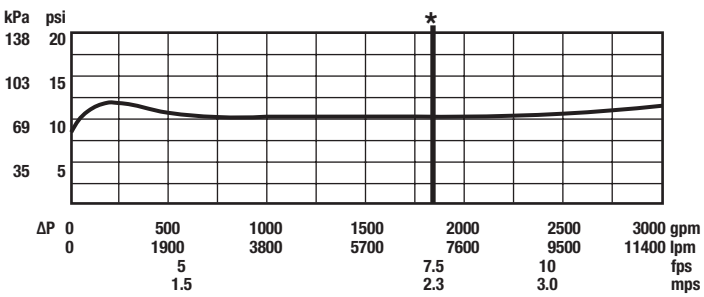
6" (150mm)



8" (200mm)



10" (250mm)



For additional information, visit our web site at: www.amesfirewater.com

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A Watts Water Technologies Company

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