

WATTS

909/ LF909/ 909 M1/ LF909M1

SIZE

3/4", 1", 1 1/4", 1 1/2", 2", 2 1/2", 3", 4", 6", 8", 10"

DESCRIPTION

Model 909 is a reduced pressure backflow assembly. Production began in 1979. The 3/4"-3" size body is constructed of bronze. In 2010 a LF909 model was produced that utilized a lead free bronze. The 2 1/2"-10" size check body is cast iron with a fused epoxy coating. The 2 1/2" and 3" were available in bronze and cast iron. Watts also has a hot water option available in the 3/4"-2" which is good up to 210° F. This is designated by the letters HW after the model number, e.g.: 909HW. The model M1 was introduced in 1989 in the 3/4"-2" and 4"-10" sizes. The 3/4"-2" size was changed by having the nipple between the body and the shut-off cast into the body instead of being a separate nipple. The repair parts on the 3/4"-2" 909 and 909M1 are the same. The 4"-6" size had a change on the relief valve body. The 909 design had a bronze relief valve body. In the 909M1 modification the relief body was changed to fused epoxy coated cast iron. The relief valve spring assembly was also changed. In the 8"-10" 909M1 sizes there was a change in the relief valve body. The relief valve utilizes the internal parts of the 4"-6" 909 unit. In the 909 M1 series the relief valve rubber repair parts will be the same in 4"-10". The check design will be similar to the 709. The check seats are replaceable and springs are contained when the covers are removed. The 2 1/2"-10" utilized an external relief valve sensing line and the relief valve body can be detached from the check body on these sizes. In 2010 a LF909 model was introduced which replaced the internal leaded bronze parts with stainless steel and other lead free bronze materials.

BASIC REPAIR KIT

The 909 repair kit contains all disc holders, or discs, O-rings, and diaphragm.

<u>SIZE</u>	<u>KIT NO</u>		<u>AIR GAP DRAIN</u>	
	<u>909M1</u>	<u>909</u>	<u>909</u>	<u>909M1</u>
3/4"-1"	909-RT075	909-RT075	AGC	AGC
1 1/4"-2"	909-RT125	909-RT125	AGF	AGF
2 1/2"	909-RT250	909-RT250	AGF	AGF
3"	909-RT250	909-RT250	AGF	AGF
4"	909-RT400	909-RT400	AGK	AGK
6"	909-RT600	909-RT600	AGK	AGK
8"	909M1-RT800	909-RT800	AGM	AGK
10"	909M1-RT001	909-RT001	AGM	AGK

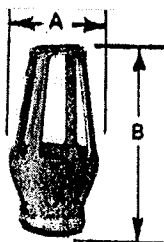
IMPORTANT FEATURES

- ~3/4"-3" bronze body
- ~2 1/2"-10" fused epoxy coated cast iron check body
- ~Contained springs
- ~Replaceable seats
- ~External relief valve sensing line
- ~Relief valve body can be detached
- ~Factory repair information enclosed



No. 909AG Series

For No. 909 Sizes	Drain Outlet Size	Dimensions		Weight
		A	B	
3/4" and 1"	1"	3 1/4"	4 7/8"	1 1/2 lbs
1 1/4" thru 2"	2"	4 3/8"	6 3/4"	3 1/4 lbs



MATERIALS

Bronze body construction — Series 909 Celcon® check seats, Series 909HW stainless steel check seats. Stainless steel relief valve seats, shafts, and flange bolts — durable tight-seating, rubber check valve and relief valve assemblies. Bronze body ball valve test cocks.

Standardly furnished with N.P.T. body connections and non-rising stem (NRS) gate valve shut-offs.

PRESSURE-TEMPERATURE

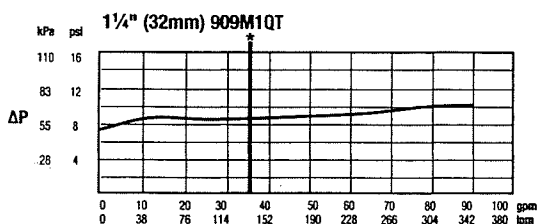
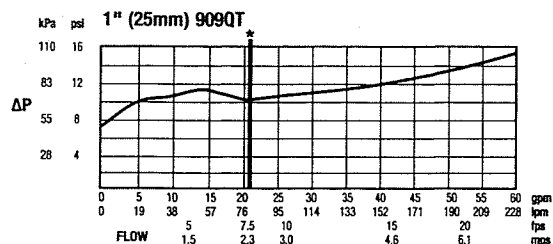
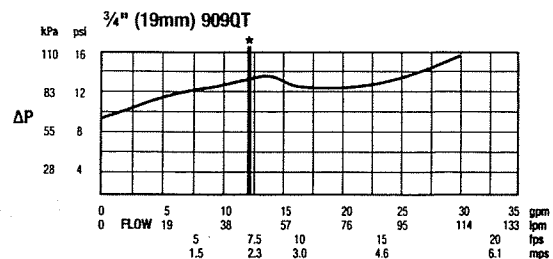
Series 909 suitable for supply pressure up to 175 PSI and water temperatures up to 140°F.

Suffix HW suitable for water temperatures up to 210°F.

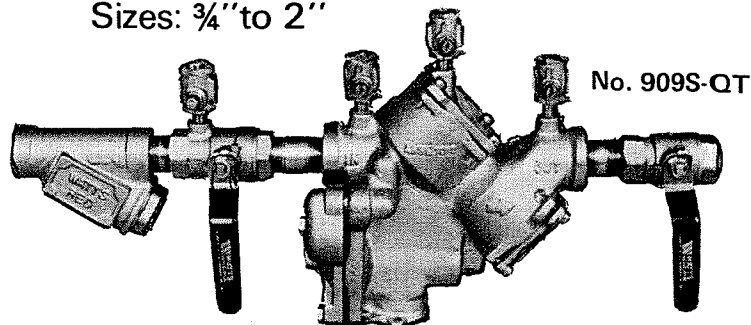
CONNECTIONS

Sizes 3/4" and 1" have N.P.T. connections. Sizes 1 1/4", 1 1/2" and 2" have screwed end flange connections.

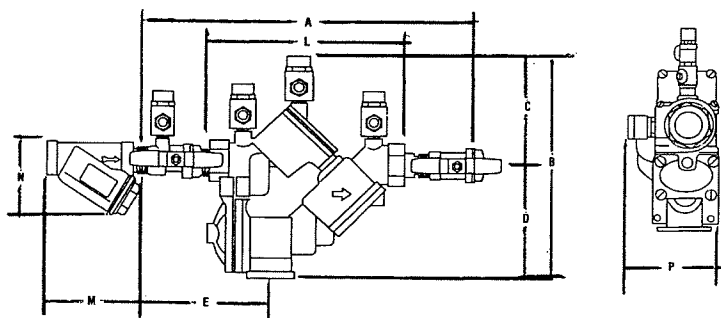
CAPACITY



909 Series Sizes: 3/4" to 2"

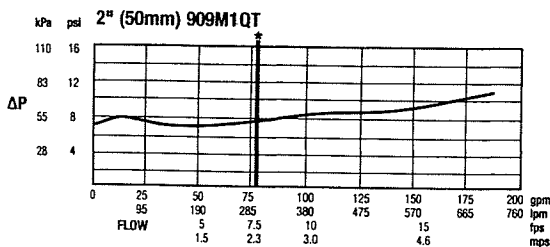
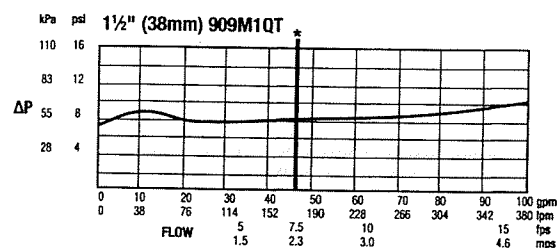


Series 909 provides superior protection in cross connection control for both cold and hot water installations. It is a unique, patented design incorporating the "air-in/water-out" principle, providing substantially improved relief valve discharge performance during the emergency conditions of combined back-siphonage and backpressure with both checks fouled.



Suffix HC - Fire Hydrant Fittings dimension "A" = 23 3/4" (603mm)
909

SIZE		DIMENSIONS																FLANGE DIMENSIONS			
		A		B		C		D		E		L		P	M		N		lbs.	kg.	
in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm				
3/4	20	1 1/4	365	8 3/4	222	4	102	4 3/4	121	6 3/4	171	7 3/4	186	3 1/4	98	3 3/4	81	2 1/4	70	14	6
1	25	1 1/2	391	8 3/4	222	4	102	4 3/4	121	7	178	7 3/4	186	3 1/4	98	3 3/4	95	3	76	15	7
1 1/4	32	1 3/4	470	11 1/4	285	5 1/2	140	6 1/2	165	7 1/2	191	10 1/4	264	5 1/4	133	4 1/4	113	3 1/4	89	40	18
1 1/2	40	1 7/8	483	11 1/4	285	5 1/2	140	6 1/2	165	7 1/2	191	10 1/4	264	5 1/4	133	4 1/4	124	4	102	40	18
2	50	1 3/4	495	11 1/4	285	5 1/2	140	6 1/2	165	7 1/2	197	10 1/4	264	5 1/4	133	5 1/4	151	5	127	40	18



Series 909

Reduced Pressure Zone Assemblies

Sizes: 2½" – 10" (65–250mm)

Materials

Check Valve Bodies: FDA epoxy coated cast iron or bronze

Seats: bronze

Trim: stainless steel

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

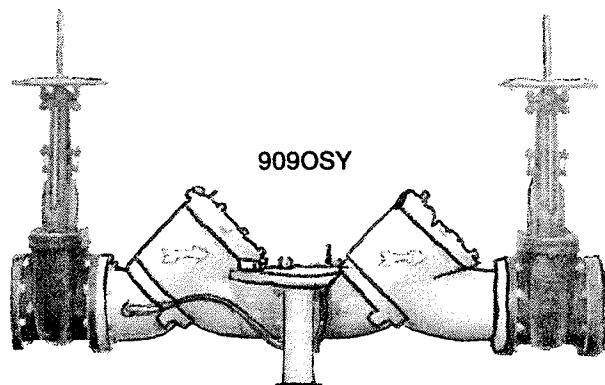
4"-10" (100-250mm) FDA epoxy coated cast iron

Test Cocks: bronze body ball valve

Pressure — Temperature

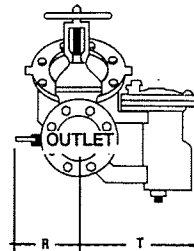
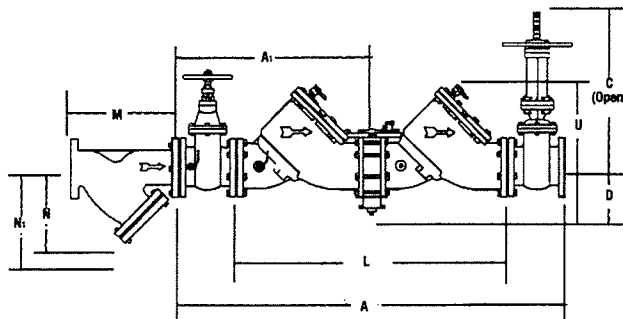
Temperature Range: 33°F–110°F (5°C–43°C) continuous,
140°F (60°C) intermittent

Maximum Working Pressure: 175psi (12.06 bar)

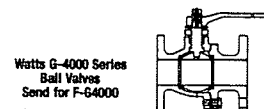


909OSY

Dimensions — Weights



Quarter-turn (QT) Valve



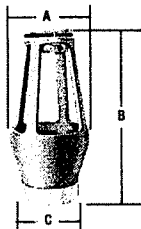
Watts G-4000 Series
Ball Valves
Send for F-64000

Air Gap Dimensions

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

Iron Body Model No.	Ordering Code	Series/Size	DIMENSIONS			WEIGHT	
			A in. mm	B in. mm	C in. mm	lbs	kgs
909AG-F	0881378	1½" – 3" 009/909	4 111	6 171	2 51	3.25	1.47
		1½" – 2" 008 M1					
		2" 008 M2					
909AG-K	0881385	4" – 6" 909	6 162	9 244	3 76	6.25	2.83
		8" – 10" 909 M1					
909AG-M	0881387	8" – 10" 909	7 187	11 286	4 102	15.50	7.03

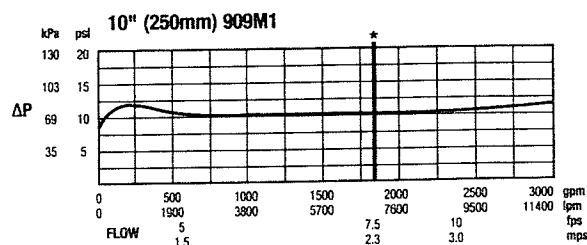
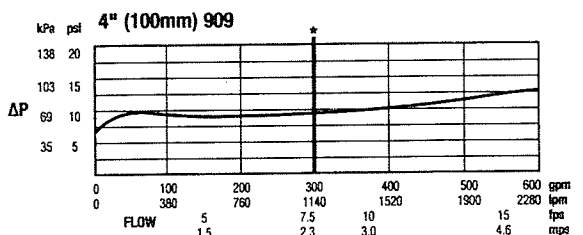
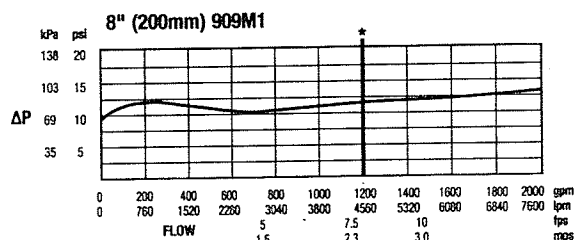
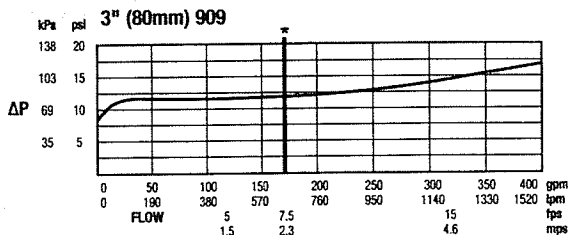
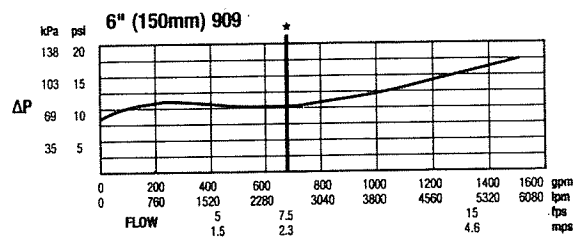
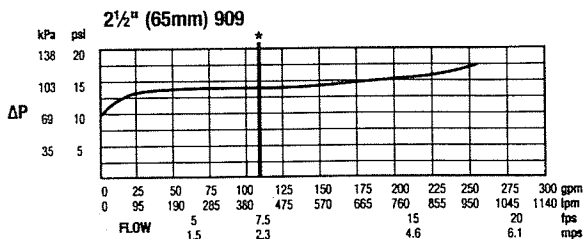
For flange size backflow preventers installed vertically (flow down), a fabricated air gap is recommended.



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

SIZE (DN)		DIMENSIONS										WEIGHT					
		A	A1	(OSY)*	(NRS)	D	L	clearance for check U	R	R (QT)	T	NRS	OSY	QT			
in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.
2½	65	41¼	1048	20¾	524	16¾	416	9¾	238	5¾	133	26¾	663	11	279	4	102
3	80	42¼	1073	21¼	540	18¾	478	10¾	260	5¾	133	26¾	663	11	279	5	127
4	100	55¼	1400	27¾	702	22¾	578	12¾	310	6	152	37	940	14	356	6	152
6	150	66	1664	33	832	30¾	765	16	406	6	152	45	1130	16	406	11	279
8	200	78¼	2000	39¾	1000	37¾	959	19¾	506	9¾	248	55¼	1403	21	533	11¼	286
10	250	93¾	2378	46¾	1180	45¾	1162	23¾	605	9¾	248	67¾	1711	21	533	12¼	318

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

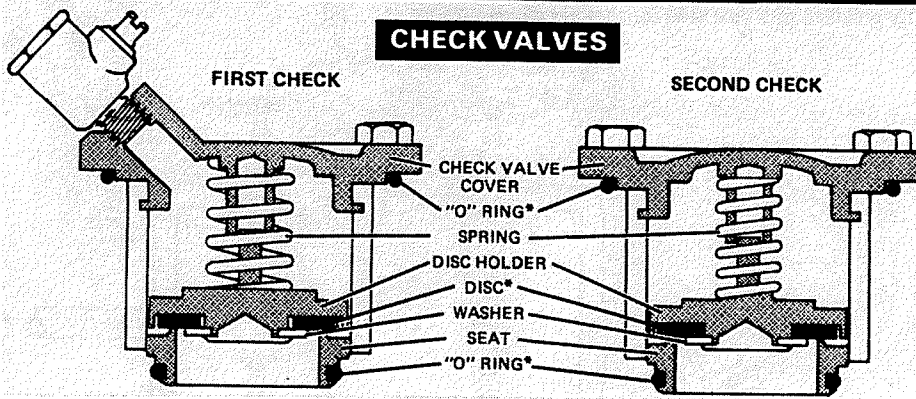


3/4" - 2" Replacement Parts

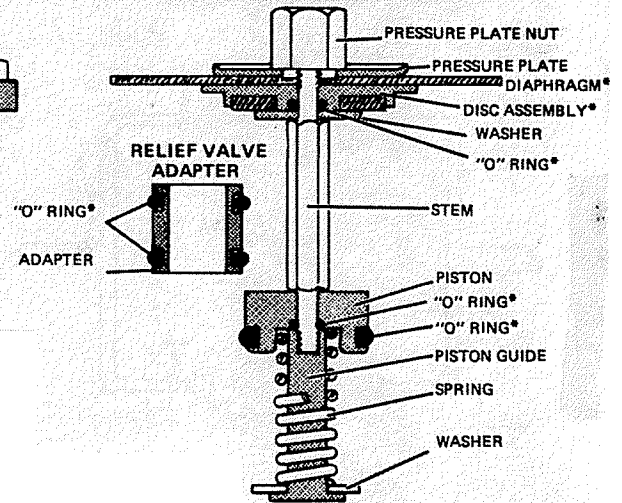
CHECK VALVES

FIRST CHECK

SECOND CHECK

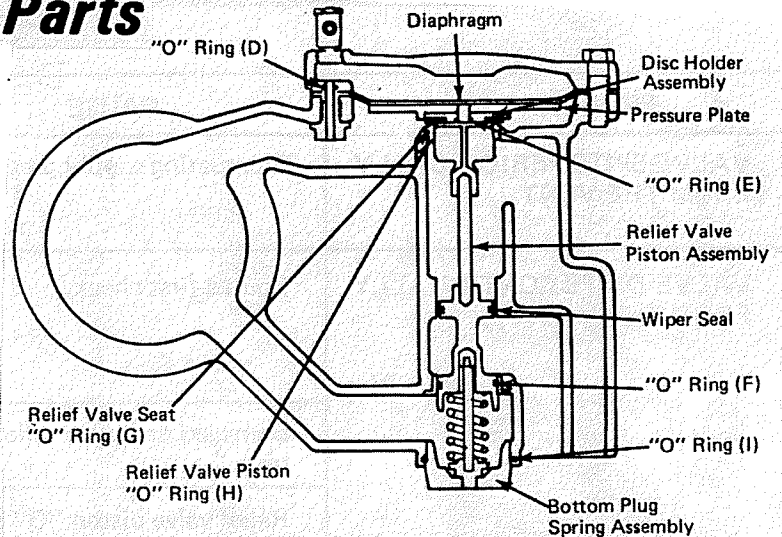
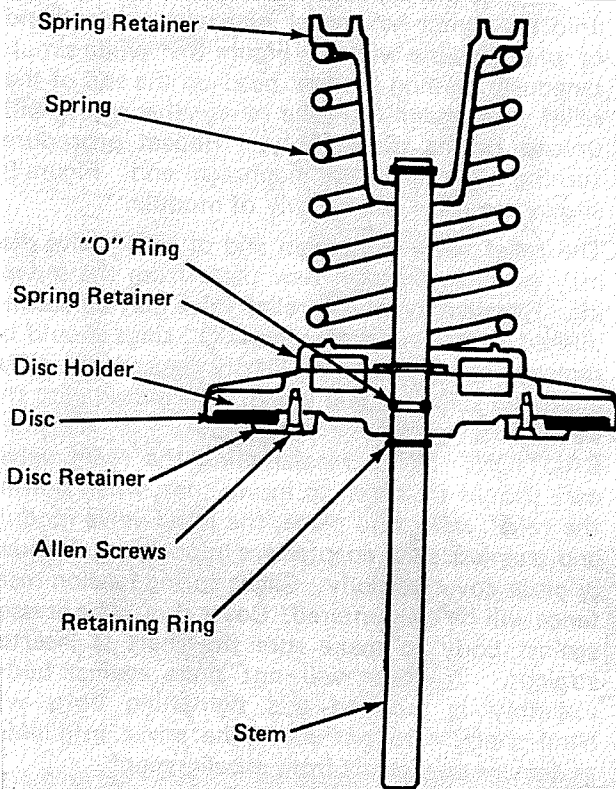


RELIEF VALVE ASSEMBLY



2 1/2" - 10" Replacement Parts

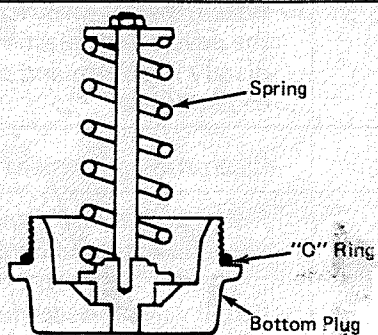
CHECK MODULE ASSEMBLY



RELIEF VALVE PISTON ASSEMBLY

A Diaphragm
B RV Stem
C RV Seat
D RV Seat O'rg
E RV Spg Button

BOTTOM PLUG SPRING ASSEMBLY 4-10"



21-66

