# Engineering Specification

Job Name _____ Contractor _____

Job Location _____ Approval _____

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

Approval _____ Representative _____

**LEAD FREE***

# Series LF919

## Reduced Pressure Zone Assembly

### ½" – 2"

Series LF919 Reduced Pressure Zone Backflow assembly protects potable water supplies in accordance with national plumbing codes and water authority requirements. This series can be used in a variety of installations, including prevention of health hazard cross-connections or containment at the service line entrance.

This series features two poppet-style check valves, replaceable check seats, and an intermediate relief valve. Its compact modular design facilitates maintenance and assembly access. Sizes ½" to 1" shutoffs have tee handles. The assembly features Lead Free* construction to comply with Lead Free* installation requirements.

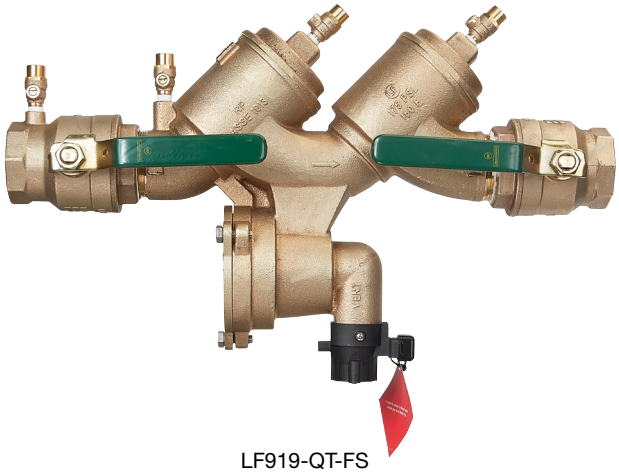
Series LF919 includes a flood sensor to detect excessive water discharges from the relief valve. The sensor is installed on the assembly exterior and does not alter assembly functions or certifications. The sensor relays a signal that triggers notification to facility personnel for corrective action, thus limiting flooding and costly damage.

**NOTICE**

An add-on connection kit is required to activate the flood sensor. Without the connection kit, the flood sensor is a passive component that has no communication with any other device. (For more information download RP/IS-LF919.)

## Features

- Separate access covers for the check valves and relief valve to ease maintenance
- Top entry for easy accessibility to all check internals
- All rubber elastomers of chloramine resistant material
- Check valve poppet assemblies fully steered by innovative plastic seat guide
- Replaceable push-in check valve and relief valve seats to eliminate threads from the water way
- EZ twist relief valve cover quarter-turn locking joint to capture the spring load during repair and to facilitate disassembly
- Innovative check valve plastic cover bushing for trouble-free guiding of the check valve poppet



LF919-QT-FS

- Bottom-mounted relief valve for reduced installation clearances
- Compact, space saving design
- No special tools required for servicing
- Top-mounted test cocks for ease in testing and reduced installation clearances
- Standardly furnished with NPT body connections
- Sensor on the relief valve for flood detection
- Flood alert feature activated with add-on sensor connection kit, compatible with BMS and cellular communication

**NOTICE**

Use of the flood sensor does not replace 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 or power issues.

**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.



WATTS®

## 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 a pressure differential relief valve located in a zone between two positive seating check valves. Seats and seat discs shall be replaceable in both check valves and the relief valve without the use of special tools. Service of all internal check valve components shall be through top-mounted access covers threaded to the main valve body. The check valve poppet assembly shall be steered through the use of a corrosion resistant plastic guide. The check valve and relief valve seats shall be push-in type. The relief valve cover shall be secured with stainless steel bolts and shall utilize a quarter-turn locking joint to capture the spring load of the relief valve. The relief valve shall have an internal sensing line to sense the inlet water supply. All rubber elastomers shall be of chloramine resistant material. The assembly shall also include two resilient seated isolation valves, four top-mounted resilient seated test cocks, and an air gap drain fitting. The Lead Free* Reduced Pressure Zone assembly shall comply with state codes and standards, where applicable, requiring reduced lead content. The assembly shall be a Watts Series LF919, and shall include a sensor on the relief valve for flood detection.

## Materials

| | |
|---|---|
| Body | Lead Free* cast copper silicon alloy |
| Discs | Silicone rubber |
| Check Seats | Replaceable polymer |
| Cover Bolts | Stainless steel |

## Model/Option

| | |
|---|---|
| FS | Flood detection sensor |
| QT | Quarter-turn ball valves |
| S | Bronze strainer |

## Approvals

USC-FCCCHR

Approved by the Foundation for Cross-Connection Control and Research at The University of Southern California, sizes ¾" to 2".

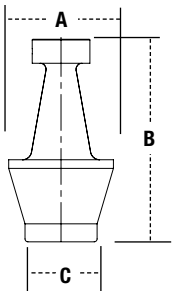
## Insulated Enclosure

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

## Pressure — Temperature

| | |
|---|---|
| Temperature Range | 33ºF – 180ºF (0.5ºC – 82ºC) |
| Maximum Working Pressure | 175 psi (12.1 bar) |

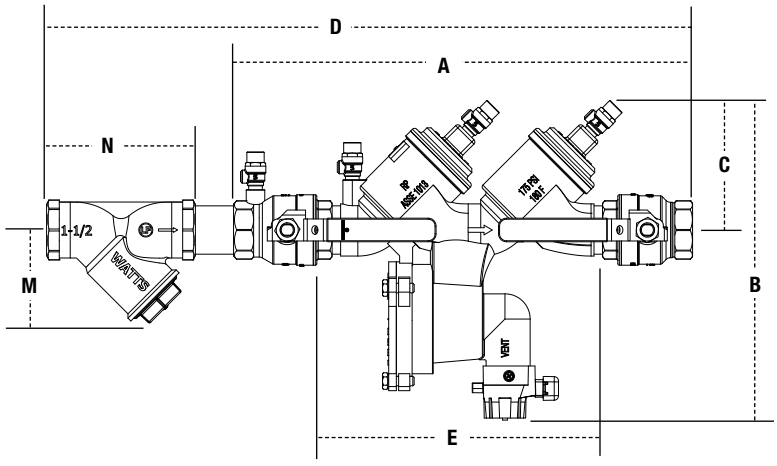
## Air Gaps

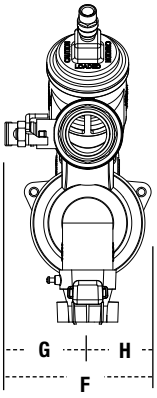



Call customer service if you need assistance with technical details.

| MODEL | SIZE | DIMENSIONS | | | | | | WEIGHT | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | | B | | C (NPT) | | | |
| | | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *lb* | *kg* |
| 919AGC | ½" – 1" | 2⅜ | 60 | 3⅛ | 79 | ½ | 13 | 0.63 | 0.28 |
| 909AGC | 1¼" – 2" | 3¼ | 83 | 4⅞ | 124 | 1 | 25 | 1.50 | 0.68 |

## Dimensions — Weights



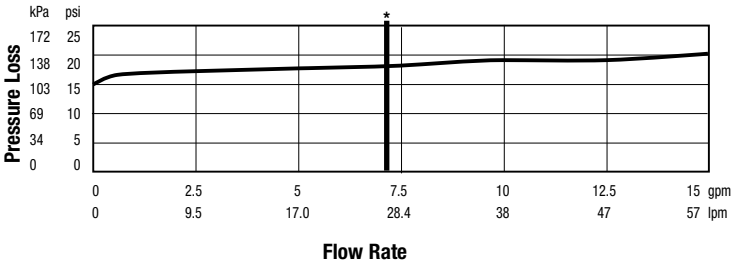




| SIZE | DIMENSIONS | | | | | | | | | | | | | | | | STRAINER DIMENSIONS | | | | WEIGHT | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | | B | | C | | D | | E (LF) | | F | | G | | H | | M | | N | | | |
| *in.* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *lb* | *kg* |
| ½ | 9½ | 241 | 8⅜ | 213 | 2⅞ | 73 | 12¾ | 324 | 5¾ | 146 | 3⅜ | 86 | 1⅞ | 48 | 1⁹⁄₁₆ | 40 | 2¾ | 70 | 2¼ | 57 | 5.8 | 2.6 |
| ¾ | 12⅛ | 307 | 8¹⁵⁄₁₆ | 227 | 3½ | 88 | 15½ | 393 | 7¹¹⁄₁₆ | 195 | 3⅝ | 92 | 2¹⁄₁₆ | 52 | 1⁹⁄₁₆ | 40 | 1⅝ | 41 | 3³⁄₁₆ | 81 | 8.3 | 3.7 |
| 1 | 14½ | 368 | 9½ | 241 | 3⅞ | 98 | 19³⁄₁₆ | 487 | 9³⁄₁₆ | 233 | 4 | 102 | 2⅞ | 62 | 1⁹⁄₁₆ | 40 | 2⅛ | 54 | 3¾ | 95 | 11.8 | 5.4 |
| 1¼ | 18⅛ | 461 | 12¹⁵⁄₁₆ | 329 | 5⅛ | 129 | 23¼ | 591 | 11¹¹⁄₁₆ | 297 | 5⅛ | 130 | 2⅝ | 67 | 2½ | 64 | 2½ | 64 | 4⁷⁄₁₆ | 113 | 22.3 | 10.1 |
| 1½ | 18¾ | 476 | 12¹⁵⁄₁₆ | 329 | 5⅛ | 129 | 25¹⁄₁₆ | 637 | 11¹¹⁄₁₆ | 297 | 5⅝ | 143 | 3⅛ | 79 | 2½ | 64 | 3 | 76 | 4⅞ | 124 | 28.3 | 12.8 |
| 2 | 21¹⁄₁₆ | 535 | 13⁹⁄₁₆ | 345 | 5⅝ | 142 | 28¹³⁄₁₆ | 732 | 13⅜ | 340 | 5¹⁵⁄₁₆ | 151 | 3⁷⁄₁₆ | 87 | 2½ | 64 | 3⁹⁄₁₆ | 90 | 5¹⁵⁄₁₆ | 151 | 37.3 | 16.9 |

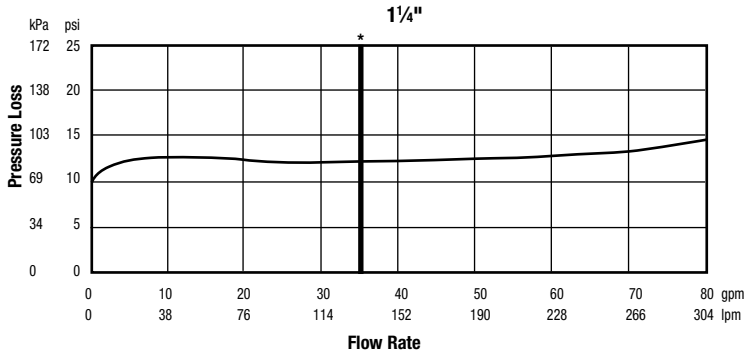
## Capacity

The asterisk (*) indicates typical maximum system flow rate (7.5 ft/sec; 2.3 m/sec).

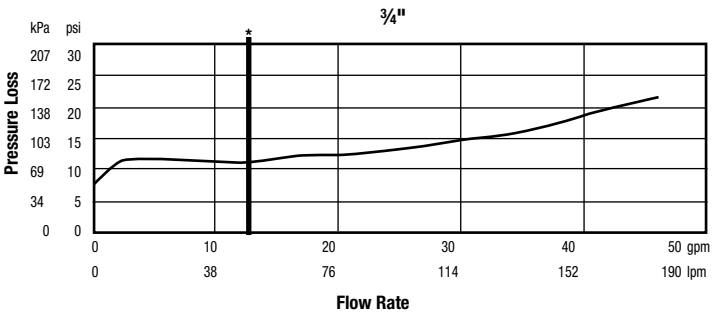
½"



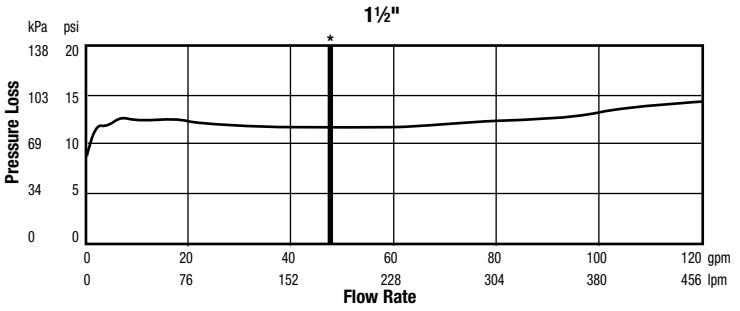

1¼"



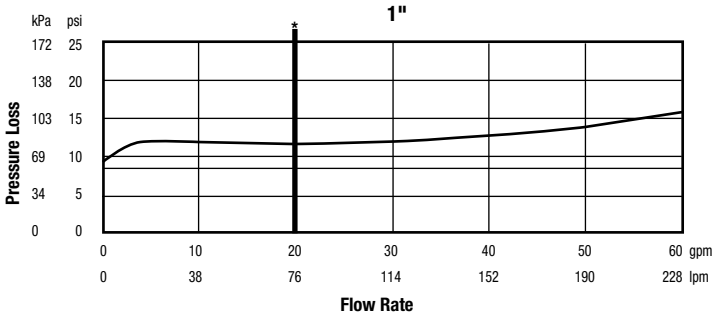

¾"



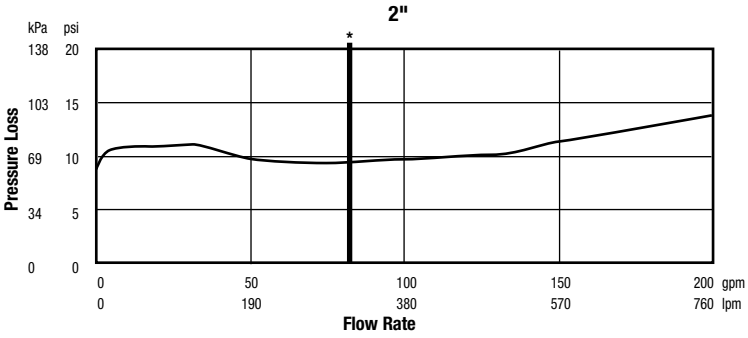

1½"




1"




2"

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