

## Engineering Specification

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

Contractor \_\_\_\_\_

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

Approval \_\_\_\_\_

Engineer \_\_\_\_\_

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

Approval \_\_\_\_\_

Representative \_\_\_\_\_

# LEAD FREE\*

## Series LF009 Reduced Pressure Zone Assembly 1/4" – 2"

Series LF009 Reduced Pressure Zone assembly is designed to protect potable water supplies in accordance with national plumbing codes and water authority requirements. It is suitable for a wide range of applications, including protection against health-hazard cross-connections in piping systems, containment at the service line entrance, and use in irrigation systems, boiler feed lines, water lines, and other installations requiring maximum backflow protection.

The assembly features Lead Free\* cast copper silicon alloy body construction to meet Lead Free\* installation requirements, along with two in-line independent check valves, captured springs, and replaceable check seats with an intermediate relief valve. Its compact, modular, space-saving design allows straightforward maintenance and access to internal components. No special tools are required for servicing. Sizes 1/4" to 1" are supplied with tee-handle shutoff valves.

Sizes 1/2" to 2" include an external flood sensor designed to detect continuous discharge from the relief valve. The sensor does not alter assembly performance or certifications and activates a relay to signal potential flooding and associated property damage.

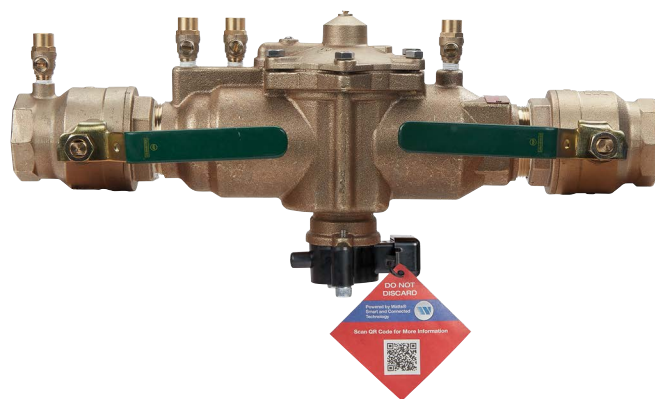
### NOTICE

An add-on connection kit is required to activate the flood sensor. Without the connection kit, the sensor is a passive component that has no communication with any other device. (For more information, download RP/IS-009.)

### NOTICE

Use of the flood sensor does not replicate the need to comply with all required instructions, codes, and regulations related to installation, operation, and maintenance of this product, including the need to provide proper drainage in the event of a discharge.

Watts is not responsible for the failure of alerts due to connectivity issues, power outages, or improper installation.



LF009M2-QT with flood sensor

### Features

- Single access cover and modular check construction for ease of maintenance
- Top entry to all internals for immediate accessibility
- Captured springs for safe maintenance
- Internal relief valve for reduced installation clearances
- Replaceable seats for economical repair
- Lead Free\* cast copper silicon alloy body construction
- Ball valve test cocks — screwdriver slotted
- Large body passages provides low pressure drop
- Sensor on the relief valve for flood detection (1/2" – 2")
- Flood alerts feature activated with add-on sensor connection kit, compatible with BMS and cellular network communication

### NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

Inquire with governing authorities for local installation requirements.

\*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

## Specification

A Reduced Pressure Zone assembly shall be installed at each potential health hazard location to prevent backflow due to backsiphonage and/or backpressure. The assembly shall consist of an internal pressure differential relief valve located in a zone between two positive seating check modules with captured springs and silicone seat discs. Seats and seat discs shall be replaceable in both check modules and the relief valve. There shall be no threads or screws in the waterway exposed to line fluids. Service of all internal components shall be through a single access cover secured with stainless steel bolts. Body and shutoffs shall be constructed using Lead Free\* cast copper silicon alloy materials. Lead Free\* reduced pressure zone assembly shall comply with state codes and standards, where applicable, requiring reduced lead content.

The assembly shall also include two resilient seated isolation valves, four resilient seated test cocks, and an air gap drain fitting. The assembly shall meet the requirements of USC; ASSE Std. 1013; AWWA Std. C511; CSA B64.4. Shall be a Watts Series LF009, and shall include a sensor on the relief valve for flood detection on sizes ½" to 2".

## Materials

Lead Free\* cast copper silicon alloy body construction, silicone rubber disc material in the first and second check plus the relief valve. Replaceable polymer check seats for first and second checks. Removable relief valve seats. Stainless steel cover bolts.

Standardly furnished with NPT body connections. Model LF009QT furnished with quarter-turn, full port, resilient seated, Lead Free\* cast copper silicon alloy body ball valve shutoffs.

## Model/Option

### Prefix:

U – Union connections

### Suffix:

FS – Flood detection sensor (½" – 2")

LF – Without shutoff valves

PC – Internal polymer coating

Press\*\* – Press inlet x press outlet (½" – 2")

QT – Quarter-turn ball valves

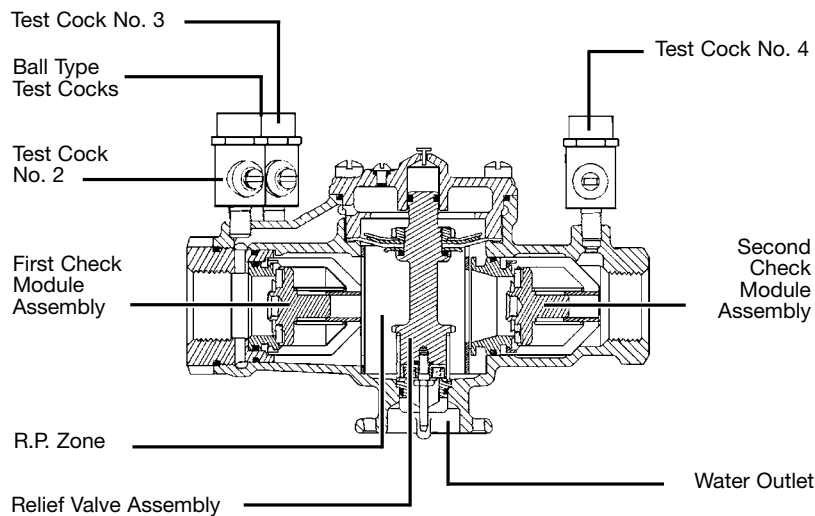
S – Strainer

NOTE: The installation of a drain line is recommended. When installing a drain line, an air gap is necessary. (For more information download ES-AG/EL/TC at watts.com.)

## Pressure – Temperature

Suitable for supply pressure up to 175 psi (12.1 bar)

Water temperature: 33°F – 180°F (0.5° – 82°C)



\*\*Viega ProPress® connections are optional factory-installed fitting on each end of the approved/certified assembly.

## Standards

USC

ASSE No. 1013

AWWA C511

CSA B64.4

IAPMO File No. 1563

## Approvals



ASSE, AWWA, CSA, IAPMO

Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California Models NRS, OSY, PC, QT

UL Classified, sizes 3/4" – 2" without shutoff valves (-LF), except LF009M3LF

## Insulated Enclosure

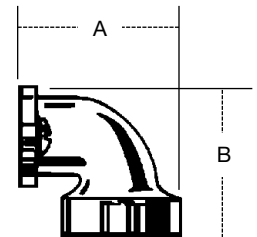
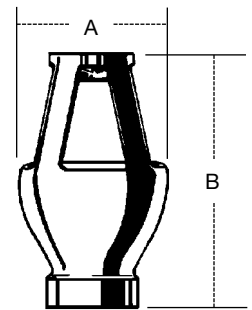
The WattsBox insulated enclosure is available for Series LF009. For more information download ES-WB at watts.com.

## Air Gaps and Elbows

Call customer service if you need assistance with technical details.

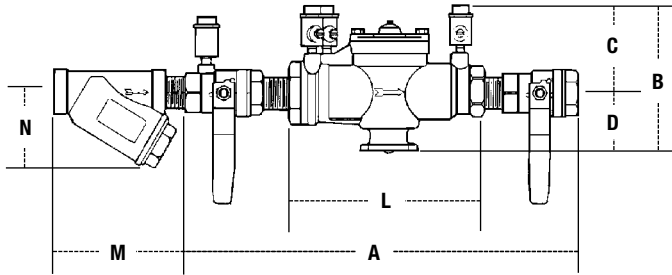
AIR GAP MODEL	BACKFLOW PREVENTER SIZE-MODEL	DRAIN OUTLET		DIMENSIONS				WEIGHT	
		<i>in.</i>	<i>mm</i>	A		B		<i>lb</i>	<i>kg</i>
	For 909, 009, and 993 sizes	<i>in.</i>	<i>mm</i>	<i>in.</i>	<i>mm</i>	<i>in.</i>	<i>mm</i>	<i>lb</i>	<i>kg</i>
AIRGAP-P-1	1/4"-1/2" 009, 3/4" 009M2/M3	1/2	13	2 3/8	60	3 1/8	79	0.63	0.28
AIRGAP-P-2	3/4"-1" 009/909, 1"-1 1/2" 009M2	1	25	3 1/4	83	4 7/8	124	1.50	0.68
909AGF	1 1/4"-2" 009M1, 1 1/4"-3" 009/909, 2" 009M2, 4"-6" 993	2	51	4 3/8	111	6 3/4	171	3.25	1.47
909AGK	4"-6" 909, 8"-10" 909M1	3	76	6 3/8	162	9 3/8	244	6.25	2.83
909AGM	8"-10" 909	4	102	7 3/8	187	11 1/4	286	15.50	7.03
909ELA	1/4"-1/2" 009, 3/4" 009M2/M3	-	-	-	-	-	-	-	-
909ELC	3/4"-1" 009/909	-	-	2 3/8	60	2 3/8	60	0.38	0.17
909ELF*	1 1/4"-2" 009M1, 1 1/4"-2" 009/909, 2" 009M2, 4"-6" 993	-	-	3 5/8	92	3 5/8	92	2.00	0.91
909ELH* Vertical	2 1/2"-3" 009/909	-	-	-	-	-	-	-	-

\*Epoxy coated

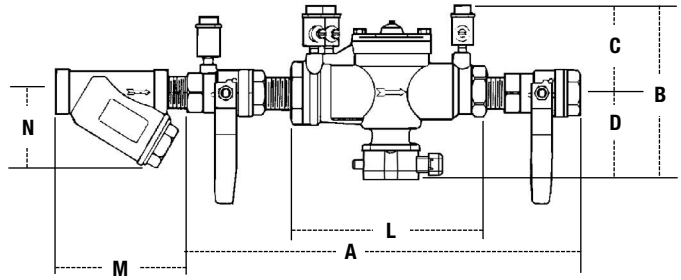


## Dimensions – Weight

1/4" – 3/8"



1/2" – 2"

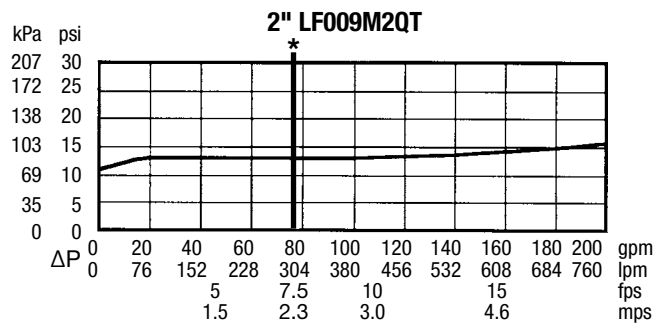
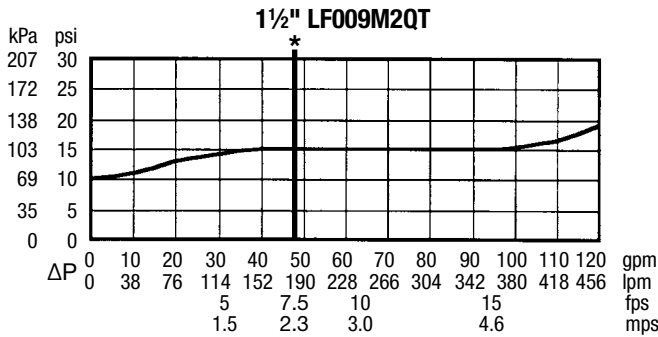
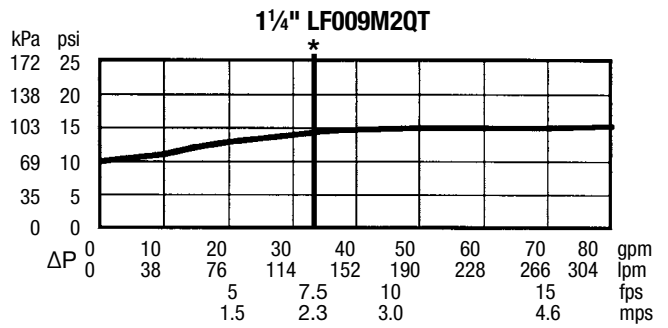
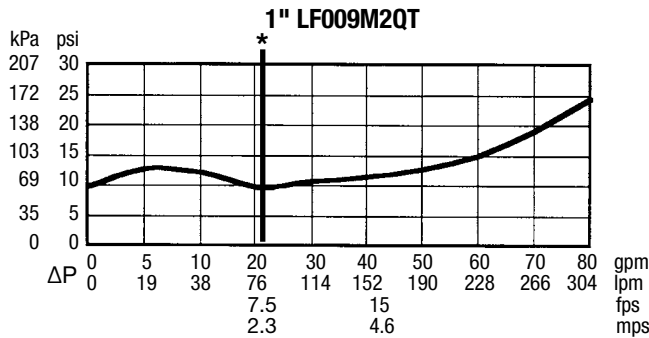
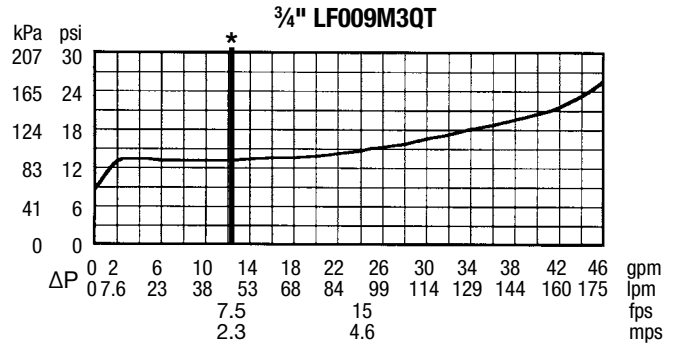
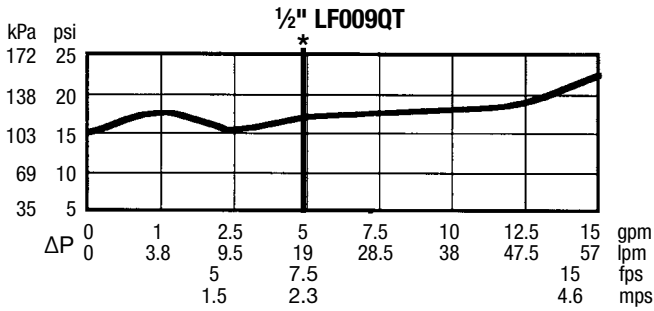
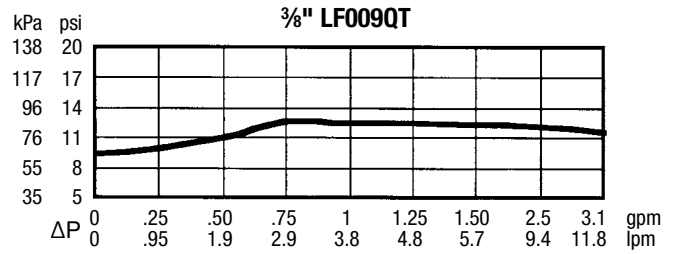
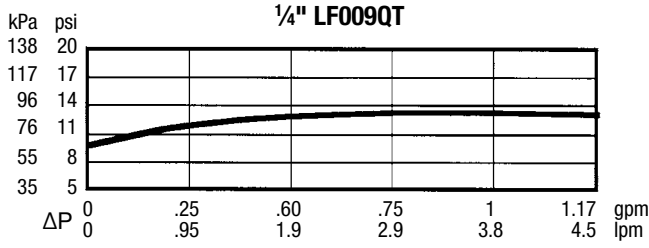


SIZE		DIMENSIONS (APPROX.)										WEIGHT				
<i>in.</i>	<i>in.</i>	<i>mm</i>	<i>in.</i>	<i>mm</i>	<i>in.</i>	<i>mm</i>	<i>in.</i>	<i>mm</i>	<i>in.</i>	<i>mm</i>	<i>in.</i>	<i>mm</i>	<i>lb</i>	<i>kg</i>		
1/4	10	250	4 5/8	117	3 3/8	86	1 1/4	32	5 1/2	140	2 3/8	60	2 1/2	64	5	2
3/8	10	250	4 5/8	117	3 3/8	86	1 1/4	32	5 1/2	140	2 3/8	60	2 1/2	64	5	2
1/2	10	250	5 7/8	149	3 3/8	86	2 1/2	64	5 1/2	140	2 3/4	70	2 1/4	57	5	2
3/4	10 3/4	273	6 1/4	159	3 1/2	89	2 3/4	70	6 3/4	171	3 3/16	81	2 3/4	70	6	3
1	14 1/2	368	6 1/4	159	3	76	3 1/4	83	9 1/2	241	3 3/4	95	3	76	12	5
1 1/4	17 3/8	441	6 3/4	169	3 1/2	89	3 1/4	83	11 3/8	289	4 7/16	113	3 1/2	89	15	6
1 1/2	17 7/8	454	6 3/4	169	3 1/2	89	3 1/4	83	11 1/8	283	4 7/8	124	4	102	16	7
2	21 3/8	543	8 3/4	222	4 1/2	114	4 1/4	108	13 1/2	343	5 7/16	151	5	127	30	13

# Capacity

Performance as established by an independent testing laboratory.

The asterisk (\*) indicates the typical maximum system flow rate (7.5 ft/s, 2.3 m/s).



USA: T: (978) 689-6066 • [Watts.com](http://Watts.com)

Canada: T: (888) 208-8927 • [Watts.ca](http://Watts.ca)

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