# JABO SUPPLY

# BACKFLOW PREVENTERS

"Apollo"®

WATTS®

*SINCE 1964 SINCE IS MORE THAN A PROMISE*


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227 C&O Shop Road 25813
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## SINCE 1964 SERVICE IS MORE THAN A PROMISE

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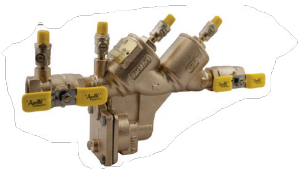
| **APOLLO SERIES RP 4A / RPLF 4A SMALL DIAMETER**<br>**Jabo Part Numbers*<br>*Apollo Spec Sheet |  | "Apollo"® | **5-6**<br>5<br>6 |
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JABO SUPPLY

"Apollo"®

# BACKFLOW PREVENTERS

# BACKFLOW PREVENTERS

## Apollo RP 4A / RPLF 4A SERIES

Smaller Diameter

Reduced Pressure Principle Backflow Preventer Assembly

| JABO # | SIZE |
|---|---|
| 761-01010 | 3/4" |
| 761-01020 | 1" |
| 761-01040 | 1-1/2" |
| 761-01060 | 2" |

| STOCK PART NUMBER CONSIST OF | |
|---|---|
| 1 | Lead Free |
| 2 | No Strainer |
| 3 | See size |
| 4 | w/Ball Valves /Standard |
| 5 | SAE Threaded Test Cocks |

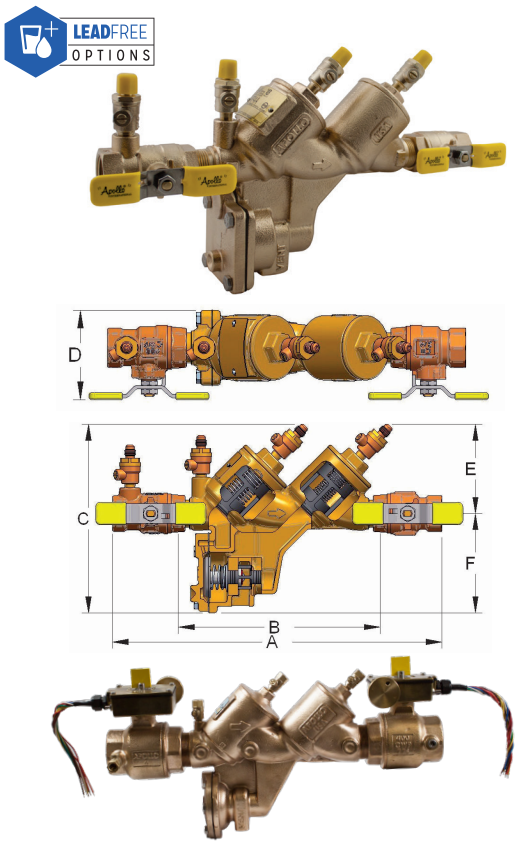
**See chart below for all options**

**5 STEPS TO BUILD YOUR OWN (see table below)**

*PICK ONE FROM EACH COLUMN*

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| 4A X | 2 X | X | XX | X |
| | Y-STRAINER | SIZE | SHUT-OFF VALVES | OPTIONS (CAN BE COMBINED) |
| 4A - Standard | 0 - Standard | 3 - 1/2" | A2 - w/ Ball Valves (Standard) | F - SAE Threaded Test Cocks (Standard 1/2") |
| 4ALF - Lead Free | 1 - w/ Y-Strainer (Shipped Loose) | 4 - 3/4" | A4 - w/ Union Ball Valves (3/4" - 2") | L - Lever Handle (3/4" & 1" Only) |
| | | 5 - 1" | T2ST - Tamper Gear Operated Ball Valves (1-1/2"- 2") | LL - Locking Lever Handles |
| | | 6 - 1-1/4" | | P - Push Connection (Factory Installed) |
| | | 7 - 1-1/2" | | PR - Press Connection (Factory Installed) (3/4" & 1" Only) |
| | | 8 - 2" | | |
| EXAMPLE: 4A 215 A4LL = 1" reduced pressure backflow preventer with strainer, union ball valves and locking lever handles | | | | |

## RP 4A / RPLF 4A SERIES
REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER ASSEMBLY




**SLOW CLOSE WITH MONITOR SWITCHES T2ST OPTION (1-1/2" AND 2" ONLY) SEE SS1397 FOR DIMENSIONS**

The Apollo Series RP 4A or RPLF 4A Reduced Pressure Principle Backflow Preventer is designed to give maximum protection against backflow caused by either back-pressure or back-siphonage from substances that are hazardous. The durable but economical device is easily maintained in the line with modular check cartridge assemblies that require no special tools. It consists of two independently acting spring-loaded check valves with an automatic differential relief valve located between the check valves. All test cocks are mounted at the top of the unit to assure easy access during repair and maintenance when unit is installed in tight places.

### FEATURES
- Maximum Protection Against Back-Pressure/Back-Siphonage
- Modular Check Valve Cartridges w/ Easily Replaced Parts
- Reversible/Removable Chloramine-Resistant Silicone Seat Discs
- Low Head Pressure Loss
- Top Mounted Test Cocks
- Threaded Testcock Protectors
- Internal Sensing Passage
- Modular Captured Spring Relief Valve
- Lead Free Option
- Standard with Full Port Ball Valves with Stainless Steel Handles
- Corrosion Resistant
- Optional Air Gap Drain
- 5 Year Warranty
- Proudly Made in USA

### PERFORMANCE RATING
- Maximum Working Pressure: 175 psi
- Operating Temperature Range: 33° to 180°F

### APPROVALS
- ASSE 1013
- CSA B64.4
- Federal Public Law 111-380
- AWWA C511
- UL, ULC Classified (T2ST Option or Less Shutoffs)
- Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California
- Horizontal Installation Approvals (1/2" thru 2")
- NSF/ANSI/CAN 61 - Water Quality (4ALF only)
- NSF/ANSI 372 - Lead Free (4ALF only)

### STANDARD MATERIALS LIST

| | | | |
|---|---|---|---|
| **BODY, CAPS** | Bronze (C84400/LF C89836) | **DIAPHRAGM** | Nitrile and Nylon |
| **BV SHUT-OFFS, TEST COCKS** | Bronze (C84400/LF C87800) | **CHECK MODULES** | Glass-Filled PPO |
| | | **O-RINGS** | Chloramine-Resistant EPDM |
| **SPRINGS** | 300 Series SS | **BALL VALVE HANDLES** | Stainless Steel |
| **SEAT DISCS** | Chloramine-Resistant Silicone | | |

Contact local water authorities for installation/service requirements.

BACKFLOW PREVENTION

### PART NUMBER MATRIX

| 4A X | 2 X | X | XX | X |
|---|---|---|---|---|
| | Y-STRAINER | SIZE | SHUT-OFF VALVES | OPTIONS (CAN BE COMBINED) |
| 4A - Standard | 0 - Standard | 3 - 1/2" | A2 - w/ Ball Valves (Standard) | F - SAE Threaded Test Cocks (Standard 1/2") |
| 4ALF - Lead Free | 1 - w/ Y-Strainer (Shipped Loose) | 4 - 3/4" | A4 - w/ Union Ball Valves (3/4" - 2") | L - Lever Handle (3/4" & 1" Only) |
| | | 5 - 1" | T2ST - Tamper Gear Operated Ball Valves (1-1/2" - 2") | LL - Locking Lever Handles |
| | | 6 - 1-1/4" | | P - Push Connection (Factory Installed) |
| | | 7 - 1-1/2" | | PR - Press Connection (Factory Installed) (3/4" & 1" Only) |
| | | 8 - 2" | | |

EXAMPLE: 4A 215 A4LL = 1" reduced pressure backflow preventer with strainer, union ball valves and locking lever handles

# BACKFLOW PREVENTERS

## RPLF 4A SERIES

Larger Diameter

*Reduced Pressure Principle Backflow Preventer Assembly*

| JABO # | SIZE |
|---|---|
| * | 2-1/2" |
| 761-01630 | 3" |
| 761-01640 | 4" |
| * | 6" |
| * | 8" |
| * | 10" |
| * | 12" |

| STOCK PART NUMBER CONSIST OF | |
|---|---|
| 1 | Lead Free |
| 2 | No Strainer |
| 3 | See Jabo part numbers |
| 4 | Flanged |
| 5 | |

**See chart below for all options**

**5 STEPS TO BUILD YOUR OWN (see table below)**

*PICK ONE FROM EACH COLUMN*

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| 4ALF | 2 X | X | 0 X | XX |
| | Y-STRAINER | SIZE | SHUT-OFF VALVES | OPTIONS |
| 4ALF - LEAD FREE STANDARD | 0 - STANDARD | 9 - 2-1/2" | 2 - NRS FLANGE X NRS FLANGE | D - DOMESTIC ASSEMBLY |
| | 1 - W/ Y-STRAINER (SHIPPED LOOSE) | 0 - 3" | 3 - OS&Y FLANGE X OS&Y FLANGE | |
| | | A - 4" | 4 - OS&Y FLANGE X MONITORED (MON.) BUTTERFLY VALVE GROOVE' | |
| | | C - 6" | 6 - OS&Y FLANGE X POST INDICATOR FLANGE | |
| | | E - 8" | 7 - OS&Y FLANGE X OS&Y GROOVE | |
| | | G - 10" | 8 - OS&Y GROOVE X OS&Y GROOVE | |
| | | H - 12" | 9 - MON. BUTTERFLY VALVE GROOVE X MON. BUTTERFLY VALVE GROOVE' | |
| | | | 10 - OS&Y FLANGE X POST INDICATOR GROOVE | |
| | | | 11 - NRS GROOVE X NRS GROOVE | |
| | | | 12 - NRS FLANGE X NRS GROOVE | |
| | | | 13 - POST INDICATOR FLANGE X MON. BUTTERFLY VALVE GROOVE' | |
| | | | 14 - POST INDICATOR FLANGE X POST INDICATOR FLANGE | |
| | | | 16 - MON BUTTERFLY VALVE GROOVE X POST INDICATOR FLANGE' | |
| | | | 17 - POST INDICATOR FLANGE X OS&Y GROOVE | |
| | | | 18 - OS&Y GROOVE X POST INDICATOR GROOVE | |
| | | | 19 - MON. BUTTERFLY VALVE GROOVE X POST INDICATOR GROOVE | |
| | | | 20 - POST INDICATOR FLANGE X OS&Y FLANGE | |
| | | | 21 - POST INDICATOR GROOVE X OS&Y GROOVE | |
| | | | 22 - POST INDICATOR GROOVE X MON. BUTTERFLY VALVE GROOVE' | |
| | | | 23 - MON. BUTTERFLY VALVE GROOVE X OS&Y FLANGE | |

EXAMPLE: 4ALF 20A 07 = 4" size Lead Free Reduced Pressure Assembly with OS&Y flanged inlet x OS&Y grooved outlet shut-off valves.

# RPLF4A series

reduced pressure principle backflow preventer

**lead free**

5 YEAR WARRANTY DOMESTIC MADE

LEAD FREE CERTIFIED

USC-FCCCHR

NSF/ANSI 61-8 & 372

| | |
|---|---|
| job name: | |
| job location: | |
| engineer: | |
| contractor: | |
| tag: | |
| po#: | |
| rep: | |
| wholesale dist.: | |

## description

the Apollo model RPLF 4A lead free reduced pressure principle backflow preventers consist of two independently acting, TriForce™ center stem guided check valves with a differential pressure relief valve located between the check valves. the unit is designed to give maximum protection against backflow of health or non-health hazard fluids by either back-pressure or back-siphonage. the durable domestic stainless steel units (2-1/2"-8") and the FDA epoxy coated ductile iron units (10" and 12") are easily maintained in the line without any special tools. the TriForce™ check valves operate with a spring assist in the flowing condition to provide excellent flow rates which are documented by an independent laboratory.

## features

- domestic stainless steel body: 2-1/2" – 8"
- FDA epoxy coated ductile iron body: 10" & 12"
- easy maintenance – no special tools required
- snap-in check retainers: 2-1/2" – 6"
- bolted-in checks: 8" – 12"
- low pressure loss as documented by an independent laboratory
- center-stem guided triforce™ check valves
- approved for horizontal flow
- US Patents: 6,443,184; 7,025,085; 7,533,699; 8,240,333
- **made in the USA** – D option
- 5 year warranty

## performance rating

- maximum working pressure: 175 psi
- temperature range: 33° F – 140° F
- hydrostatic test pressure: 350 psi

## approvals

- sizes 2-1/2" – 12": AWWA C511
- sizes 2-1/2" – 12": ASSE 1013-2011, CSA B64.4, FM, UL*, cUL*
- NSF/ANSI 61 water quality (2-1/2" - 12")
- NSF/ANSI 372 lead free (2-1/2" – 12")
- approved by the foundation for Cross-connection control and hydraulic research at the university of southern california (2-1/2" - 12")

***UL and cUL installations must include indicating-type shut-off valves**

## standard materials list

| | |
|---|---|
| **body (2-1/2" - 8")** | 304 stainless steel |
| **body (10" & 12")** | FDA epoxy coated ductile iron |
| **covers (2-1/2" - 6")** | glass filled PPO/SS |
| **covers (8")** | 304 stainless steel |
| **covers (10" & 12")** | FDA epoxy coated ductile iron |
| **relief valve** | lead free bronze C89836 |
| **check valves** | bronze/glass-filled PPO/SS |
| **springs** | stainless steel |
| **seat discs** | chloramine-resistant silicone |

## part number matrix

| 4ALF | 2 X | X | 0 X | XX |
|---|---|---|---|---|
| | Y-STRAINER | SIZE | SHUT-OFF VALVES | OPTIONS |
| 4ALF - LEAD FREE STANDARD | 0 - STANDARD | 9 - 2-1/2" | 2 - NRS FLANGE X NRS FLANGE | D - DOMESTIC ASSEMBLY |
| | 1 - W/ Y-STRAINER | 0 - 3" | 3 - OS&Y FLANGE X OS&Y FLANGE | |
| | (SHIPPED LOOSE) | A - 4" | 4 - OS&Y FLANGE X MONITORED (MON.) BUTTERFLY VALVE GROOVE' | |
| | | C - 6" | 6 - OS&Y FLANGE X POST INDICATOR FLANGE | |
| | | E - 8" | 7 - OS&Y FLANGE X OS&Y GROOVE | |
| | | G - 10" | 8 - OS&Y GROOVE X OS&Y GROOVE | |
| | | H - 12" | 9 - MON. BUTTERFLY VALVE GROOVE X MON. BUTTERFLY VALVE GROOVE' | |
| | | | 10 - OS&Y FLANGE X POST INDICATOR GROOVE | |
| | | | 11 - NRS GROOVE X NRS GROOVE | |
| | | | 12 - NRS FLANGE X NRS GROOVE | |
| | | | 13 - POST INDICATOR FLANGE X MON. BUTTERFLY VALVE GROOVE' | |
| | | | 14 - POST INDICATOR FLANGE X POST INDICATOR FLANGE | |
| | | | 16 - MON BUTTERFLY VALVE GROOVE X POST INDICATOR FLANGE' | |
| | | | 17 - POST INDICATOR FLANGE X OS&Y GROOVE | |
| | | | 18 - OS&Y GROOVE X POST INDICATOR GROOVE | |
| | | | 19 - MON. BUTTERFLY VALVE GROOVE X POST INDICATOR GROOVE | |
| | | | 20 - POST INDICATOR FLANGE X OS&Y FLANGE | |
| | | | 21 - POST INDICATOR GROOVE X OS&Y GROOVE | |
| | | | 22 - POST INDICATOR GROOVE X MON. BUTTERFLY VALVE GROOVE' | |
| | | | 23 - MON. BUTTERFLY VALVE GROOVE X OS&Y FLANGE | |

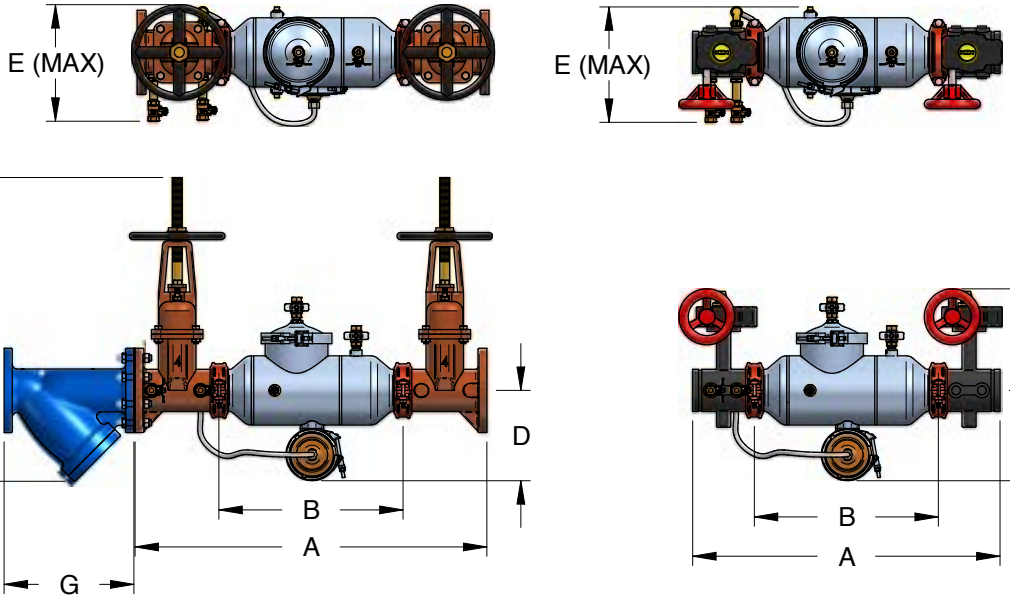
EXAMPLE: 4ALF 20A 07 = 4" size Lead Free Reduced Pressure Assembly with OS&Y flanged inlet x OS&Y grooved outlet shut-off valves.

*lead free: the wetted surfaces of this product shall contain no more than 0.25% lead by weighted average. complies with federal public law 111-380. ANSI 3rd party approved and listed.

# RPLF4A series

reduced pressure principle backflow preventer

**lead free**


## dimensions

nominal dimensions are shown. allowances must be made for manufacturers' tolerances (3 1/8" (3 mm) per joint)

| DIMENSIONS | 2-1/2" | 60 MM. | 3" | 75 MM. | 4" | 100 MM. | 6" | 150 MM. | 8" | 200 MM. | 10" | 250 MM. | 12" | 300 MM. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A (Butterfly Valves) | 28 | 711 | 28.5 | 724 | 33 | 838 | 38.5 | 978 | 46 | 1168 | N/A | N/A | N/A | N/A |
| A (Gate Valves) | 31 | 787 | 32 | 813 | 37.6 | 955 | 45.5 | 1156 | 53.1 | 1349 | 62.3 | 1582 | 65.4 | 1661 |
| B (Less Shut-Off Valves) | 16 | 406 | 16 | 406 | 19.8 | 503 | 24.5 | 622 | 30 | 762 | 36 | 914 | 37 | 940 |
| C (Butterfly Valves) | 8.6 | 218 | 9.6 | 244 | 10.9 | 277 | 13 | 330 | 16.5 | 419 | N/A | N/A | N/A | N/A |
| C (NRS/PI Gate Valves) | 11.8 | 300 | 13 | 330 | 14 | 356 | 17.8 | 452 | 21 | 533 | 24.5 | 622 | 30 | 762 |
| C (OS&Y Open) | 16.4 | 417 | 20.5 | 521 | 22.8 | 579 | 27.3 | 693 | 37.8 | 960 | 45.8 | 1163 | 53.1 | 1349 |
| D (Centerline to Bottom) | 9 | 229 | 9 | 229 | 9.8 | 249 | 11 | 279 | 15.8 | 401 | 21 | 533 | 21.1 | 536 |
| E (Max w/Gate or Butterfly Valves) | 11.9 | 302 | 12.5 | 318 | 13 | 330 | 15.4 | 391 | 19.4 | 493 | 21.5 | 546 | 21.8 | 554 |
| F (Check Removal Clearance) | 4.8 | 122 | 4.8 | 122 | 6.5 | 165 | 7.5 | 191 | 7.5 | 191 | 10 | 254 | 10 | 254 |
| G (Strainer Length) | 10.9 | 277 | 11.6 | 295 | 14 | 356 | 18.6 | 472 | 25.5 | 648 | 26.1 | 663 | 30.1 | 765 |
| H (Strainer Clearance) | 8 | 203 | 8.8 | 224 | 9.5 | 241 | 12.6 | 320 | 16.4 | 417 | 19 | 483 | 22 | 559 |
| Test Cocks (NPT) | 1/2" | 15 | 1/2" | 15 | 1/2" | 15 | 3/4" | 20 | 3/4" | 20 | 3/4" | 20 | 3/4" | 20 |
| **WEIGHTS** | **LB.** | **KG** | **LB.** | **KG** | **LB.** | **KG** | **LB.** | **KG** | **LB.** | **KG** | **LB.** | **KG** | **LB.** | **KG** |
| Net Wt. (Less Valves) | 31 | 14 | 32 | 15 | 48 | 22 | 84 | 38 | 228 | 103 | 762 | 346 | 865 | 392 |
| Net Wt. (w/ Butterfly Valves) | 92.6 | 42 | 98.6 | 45 | 124.6 | 57 | 184.6 | 84 | 407 | 185 | N/A | N/A | N/A | N/A |
| Net Wt. (w/ NRS Gate Valves) | 85 | 39 | 103 | 47 | 143 | 65 | 267 | 121 | 545 | 247 | 1269 | 576 | 1725 | 782 |
| Net Wt. (w/ OS&Y Gate Valves) | 103 | 47 | 119 | 54 | 174 | 79 | 327 | 148 | 620 | 281 | 1384 | 628 | 1840 | 835 |

nominal dimensions are shown. allowances must be made for manufacturers' tolerances (1/8" per joint).
internal body connections are grooved on 2 " – 10" sizes.
internal body connections are flanged on 12" size.
strainer option only available for flanged-end shut-off options.

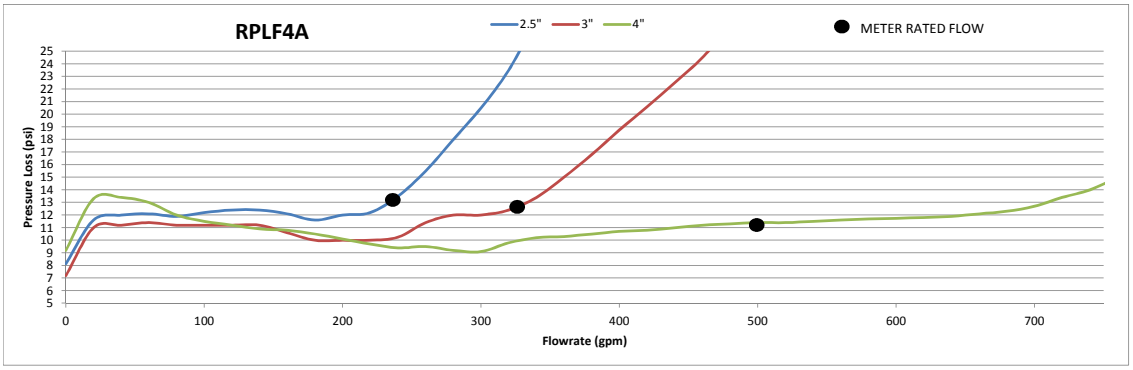
# RPLF4A series

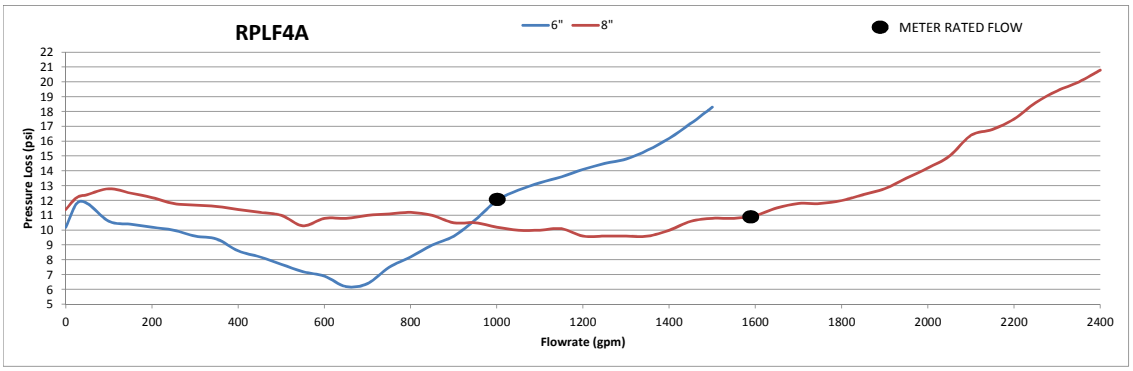
reduced pressure principle backflow preventer

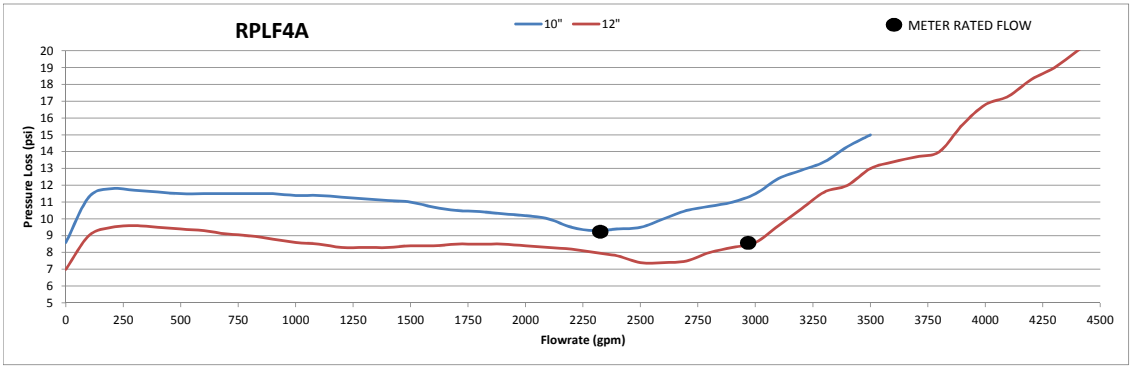
**lead free**

## flow curves

pressure loss versus flow data as determined by independent approval agencies.



# BACKFLOW PREVENTERS

## DC 4A / DCLF 4A SERIES

*DOUBLE CHECK VALVE BACKFLOW PREVENTER ASSEMBLY*

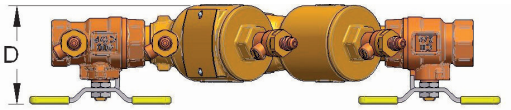
| JABO # | SIZE |
|---|---|
| 761-02030 | 3/4" |
| 761-02050 | 1" |
| 761-02070 | 1-1/2" |
| 761-02090 | 2" |

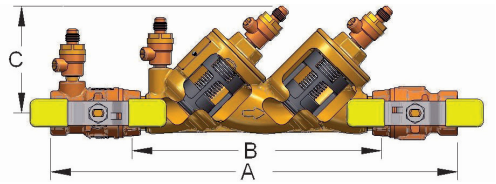
| STOCK PART NUMBER CONSIST OF | |
|---|---|
| 1 | Lead Free |
| 2 | No Strainer |
| 3 | See Jabo part numbers |
| 4 | w/Ball Valves |
| 5 | SAE Threaded Test Cocks |

**See chart below for all options**

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| 4A X | 1 X | X | XX | X |
| | Y-STRAINER | SIZE | SHUT-OFF VALVES | OPTIONS (CAN BE COMBINED) |
| 4A - Standard | 0 - Standard | 3 - 1/2" | A2 - w/ Ball Valves (Standard) | F - SAE Threaded Test Cocks (Standard 1/2"-2") |
| 4ALF - Lead Free | 1 - w/ Y-strainer (Shipped Loose) | 4 - 3/4" | A4 - w/ Union Ball Valves (3/4"-2") | LL - SS Locking Lever Handles |
| | | 5 - 1" | | PR - Press Connections (Factory Installed) |
| | | 6 - 1-1/4" | | P - Push Connections (Factory Installed) (3/4"-1") |
| | | 7 - 1-1/2" | | |
| | | 8 - 2" | | |
| EXAMPLE: 4A 104 A4LL = 3/4" double check valve assembly with union ball valves with locking lever handles | | | | |

## DC 4A / DCLF 4A SERIES
DOUBLE CHECK VALVE BACKFLOW PREVENTER ASSEMBLY


**SLOW CLOSE WITH MONITOR SWITCHES T2ST OPTION (1-1/2" AND 2" ONLY) SEE SS1396 FOR DIMENSIONS**

The Apollo Model DC 4A or DCLF 4A Double Check Valves are designed to prevent contamination of the potable water supply due to back-siphonage or backpressure from substances that are objectionable, but non-health hazards. The modular check valve captured spring cartridges have replaceable seats and reversible silicone seat discs. Ball valve shut-offs with stainless steel handles and nuts are standard.

### OPERATION
During normal flow conditions, the two check valves are held off their seats, supplying water downstream. Each check valve is designed to maintain a minimum of 1 psi across the valve during normal operation. Should the downstream pressure increase to within 1 psi of supply pressure, both check valves will close to prevent a backflow condition.

### FEATURES
- Low Pressure Loss
- Captured Spring Cartridge Check Valves
- Compact, Yet Easy to Maintain
- Ball Valve Shut-Offs w/ SS Handles & Nuts Standard
- Top Access for Fast Testing & Maintenance
- Threaded Testcock Protectors
- Corrosion Resistant
- No Special Tools Required
- 5 Year Warranty
- Lead-Free Option
- Chloramine-Resistant Elastomers
- Proudly Made in USA

### PERFORMANCE RATING
- Maximum Working Pressure: 175 psi
- Temperature Range: 33° to 180°F

### APPROVALS
- Horizontal and Vertical Up Approvals
- AWWA C510
- UL, ULC Classified (T2ST Option or Less Shutoffs)
- Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California
- ASSE 1015
- IAPMO
- CSA
- NSF/ANSI/CAN 61 - Water Quality (4ALF only)
- NSF/ANSI 372 - Lead Free (4ALF only)

### STANDARD MATERIALS LIST

| | |
|---|---|
| **BODY, CAPS** | Bronze C84400/LF C89836 |
| **BV SHUT-OFFS TEST COCKS** | Bronze C84400 or LF C87800 |
| **CHECK VALVES** | Glass-Filled PPO |
| **SPRINGS** | 300 Series Stainless Steel |
| **SEAT DISCS** | Chloramine-Resistant Silicone |
| **O-RINGS** | Chloramine-Resistant EPDM |
| **BV HANDLES** | Stainless Steel |

### PART NUMBER MATRIX

| 4A X | 1 X | X | XX | X |
|---|---|---|---|---|
| | Y-STRAINER | SIZE | SHUT-OFF VALVES | OPTIONS (CAN BE COMBINED) |
| 4A - Standard | 0 - Standard | 3 - 1/2" | A2 - w/ Ball Valves (Standard) | F - SAE Threaded Test Cocks (Standard 1/2"-2") |
| 4ALF - Lead Free | 1 - w/ Y-strainer (Shipped Loose) | 4 - 3/4" | A4 - w/ Union Ball Valves (3/4"-2") | LL - SS Locking Lever Handles |
| | | 5 - 1" | | PR - Press Connections (Factory Installed) |
| | | 6 - 1-1/4" | | P - Push Connections (Factory Installed) (3/4"-1") |
| | | 7 - 1-1/2" | | |
| | | 8 - 2" | | |
| EXAMPLE: 4A 104 A4LL = 3/4" double check valve assembly with union ball valves with locking lever handles | | | | |

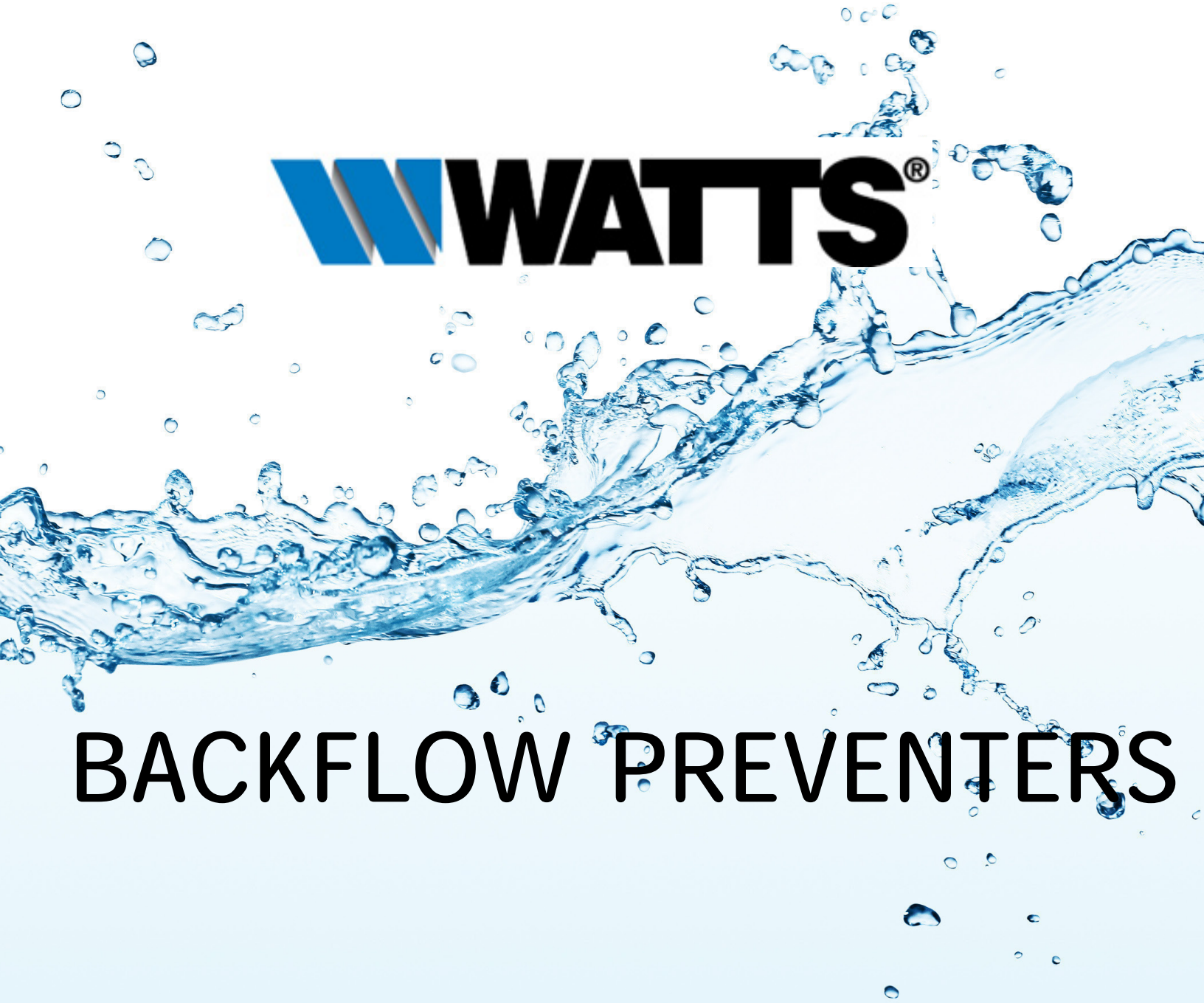
### DIMENSIONS

| MODEL NO. PART NO. SIZE | 4A 103 A2F DC 4A 12 1/2" | 4A 103 A2F DC 4A 12 15 MM. | 4A 104 A2F DC 4A 34 3/4" | 4A 104 A2F DC 4A 34 20 MM. | 4A 105 A2F DC 4A 1 1" | 4A 105 A2F DC 4A 1 25MM. | 4A 106 A2F DC 4A 114 1-1/4" | 4A 106 A2F DC 4A 114 32 MM. | 4A 107 A2F DC 4A 112 1-1/2" | 4A 107 A2F DC 4A 112 40 MM. | 4A 108 A2 DC 4A 2 2" | 4A 108 A2 DC 4A 2 50 MM. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A* | 10-7/8 | 276 | 12-5/8 | 321 | 14-5/8 | 371 | 17-1/2 | 445 | 18 | 457 | 20-1/8 | 511 |
| B | 7-3/8 | 187 | 8-1/2 | 215 | 9-1/2 | 241 | 11-3/4 | 298 | 11-5/8 | 295 | 12-3/4 | 324 |
| C | 3-1/4 | 83 | 3-1/2 | 89 | 4 | 100 | 4-1/2 | 114 | 4-1/2 | 114 | 5 | 127 |
| D | 2-1/2 | 64 | 3 | 76 | 3-1/4 | 83 | 4-3/4 | 121 | 4-3/4 | 121 | 5-3/8 | 136 |
| **WEIGHTS** | **LB.** | **KG.** | **LB.** | **KG.** | **LB.** | **KG.** | **LB.** | **KG.** | **LB.** | **KG.** | **LB.** | **KG.** |
| Net Wt. | 4.1 | 1.9 | 5.4 | 2.5 | 9.0 | 4.0 | 9.1 | 4.1 | 12.9 | 5.9 | 16.5 | 7.5 |

*For T2ST Option, Union Ball Valve, Press, and Push connection dimensions, see submittal sheets.

JABO SUPPLY

WATTS®



# BACKFLOW PREVENTERS

# BACKFLOW PREVENTERS

## SERIES LF009

Reduced Pressure Zone Assemblies

A Reduced Pressure Zone (RPZ) valve in a backflow preventer creates a pressure differential to prevent contaminated water from flowing back into a potable water supply. It uses two independent check valves and a relief valve to create a zone of reduced pressure. If either check valve fails, the relief valve opens, discharging water and preventing backflow.

| JABO # | SIZE |
|---|---|
| 761-00005 | 3/4" |
| 761-00010 | 1" |
| 761-00015 | 1-1/2" |
| 761-00020 | 2" |

| STOCK PART NUMBER CONSIST OF | |
|---|---|
| FS | Flood Detection Sensor |
| QT | Quarter Turn Ball Valve |
| S | NO Stainer |
| | |
| | |

### Model/Option

**¼" – 2"**

**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

**2½" – 3"**

**Suffix:**

FS – Flood detection sensor
LF – Without shutoff valves
NRS – Non-rising stem resilient seated gate valves
OSY – UL Classified and FM Approved outside stem and yoke resilient seated gate valves
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. (For more information download ES-AG/EL/TC at watts.com.)

## *Engineering Specification*

Job Name _____ Contractor _____

Job Location _____ Approval _____

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

Approval _____ Representative _____

**LEAD FREE***

# Series LF009

## Reduced Pressure Zone Assemblies

### ¼" – 3"

Series LF009 Reduced Pressure Zone assemblies are designed to protect potable water supplies in accordance with national plumbing codes and water authority requirements. These series are used in a variety of installations, including the prevention of health hazard cross-connections in piping systems or for containment at the service line entrance. They are also used in irrigation systems, boiler feed, water lines, and other installations requiring maximum protection. The body construction is fused with ArmorTek™ coating technology to resist corrosion due to microbial induced corrosion (MIC) or exposed metal substrate.* The series also features Lead Free* construction to comply with Lead Free* installation requirements.

The series features two in-line, independent check valves, captured springs, and replaceable check seats with an intermediate relief valve. Its compact modular design facilitates maintenance and assembly access. Sizes ¼" to 1" shutoffs have tee handles.

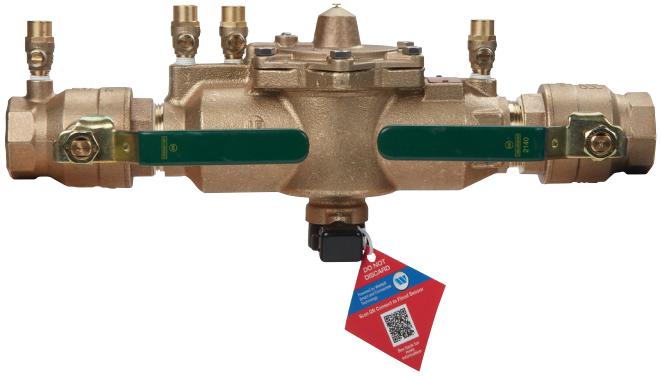
Series LF009 assemblies of sizes ½" to 3" include a flood sensor to detect excessive water discharges from the relief valve. The sensor is installed on the assembly exterior and does not alter assembly functions or certifications. The sensor relays a signal that triggers notification to facility personnel who can take corrective action, thus avoiding the possibility of ruinous flooding and costly 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.)

## 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
- ArmorTek™ coating technology to resist internal corrosion†



LF009M2-QT-FS

- Lead Free* cast copper silicon alloy body construction (¼" – 2")
- Fused epoxy coated cast iron body (2½" – 3")
- Ball valve test cocks — screwdriver slotted (¼" – 2")
- Large body passages provides low pressure drop
- Compact, space saving design
- No special tools required for servicing
- Sensor on the relief valve for flood detection (½" – 3")
- Flood alerts feature activated with add-on sensor connection kit, compatible with BMS and cellular communication

**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

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.

†Amortek coating applied to the 2½" and 3" models only.

## 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 valve body shall utilize a coating system with built-in electrochemical corrosion inhibitor and microbial inhibitor.† 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 3".

## Materials

**¼" – 2"**

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.

**2½" – 3"**

- FDA-approved epoxy-coated cast iron unibody with plastic seats
- Relief valve with stainless steel seat and trim
- Lead Free* cast copper silicon alloy body ball valve test cocks

## Model/Option

**¼" – 2"**

**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

**2½" – 3"**

**Suffix:**

FS – Flood detection sensor
LF – Without shutoff valves
NRS – Non-rising stem resilient seated gate valves
OSY – UL Classified and FM Approved outside stem and yoke resilient seated gate valves
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. (For more information download ES-AG/EL/TC at watts.com.)

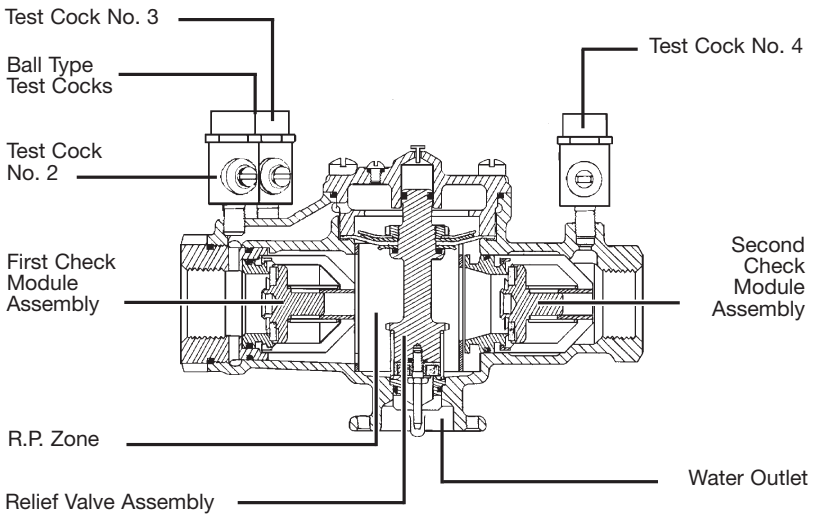
## Pressure – Temperature

**¼" – 2"**

Suitable for supply pressure up to 175 psi (12.1 bar)
Water temperature: 33°F – 180°F (0.5° – 82°C)

**2½" – 3"**

Suitable for supply pressures up to 175 psi (12.1 bar)
Water temperature: 110°F (43°C) continuous; 140°F (60°C) intermittent




** 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

USC-FCCCHR

ASSE, AWWA, CSA, IAPMO

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

Approval models NRS, OSY, PC, QT

UL Classified
2½" – 3" with OSY gate valves

¾" – 2" without shutoff valves (-LF), except LF009M3LF

## Insulated Enclosure

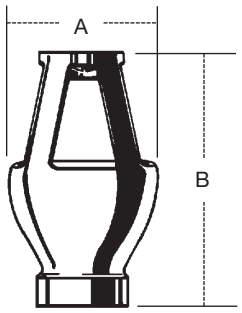
The WattsBox insulated enclosure is available for Series LF009.
For more information download ES-WB at watts.com.

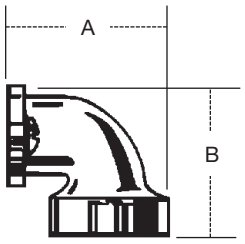
## Air Gaps and Elbows

Call customer service if you need assistance with technical details.

| MODEL | | DRAIN OUTLET | | DIMENSIONS | | | | WEIGHT | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | A | | B | | | |
| | For 909, 009, and 993 sizes | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *lb* | *kg* |
| 909AGA | ¼"–½" 009, ¾" 009M2/M3 | ½ | 13 | 2⅜ | 60 | 3⅛ | 79 | 0.625 | 0.28 |
| 909AGC | ¾"–1" 009/909, 1"–1½" 009M2 | 1 | 25 | 3¼ | 83 | 4⅞ | 124 | 1.5 | 0.68 |
| 909AGF | 1¼"–2" 009M1, 1¼"–3" 009/909, 2" 009M2, 4"–6" 993 | 2 | 51 | 4⅜ | 111 | 6¾ | 171 | 3.25 | 1.47 |
| 909AGK | 4"–6" 909, 8"–10" 909M1 | 3 | 76 | 6⅜ | 162 | 9⅝ | 244 | 6.25 | 2.83 |
| 909AGM | 8"–10" 909 | 4 | 102 | 7⅜ | 187 | 11¼ | 286 | 15.5 | 7.03 |
| 909ELA | ¼"–½" 009, ¾" 009M2/M3 | – | – | – | – | – | – | – | – |
| 909ELC | ¾"–1" 009/909 | – | – | 2⅜ | 60 | 2⅜ | 60 | 0.38 | 0.17 |
| 909ELF* | 1¼"-2" 009M1, 1¼"–2" 009/909, 2" 009M2, 4"–6" 993 | – | – | 3⅝ | 92 | 3⅝ | 92 | 2 | 0.91 |
| 909ELH* Vertical | 2½"–3" 009/909 | – | – | – | – | – | – | – | – |

*Epoxy coated

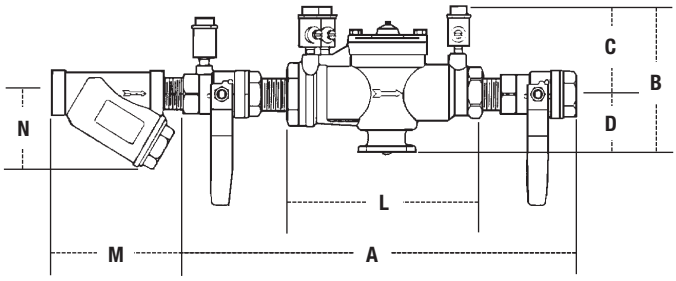


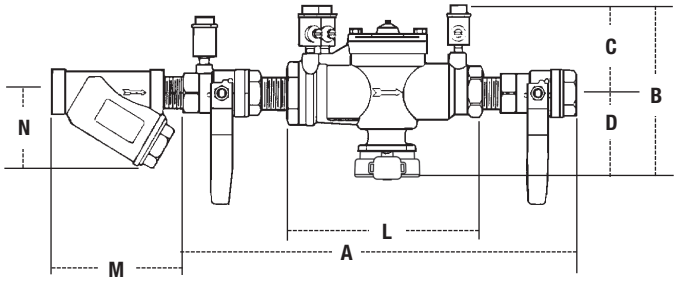
# Dimensions – Weight

Call customer service if you need assistance with technical details.

## ¼" – ⅜"

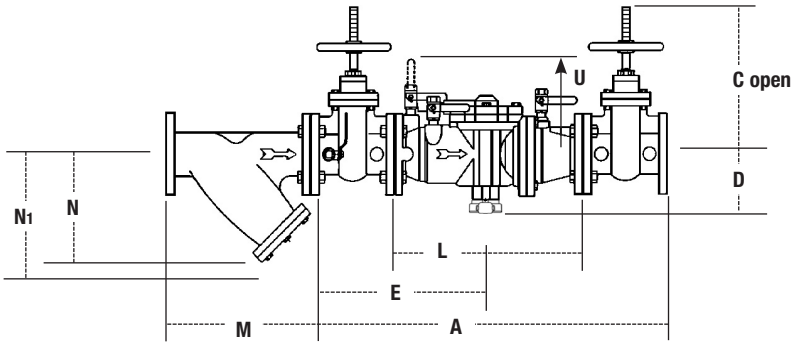


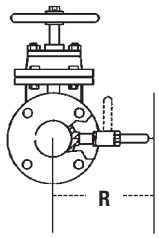

## ½" – 2"

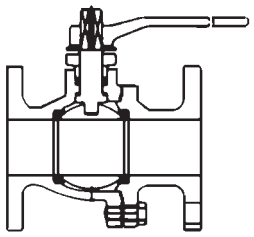



| SIZE | DIMENSIONS (APPROX.) | | | | | | | | | | | | | | WEIGHT | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | | B | | C | | D | | L | | M | | N | | | |
| *in.* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in* | *mm* | *in* | *mm* | *lb* | *kg* |
| ¼ | 10 | 250 | 4⅝ | 117 | 3⅜ | 86 | 1¼ | 32 | 5½ | 140 | 2⅜ | 60 | 2½ | 64 | 5 | 2 |
| ⅜ | 10 | 250 | 4⅝ | 117 | 3⅜ | 86 | 1¼ | 32 | 5½ | 140 | 2⅜ | 60 | 2½ | 64 | 5 | 2 |
| ½ | 10 | 250 | 5⅞ | 149 | 3⅜ | 86 | 2½ | 64 | 5½ | 140 | 2¾ | 70 | 2¼ | 57 | 5 | 2 |
| ¾ | 10¾ | 273 | 6¼ | 159 | 3½ | 89 | 2¾ | 70 | 6¾ | 171 | 3⅜₁₆ | 81 | 2¾ | 70 | 6 | 3 |
| 1 | 14½ | 368 | 6¼ | 159 | 3 | 76 | 3¼ | 83 | 9½ | 241 | 3¾ | 95 | 3 | 76 | 12 | 5 |
| 1¼ | 17⅜ | 441 | 6¾ | 169 | 3½ | 89 | 3¼ | 83 | 11⅜ | 289 | 4⅞₁₆ | 113 | 3½ | 89 | 15 | 6 |
| 1½ | 17⅞ | 454 | 6¾ | 169 | 3½ | 89 | 3¼ | 83 | 11⅛ | 283 | 4⅞ | 124 | 4 | 102 | 16 | 7 |
| 2 | 21⅜ | 543 | 8¾ | 222 | 4½ | 114 | 4¼ | 108 | 13½ | 343 | 5⅝₁₆ | 151 | 5 | 127 | 30 | 13 |

## 2½" – 3"



Watts G-4000 Series
QT – Ball Valves

| STRAINER SIZE | | DIMENSIONS (APPROX.) | | | | | | WEIGHT | |
|---|---|---|---|---|---|---|---|---|---|
| | | M | | N | | N1† | | | |
| *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *lb* | *kg* |
| 2½ | 65 | 10 | 254 | 6½ | 165 | 9¾ | 248 | 28 | 12.7 |
| 3 | 80 | 10⅛ | 257 | 7 | 178 | 10 | 254 | 34 | 15.4 |

†Clearance for servicing

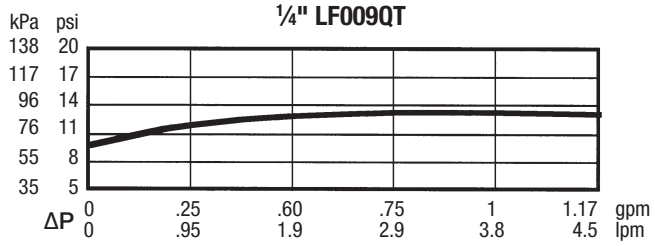
| MODEL | SIZE | DIMENSIONS (APPROX.) | | | | | | | | | | | | | | WEIGHT | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | A | | C | | D | | E | | L | | R | | U | | | |
| | *in.* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *lb* | *kg* |
| LF009LF | 2½ | — | — | — | — | 5⅝ | 143 | — | — | 18⅛ | 460 | — | — | 10⅝ | 270 | 76 | 34.5 |
| LF0090SY | 2½ | 33¼ | 845 | 15⅞ | 403 | 5⅝ | 143 | 16⅜ | 416 | 18⅛ | 460 | 7¾ | 197 | 10⅝ | 270 | 166 | 75.3 |
| LF009NRS | 2½ | 33¼ | 845 | 11⅜ | 289 | 5⅝ | 143 | 16⅜ | 416 | 18⅛ | 460 | 7¾ | 197 | 10⅝ | 270 | 161 | 73.0 |
| LF009LF | 3 | — | — | — | — | 5⅝ | 143 | — | — | 18⅛ | 460 | — | — | 10⅝ | 270 | 76 | 34.5 |
| LF0090SY | 3 | 34¼ | 870 | 18½ | 470 | 5⅝ | 143 | 16⅝ | 422 | 18⅛ | 460 | 8¾ | 222 | 10⅝ | 270 | 198 | 89.8 |
| LF009NRS | 3 | 34¼ | 870 | 12¾ | 324 | 5⅝ | 143 | 16⅝ | 422 | 18⅛ | 460 | 8¾ | 222 | 10⅝ | 270 | 191 | 86.6 |

## Capacity

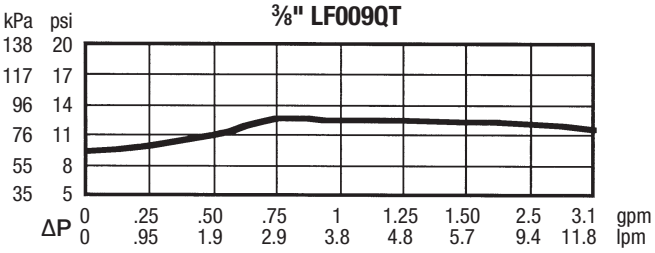
Performance as established by an independent testing laboratory.

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

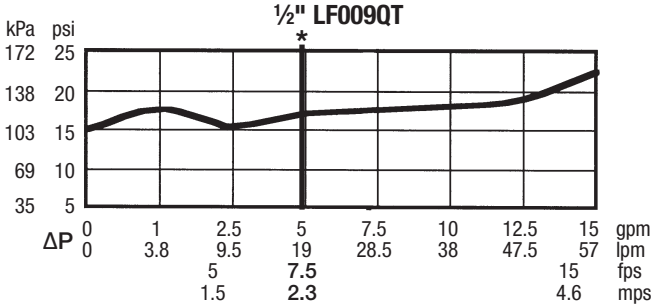
### ¼" LF009QT



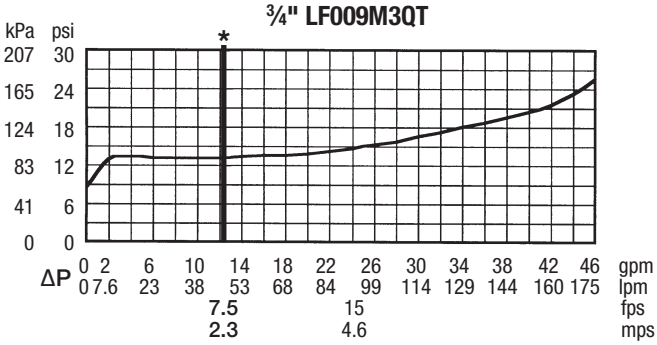

### ⅜" LF009QT



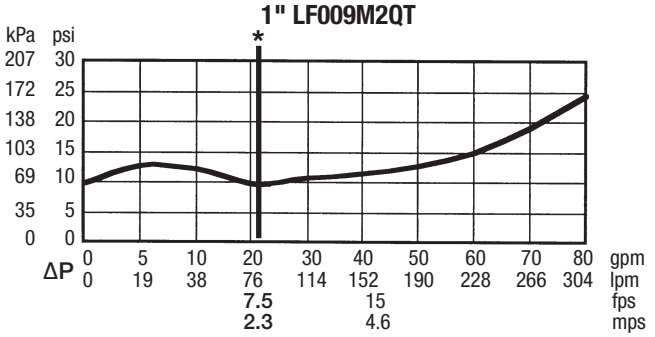

### ½" LF009QT



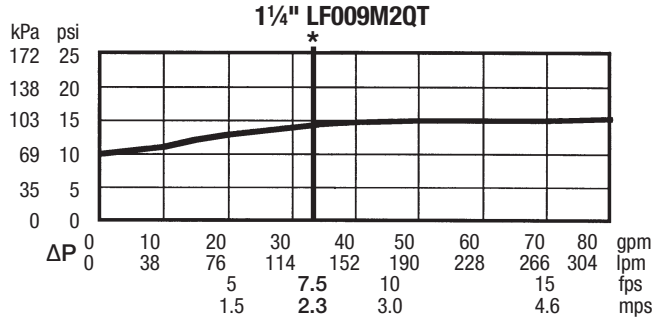

### ¾" LF009M3QT



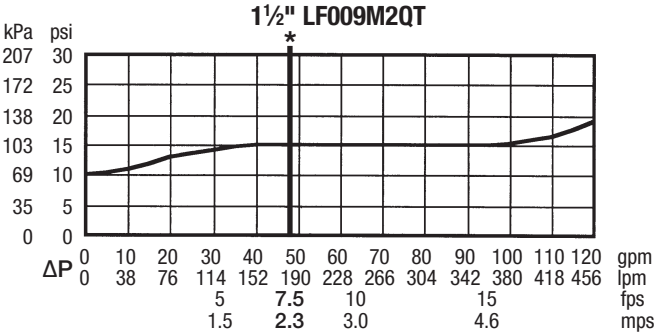

### 1" LF009M2QT



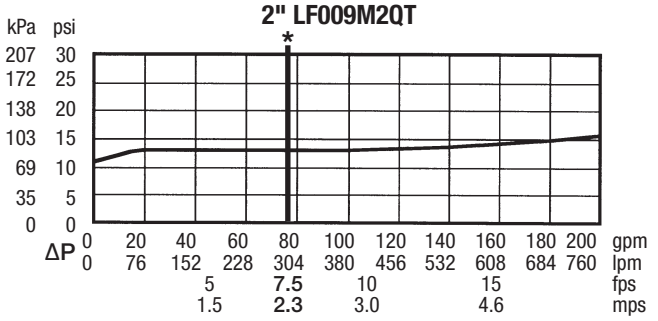

### 1¼" LF009M2QT



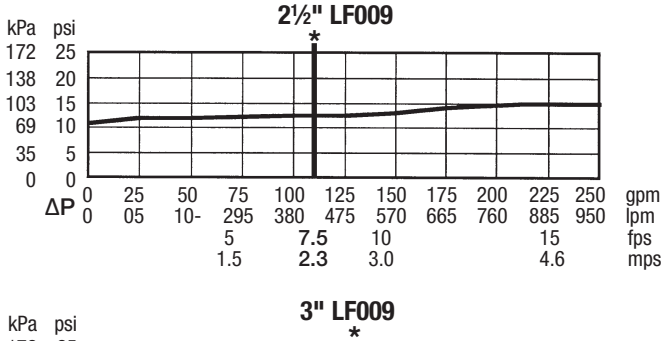

### 1½" LF009M2QT



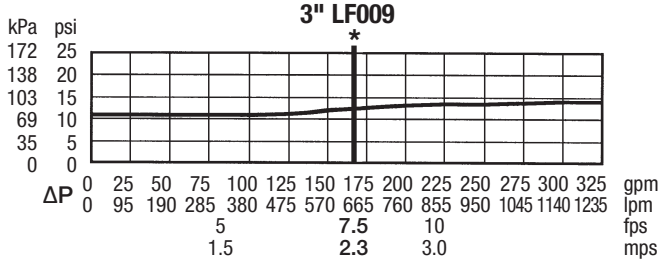

### 2" LF009M2QT




### 2½" LF009



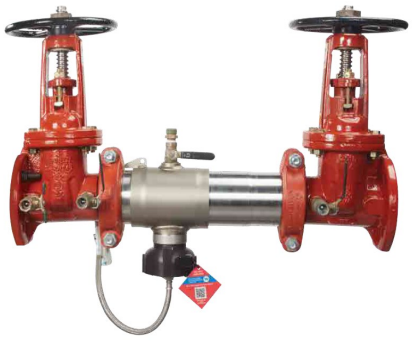

### 3" LF009



# BACKFLOW PREVENTERS

## SERIES 957

Reduced Pressure Zone Assemblies



957-OSY with Flood Sensor

A Reduced Pressure Zone (RPZ) valve in a backflow preventer creates a pressure differential to prevent contaminated water from flowing back into a potable water supply. It uses two independent check valves and a relief valve to create a zone of reduced pressure. If either check valve fails, the relief valve opens, discharging water and preventing backflow.

| JABO # | SIZE |
|---|---|
| 761-00500 | 3" |
| 761-00505 | 4" |
| 761-00510 | 6" |

| STOCK PART NUMBER CONSIST OF | |
|---|---|
| FS | Flood Sensor on Reliev Valves for Flood detection |
| OSY | UL Classified and FM Approved outside stem and yoke resilient seated gate valves |

### OPTIONS

### Model/Option

| | |
|---|---|
| FS | Flood sensor on relief valve for flood detection |
| NRS | Non-rising stem, resilient seated gate valves |
| OSY | UL Classified and FM Approved outside stem and yoke resilient seated gate valves |
| N | N-pattern orientation |
| Z | Z-pattern orientation |
| BFG | UL Classified and FM Approved grooved gear operated butterfly valves with tamper switch |
| QT | 2½" - 4" quarter-turn ball valves |
| OSY FxG** | Flanged inlet gate connection and grooved outlet gate connection |
| OSY GxF** | Grooved inlet gate connection and flanged outlet gate connection |
| OSY GxG** | Grooved inlet gate connection and grooved outlet gate connection |

## *Engineering Specification*

Job Name _____ Contractor _____

Job Location _____ Approval _____

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

Approval _____ Representative _____

**LEAD FREE***

# Series 957

## Reduced Pressure Zone Assembly

### 2½" – 10"

Series 957 Reduced Pressure Zone assembly provides protection to the potable water system from contamination in accordance with national plumbing codes. The assemblies are normally used in health hazard applications for protection against backsiphonage or backpressure.

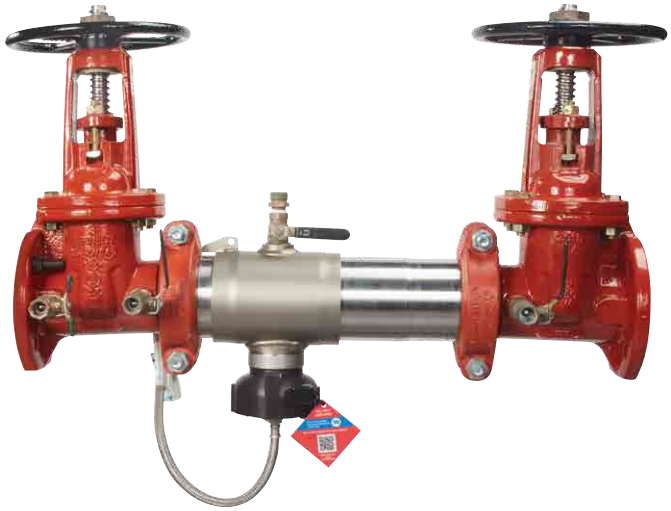
The series includes a flood sensor to detect excessive water discharges from the relief valve. The sensor is installed on the assembly exterior and does not alter assembly functions or certifications. The sensor relays a signal that triggers notification to facility personnel for corrective action, thus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

***NOTICE***

An add-on connection kit is required to activate the flood sensor. Without the connection kit, the sensor is a passive component that has no communication with any other device. (For more information download RP/IS-957/957DCDA.)

### Features

- Sizes 2½", 3", and 4" available with quarter-turn ball valve shutoffs
- Replaceable check disc rubber
- Extremely compact design
- 70% Lighter than traditional designs
- 304 (Schedule 40) stainless steel housing and sleeve
- Groove fittings allow integral pipeline adjustment
- Patented torsion spring checks provide lowest pressure loss
- Unmatched ease of serviceability
- Bottom mounted cast stainless steel relief valve
- Available with grooved butterfly valve shutoffs
- Sensor on relief valve for flood detection
- Flood alerts feature activated with add-on sensor connection kit, compatible with BMS and cellular network communication



**957-OSY with Flood Sensor**

***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 issues, power outages, or improper installation.

***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

The Reduced Pressure Zone assembly shall consist of two independent torsion spring check modules, a differential pressure relief valve located between and below the two modules, two drip tight shutoff valves, and required torsion spring check modules and relief valve shall be contained with a sleeve accessible single housing constructed from 304 (Schedule 40) stainless steel pipe with groove end connections. Torsion spring checks shall have replaceable elastomer discs and in operation produce drip tight closure against the reverse flow of liquid caused by backpressure or backsiphonage. The assembly shall be a Watts Series 957, and shall include a flood sensor on the relief valve for flood detection.

## Model/Option

| | |
|---|---|
| FS | Flood sensor on relief valve for flood detection |
| NRS | Non-rising stem, resilient seated gate valves |
| OSY | UL Classified and FM Approved outside stem and yoke resilient seated gate valves |
| N | N-pattern orientation |
| Z | Z-pattern orientation |
| BFG | UL Classified and FM Approved grooved gear operated butterfly valves with tamper switch |
| QT | 2½" - 4" quarter-turn ball valves |
| OSY FxG** | Flanged inlet gate connection and grooved outlet gate connection |
| OSY GxF** | Grooved inlet gate connection and flanged outlet gate connection |
| OSY GxG** | Grooved inlet gate connection and grooved outlet gate connection |

## Materials

| | |
|---|---|
| Housing & Sleeve | 304 (Schedule 40) stainless steel |
| Elastomers | EPDM, silicone, and Buna-N |
| Torsion Spring Checks | Noryl®, stainless steel |
| Check Discs | Reversible silicone or EPDM |
| Test Cocks | Lead Free* bronze body |
| Pins & Fasteners | 300 Series stainless steel |
| Springs | Stainless steel |

## Pressure — Temperature

| | |
|---|---|
| Temperature Range | 33°F – 140°F (0.5°C – 60°C) |
| Maximum Working Pressure | 175 psi (12.1 bar) |

## Approvals

- Approved by the Foundation for Cross-Connection Control and Hydraulic Research at The University of Southern California (FCCCHR-USC), excluding 10" N-pattern installation as well as 6" and 10" Z-pattern installations
- AWWA C511-97

1013 B64.4 (**BFG & OSY Only)

For additional approval information, contact the factory or visit watts.com.

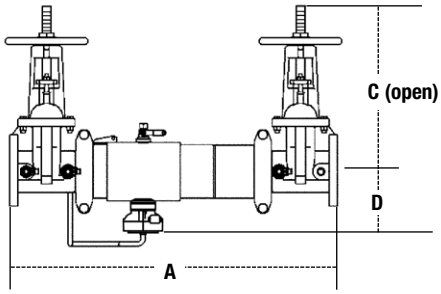
***NOTICE***

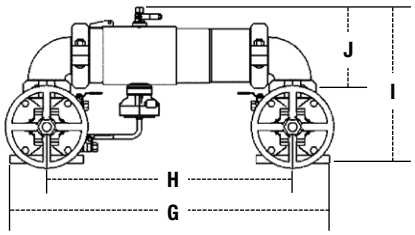
When installing a drain line on Series 957 backflow preventers, use 957AG air gaps. Attach the air gap brackets directly onto the flood sensor. For additional information, refer to ES-AG/EL/TC at watts.com

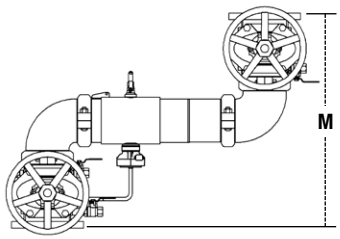
**Options for the gate valve:
– Consult factory for dimensions.
– Available with grooved NRS gate valves; consult factory.
– Post indicator plate and operating nut available; consult factory.

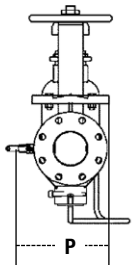
Noryl® is a registered trademark of SHPP Global Technologies B.V.

# Dimensions - Weight



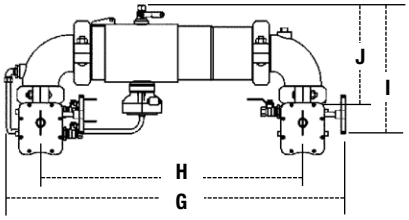



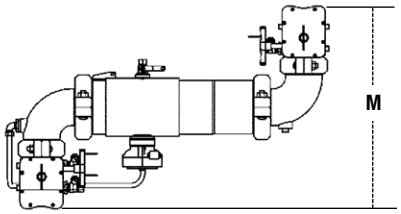



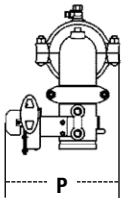




### *957, 957N, 957Z*

| SIZE | DIMENSIONS | | | | | | | | | | | | | | | | | | WEIGHT | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | | C (OSY) | | C (NRS) | | D | | G | | H | | I | | J | | M | | P | | 957NRS | | 957OSY | | 957N NRS | | 957N OSY | |
| *in.* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *lb* | *kg* | *lb* | *kg* | *lb* | *kg* | *lb* | *kg* |
| 2½ | 30¾ | 781 | 16⅜ | 416 | 9⅜ | 238 | 6½ | 165 | 29 1/16 | 738 | 21½ | 546 | 15½ | 393 | 8 13/16 | 223 | 21¼ | 540 | 9 3/16 | 234 | 118 | 54 | 128 | 58 | 126 | 57 | 136 | 62 |
| 3 | 31¾ | 806 | 18⅞ | 479 | 10¼ | 260 | 6 11/16 | 170 | 30¼ | 768 | 22¼ | 565 | 17⅛ | 435 | 9 3/16 | 233 | 23 | 584 | 10½ | 267 | 134 | 61 | 148 | 67 | 147 | 67 | 161 | 73 |
| 4 | 33¾ | 857 | 22¾ | 578 | 12 3/16 | 310 | 7 | 178 | 33 | 838 | 23½ | 597 | 18½ | 470 | 9 15/16 | 252 | 26¼ | 667 | 11 3/16 | 284 | 164 | 74 | 164 | 74 | 187 | 85 | 187 | 85 |
| 6 | 43½ | 1105 | 30⅛ | 765 | 16 | 406 | 8½ | 216 | 44¾ | 1137 | 33½ | 851 | 23 3/16 | 589 | 13 1/16 | 332 | 34¼ | 870 | 15 | 381 | 276 | 125 | 298 | 135 | 317 | 144 | 339 | 154 |
| 8 | 49¾ | 1264 | 37¾ | 959 | 19 15/16 | 506 | 9 11/16 | 246 | 54⅛ | 1375 | 40⅛ | 1019 | 27 7/16 | 697 | 15 11/16 | 399 | 36⅞ | 937 | 17 3/16 | 437 | 441 | 200 | 483 | 219 | 516 | 234 | 558 | 253 |
| 10 | 57¾ | 1467 | 45¾ | 1162 | 23 13/16 | 605 | 11 3/16 | 285 | 66 | 1676 | 49½ | 1257 | 32½ | 826 | 17 5/16 | 440 | 44½ | 1124 | 20 | 508 | 723 | 328 | 783 | 355 | 893 | 405 | 950 | 431 |

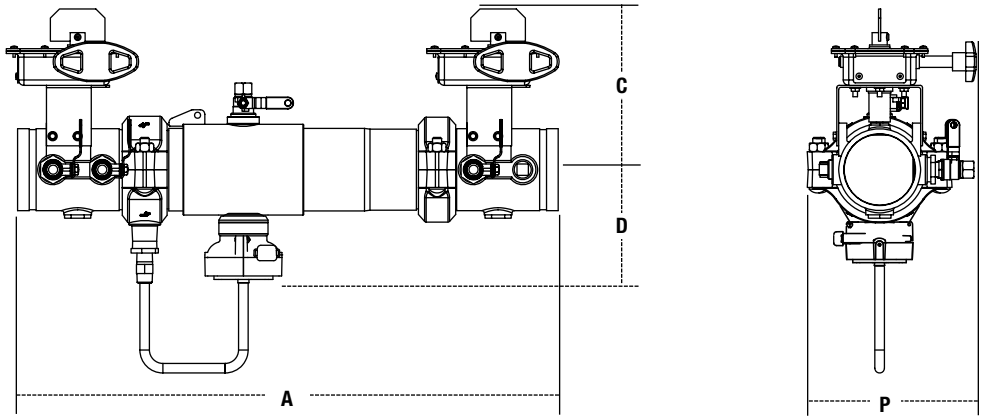


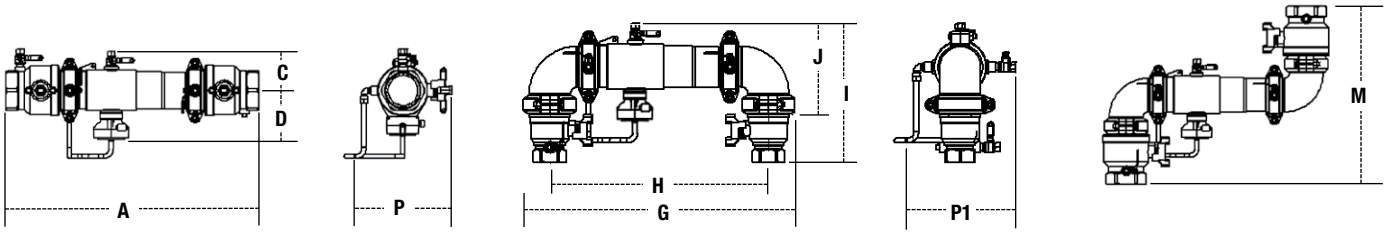

### *957NBFG, 957ZBFG*

| SIZE | DIMENSIONS | | | | | | | | | | | | WEIGHT | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | G | | H | | I | | J | | M | | P | | 957N/957Z | |
| *in.* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *lb* | *kg* |
| 2½ | 32½ | 826 | 23 | 584 | 15½ | 394 | 9½ | 241 | 19¾ | 502 | 11 13/16 | 300 | 67 | 30 |
| 3 | 34 | 864 | 24 | 610 | 16 5/16 | 414 | 10 1/16 | 256 | 21¼ | 540 | 12⅛ | 308 | 70 | 32 |
| 4 | 35⅝ | 905 | 25½ | 648 | 17 3/16 | 437 | 10 15/16 | 279 | 23½ | 597 | 12⅝ | 321 | 87 | 39 |
| 6 | 46½ | 1181 | 35¼ | 895 | 20½ | 521 | 13½ | 343 | 27¼ | 692 | 15 | 382 | 160 | 73 |




### *957 BFG*

| SIZE | DIMENSIONS | | | | | | | | WEIGHT | |
|---|---|---|---|---|---|---|---|---|---|---|
| | A | | C | | D | | P | | | |
| *in.* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *lb* | *kg* |
| 4 | 29 | 737 | 7¾ | 197 | 6⅜ | 162 | 9½ | 241 | 66 | 30 |
| 6 | 36½ | 927 | 9 11⁄16 | 246 | 7 7⁄16 | 189 | 14¼ | 362 | 122 | 55 |




### *957QT*

| SIZE | DIMENSIONS | | | | | | | | | | | | | | | | | | WEIGHT | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | | C | | D | | G | | H | | I | | J | | M | | P | | P1 | | QT | | QTN | |
| *in.* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *lb* | *kg* | *lb* | *kg* |
| 2 1⁄2 | 27 1⁄2 | 698 | 4 7⁄8 | 124 | 6 7⁄8 | 175 | 30 1⁄4 | 768 | 21 1⁄2 | 546 | 16 1⁄16 | 407 | 11 3⁄8 | 289 | 19 7⁄8 | 505 | 11 5⁄16 | 287 | 11 5⁄16 | 287 | 46 | 21 | 57 | 26 |
| 3 | 28 | 711 | 4 7⁄8 | 124 | 6 7⁄8 | 175 | 30 1⁄4 | 768 | 22 1⁄4 | 565 | 16 9⁄16 | 420 | 11 3⁄8 | 289 | 20 7⁄8 | 531 | 11 5⁄16 | 287 | 11 5⁄16 | 287 | 56 | 25 | 67 | 30 |
| 4 | 28 3⁄4 | 730 | 4 7⁄8 | 124 | 6 7⁄8 | 175 | 30 1⁄4 | 768 | 23 1⁄2 | 597 | 18 5⁄16 | 465 | 11 3⁄8 | 289 | 24 3⁄8 | 619 | 11 5⁄16 | 287 | 11 5⁄16 | 287 | 76 | 34 | 87 | 39 |

## Capacity

Flow curves as tested by Underwriters Laboratories.

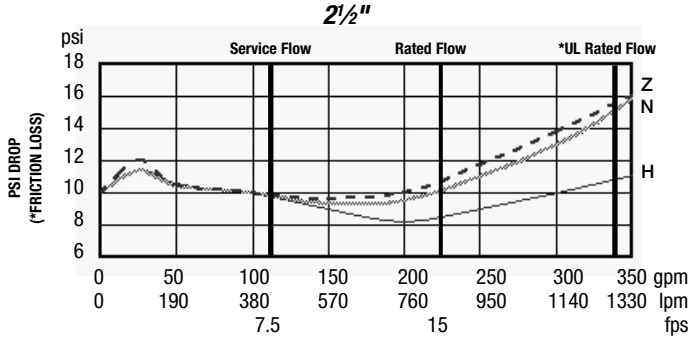
Flow capacity chart identifies valve performance based upon rated water velocity up to 25 fps.

- Service Flow is typically determined by a rated velocity of 7.5 fps based upon schedule 40 pipe.
- Rated Flow identifies maximum continuous duty performance determined by AWWA.
- UL Flow Rate is 150% of Rated Flow and is not recommended for continuous duty.
- AWWA Manual M22 (Appendix C) recommends that the maximum water velocity in services be not more than 10 fps.

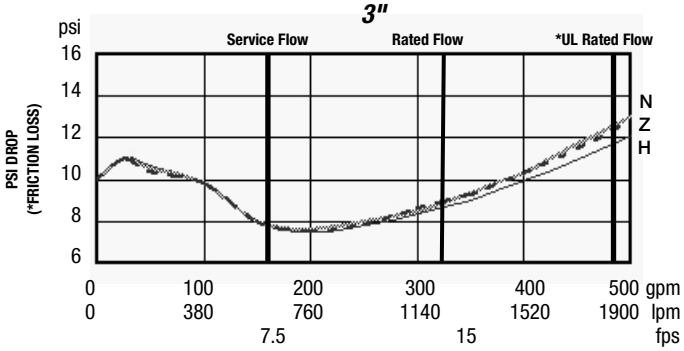
Flow characteristics collected using butterfly shutoff valves.

Horizontal N-pattern Z-pattern

### 2½"




### 3"

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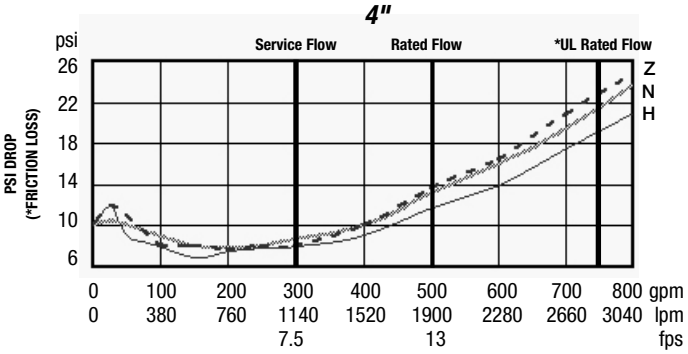
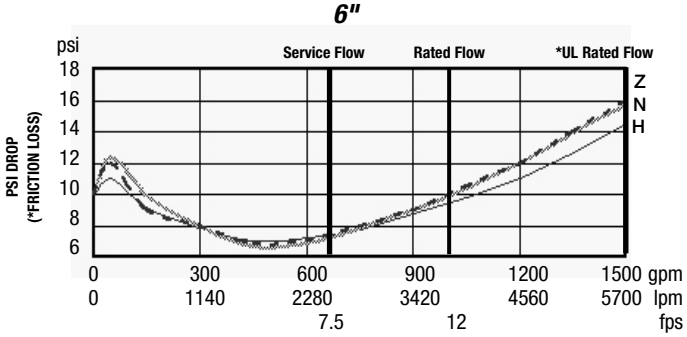
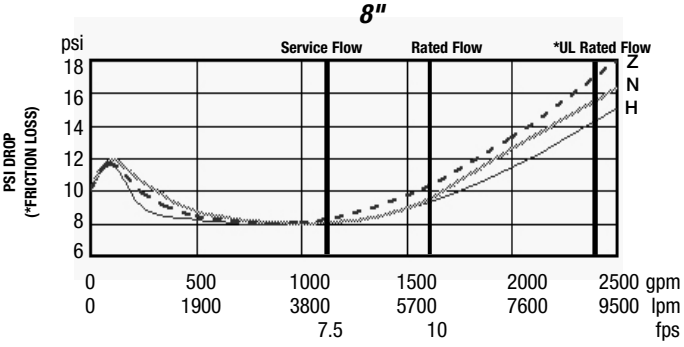


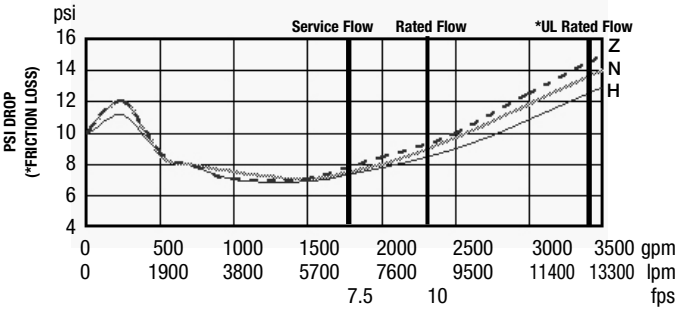

### 6"



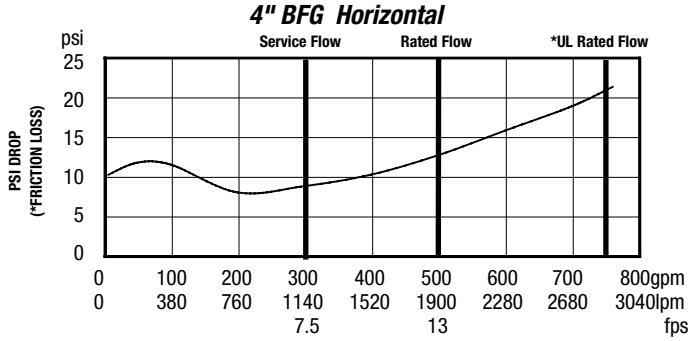

### 8"



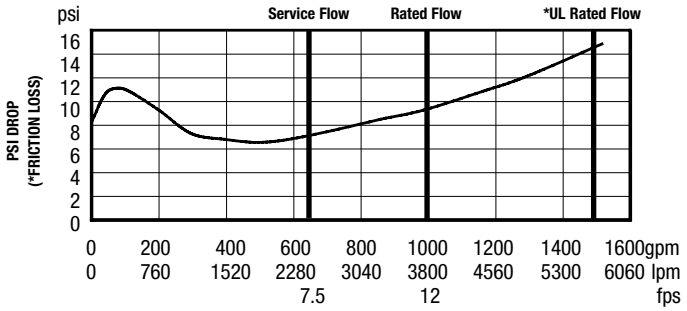

### 10"




### 4" BFG Horizontal

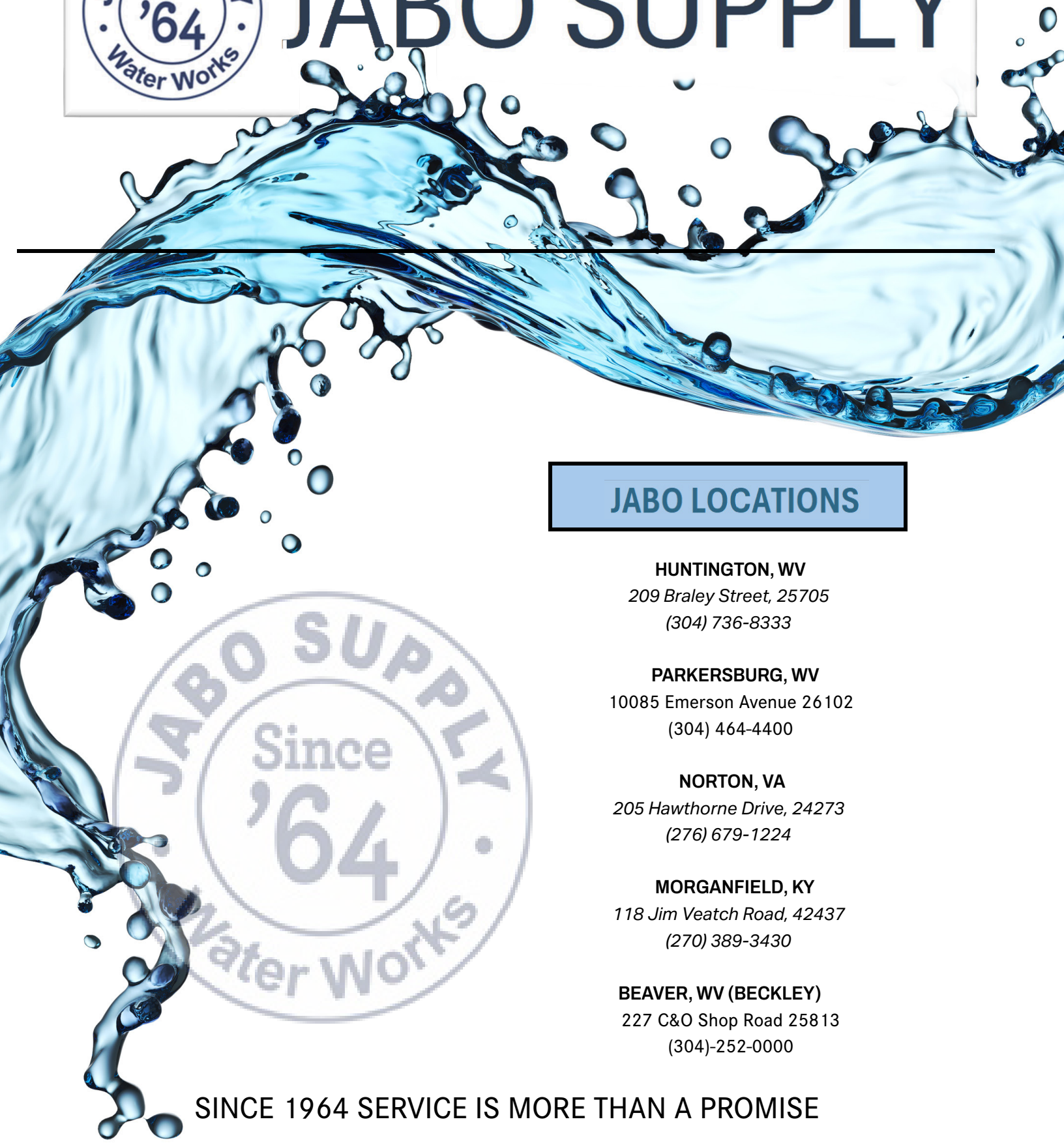



### 6" BFG Horizontal




WATTS®

# JABO SUPPLY



## JABO LOCATIONS

**HUNTINGTON, WV**
*209 Braley Street, 25705*
*(304) 736-8333*

**PARKERSBURG, WV**
10085 Emerson Avenue 26102
(304) 464-4400

**NORTON, VA**
*205 Hawthorne Drive, 24273*
*(276) 679-1224*

**MORGANFIELD, KY**
*118 Jim Veatch Road, 42437*
*(270) 389-3430*

**BEAVER, WV (BECKLEY)**
227 C&O Shop Road 25813
(304)-252-0000

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