

## For Health Hazard Applications

Job Name \_\_\_\_\_

Contractor \_\_\_\_\_

Job Location \_\_\_\_\_

Approval \_\_\_\_\_

Engineer \_\_\_\_\_

Contractor's P.O. No. \_\_\_\_\_

Approval \_\_\_\_\_

Representative \_\_\_\_\_

# Series 909

## Reduced Pressure Zone Assemblies

Sizes: 2½" – 10" (65–250mm)

Series 909 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.

### 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

### Available Models

Suffix:

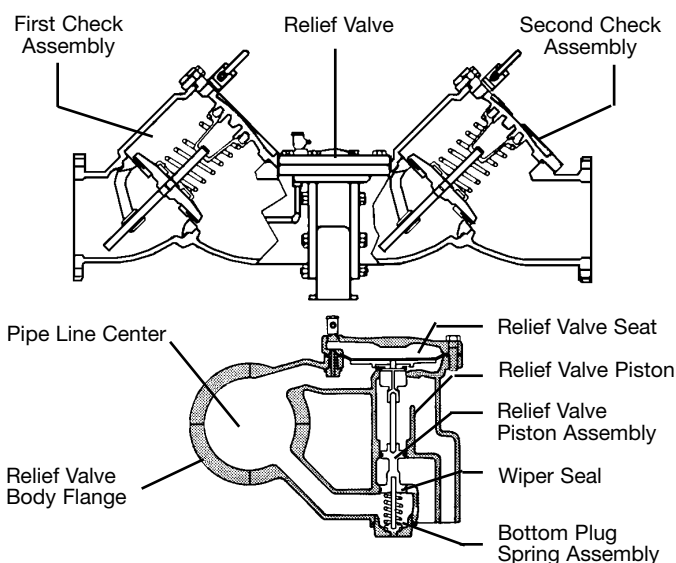
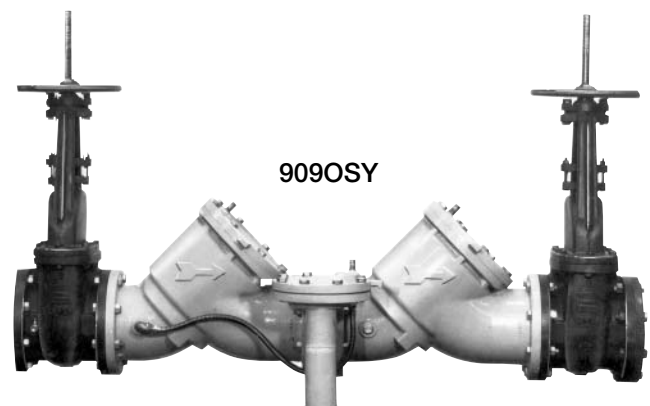
- BB – bronze body (2½", 3" only) (64, 76mm)  
 LF – without shutoff valves  
 NRS – non-rising stem resilient seated gate valves  
 OSY – UL/FM outside stem & yoke resilient seated gate valves  
 QT-FDA – FDA epoxy coated quarter-turn ball valves  
 S – cast iron strainer  
 S-FDA – FDA epoxy coated strainer

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

### 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 a Watts Regulator Company Series 909.

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.



### Now Available WattsBox Insulated Enclosures.

For more information, send for literature ES-WB.

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

# WATTS®

## Materials

Check Valve Bodies: FDA epoxy coated cast iron or bronze

Seats: bronze

Trim: stainless steel

Relief Valve Body: 2½"-3" (60-80mm) bronze

4"-10" (100-250mm) FDA epoxy coated cast iron

Test Cocks: bronze body ball valve

## 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

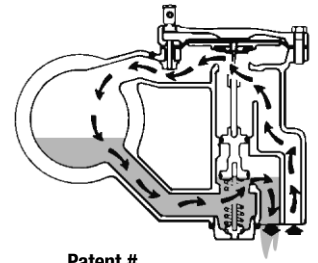
AWWA C511-92

IAPMO PS 31, SBCCI (Standard Plumbing Code)

USC manual for Cross-Connection Control, 8th Edition

## 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.



Patent #  
4,241,752

Water Out  
Air In

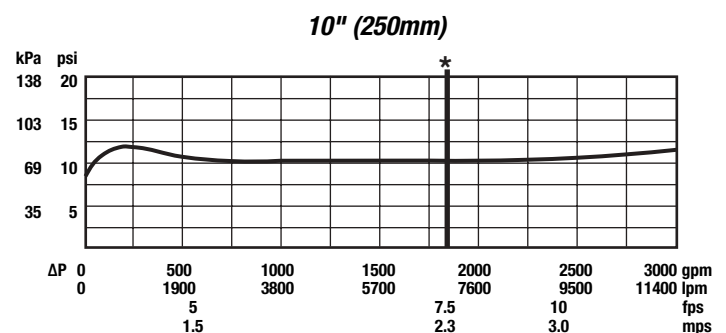
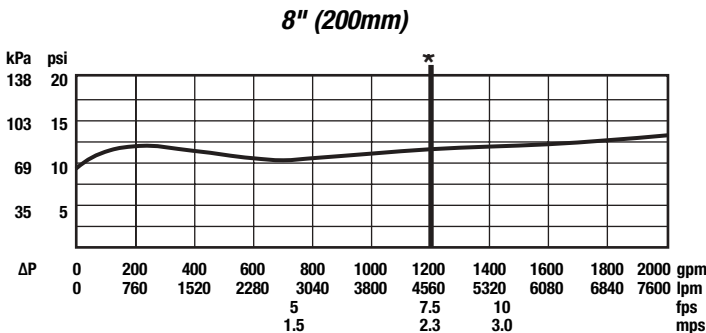
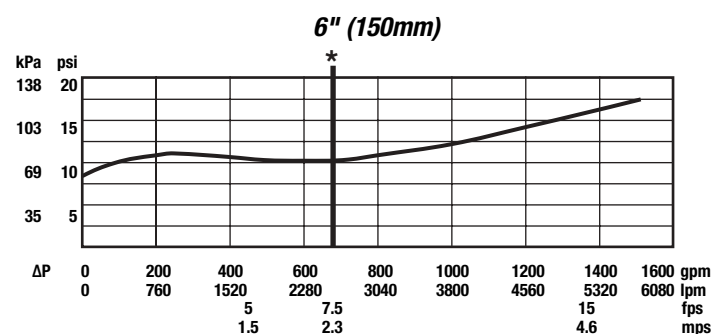
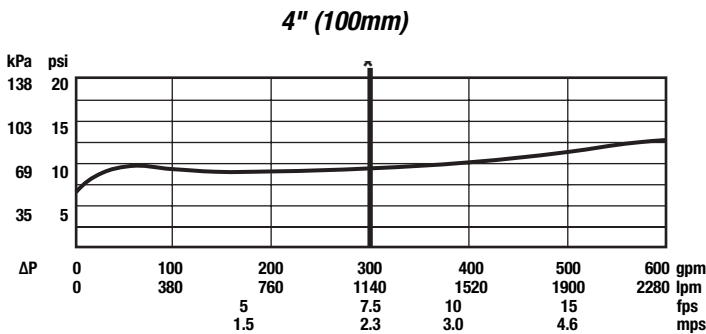
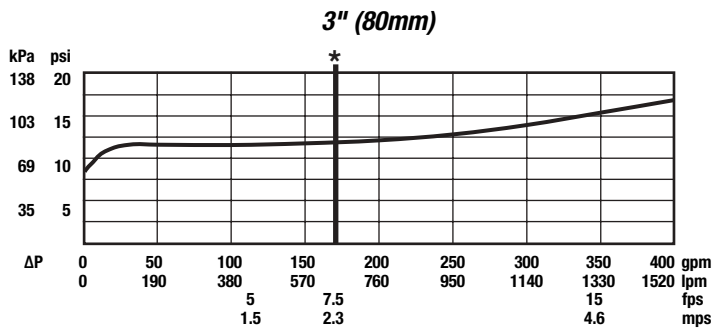
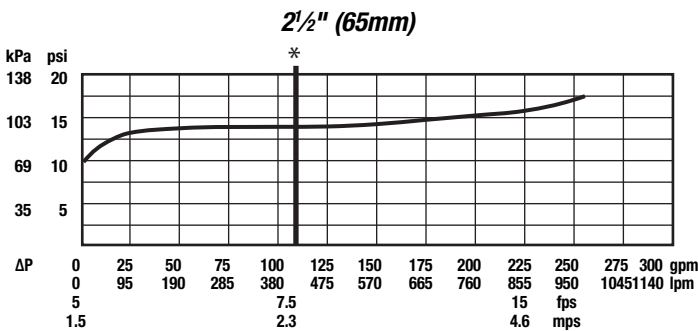
## Approvals



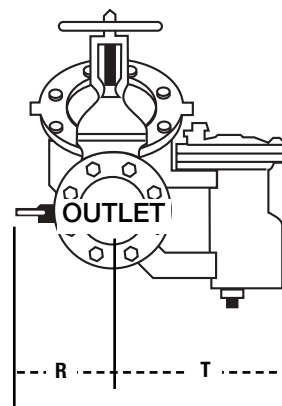
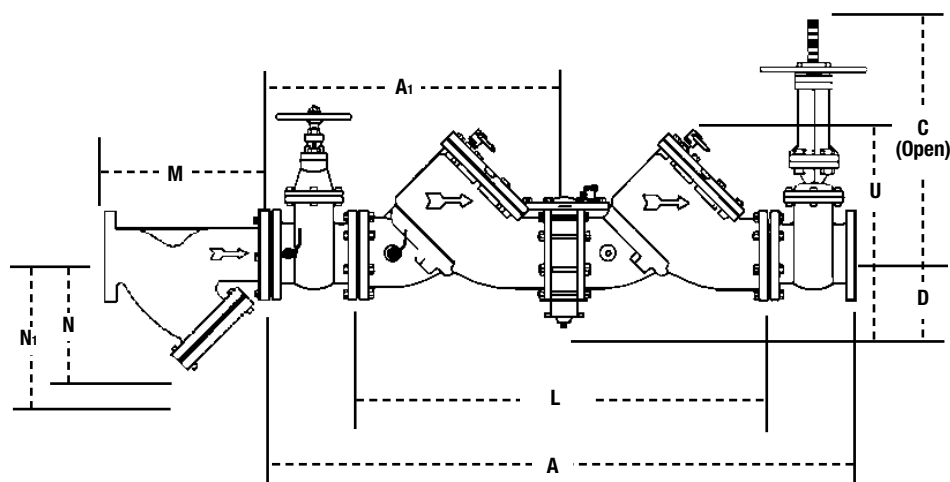
Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California.

## Capacity

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

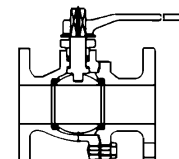


## Dimensions — Weights



Quarter-turn (QT) Valve

Watts G-4000 Series  
Ball Valves  
Send for F-G4000



NOTE: Relief valve section is reversible, therefore, can be on either side and is furnished standardly as shown.

SIZE (DN)				DIMENSIONS										WEIGHT													
		A		A1		C		D		L		clearance for check U	R		R (QT)		T		NRS		OSY		QT				
in.	mm	in.	mm	in.	mm	(OSY)* in.	(NRS) mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.	lbs.	kgs.	lbs.	kgs.				
2½	65	41¼	1048	20⅝	524	16⅜	416	9⅝	238	5¼	133	26⅞	663	11	279	4	102	16	406	9⅞	230	195	88.4	198	89.8	182	82.6
3	80	42¼	1073	21¼	540	18⅞	479	10¼	260	5¼	133	26⅞	663	11	279	5	127	16	406	9⅞	230	225	102	230	104	190	86
4	100	55⅞	1400	27⅝	702	22¾	578	12⅜	310	6	152	37	940	14	356	6	152	19¾	502	14⅝	365	455	206	470	213	352	160
6	150	65½	1664	32¾	832	30⅝	765	16	406	6	152	44½	1130	16	406	11	279	26	660	14⅝	365	718	326	798	362	762	346
8	200	78½	2000	39¾	1000	37⅞	959	19⅝	506	9¾	248	55¼	1403	21	533	11¼	286	11¼	286	19¼	489	1350	612	1456	660	2286	1037
10	250	93⅝	2378	46⅞	1190	45¾	1162	23⅜	605	9¾	248	67⅞	1711	21	533	12½	318	12½	318	21	533	2160	980	2230	1011	3716	1685

\*UL, FM approved backflow preventers must include UL/FM approved OSY gate valves.

## Strainer Dimensions

SIZE (DN)		DIMENSIONS				WEIGHT	
in.	mm	M	N1†	N		lbs.	kgs.
2½	65	10	254	10	254	28	12.7
3	80	10⅞	257	10	254	34	15.4
4	100	12⅞	308	12	305	60	27
6	150	18½	470	20	508	133	60
8	200	21⅞	549	22¾	578	247	112
10	250	26	660	28	711	370	168

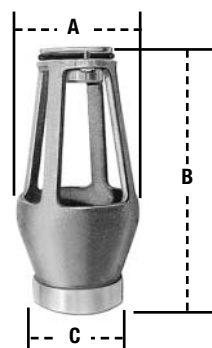
† – Dimension required for screen removal

## Air Gap Dimensions

When installing a drain line on Series 909 backflow preventers that are installed horizontally, use 909 AG series air gaps.

			DIMENSIONS			WEIGHT	
Iron Body Model No.	Ordering Code	Series/Sizes	A	B	C		
			in. mm	in. mm	in. mm	lbs kgs	
909AG-F	0881378	1¼" – 3" 009/909					
		1¼" – 2" 009 M1	4⅝ 111	6¾ 171	2 51	3.25 1.47	
		2" 009 M2					
909AG-K	0881385	4" – 6" 909	6⅝ 162	9⅝ 244	3 76	6.25 2.83	
		8" – 10" 909 M1					
909AG-M	0881387	8" – 10" 909	7⅝ 187	11¼ 286	4 102	15.50 7.03	

For flange size backflow preventers installed vertically (flow down), a fabricated air gap is recommended.



For additional information, visit our website at: [www.watts.com](http://www.watts.com)



**Backflow Prevention Products**

ES-909L 0704



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**Canada:** 5435 North Service Rd., Burlington, ONT. L7L 5H7; [www.wattscanada.ca](http://www.wattscanada.ca)

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