

# **Watts Regulator Company**



**Condensed Catalog**



# Watts Regulator Company

Since 1874 Watts Regulator Company has been a leader in valve technology, offering a wide variety of products for applications in the commercial, fire protection, heating & hydronics, irrigation, residential, steam and waterworks markets. As you will see by looking through our general catalog, Watts has truly become the single source for plumbing & heating and water quality products. Why not make Watts your single source for quality plumbing products?

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# Series U5 (1/2" - 2")

## High Performance Water Pressure Reducing Valves

- Provides water pressure control solutions for residential, commercial, and industrial applications
- Basic design and construction is time tested and proven
- Offers durability and years of continuous trouble-free operation
- Water savings up to 30%\* (see page 11)



U5

### Specifications

- Temperature Range: 33°F – 160°F (5°C – 71°C)
- Maximum Working Pressure: 300psi (21 bars)
- Adjustable Reduced Pressure Range: 25 – 75psi (172 – 517kPa)
- Standard Reduced Pressure Setting: 50psi (345kPa)

### Standards

Meets requirements of ASSE Standard 1003, (ANSI A112.26.2), CSA Standard B356, Southern Standard Plumbing Code and listed by IAPMO.



### Models

**U5** – NPT threaded female union inlet x NPT female outlet, 1/2" – 1" (15 – 25mm).

**U5-S** – Solder union inlet x NPT female outlet, 1/2" – 1" (15 – 25mm).

**U5B** – NPT threaded female union inlet x NPT female outlet w/built in thermal expansion bypass.

**U5B-S** – Solder union inlet x NPT female outlet w/built in thermal expansion bypass.

**5M3-Z6** – Water meter threaded connections and 7 1/2" (190mm) lay length for new or existing meter box installations. For 5/8" (16mm), 5/8" x 3/4" (16 x 20mm) or 3/4" (20mm) meter setters or resetters.

**U5-Z9** – 3/4" (20mm) NPT threaded male union inlet and 3/4" (20mm) NPT threaded female outlet connection.

### Options

**add Suffix:**

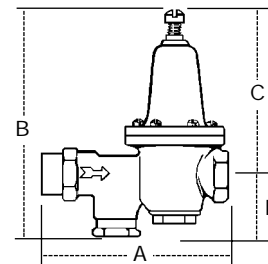
- G Gauge tapping
- GG Gauge tapping and 160psi (11 bar) gauge
- HP High pressure range 75 – 125psi (5.27 – 8.79 bar)
- LP Low pressure range 10 – 35psi (69 – 241 kPa)
- SC Sealed spring cage for high-rise applications
- Z3 Sealed spring cage and corrosion resistant adjusting & cage screws for waterworks pit installations

For additional information, request literature ES-U5.

\*\*Bypass will not work if inlet pressure is above 150psi (10.34 bars)

### Features

- Integral stainless steel strainer
- Replaceable seat module
- Bronze body construction
- Serviceable in line
- Bypass feature controls thermal expansion pressure (U5B)\*\*
- High temperature resistant reinforced diaphragm for hot water



MODEL †	SIZE (DN)		DIMENSIONS (APPROX.)								WEIGHT	
	in.	mm	A		B		C		D		lbs.	kg.
U5/U5B	1/2	15	5 5/8	143	5 7/8	149	4 1/4	108	1 5/8	41	4	1.8
U5/U5B	3/4	20	6 3/16	157	6 7/8	175	5	127	1 7/8	48	5	2.3
U5/U5B	1	25	6 5/8	168	7 3/8	187	5 3/8	137	2	50	6	2.7
U5B	1 1/4	32	7 15/16	191	8 3/8	213	6 1/8	155	2 1/4	57	9	4.0
U5B	1 1/2	40	9 7/16	240	9 3/8	238	6 1/2	165	2 7/8	73	14	6.3
U5B	2	50	10 7/8	276	12 1/4	311	9	229	3 1/4	83	23	10.4

† Dimensions for all models are shown on literature ES-U5.

# Series 25AUB-Z3 (1/2" – 2")

## Standard Capacity Water Pressure Reducing Valves

- Accurate water pressure control
- Bronze body construction
- Fast and easy adjustment
- Popular choice for residential and commercial applications
- Water Savings up to 30%\* (see page 11)



25AUB-Z3

### Specifications

- Temperature Range: 33°F - 160°F (5°C - 71°C)
- Maximum Working Pressure: 300psi (21 bars)
- Adjustable Reduced Pressure Range: 25-75psi (172 - 517kPa)
- Standard Reduced Pressure Setting: 50psi (345kPa)

### Standards

Meets requirements of ASSE Standard 1003 (ANSI A112.26.2), CSA Standard B356, Southern Standard Plumbing Code and Listed by IAPMO.



### Models

- 25AUB-Z3** – NPT threaded female union inlet x NPT female outlet
- 25AUB-S-Z3** – Solder union inlet x NPT female outlet
- 25AUB-DU-Z3** – Double Union – NPT threaded union female inlet and outlet
- 25AUB-S-DU-Z3** – Double Union – Solder union inlet and outlet
- 25AUB-DU-THDxPEX-Z3** – Double Union – NPT threaded female union inlet and PEX union outlet
- 25AUB-DU-CPVC-Z3** – Double Union – CPVC union inlet and outlet
- 25AUB-DU-LF-Z3** – Double union body less union fittings

### Options

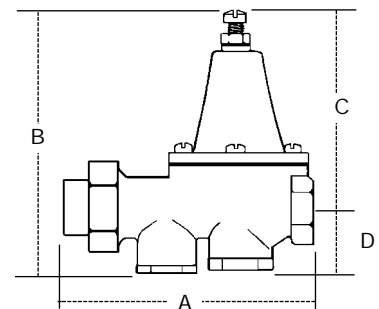
- G Gauge tapping 1/8"
- GG Gauge tapping and 160psi (11 bar) gauge
- HP High pressure range 75-125psi (5.27 – 8.79 bar)
- LP Low pressure range 10-35psi (69 – 241 kPa)
- Z7 400psi (28 bar) initial pressure, 1/2" (20mm) models only

For additional information, request literature ES-25AUB.

\*\*Bypass will not work if inlet pressure is above 150psi (10.34 bars)

### Features

- Union inlet connection
- Integral stainless steel strainer
- Replaceable seat module
- Bronze body construction
- Serviceable in line
- Bypass feature controls thermal expansion pressure\*\*
- High temperature resistant reinforced diaphragm for hot water
- Standard construction includes Z3 sealed spring cage and corrosion resistant adjusting & cage screws for outdoor/waterworks pit installations



MODEL †	SIZE (DN)		DIMENSIONS (APPROX.)								WEIGHT	
	in.	mm	A		B		C		D		lbs.	kg.
25AUB-Z3	1/2	15	5 3/8	137	7	178	5 1/2	140	1 1/2	38	3.5	1.6
25AUB-Z3	3/4	20	5 5/16	135	7	178	5 1/2	140	1 1/2	38	3.5	1.6
25AUB-Z3	1	25	6	152	8	203	6 1/4	159	1 3/4	44	6.5	2.9
25AUB-Z3	1 1/4	32	8 3/4	222	9	229	6 7/8	175	2 1/8	54	10.0	4.5
25AUB-Z3	1 1/2	40	8 3/4	222	9 1/2	241	7 1/8	181	2 3/8	60	10.0	4.5
25AUB-Z3	2	50	9 3/4	235	11 1/4	286	8	203	3 1/4	83	15.0	6.8

† Dimensions for all models are shown on literature ES-25AUB.

For assistance, contact your local authorized Watts agent or visit our website at [www.wattsreg.com](http://www.wattsreg.com)

# Series N35B (1/2" – 1")

## Compact, Versatile Water Pressure Reducing Valves

- Bronze body construction
- Practical solution for residential and light commercial water pressure regulation
- Compact design, built-in strainer and bypass
- Water savings up to 30%\* (see page 11)

### Specifications

- Temperature Range: 33°F – 180°F (5°C – 82°C)
- Maximum Working Pressure: 400psi (27.6 bars)
- Adjustable Reduced Pressure Range: 25 – 75psi (172 – 517 kPa)
- Standard Reduced Pressure Setting: 50psi (345 kPa)

### Standards

Meets requirements of ASSE Standard 1003 (ANSI A112.26.2); Listed by IAPMO.



### Models

- N35B** – NPT threaded female inlet x NPT female outlet
- N35BU** – NPT threaded female union inlet x NPT female outlet
- N35BU-S** – Solder union inlet x NPT female outlet
- N35BDU** – Double Union - NPT threaded union female inlet and outlet
- N35BDU-S** – Double Union - Solder union inlet and outlet
- N35BDU-PEX** – Double Union - PEX union inlet and outlet
- N35BDU-CPVC** – Double Union - CPVC union inlet and outlet

### Features

- Single union inlet connection
- Double union inlet & outlet connections (Option DU)
- Integral stainless steel strainer, removable when bottom plug is removed
- Replaceable seat module
- Bronze body construction
- Serviceable in line
- Bypass feature controls thermal expansion pressure\*\*

For additional information, request literature ES-N35B.

\*\*Bypass will not work if inlet pressure is above 150psi (10.34 bars)

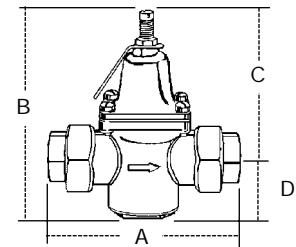


N35BDU

### Options

**add Suffix:**

- G Gauge tapping
- GG Gauge tapping and 160psi (11 bar) gauge
- LP Low pressure range 10 – 35psi (69 – 241 kPa)
- SC Sealed spring cage for high-rise applications
- Z3 Sealed spring cage and corrosion resistant adjusting & cage screws for waterworks pit installations
- Z6 Water meter threaded male connections for meter box installations; also uses sealed spring cage and corrosion resistant spring cage screws
- Z8 Water meter threaded female solder connections for meter box installations
- Z9 1" (25mm) meter threaded union inlet x 1/2" NPT threaded outlet with 90° adjustable elbows. Request literature ES-N35B-Z9 for more information



MODEL †	SIZE (DN)		DIMENSIONS (APPROX.)								WEIGHT	
	in.	mm	A		B		C		D		lbs.	kg.
N35BDU	1/2	15	4 13/16	122	5 1/8	130	3 11/16	94	1 7/16	37	3	1.4
N35BDU	3/4	20	4 3/4	121	5 1/8	130	3 3/4	95	1 3/8	35	3	1.4
N35BDU	1	25	4 5/8	117	5 1/8	130	3 9/16	90	1 9/16	40	3.5	1.6

† Dimensions for all models are shown on literature ES-N35B.

# Series N45B (1/2" – 1")

## Water Pressure Regulator

- Bronze body construction
- Ideal for residential and commercial applications
- Integral stainless steel strainer and built-in bypass
- Water savings up to 30%\* (see page 11)



N45BU

### Specifications

- Temperature Range: 33°F – 180°F (5°C - 82°C)
- Maximum Working Pressure: 400psi (27.6 bars)
- Adjustable Reduced Pressure Range: 25 – 75psi (172 – 517 kPa)
- Standard Reduced Pressure Setting: 50psi (345 kPa).

### Standards

Meets requirements of ASSE Standard 1003 (ANSI A112.26.2); CSA Standard, B356 and Listed by IAPMO, City of Los Angeles.



### Models

- N45B** – NPT threaded female inlet x NPT female outlet
- N45BU** – NPT threaded union inlet x NPT female outlet
- N45BU-S** – Solder union inlet x NPT female outlet
- N45BDU** – Double Union – NPT threaded union female inlet and outlet
- N45BDU-S** – Double Union – Solder union inlet and outlet
- N45BDU-PEX** – Double Union – PEX union inlet and outlet
- N45BDU-CPVC** – Double Union – CPVC union inlet and outlet

### Options

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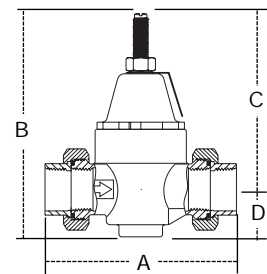
- G Gauge tapping
- GG Gauge tapping and 160psi (11 bar) gauge

For additional information, request literature ES-N45B.

\*\*Bypass will not work if inlet pressure is above 150psi (10.34 bars)

### Features

- Double union connections (inlet and outlet) option DU
- Integral, stainless steel strainer
- Thermoplastic seat and cage
- Bronze body construction
- Serviceable in line
- Bypass feature controls thermal expansion pressure\*\*
- Sealed spring cage on all models for waterworks pit installation



MODEL	SIZE (DN)		DIMENSIONS (APPROX.)								WEIGHT	
	in.	mm	A		B		C		D		lbs.	kg.
N45BDU	1/2	15	4 11/16	119	6 1/4	159	4 9/16	116	1 13/16	43	2.5	1.1
N45BDU	3/4	20	4 11/16	119	6 1/4	159	4 9/16	116	1 13/16	43	2.5	1.1
N45BDU	1	25	5 5/8	143	6 1/4	159	4 9/16	116	1 13/16	43	3	1.4

† Dimensions for all models are shown on literature ES-N45B.

# Series N45B (1¼" – 2")

## Water Pressure Reducing Valves

- Bronze body construction
- Ideal for residential and commercial applications
- Sealed spring cage on all models for waterworks pit installations
- Water savings up to 30%\* (see page 11)

### Specifications

- Temperature Range: 33°F – 180°F (5°C – 82°C)
- Maximum Working Pressure: 300psi (21 bars)
- Adjustable Reduced Pressure Range: 25 – 75psi (172 – 517kPa)
- Standard Reduced Pressure Setting: 50psi (345kPa)

### Standards

Meets requirements of ASSE Standard 1003 (ANSI A112.26.2); CSA Standard B356; and listed by IAPMO. City of Los Angeles.



### Models

**N45BDU** – Double Union – NPT threaded union female inlet and outlet

**N45BDU-S** – Double Union – Solder union inlet and outlet

### Options

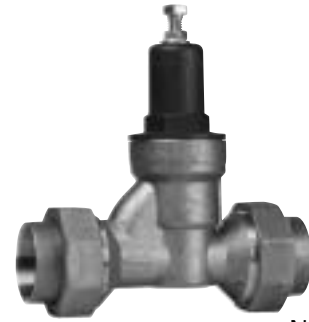
add Suffix:

G Gauge tapping

GG Gauge tapping and 160psi (11 bar) gauge

For additional information, request literature ES-N45B-L.

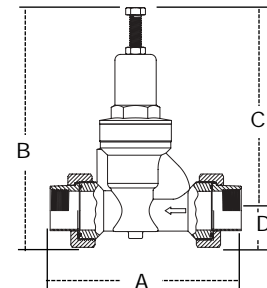
\*\*Bypass will not work if inlet pressure is above 150psi (10.34 bars)



N45BDU

### Features

- Double union inlet & outlet connections
- Integral stainless steel strainer
- Thermoplastic seat & cage
- Bronze body construction
- Serviceable in line
- Bypass feature controls thermal expansion pressure\*\*
- Sealed spring cage on all models for waterworks pit installations



MODEL	SIZE (DN)		DIMENSIONS (APPROX.)								WEIGHT	
	in.	mm	A		B		C		D		lbs.	kg.
N45BDU	1¼	32	8¾	213	10 <sup>5</sup> / <sub>16</sub>	262	8 <sup>7</sup> / <sub>8</sub>	225	1 <sup>7</sup> / <sub>16</sub>	36	6.5	2.9
N45BDU	1½	40	8¾	213	10½	267	8 <sup>7</sup> / <sub>8</sub>	225	1 <sup>5</sup> / <sub>8</sub>	41	8	3.6
N45BDU	2	50	9	228	12 <sup>9</sup> / <sub>16</sub>	319	8 <sup>7</sup> / <sub>8</sub>	225	1 <sup>7</sup> / <sub>8</sub>	47	9	4.1
N45BDU-S	1¼	32	7 <sup>15</sup> / <sub>16</sub>	201	10 <sup>5</sup> / <sub>16</sub>	262	8 <sup>7</sup> / <sub>8</sub>	225	1 <sup>7</sup> / <sub>16</sub>	36	6.5	2.9
N45BDU-S	1½	40	8 <sup>3</sup> / <sub>16</sub>	207	10½	267	8 <sup>7</sup> / <sub>8</sub>	225	1 <sup>5</sup> / <sub>8</sub>	41	8	3.6
N45BDU-S	2	50	9¼	235	12 <sup>9</sup> / <sub>16</sub>	319	8 <sup>7</sup> / <sub>8</sub>	225	1 <sup>7</sup> / <sub>8</sub>	47	9	4.1



# Series N45B-EZ (1/2" – 1")

## Water Pressure Reducing Valve

- Bronze body construction
- Ideal for residential and commercial applications
- Factory calibrated outlet pressure adjustment
- Easily adjustable pressure setting
- Water savings up to 30%\* (see page 11)



N45BDU-EZ

### Specifications

- Temperature Range: 33°F – 180°F (5°C – 82°C)
- Maximum Working Pressure: 400psi (27.6 bars)
- Adjustable Reduced Pressure Range: 25-75psi (172 - 517kPa)
- Standard Reduced Pressure Setting: 50psi (345kPa)

### Standards

Meets requirements of ASSE Standard 1003 (ANSI A112.26.2); CSA Standard B356; and listed by IAPMO.



### Features

- Factory calibrated outlet pressure adjustment
- Easily adjustable pressure setting
- Double union inlet & outlet connections (option DU)
- Integral stainless steel strainer
- Thermoplastic cage & seat
- Bronze body construction
- Serviceable in line
- Bypass feature controls thermal expansion pressure\*\*

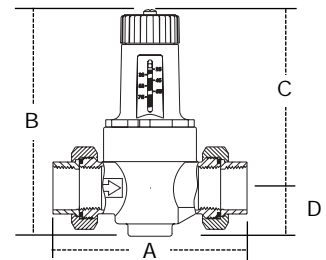
### Models

- N45B-EZ** – NPT threaded female inlet x NPT female outlet
- N45BU-EZ** – NPT threaded union inlet x NPT female outlet
- N45BU-EZ-S** – Solder union inlet x NPT female outlet
- N45BDU-EZ** – Double Union – NPT threaded union female inlet and outlet
- N45BDU-EZ-S** – Double Union – Solder union inlet and outlet

### Options

- G Gauge tapping
  - GG Gauge tapping and 160psi (11 bar) gauge
- For additional information, request literature ES-N45B-EZ.

\*\*Bypass will not work if inlet pressure is above 150psi (10.34 bars)



MODEL †	SIZE (DN)		DIMENSIONS (APPROX.)								WEIGHT	
	in.	mm	A		B		C		D		lbs.	kg.
N45BDU-EZ	1/2	15	4 11/16	119	6 1/16	154	4 3/8	111	1 11/16	43	6.5	2.9
N45BDU-EZ	3/4	20	4 11/16	119	6 1/16	154	4 3/8	111	1 11/16	43	8	3.6
N45BDU-EZ	1	25	5 5/8	143	6 1/16	154	4 3/8	111	1 11/16	43	9	1.4

† Dimensions for all models are shown on literature ES-N45B-EZ.

# Series N45BDU-EZ (1¼" – 2")

## Water Pressure Reducing Valve

- Bronze body construction
- Ideal for residential and commercial applications
- Factory calibrated outlet pressure adjustment
- Easily adjustable pressure setting
- Water savings up to 30%\* (see page 11)

### Specifications

- Temperature Range: 33°F – 180°F (5°C – 82°C)
- Maximum Working Pressure: 300psi (21 bars)
- Adjustable Reduced Pressure Range: 25 – 75psi (172 – 517kPa)
- Standard Reduced Pressure Setting: 50psi (345kPa)

### Standards

Meets requirements of ASSE Standard 1003 (ANSI A112.26.2); CSA Standard B356; and listed by IAPMO.



### Models

**N45BDU-EZ** – Double Union - NPT threaded union female inlet and outlet

**N45BDU-EZ-S** – Double Union - Solder union inlet and outlet

### Options

G gauge tapping

GG gauge tapping and 160psi (11 bar) gauge

For additional information, request literature ES-N45BDU-EZ-L.

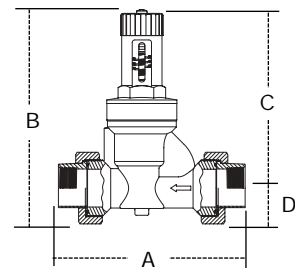
\*\*Bypass will not work if inlet pressure is above 150psi (10.34 bars)



N45BDU-EZ

### Features

- Factory calibrated outlet pressure adjustment
- Easily adjustable pressure setting
- Double union inlet & outlet connections
- Integral stainless steel strainer
- Bronze body construction
- Serviceable in line
- Bypass feature controls thermal expansion pressure\*\*



MODEL	SIZE (DN)		DIMENSIONS (APPROX.)								WEIGHT	
	in.	mm	A		B		C		D		lbs.	kg.
N45BDU-EZ	1¼	32	8⅜	213	9⅞	240	8	204	1⅞	36	6.5	2.9
N45BDU-EZ	1½	40	8⅜	213	9⅞	244	8	204	1⅞	41	8	3.6
N45BDU-EZ	2	50	9	228	9⅞	251	8	204	1⅞	47	9	1.4
N45BDU-EZ-S	1¼	32	7⅞	201	9⅞	240	8	204	1⅞	36	6.5	2.9
N45BDU-EZ-S	1½	40	8⅜	207	9⅞	244	8	204	1⅞	41	8	3.6
N45BDU-EZ-S	2	50	9¼	235	9⅞	251	8	204	1⅞	47	9	1.4

# Series N55B (1¼" – 2")

## Water Pressure Reducing Valve

- Bronze body construction
- Ideal for residential and commercial applications
- Sealed spring cage on all models for waterworks pit installations
- Water savings up to 30%\* (see page 11)

### Specifications

- Temperature Range: 33°F – 180°F (5°C – 82°C)
- Maximum Working Pressure: 300psi (21 bars)
- Adjustable Reduced Pressure Range: 25 – 75psi (172 – 517 kPa)
- Standard Reduced Pressure Setting: 50psi (345 kPa)

### Standards

Meets requirements of ASSE Standard 1003 (ANSI A112.26.2); CSA Standard B356; and listed by IAPMO.



### Models

**N55BDU** – Double Union – NPT threaded union female inlet and outlet

**N55BDU-S** – Double Union – Solder union inlet and outlet

### Options

add Suffix:

G Gauge tapping

GG Gauge tapping and 160psi (11 bar) gauge

For additional information, request literature ES-N55B-L.

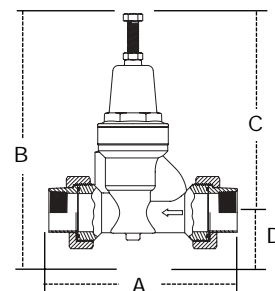
\*\*Bypass will not work if inlet pressure is above 150psi (10.34 bars)



N55BDU

### Features

- Bronze cage
- Double union inlet & outlet connections
- Integral stainless steel strainer
- Thermoplastic seat
- Bronze body construction
- Serviceable in line
- Bypass feature controls thermal expansion pressure\*\*
- Sealed spring cage on all models for waterworks pit installations



MODEL	SIZE (DN)		DIMENSIONS (APPROX.)								WEIGHT	
	in.	mm	A		B		C		D		lbs.	kg.
N55BDU	1¼	32	8¾	213	10 <sup>5</sup> / <sub>16</sub>	262	8 <sup>7</sup> / <sub>8</sub>	225	1 <sup>7</sup> / <sub>16</sub>	36	2.5	1.1
N55BDU	1½	40	8¾	213	10½	267	8 <sup>7</sup> / <sub>8</sub>	225	1 <sup>5</sup> / <sub>8</sub>	41	2.5	1.1
N55BDU	2	50	9	228	12 <sup>9</sup> / <sub>16</sub>	319	8 <sup>7</sup> / <sub>8</sub>	225	1 <sup>7</sup> / <sub>8</sub>	47	3	1.4
N55BDU-S	1¼	32	7 <sup>15</sup> / <sub>16</sub>	201	10 <sup>5</sup> / <sub>16</sub>	262	8 <sup>7</sup> / <sub>8</sub>	225	1 <sup>7</sup> / <sub>16</sub>	36	2.5	1.1
N55BDU-S	1½	40	8 <sup>3</sup> / <sub>16</sub>	207	10½	267	8 <sup>7</sup> / <sub>8</sub>	225	1 <sup>5</sup> / <sub>8</sub>	41	2.5	1.1
N55BDU-S	2	50	9¼	235	12 <sup>9</sup> / <sub>16</sub>	319	8 <sup>7</sup> / <sub>8</sub>	225	1 <sup>7</sup> / <sub>8</sub>	47	3	1.4

\* **Water Savings:** A water savings test program concluded that reducing the water supply pressure from 80psi to 50psi (551.2 – 344.8 kPa) resulted in a water savings of 30%. For additional information on conserving water and energy, request our F-23QA brochure – “23 Questions and Answers About Water Pressure Reducing Valves”.

# Jumper Kits

## Temporary By-pass for Water Pressure Reducing Valves

Jumper kits are used in new construction as a temporary by-pass, prior to the actual installation of a water pressure reducing valve on potable water supply systems.

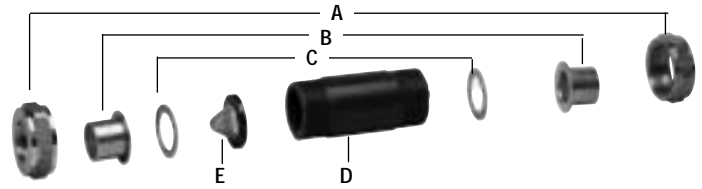
The use of a temporary jumper permits testing of the building piping system for leaks and pressure loss and facilitates pipe flushing prior to the installation of the water pressure reducing valve. On unsecured job sites, the jumper kit reduces loss from theft or vandalism.

Jumper Kits come complete with union connections, washers, and a brass or plastic pipe nipple with male union threads. The length of the jumper nipple matches the valve lay length, allowing the piping to be completed prior to the installation of a water pressure reducing valve and permitting quick change out from the jumper to the valve.

The jumper kits include a stainless steel strainer screen to provide protection from debris downstream of the valve.

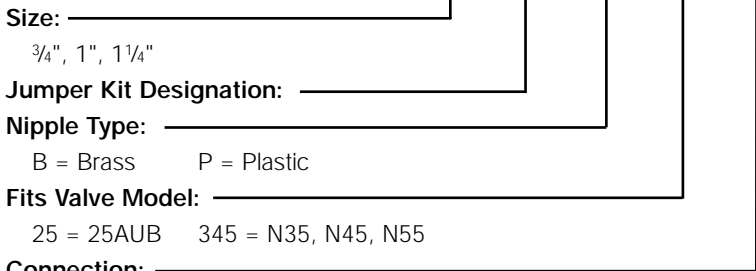


Jumper Kit



### How to order jumper kits

Example:  $\frac{3}{4}$ " JK P-345 S       $\frac{3}{4}$ " JK P-345 S



M = Male brass solder    S = Female copper solder

### Jumper Kit Exploded View

Kit consists of:

- A – Union Nut (2)
- B – Sweat Tailpiece (2)
- C – Fiber Washer (2)
- D – Jumper Nipple
- E – Screen

COMPLETE KITS WITH PLASTIC NIPPLE		COMPLETE KITS WITH BRASS NIPPLE	
FEMALE X FEMALE COPPER SWEAT TAILPIECE		FEMALE X FEMALE COPPER SWEAT TAILPIECE	
Kit	Size	Kit	Size
JK P-345 S	$\frac{3}{4}$ "	JK B-345 S	$\frac{3}{4}$ "
JK P-25 S	$\frac{3}{4}$ "	JK B-25 S	$\frac{3}{4}$ "
JK P-345 S	1"	JK B-345 S	1"
JK P-25 S	$1\frac{1}{4}$ "	JK B-25 S	$1\frac{1}{4}$ "
JK P-55 S	$1\frac{1}{4}$ "	JK B-55 S	$1\frac{1}{4}$ "
FEMALE COPPER SWEAT X MALE BRASS SWEAT TAILPIECE			
Kit	Size		
JK P-345-SM	$\frac{3}{4}$ "		
JK P-345-SM	1"		
MALE X MALE BRASS SWEAT TAILPIECE			
Kit	Size		
JK P-345 MM	1"		

For additional information, request literature ES-Jumper Kits.

Jumper Kits Include: Jumper Nipple, strainer screen, 2 fiber washers, 2 union nuts and tailpieces as described above.  
 Jumper Kits are the correct lay length for the following water pressure reducing valves: N35B, N35B-Z3, N45B, 25AUB-DULF, 25AUB-DU LF-Z3, N55B-LF.  
 When removing Jumper Nipple and inserting the water pressure reducing valve, two O-rings (ordered separately) are required.  
 Refer to literature PL-RP-GP for O-ring ordering information.

# Series 223, 223S (1/2" – 2 1/2")

## High Capacity Water Pressure Reducing Valves

- One of the most proven regulator designs available.
- For commercial, institutional and industrial water pressure control applications.
- Available with (223S) or without (223) a strainer.



223

### Specifications

- Temperature Range: 33°F – 160°F (5°C – 71°C)
- Maximum Working Pressure: 300psi (21 bars)
- Adjustable Reduced Pressure Range: 25-75psi (172 – 517kPa)
- Standard Reduced Pressure Setting: 50psi (345kPa)
- Size 1/2" – 2" (15 – 50mm) have bronze body construction.
- Size 2 1/2" (65mm) has iron body construction.

### Standards

1/2" – 2" (15 – 50mm) Meets requirements of ASSE Standard 1003 (ANSI A112.26); CSA Standard B356; Southern Standard Plumbing Code, Military Standard MIL-V-18146B and listed by IAPMO.



### Features

- Enlarged diaphragm, spring cage and seat orifice for super capacity performance
- Bronze body construction (except 2 1/2" which is iron)
- Serviceable in line
- Series 223S furnished with separate strainer
- Optional bypass feature controls thermal expansion pressure\*\*
- Sealed spring cage on all models for waterworks pit installations

### Models

**223** – NPT threaded female union inlet x NPT female outlet

**223-S** – NPT threaded female union inlet x NPT female outlet with strainer

### Options

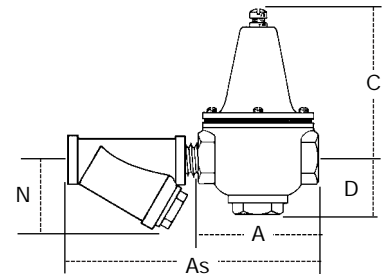
add Suffix:

B Built-in bypass feature

LP Low pressure range 10-35psi (5.27 – 8.79 bars)

HP High pressure range 1/2", 3/4", 1" (15, 20, 25mm) 50 – 145psi (3.4 – 10 bars);  
1 1/4" (32mm) 50 – 120psi (3.4 – 8.3 bars); 1 1/2" – 2 1/2" (40 – 65mm) 50 – 95psi  
(344.8 – 654.6 kPa).

For additional information, request literature ES-223.



SIZE (DN)		BODY	DIMENSIONS (APPROX.)								WEIGHTS					
in.	mm		A (223)		As (223S)		C		D (223)		N (223S)		223		223S	
			in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kg.	lbs.	kg.
1/2	15	Bronze	4 1/4	108	9	229	6 1/4	159	2	50	2 1/2	64	4.5	2.0	6.0	2.7
3/4	20	Bronze	4 1/4	108	9	229	6 1/4	159	2	50	2 1/2	64	5.0	2.3	6.5	2.9
1	25	Bronze	4 3/4	121	10 15/16	262	6 1/2	165	2 1/8	54	2 15/16	75	7.0	3.2	9.5	4.3
1 1/4	32	Bronze	5	127	11 15/16	287	6 3/4	172	2 3/4	70	3	76	9.0	4.1	12.0	5.4
1 1/2	40	Bronze	6 3/4	171	14 3/4	375	9 7/8	251	2 3/4	70	3 7/16	87	19.5	8.8	23.5	6.8
2	50	Bronze	8	203	16 3/4	425	10 3/4	273	3 3/8	86	4	102	30.0	13.6	37.5	17.0
2 1/2	65	Iron	9	229	20 1/8	511	10 3/4	273	3 3/8	86	5	127	32.5	14.8	59.0	26.8

## Series N223B, N223BS (2½" – 3")

### Super Capacity Water Pressure Reducing Valves

- For commercial, institutional and industrial applications
- Sealed spring cage on all models for waterworks pit installations
- Triple coated with special corrosion preventative materials superior to hot dip galvanizing

#### Specifications

- Temperature Range: 33°F – 160°F (5°C – 71°C)
- Maximum Working Pressure: 300psi (21 bars)
- Adjustable Reduced Pressure Range: 25 – 75psi (172 – 517kPa)
- Standard Reduced Pressure Setting: 50psi (345kPa)

\*\*Bypass will not work if inlet pressure is above 150psi (10.34 bars)

#### Models

**N223B** – NPT threaded female union inlet x NPT female outlet

**N223B-S** - NPT threaded female union inlet x NPT female outlet with strainer

#### Options

HP High pressure range 75 – 125psi (172 – 517kPa)

For additional information, request literature ES-N223B.



N223B

#### Features

- Enlarged diaphragm, spring cage and seat orifice for super capacity performance
- Bronze body construction
- Serviceable in line
- Series N223S furnished with separate strainer
- Standard bypass feature controls thermal expansion pressure\*\*
- Sealed spring cage on all models for waterworks pit installations

## Series N223F, N223FS (3")

### Super Capacity Water Pressure Reducing Valves

- Flanged connections
- For commercial or industrial applications
- Iron body construction
- Triple coated with special corrosion preventative materials superior to hot dip galvanizing

#### Specifications

- Size: 3" (80mm), flanged connections Class 125psi (8.6 bars) WSP.
- Temperature Range: 33°F – 160°F (5°C – 71°C).
- Maximum Working Pressure: 175psi (12.1 bars).
- Adjustable Reduced Pressure Range 25 – 75psi (172.4 – 517.1 kPa).
- Standard Reduced Pressure Setting: 50psi (344.8 kPa)
- Model N223FS includes strainer.

For additional information, request literature ES-N223F.



N223F

## Series 127W (3", 4")

### High capacity water pressure regulators

- Remote control water regulator
- Close pressure regulation
- Single seated
- Maximum Working Pressure: 175psi (17.2 bars).
- Reduced Pressure Range: 25-140psi (1.7 – 9.8 bars) depending on the supply pressure.
- Temperature Range: 33°F – 160°F (5°C – 71°C).
- The 4" (100mm) size is tapped for the installation of a bypass line and an auxiliary regulator.

#### Specifications

- Sizes: 3", 4" (80, 100mm), flanged connections with iron body.
- Size 3" (80mm) with bronze body, has NPT threaded female inlet x female outlet connections.



127W

For additional information, request literature ES-127W .

## Series N250 (1/2", 3/4")

### Iron body water pressure regulators

- Integral strainer
- Unitized construction for ease of maintenance
- For standard capacity domestic water pressure regulation

#### Specifications

- Sizes: 1/2", 3/4" (15, 20mm), NPT threaded female inlet and outlet connections.
  - Maximum Working Pressure: 250psi (17.2 bars).
  - Standard Reduced Pressure Setting: 50psi (344.8 kPa).
  - Adjustable Reduced Pressure Range: 25 – 75psi (172.4 – 517.1 kPa).
  - Temperature Range: 33°F – 160°F (5°C – 71°C).
- For additional information, request literature ES-N250.



N250

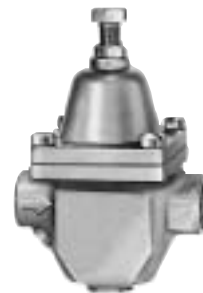
## Series 123LP (1/2", 3/4")

### High performance low pressure regulators

- NPT threaded female inlet and outlet connections.

#### Specifications

- Maximum Working Pressure: 200psi (13.8 bars).
  - Reduced Pressure Setting: 25psi (172.4 kPa).
  - Temperature Range: 33°F – 140°F (5°C – 60°C).
  - Nominal size 1/2" (15mm) or 3/4" (20mm).
  - Adjustable Pressure Range: 40 – 50psi (276 – 345 kPa).
- For additional information, request literature ES-123LP.



123LP

## Series 2300 (3" – 6")

### Direct Operated Water Pressure Reducing Valves

- Designed for dead-end water service where the flow is intermittent and changes rapidly, as on domestic water systems.
- Ideal for fast acting equipment such as flushometers and snap cocks.
- Pressure balanced design eliminates water hammer, pressure fluctuations, pressure creep and costly maintenance.

For additional information, request literature ES-2300.



2300

# Automatic Control Valves

## "A" Series

- Pilot Controlled Diaphragm Valve
- Globe or Angle Pattern
- Threaded or Flanged Ends
- Modulating, On-Off, or Combination functions available

## Specifications

**Globe Pattern:** 1¼" – 24" (32mm – 600mm)

**Angle Pattern:** 1¼" – 12" (32mm – 300mm)

**Body & Cover:** Ductile Iron ASTM A536 64-45-12

**Coatings:** NSF Approved Fusion Bonded Epoxy Coated and Lined

**Valve Trim:** 1¼" – 8": Stainless Steel 10" – 24": Bronze

**Elastomers:** Buna-N (std)

**Tubing/Fittings:** Copper and Brass

**Threaded:** 400psi MWP

**150 Flanged:** 250psi MWP

**400 Flanged:** 400psi MWP

## Models

Numerous functional combinations are available in each valve series. Consult your Watts Representative for detailed assistance in selecting and sizing the proper ACV for your specific application.

**110 Series** – (Float / Level Control)

**113 Series** – (Solenoid & Pump Control)

**114 Series** – (Rate-of-Flow Control)

**115 Series** – (Pressure Reducing Control)

**116 Series** – (Pressure Relief, Sustaining, or Backpressure Control)

**118 Series** – (Check)

**127 Series** – (Altitude / Level Control)

## Options

### Materials

- Carbon Steel
- Stainless Steel
- Bronze

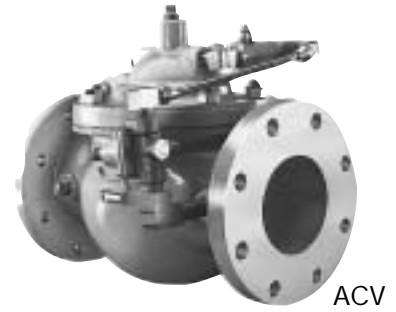
### Elastomers

- Viton®

### Tubing & Fittings

- Stainless Steel

For additional information, request literature C-CACV.



ACV

## Features

- Exclusive "Quad-Seal" seat disc Retained on 3½ sides. Provides drip-tight, positive closure
- Long life non-edged seat Allows for longer seat life and superior low-flow performance
- Top and bottom guided stem Assures positive seat-to-disc alignment and stable throttling characteristics at low, intermediate, and peak flow rates
- 100% NSF approved fusion bonded epoxy lined and coated Reduces rust and corrosion, greatly extending the life of the main valve diaphragm. Shortens the time required for maintenance and improves valve flow coefficient
- FDA approved diaphragm Approved for use in drinking water systems



## Series 26A, 263A (1/8" – 1/2")

### Small Pressure Regulators

- Brass or stainless steel body regulators suitable for water and No. 2 fuel oil. Before using them with other liquids, please consult the factory.
- Readily meets requirements for use in beverage dispensing and paint spraying equipment, drinking fountains and many other applications. We recommend the use of strainers with all regulators.
- Series 263A has extra 1/4" low pressure gauge port and is available with all stainless steel construction, specify SS-263AP.



SS263AP

### Specifications

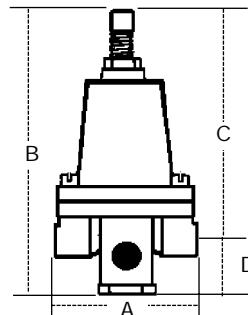
- Sizes: 1/8", 1/4", 3/8", 1/2" (3-15mm) NPT threaded female inlet and outlet connections.
- Maximum Working Pressure: 300psi (20.7 bars).
- Temperature Range: 33°F – 140°F (5°C – 60°C).
- Available with Viton® trim.
- Specify suffix letter for reduced pressure range required.

#### Reduced Pressure Ranges: Std.psi set at:

<b>Suffix A</b>	for 1 – 25psi	<b>10</b>
<b>Suffix B</b>	for 3 – 50psi	<b>15</b>
<b>Suffix C</b>	for 10 – 125psi	<b>25</b>
<b>Suffix D</b>	or 50 – 175psi	<b>50</b>

For additional information, request literature ES-26A, 263 or ES-SS-263AP for all stainless construction.

Model	SIZE (DN)		DIMENSIONS (APPROX.)								WEIGHT	
	in.	mm	A		B		C		D		oz.	gm.
26A	1/8	3	2 1/4	54	3 7/8	98	3	76	7/8	22	16	454
26A	1/4	8	2 1/4	54	3 7/8	98	3	76	7/8	22	16	454
26A	3/8	10	2 1/4	54	3 7/8	98	3	76	7/8	22	16	454
26A	1/2	15	2 1/4	54	4	100	3 1/8	79	7/8	22	16	454
263A	1/4	8	2 1/4	54	4 7/8	124	4	100	7/8	22	16	454
263A	3/8	10	2 1/4	54	4 7/8	124	4	100	7/8	22	16	454
263A	1/2	15	2 1/4	54	4	100	3 1/8	79	7/8	22	16	454



## Series 560 (1/8" x 1/4", 3/4" x 3/4")

### Mini Water Pressure Regulators

- General purpose brass body regulators for industrial, process, plumbing and OEM applications such as travel trailers. Consult factory for special requirements.

(20.7 bars). Maximum temperature 140°F (60°C).

**H560** – Water regulation for grid systems. 3/4" (20mm) female inlet and male outlet hose connections. Max. pressure 150psi (10.3 bars), adjustable from 10 – 60psi (68.9 – 413.7 kPa). Standard set at 40psi (276 kPa). Delivery capacity up to 250 gallons per hour (946 lph). Also used for recreational vehicles. Listed by IAPMO.



H560

### Models

**560** – has female threaded 1/8" and 1/4" (3 and 8mm) inlet and outlet connections. Female 1/8" (3mm) side tapping (plugged) for gauge. Initial pressures up to 300psi

For additional information, request

literature ES-560-26A or IS-IR-56/H560G.

## Series IR-56 (3/4")

### Bronze Water Pressure Regulators

- Dependable, low cost regulator for grid systems and recreational vehicles.
- Hose connection, male inlet x male outlet.

- 1/8" (3mm) NPT female side tapping for gauge.
- Maximum Working Pressure: 150psi (10.3 bars).
- Adjustable Reduced Pressure Range: 10 – 60psi (68.9 – 413.7 kPa).
- Reduced Pressure Setting: 40psi (275.8 kPa).
- Delivery up to 250 gph (946 lph).

### Specifications

- 3/4" (20mm) hose connection female inlet x male outlet.



IR-56

For additional information, request literature IS-IR-56/H560G.

## Series P50, P60 (1/4")

### Plastic Water Pressure Regulators

- Compact, superior corrosion resistant regulators
- For general purpose, OEM and irrigation applications
- Can be used with deionized water
- Maximum Working Pressure: 300psi (20.7 bars).
- Maximum Temperature Range: 33°F - 150°F (5°C - 65.6°C).
- **Reduced Pressure Range:**  
**(A)** 0 - 25psi (0 - 172 kPa);  
**(B)** 0 - 60psi (0 - 413 kPa);  
**(C)** 0 - 125psi (0 - 861 kPa)

#### Specifications

- 1/4" (8mm) NPT female connections.



P50

For additional information, request literature S-SS-263AP, P50/60.

## Series 215 (1/4", 3/8")

### Precision Regulator for Low Pressures

- Forged brass body, for water and No. 2 fuel oil
- For other liquids, consult factory
- NPT threaded female inlet and outlet connections.
- Maximum Working Pressure: 300psi (20.7 bars).
- Temperature Range: 33°F - 120°F (5°C - 48.9°C).

#### Specifications

- **Reduced Pressure Ranges: Std.psi set at:**  
**Suffix A** for 0 - 8psi **4**  
**Suffix B** for 0 - 20psi **10**  
**Suffix C** for 0 - 50psi **15**

For additional information, request literature ES-215.



215

## Model 276H300, IWTG (3/4")

### Water Pressure Test Gauges

- For testing water supply pressure within a distribution system.
- Red indicator hand "holds" at highest reading registered.

#### Specifications

- **276H300** - 3/4" (20mm) hose thread connection; 0 - 300psi (0 - 20.7 bars).
- **IWTG** - 3/4" (20mm) hose thread connection; 0 - 200psi (0 - 13.8 bars).



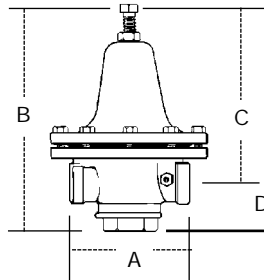
276H300

For additional information, request literature F-Gauges.

## Series 152A, 252A (1/2" - 2")

### Process Steam Pressure Regulators

- For autoclaves, steam tables/irons, vulcanizers and single radiators.
- Also used on sterilizers, process lines, testing fixtures and oil lines.
- Highly sensitive to reduced pressure changes.
- Full volume with minimum pressure drop.
- Sensitivity adjustment feature for critical flow.



152A

#### Models

**152A** - with iron body. Sizes: 1/2" to 2" (15-50mm), NPT threaded female inlet and outlet connections. Initial pressures up to 200psi (13.8 bars).

**152SS** - with stainless steel body and trim, sizes 1/2", 3/4", 1" (15, 20, 25mm). For maximum supply pressure up to 300psi (20.7 bars) at 420°F (216°C).

**252A** - sizes 1/2", 3/4" (15, 20mm) identical to 152A except furnished in bronze body for pressures up to 300psi (20.7 bars).

**152A-T, 152SS-T or 252A-T** - tight seating models for dead end and liquid service. When utilizing a Teflon® valve disc in the 252A-T, the maximum operating temperatures are 300°F (149°C) at 300psi (20.7 bars) and 400°F (204°C) at 200psi (13.8 bars).

See capacity chart on pg. 12 for max. ratings.

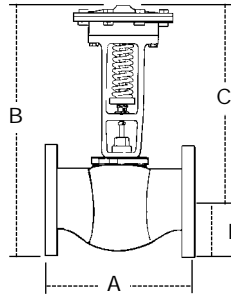
For additional information, request literature ES-152A, ES-152SS.

MODEL	SIZE (DN)	DIMENSIONS (APPROX.)								WEIGHT			
		A		B		C		D		lbs.	kg.		
		in.	mm	in.	mm	in.	mm	in.	mm				
152A	3 - 15	1/2	15	6	150	8 5/8	219	6 7/8	175	1 3/4	44	12	5
152A	3 - 15	3/4	20	6	150	8 5/8	219	6 7/8	175	1 3/4	44	12	5
152A	3 - 15	1	25	7 1/2	191	9 1/4	235	7 1/4	184	2	50	20	9
152A	3 - 15	1 1/4	32	7 1/2	191	9 1/4	235	7 1/4	184	2	50	20	9
152A	5 - 40	1 1/2	40	9	229	14 1/4	362	11 1/2	292	2 3/4	70	40	18
152A	5 - 40	2	50	9	229	14 1/4	362	11 1/2	292	2 3/4	70	40	18
252A	10 - 50	1/2	15	6	150	8 5/8	219	6 7/8	175	1 3/4	44	12	5
252A	10 - 50	3/4	20	6	150	8 5/8	219	6 7/8	175	1 3/4	44	12	5
152SS	10 - 50	1/2	15	6	150	8 5/8	219	6 7/8	175	1 3/4	44	12	5
152SS	10 - 50	3/4	20	6	150	8 5/8	219	6 7/8	175	1 3/4	44	12	5
152SS	10 - 50	1	25	7 1/2	191	9 1/4	235	7 1/4	184	2	50	20	9

# Series 127 (1/2" - 4")

## Process Steam Pressure Regulators

- Diaphragm type regulator
- Single seated
- Large capacity
- Main line and high capacity process regulation
- Heating and dead end service
- Institutional, commercial and industrial applications



F127SS

### Specifications

- Sizes: 1/2" - 3" (15 - 80mm), bronze body with NPT threaded inlet and outlet connections.
- Sizes: 1/2" - 1 1/4" (15 - 32mm) have composition disc.
- Sizes: 1 1/2" - 3" (40 - 80mm) have stainless steel disc.
- Adjustable Reduced Pressure Range: 5 - 150psi (.34 - 10.3 bars) depending on size of the valve and supply pressure.

For additional information, request literature F-127.

MODEL	SIZE (DN)		DIMENSIONS (APPROX.)							
	in.	mm	A		B		C		D	
			in	mm	in	mm	in	mm	in	mm
127	1/2	15	4	102	16	406	15	381	1	25
127	3/4	20	4	102	16	406	15	381	1	25
127	1	25	4 1/4	108	16 1/8	410	15	381	1 1/8	29
127	1 1/4	32	4 1/2	114	16 3/8	416	15 1/8	384	1 1/4	32
127	1 1/2	40	5 1/4	133	16 3/4	425	15 1/4	387	1 1/2	38
127	2	50	6	152	17 1/8	435	15 3/8	391	1 3/4	44
127	2 1/2	65	7 1/4	184	17 7/8	454	15 3/4	400	2 1/8	54
127	3	80	8	203	18 1/2	470	16 1/8	410	2 3/8	60
F127*	3	80	8	203	20 1/2	521	16 3/4	425	3 3/4	95
F127*	4	100	12 1/8	308	21 1/4	540	16 3/4	425	4 1/2	114

\*Iron body, flanged connections

### Quick Reference Capacity Chart

#### MAXIMUM CAPACITIES In Pounds or Kilograms (lbs. or kgs.) per Hour of Steam

MODEL	SIZE (DN)		FROM 50PSI (3.4 BARS)		FROM 100PSI (6.9 BARS)		FROM 150PSI (10.3 BARS)		FROM 200PSI (13.8 BARS)		FROM 250PSI (17.2 BARS)	
	in.	mm	lbs./hr.	kgs./hr.	lbs./hr.	kgs./hr.	lbs./hr.	kgs./hr.	lbs./hr.	kgs./hr.	lbs./hr.	kgs./hr.
			UP TO 20PSI (1.4 BARS)		UP TO 50PSI (3.4 BARS)		UP TO 70PSI (4.8 BARS)		UP TO 90PSI (6.2 BARS)		UP TO 125PSI (8.6 BARS)	
127	1/2	15	218	99	387	175	555	252	731	332	900	408
127	3/4	20	492	223	875	397	1255	569	1653	750	2037	924
127	1	25	878	398	1560	708	2237	1015	2943	1131	3631	1647
127	1 1/4	32	1370	621	2436	1105	3493	1584	4599	2086	5668	2570
127	1 1/2	40	1973	895	3508	1591	5030	2282	6623	3004	8163	3703
127	2	50	3518	1596	6253	2836	8967	4067	11807	5356	14553	6601
127	2 1/2	65	5494	2492	9766	4430	14006	6353	18442	8365	22730	10310
127	3	80	7906	3586	14054	6375	20154	9142	26538	12037	32709	14837
F127	3	80	7906	3586	14054	6375	20154	9142	-	-	-	-
F127	4	100	8301	3765	14756	6693	21161	9598	-	-	-	-
152A	1/2	15	80	36	143	65	205	93	270	122	332	151
252A	1/2	15	80	36	143	65	205	93	270	122	332	151
152A	3/4	20	285	129	506	230	726	329	956	434	1178	534
252A	3/4	20	285	129	506	230	726	329	956	434	1178	534
152A	1	25	402	182	715	324	1025	465	1349	612	1663	754
152A	1 1/4	32	442	200	786	357	1127	511	1484	673	1830	830
152A	1 1/2	40	665	302	1120	508	1600	726	2230	1012	2725	1236
152A	2	50	765	347	1285	583	1840	835	2564	1163	3134	1422

**EXAMPLE:** Initial Pressure is 100psi (6.9 bars), Reduced Pressure is 50psi (3.4 bars) and Capacity required is 1500 lbs. (680 kgs.) of steam per hour. By referring to the proper initial reduced pressure column "From 100psi/Up to 50psi (6.9 - 3.4 bars)", you will find the capacity of 1560 lbs./hr. (708 kgs./hr.) for the 1" (25mm) Model 127 valve corresponds most closely to the required capacity of 1500 lbs./hr.

**NOTE:** For reduced pressures greater than those shown for each Initial Pressure column above, refer to the Detailed Capacity Table in the Watts brochure F-127. Be sure to determine both Initial Pressure and Reduced Pressure setting, or the range required.

For assistance, contact your local authorized Watts agent or visit our website at [www.wattsreg.com](http://www.wattsreg.com)

# Series 174A (3/4" – 2") Model 374A (3/4")

## ASME Water Pressure Safety Relief Valves

- For hot water heating and supply boilers
- Pressure protection only
- Series 174A bronze body construction resists corrosive water conditions of water supplies



174A

### Specifications

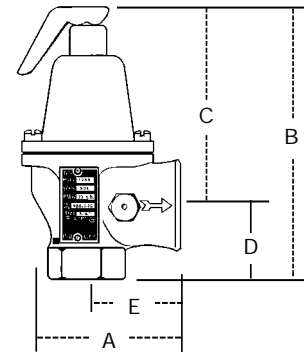
- Standard Pressure Relief Setting: 30psi (206.9 kPa).
- Other valve settings are available in 5psi (34.5 kPa) increments from 30 – 150psi (2.1 – 10.3 bars).

### Models

**174A** – Sizes 3/4" – 2" (20 – 50mm), NPT threaded female inlet x female outlet (drain) connection.

**374A** has iron body with bronze inlet; 550,000 BTU/hr. rating.

For additional information, request literature ES-174A-740.



MODEL	SIZE (DN)		DIMENSIONS (APPROX.)										WEIGHT	
	in.	mm	A		B		C		D		E		lbs.	kg.
174A	3/4	20	2 1/2	64	4 7/8	124	3 3/4	95	1 1/8	29	1 5/8	41	1.5	0.7
174A	1	25	3	76	5 7/8	149	4 3/8	111	1 1/2	38	1 7/8	48	3.1	1.4
174A	1 1/4	32	4 3/4	121	8 1/2	216	6 3/8	162	2 1/8	54	2 3/8	60	6.3	2.8
174A	1 1/2	40	4 7/8	124	9 1/4	235	6 3/4	171	2 1/2	64	2 5/8	67	7.3	3.3
174A	2	50	6 1/2	165	10 1/4	260	7 1/4	184	3	76	3 3/8	86	13.8	6.2
374A	3/4	20	2 1/2	64	3 5/8	72	2 3/8	60	1 1/4	32	1 1/2	38	1.1	0.5

### Safety Relief Valves Settings and Relieving Capacities

#### (National Board Certified Ratings) BTU Steam Discharge Capacities (lbs./hr.)

MODEL	SIZE (DN)		30PSI	100PSI	125PSI	150PSI
	in.	(mm)				
174A	3/4	20	650,000	1,695,000	2,070,000	2,445,000
174A	1	25	1,005,000	2,635,000	3,215,000	3,795,000
174A	1 1/4	32	1,682,000	4,399,000	5,370,000	6,340,000
174A	1 1/2	40	2,020,000	5,290,000	6,460,000	7,630,000
174A	2	50	3,815,000	9,970,000	12,170,000	14,370,000
374A	3/4	20	550,000	–	–	–

**Note:** Valve settings, other than shown above, are available in 5psi increments within the pressure ranges shown.

# Series 740 (3/4" – 2")

## Iron Body ASME Rated Water Pressure Relief Valves

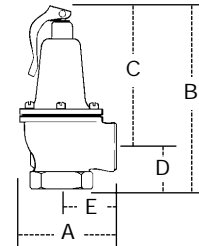
- For hot water heating boiler pressure protection.
- Expanded outlet drain connections.
- Size for size, Watts 740 Models offer greater discharge capacity than comparable competitive models.



740

### Specifications

- NPT threaded female inlet x female outlet (drain) connection.
- Sizes 3/4" x 1" (20 x 25mm), 1" x 1 1/4" (25 x 32mm), 1 1/4" x 1 1/2" (32 x 40mm), 1 1/2" x 2" (40 x 50mm), 2" x 2 1/2" (50 x 65mm).
- Standard pressure relief setting is 30psi (206.9 kPa).
- Other settings available in 5psi (34.5 kPa) increments from 30 – 75psi (206.9 – 517.1 kPa).



For additional information, request literature ES-174A/740.

MODEL	SIZE (DN)		DIMENSIONS (APPROX.)										WEIGHT	
	in.	mm	A		B		C		D		E		lbs.	kg.
740	3/4 x 1	20 – 25	3	76	5 7/8	149	4 3/8	111	1 1/2	38	1 7/8	48	1.9	.9
740	1 x 1 1/4	25 – 32	3 1/2	89	7 1/4	184	5 3/8	137	1 7/8	48	2 1/8	54	3.1	1.4
740	1 1/4 x 1 1/2	32 – 40	4 5/8	117	8 3/4	222	6 1/2	165	2 1/4	57	2 5/8	67	6.1	2.8
740	1 1/2 x 2	40 – 50	5 1/4	133	9 1/4	235	7	178	2 1/4	57	3	76	7.5	3.4
740	2 x 2 1/2	50 – 65	6 3/4	171	11 5/8	295	8 3/4	222	2 7/8	73	3 7/8	98	16.5	7.5

### Safety Relief Valves Settings and Relieving Capacities

#### (National Board Certified Ratings) BTU Steam Discharge Capacities (lbs./hr.)

MODEL	SIZE (DN)		30PSI	45PSI	50PSI	75PSI
	in.	mm				
740	3/4 x 1	20 x 25	925,000	1,245,000	1,352,000	1,886,000
740	1 x 1 1/4	25 x 32	1,300,000	1,750,000	1,899,000	2,649,000
740	1 1/4 x 1 1/2	32 x 40	2,105,000	2,830,000	3,075,000	4,285,000
740	1 1/2 x 2	40 x 50	2,900,000	3,903,000	4,237,000	5,909,000
740	2 x 2 1/2	50 x 65	5,250,000	7,067,000	7,672,000	10,700,000

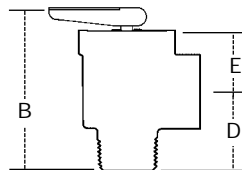
**Note:** Valve settings, other than shown above, are available in 5psi increments within the pressure ranges shown.

Contact your local Watts Agent or call Customer Service (978) 689-6066 for the products with a relief setting other than shown and/or special models of interest.

# Series 315 and 415 (3/4" – 1 1/2")

## ASME Rated and Tested Steam Safety Relief Valves

- For low pressure steam heating equipment.



315

### Specifications

- NPT threaded male inlet x threaded female outlet (drain) connection.
- Standard relief set pressure 15psi (103.4 kPa).
- Available with lower pressure relief settings, consult factory.
- Model 315 – 3/4" x 3/4" (20 x 20mm), Model 415 – 3/4" x 3/4" (20 x 20mm), 1" x 1" (25 x 25mm), 1 1/4" x 1 1/2" (32 x 40mm), and 1 1/2" x 2" (40 x 50mm).

MODEL	SIZE	ASME STEAM Discharge Capacity lbs./hr. @ 15psi	DIMENSIONS (APPROX.)						WEIGHT	
			B		D		E		lbs.	kg.
315-M1	3/4 x 3/4	375	2 11/16	68	1 3/8	35	1 1/4	32	.55	.24
415-M1	3/4 x 3/4	450	2 13/16	71	1 5/16	33	1 1/4	32	.70	.31
415-M1	1 x 1	643	3 1/8	78	1 11/16	43	1 5/8	41	.91	.41
415	1 1/4 x 1 1/2	1265	4 3/4	121	2 3/8	60	2 1/8	54	2.00	.91
415	1 1/2 x 2	1860	5 7/16	138	2 5/8	67	2 5/16	59	3.00	1.36

For assistance, contact your local authorized Watts agent or visit our website at [www.wattsreg.com](http://www.wattsreg.com)

# Series Fig. 10 (3/4" – 3")

## Steam Boiler Safety Valves

- Series Fig. 10 are cast iron ASME section IV safety valves.
- For low pressure steam heating boilers and associated equipment with operating pressures up to 15psi (103.4 kPa).

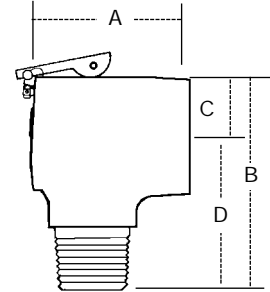


Fig. 10

### Specifications

- Sizes 3/4" – 3" (20 – 80mm), NPT male x female outlet (drain) connection.
- Cast iron body is rated at 15psi (103.4 kPa) at saturated steam temperature 250°F (121°C).
- Standard pressure ratings for saturated steam service are 5 – 15psi (34.5 – 103.4 kPa).

For additional information, request literature PG-SSRV.



MODEL	SIZE (DN)		DIMENSIONS (APPROX.)								WEIGHT	
	in.	mm	A		B		C		D		lbs.	kg.
Fig. 10†	3/4 x 1	20 x 25	2 1/4	57	3 5/16	84	1 3/16	30	2 1/8	54	1	.5
Fig. 10*	1 x 1 1/4	25 x 32	3	76	4	102	1 3/8	35	2 5/8	67	2	.9
Fig. 10*	1 1/4 x 1 1/2	32 x 40	3 1/4	83	5	127	1 15/16	49	3	76	3	1.4
Fig. 10†	1 1/2 x 2	40 x 50	3 3/8	86	5 1/8	130	2	51	3 7/16	81	4	1.8
Fig. 10‡	2 x 2 1/2	50 x 65	4 1/2	114	6 11/16	171	2 11/16	68	4	102	8	3.6
Fig. 10Δ	2 1/2 x 2 1/2	65 x 65	5 1/4	133	8 3/8	213	4	102	4 3/8	111	14	6.4
Fig. 10‡	3 x 3	80 x 80	6	150	9 1/2	241	4 3/8	111	5 1/8	130	22	10.0

Set At: †(12psi/82.7 kPa), \*(10psi/68.9 kPa), Δ(8psi/55.2 kPa), ‡(5psi/34.5 kPa)

### Fig. 10 ASME Section IV Series Valves

#### Saturated Steam Capacities (lbs./hr. @ 90% rating and 33 1/3% Overpressure)

MODEL	SET PRESSURE		INLET X OUTLET (IN.)						
	psi	kPa	3/4 x 1	1 x 1 1/4	1 1/4 x 1 1/2	1 1/2 x 2	2 x 2 1/2	2 1/2 x 2 1/2	3x3
Fig. 10	5*	34	230	409	649	924	1637	2557	3698
Fig. 10	10*	69	318	565	882	1276	2260	3530	5106
Fig. 10	15	103	394	700	1093	1581	2801	4375	6328

\* Capacities for 5 and 10psi are not certified by ASME National Board.

contact your local Watts Agent or call Customer Service at (978) 689-6066 for products with pressure ratings other than shown

# Series Fig. 31, 41, 41A (1/2" – 6")

## Safety Relief Valves

### Specifications

- Available in bronze with threaded connections or cast iron with flanged connections.
- **Fig. 31** – ASME Section I valves for steam boilers with pressures to 250psi (17.2 bars).
- **Fig. 41** – For ASME Section VIII steam service handling saturated steam to 250psi (17.2 bars).
- **Fig. 41A** – For ASME Section VIII service on air, gas and vapors to 250psi (17.2 bars).
- Saturated Steam Capacities: see tables on page 16.
- Next day service available.



Fig. 31, 41, 41A

For additional information, request literature PG-SSRV.

**Fig. 31 ASME Section I Series Valves Saturated Steam Capacities**

(lbs/hr @ 90% rating and 3% overpressure)

MODEL	SET PRESSURE		INLET X OUTLET (IN.)					
	psi	kPa	1/2 x 3/4	3/4 x 1	1 x 1 1/4	1 1/4 x 1 1/2	1 1/2 x 2	2 x 2 1/2
Fig. 31	5*	34	96	171	269	439	686	1126
Fig. 31	10*	69	133	238	372	609	952	1562
Fig. 31	15	103	161	288	451	738	1154	1893
Fig. 31	20	138	189	337	528	864	1351	2216
Fig. 31	25	172	216	386	605	990	1548	2540
Fig. 31	30	207	244	435	683	1116	1745	2863
Fig. 31	50	345	355	632	991	1621	2543	4157
Fig. 31	75	517	493	878	1377	2251	3519	5774
Fig. 31	100	689	631	1124	1763	2882	4505	7391
Fig. 31	125	861	769	1370	2148	3512	5491	9008
Fig. 31	150	1034	907	1616	2534	4143	6477	10625
Fig. 31	175	1206	1045	1862	2920	4773	7462	12242
Fig. 31	200	1378	1183	2108	3306	5404	8448	13859
Fig. 31	225	1550	1321	2354	3691	6035	9434	15477
Fig. 31	250	1723	1459	2600	4077	6665	10419	17094

\* Capacities for 5 and 10psi are not certified by ASME National Board.

**Fig. 41 ASME Section VIII Series Valves Saturated Steam Capacities**

(lbs/hr @ 90% rating and 10% overpressure)

MODEL	SET PRESSURE		INLET X OUTLET (IN.)					
	psi	kPa	1/2 x 3/4	3/4 x 1	1 x 1 1/4	1 1/4 x 1 1/2	1 1/2 x 2	2 x 2 1/2
Fig. 41	5*	34	104	185	289	473	739	1213
Fig. 41	10*	69	141	250	393	642	1003	1646
Fig. 41	15	103	176	361	491	802	1254	2057
Fig. 41	20	138	203	361	566	925	1445	2371
Fig. 41	25	172	229	409	641	1047	1637	2686
Fig. 41	30	207	256	456	716	1170	1829	3000
Fig. 41	50	345	374	666	1045	1709	2672	4384
Fig. 41	75	517	522	930	1458	2383	3726	6113
Fig. 41	100	689	669	1193	1870	3058	4780	7843
Fig. 41	125	861	817	1456	2283	3732	5835	9572
Fig. 41	150	1034	965	1719	2696	4407	6889	11302
Fig. 41	175	1206	1113	1982	3108	5031	7943	13032
Fig. 41	200	1378	1260	2245	3521	5756	8998	14761
Fig. 41	225	1550	1408	2508	3933	6430	10052	16491
Fig. 41	250	1723	1556	2771	4346	7105	11106	18221

\* Capacities for 5 and 10psi are not certified by ASME National Board.

**Fig. 41A ASME Section VIII Air Capacity Ratings**

(SCFM @ 90% rating and 10% overpressure)

MODEL	SET PRESSURE		INLET X OUTLET (IN.)					
	psi	kPa	1/2 x 3/4	3/4 x 1	1 x 1 1/4	1 1/4 x 1 1/2	1 1/2 x 2	2 x 2 1/2
Fig. 41A	5*	34	37	65	102	167	261	428
Fig. 41A	10*	69	50	89	140	228	356	585
Fig. 41A	15	103	63	111	175	285	446	732
Fig. 41A	20	138	72	128	201	329	514	844
Fig. 41A	25	172	82	145	228	373	583	956
Fig. 41A	30	207	91	162	255	416	651	1068
Fig. 41A	50	345	133	237	372	608	951	1550
Fig. 41A	75	517	185	331	519	848	1326	2176
Fig. 41A	100	689	238	424	665	1088	1701	2791
Fig. 41A	125	861	291	518	812	1328	2076	3407
Fig. 41A	150	1034	343	611	959	1568	2452	4022
Fig. 41A	175	1206	396	705	1210	1808	2827	4638
Fig. 41A	200	1378	448	799	1253	2048	3202	5254
Fig. 41A	225	1550	501	892	1400	2288	3578	5869
Fig. 41A	250	1723	553	986	1547	2528	3953	6435
Fig. 41A	275	1895	606	1080	1693	2769	4328	7101
Fig. 41A	300	2067	659	1173	1840	3009	4703	7716

\* Capacities for 5 and 10psi are not certified by ASME/National Board.

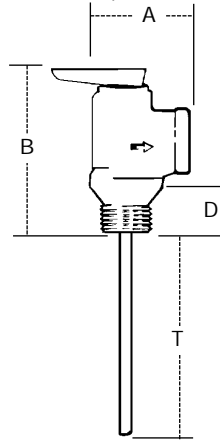
## Series 1L, 1XL, 10L and 100XL (1/2", 3/4")

Self-closing T&P Safety Relief Valves for Hot Water Storage Tanks and Heaters

- These combined two-in-one Temperature and Pressure relief valves provide the least expensive and proven means for protection against both excessive temperature and pressure emergency conditions.
- Fully automatic temperature and pressure relief protection for domestic hot water supply tanks and heaters based on the latest ANSI Z21.22 listing requirements for temperature discharge capacity.
- Reliable and proven means of protection against excessive temperature and pressure build-up in domestic hot water systems.
- Includes test lever.
- For water heaters from 15,000 to 105,000 BTU/hr.
- NPT male inlet and female outlet.

**Note:** See pg. 25 for information on domestic expansion tanks (DET) to control thermal expansion in domestic water closed systems.

For additional information, request literature ES-10L, ES-100XL, ES-SL100XL/L100XL/LL100XL/LLL100XL.



100XL

### Standards

- ANSI Z21.22 and ASME Section IV Rated†, CSA Listed.

### Specifications

- Temperature Relief: 210°F (99°C).  
Pressure Relief Range: 75 – 150psi (5.2 – 10.3 bars). Standard Pressure Relief Settings: 75psi (517.1 kPa), 100psi (6.9 bars), 125psi (8.6 bars) or 150psi (10.3 bars).

MODEL	SIZE (DN)		DIMENSIONS (APPROX.)								WEIGHT		CSA
	in.	mm	A		B		D		T		oz.	gm.	Temp. Steam Rating BTU/hr.
1L2†	1/2	15	1 3/4	43	3 1/2	89	7/8	22	2	50	10	284	15,000
1XL†	1/2	15	1 3/4	43	3 1/2	89	7/8	22	3	76	12	340	15,000
1XL-8†	1/2	15	1 3/4	43	3 1/2	89	7/8	22	8	203	16	454	15,000
10L-2	3/4	20	1 3/4	43	3 1/2	89	1 1/8	29	2	50	10	284	80,000
100XL	3/4	20	1 3/4	43	3 1/2	89	1 1/8	29	3	76	12	340	100,000
100XL-8	3/4	20	1 3/4	43	3 1/2	89	1 1/8	29	8	203	14	397	100,000
L100XL-3	3/4	20	1 3/4	43	4 1/4	108	2 1/8	41	3	76	12	340	100,000
SL100XL**	3/4	20	1 3/4	43	4 3/8	111	1 1/4	32	3 1/2	89	12	340	105,000
LL100XL	3/4	20	1 3/4	43	4 3/4	121	2	50	2 1/2	64	12	340	100,000
LLL100XL-Z5**	3/4	20	1 3/4	43	5 1/4	133	2 1/2	64	2 1/8	54	12	340	105,000

A = overall width of the valve. B = overall height of the valve, with lever closed, not including thermostat element length. D = length of shank, from shoulder under outlet orifice overhang to inlet orifice edge. T = length of thermostat element, measured from inlet orifice edge to end of thermostat. Set @ 150psi (10.3 bars). Consult your local Watts Agent or call Customer Service at (978) 689-6066 for ordering codes of valves with pressure relief settings of 75, 100, 125psi (5.2, 6.9, 8.6 bars).

\*\*CSA rating 105,000 BTU

†1/2" (15mm) valves are not ASME rated.

## Model 210 (3/4")

Immersion-type, Temperature Gas Shutoff for Hot Water Storage Heaters.

- Protects against excessive temperatures in gas water heaters.
- Shuts off the gas supply to the water heater in the event that the water temperature reaches 210°F (98.9°C).
- Used in conjunction with Model 3L pressure relief valve, p.20.

### Specifications

- Tank connection 3/4" (20mm) NPT male.
- Gas inlet and outlet connection 1/2" (15mm) NPT female.
- Design certified by CSA.
- CSA ratings: natural gas 150,000 BTU/hr., liquefied petroleum gas 243,000 BTU/hr.



210

For additional information, request literature ES-210.



# ASME Rated Series 40, 140, 240, 340, 342 (3/4" – 2")

Automatic Reseating T&P Relief Valves for Hot Water Supply Tanks and Heaters.

- The combined two-in-one Temperature and Pressure relief valve provides the least expensive and most proven means for protection against both excessive temperature and pressure.
- Fully automatic temperature and pressure relief protection for hot water supply tanks and heaters based on the latest ANSI Z21.22 Listing Requirements for temperature discharge capacity.

## Standards

ANSI Z21.22 and ASME Section IV Rated, CSA Listed.

## Specifications

- Temperature relief 210°F (98.9°C). Pressure range 75 – 150psi (5.2 – 10.3 bars). Standard settings: 75psi (517.1 kPa); 100psi (6.9 bars); 125psi (8.6 bars); and 150psi (10.3 bars). See Dimensions/Wgts. chart on next page for inlet and outlet connection type and sizes.

### Series 40, 140 nominal size 3/4" (20mm)

- To protect gas, electric or oil-fired storage water heaters rated between 180,000 to 200,000 BTU/Hr. from excessive heat or pressure build up, choose the 3/4" (20mm) model 40 or 140. Tested under ANSI Z21.22 with ratings as certified and listed by CSA. Series 40, 140 and 240 nominal size 1" (25mm).
- For gas or oil-fired storage water heaters rated between 450,000 and 730,000 BTU/Hr., choose the 1" (25mm) model 40, 140 or 240. Tested under ANSI Z21.22 with ratings as certified and listed by CSA.

### Series 340, 342 nominal sizes 1 1/2" x 2" (40 x 50mm)

- For gas or oil-fired hot water supply boilers rated over 730,000 BTU/Hr. output heating for water and for steam coil storage water heaters, choose the Model 340 or 342. Tested under ANSI Z21.22 with ratings as certified and listed by CSA.

## Special Model

**Special Model 340X-8 M4Z** available in 1 1/2" (40mm) size only. Pressure setting is 175psi (12.1 bars). Temperature relief at 210°F (98.9°C); Certified by CSA only.

For additional information, request literature ES-40, 140, 240, 340, or ES-LL/LLL-40XL.



340

## Features

- Bronze body construction
- Tamper-resistant bonnet screws
- Series 40 and 140 feature a unique thermostat with a special thermo-bonded coating
- 1" (25mm) and above sizes Model M2, M4 and M14 are standardly furnished with stainless steel thermostat tube
- Accurate and proven thermostat, exclusively designed and manufactured by Watts



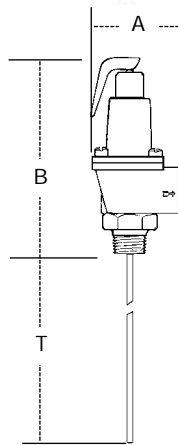
1" LL40XL-Z2



3/4" LL40XL-Z2



3/4" LLL40XL-Z2



Series 40L

MODEL	SIZE (DN)		THERMOSTAT LENGTH		DIMENSIONS (APPROX.)				WEIGHT		RATINGS		
	M = MALE F = Female Inlet x Outlet in. x in.    mm x mm		T (below inlet) in.    mm		A in.    mm		B less thermostat in.    mm		lbs.	kg.	CSA TEMP. STEAM RATING BTU/hr.	ASME PRESSURE STEAM RATING BTU/hr. ** @75psi set pressure	ASME PRESSURE STEAM RATING BTU/hr. ** @150psi set pressure
40L-3	3/4M x 3/4F	20 x 20	3	76	2 5/8	67	5 5/8	143	1 3/4	.79	180,000	777,600	1,437,600
40XL-5	3/4M x 3/4F	20 x 20	5	127	2 5/8	67	5 5/8	143	1 3/4	.79	205,000	777,600	1,437,600
40XL-8	3/4M x 3/4F	20 x 20	8	200	2 5/8	67	5 5/8	143	1 3/4	.79	205,000	777,600	1,437,600
LL40XL	3/4M x 3/4F	20 x 20	3 1/2	89	2 5/8	67	5 5/8	143	1 1/2	.68	205,000	777,600	1,437,600
LLL40XL	3/4M x 3/4F	20 x 20	5	127	2 5/8	67	7 5/8	194	2	.90	205,000	777,600	1,437,600
140S-3	3/4F x 3/4F	20 x 20	3	76	2 5/8	67	5 5/8	143	1 3/4	.79	180,000	777,600	1,437,600
140X-5	3/4F x 3/4F	20 x 20	5	127	2 5/8	67	5 5/8	143	1 3/4	.79	205,000	777,600	1,437,600
140X-8	3/4F x 3/4F	20 x 20	8	200	2 5/8	67	5 5/8	143	1 3/4	.79	205,000	777,600	1,437,600
40L-2	1M x 1F	25 x 25	2	50	2 3/4	70	6 1/4	158	2 1/4	1.00	450,000	1,155,000	2,134,000
40XL-4	1M x 1F	25 x 25	4	100	2 3/4	70	6 1/4	158	2 1/4	1.00	500,000	1,555,000	2,134,000
40XL-7	1M x 1F	25 x 25	7	178	2 3/4	70	6 1/4	158	2 1/4	1.00	500,000	1,555,000	2,134,000
LL40XL	1M x 1F	25 x 25	3	76	2 3/4	70	6 1/2	165	2	.90	500,000	1,155,000	2,134,000
*140S-3	1F x 1F	25 x 25	3	76	3	76	5 1/2	140	2 1/4	1.00	570,000	1,670,000	3,085,000
*140X-6	1F x 1F	25 x 25	6	150	3	76	5 1/2	140	2 1/4	1.00	670,000	1,670,000	3,085,000
*140 X-9	1F x 1F	25 x 25	9	229	3	76	5 1/2	140	2 1/4	1.00	670,000	1,670,000	3,085,000
*N240X-6	1F x 1F	25 x 25	6	150	3 3/8	86	6 5/8	168	2 3/4	1.20	730,000	2,195,000	4,059,000
*N240X-9	1F x 1F	25 x 25	9	229	3 3/8	86	6 5/8	168	2 3/4	1.20	730,000	2,195,000	4,059,000
*N241X-5	1 1/4M x 1F	32 x 25	5	127	3 3/8	86	6 5/8	168	2 3/4	1.20	730,000	2,195,000	4,059,000
*N241X-8	1 1/4M x 1F	32 x 25	8	200	3 3/8	86	6 5/8	168	2 3/4	1.20	730,000	2,195,000	4,059,000
*340-3	1 1/2F x 1 1/2F	40 x 40	3	76	4 1/2	114	9 3/4	248	7	3.00	1,150,000	3,450,000	6,379,000
*340X-8†	1 1/2F x 1 1/2F	40 x 40	8	200	4 1/2	114	9 3/4	248	8	3.60	1,150,000	3,450,000	6,379,000
*342-3	2M x 1 1/2F	50 x 40	3	76	4 1/2	114	9 3/4	248	7	3.00	1,150,000	3,450,000	6,379,000
*342X-8	2M x 1 1/2F	50 x 40	8	200	4 1/2	114	9 3/4	248	8	3.60	1,150,000	3,450,000	6,379,000

\* Standardly furnished with stainless steel thermostat tube. †340X-M4Z – Temperature Relief of 210°F, Certified CSA only.

\*\* ASME capacities are steam pressure ratings at the indicated set pressure and do not reflect the CSA temperature relieving capacity of the valves for selection purposes. Standard pressure relief setting: 75, 100, 125 and 150psi (5.2, 6.9, 8.6, and 10.3 bars).

Set @ 150psi (10.3 bars).

## Series 3L, 53L (1/2", 3/4")

### Poppet Type Pressure Relief Valves for Protection Against Excessive Pressure

**3L** – ASME rated, design certified and listed by CSA. MIL Spec MIL-V-136-10 Type 1. Size: 3/4" (20mm), NPT male inlet x NPT female (drain) outlet. ASME construction and tested, listed and certified by the National Board of Boiler and Pressure Vessel Inspectors. Pressure range 75 – 150psi (5.2 – 10.3 bars). Standard setting 75psi (517.1 kPa). Optional setting 100, 125, 150psi (6.9, 8.6, 10.3 bars). Used in conjunction with Model 210 gas shutoff valve, p.17.

**53** – without test lever.

- Sizes: 1/2", 3/4" (15, 20mm), NPT male inlet x NPT female (drain) outlet.
- Pressure Range: 75 – 175psi (5.2 – 12.1 bars).
- Standard pressure relief setting is 75psi (517.1 kPa). Optional settings 100, 125 or 150psi (6.9, 8.6, or 10.3 bars).

**53L** – same as Model 3L except 1/2" (15mm) inlet/outlet. Includes test lever. ANSI Z21.22 "Relief Valves for Hot Water Supply Systems". Design certified and listed by CSA. Does not comply with ASME requirements. UL Listed.

**FP53L** – for fire protection grid systems; protects against excessive pressure from thermal expansion or line surge. Size: 1/2" (15mm). Pressure relief set at 175psi (12.1 bars). UL Listed.

For more products to protect against thermal expansion, see pages 25 and 27.

For additional information, request literature ES-530C or ES-FP53L.



3L

## Series 30 (1/2")

### Pressure Relief Valves

- Pressure relief only.

**30L** – with test lever; not diaphragm activated. Nominal size: 1/2" (15mm), NPT male inlet x female (drain) outlet. Standard Pressure Setting: 75psi (5.17 bars). Optional settings 100, 125 and 150psi (6.9, 8.6, 10.3 bars).

**30L-Z1** – well system relief valve. Capacity 20 gpm (76 lpm) at 10psi (68.9kPa) over 75psi (516.7 kPa) set pressure.

**N30L** – with test lever. Pressure Range: 30 – 60psi (206.7 – 413.4 kPa). Standard settings 30 – 45psi (206.7 – 310 kPa).

**N30** – without test lever. Pressure Range: 5 – 25psi (34.5 – 172.4 kPa).

For additional information, request literature ES-530C.



30L

## Series 530C (1/2" – 3/4")

### Calibrated Pressure Relief Valves

- Adjustable pressure relief range 50-175psi (3.4 – 12.1 bars).
- Designed for use as protection against excessive pressure build-up in systems containing water, oil and air.

**530FP** – for fire protection systems.

#### Specifications

- Nominal sizes: 1/2" or 3/4" (15 – 20mm), NPT male inlet x 1/2" (15mm) NPT female (drain) outlet.
- Maximum Working Pressure: 300psi (20.7 bars).
- Maximum Working Temperature: 180°F (82°C).

For additional information, request literature ES-530C.



530C

## Series H32 (1/2" – 3/4")

### Hose Connection Pressure Relief Valve

- Has a 3/4" hose connection inlet for ease of installation.

#### Specifications

- Set at 80psi or 100psi (5.5 bars or 6.89 bars).

For assistance, contact your local authorized Watts agent or visit our website at [www.wattsreg.com](http://www.wattsreg.com)



H32

## Model 5300A (1/2")

Poppet-type, Compact By-pass Relief Valve

- Bronze body construction
- "T" handle facilitates pressure adjustment

### Specifications

- Nominal size: 1/2" (15mm), NPT male inlet x female outlet.
- Pressure Range: 0 – 250psi (0 – 17.2 bars).

For additional information, request literature ES-530C.



5300A

## Series BP30 (1/2")

By-pass Control Relief Valves

- Controls liquid pressure as supplied by a positive pressure pump.
- Protects equipment by operating at the desired pressure setting and allows excess volume to be bypassed back to the source.

### Specifications

- Size 1/2" (15mm), NPT male inlet x female outlet.
- Pressure Range: 10 – 175psi (.069 – 12.1 bars).
- Maximum Temperature: 180°F (82°C).
- Bronze body, sensitive rubber diaphragm and special Teflon® disc.

### Models

**BP30A** – adjustable 10 – 50psi (68.9-344.8 kPa), Model BP30B,  
45 – 100psi (310.3 – 689.5 kPa) Model BP30C 75 – 175psi (5.2 – 12.1 bars).

For additional information, request literature ES-530C.



BP30

## Spacemaker® by Watts Outside Water Heater Enclosures

- Allows water heater to be installed outdoors
- Galvanized steel enclosures

### Specifications/Models

- Enclosures available for water heaters 20 to 100 gallons in size.
- Three sided, back sections are also available.
- No screws, nuts or bolts required.

**R-24 BL** – for 20 – 40 gallon tank size, 24" Square x 72½" Tall.

**WPE-24 (1)** – for 20 – 40 gallon tank size, 24" Cabinet w/o Venting or Louvers.

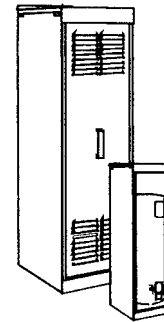
**R-26** – for 20 – 40 gallon tank size, 26" Wide x 24" Deep x 72½" Tall.

**R-30 BL** – for 50 – 80 gallon tank size, 30" Square x 72½" Tall.

**C-36 Com** – for 80 – 100 gallon tank size, 36" Square x 82" Tall.

**B-24** – 24" Back Section for R-24BL Enclosures.

**B-24 WPE** – Back Section for WPE-24.



**B-26** – 26" Back Section for R-26 Enclosures.

**B-30** – 30" Back Section for R-30BL Enclosures.

**B-36** – 36" Back Section for C-36 Enclosures.

For additional information, request literature F-Spcmkr.

## Spacemaker® by Watts Water Heater Stands Series AS — Preassembled

- Raises water heater flame element 18" above the floor per safety code requirements
- Reduces risk of fire, explosion, and property damage
- Galvanized steel construction

### Specifications/Models

- Stands available for water heaters 40 to 100 gallons in size.

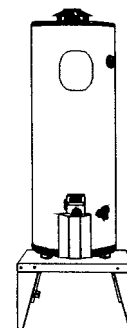
**AS-20** – for up to 52 gallon tank, Size 20" x 20" x 16".

**AS-22** – for up to 65 gallon tank, Size 22" x 22" x 16".

**AS-26** – for up to 75 gallon tank, Size 26" x 26" x 16".

**AS-30** – for up to 100 gallon tank, Size 30" x 30" x 16".

For additional information, request literature F-Spcmkr.



## Model DPS Drip Pan Stand

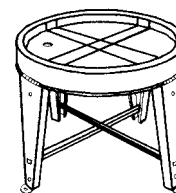
- Round Stand includes built-in drip pan

### Specifications/Models

- Holds up to 52 gallon water heater
- PVC drain connector
- All clip together design

**DPS-20** – for up to 52 gallon tank, Size 22" x 16".

For additional information, request literature F-Spcmkr.



## Model ENS Enclosed Stand

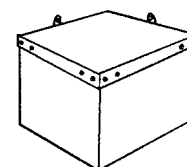
- For use in food processing areas
- Fully enclosed to prevent the base from being used as a storage area

### Specifications/Models

- Floating seismic clips for easy bolting to the wall.

**ENS-20** – for up to 40 gallon tank, Size 20" x 20" x 16".

For additional information, request literature F-Spcmkr.



## Spacemaker® by Watts Heavy-duty Water Heater Restraints Series E-50, E-100 — Double Straps for Tight Spacing

- Use for optimal security
- Specially designed for cabinets and space limited installations

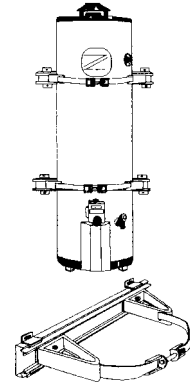
### Specifications/Models

- Accommodates up to 100 gallon water heater.
- Double strapping system.
- Cradles the tank with gussets for added security.
- Fast convenient front tensioning of the restraint.

**E-50** – for up to 52 gallon tank. Double strapping system for tight spaces and/or cabinets where hardware needs to locate behind the water heater.

**E-100** – for up to 100 gallon tank. Double strapping system for tight spaces and/or cabinets where hardware needs to locate behind the water heater.

For additional information, request literature F-Spcmkr.



## Series FS — Free Standing

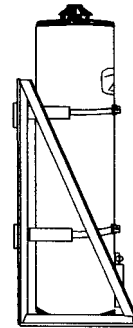
- Allows safe placement of the water heater anywhere on roof or floor.
- Mounts to the roof or floor by bolting straight through or with the use of a floating clip.

### Specifications/Models

- Accommodates up to 100 gallon water heaters.
- Heavy duty angle iron frame complete with a E-100 restraint.

**FS-26** – for up to 65 gallon tank; super heavy duty construction for installations where no wall is available for mounting. Platform is 26" square.

**FS-36** – for up to 120 gallon tank; super heavy duty construction for installations where no wall is available for mounting. Platform is 36" square.



## Series WM — Wall Mounted

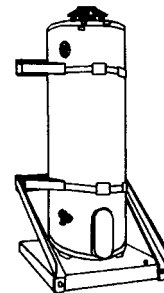
- Allows safe placement of the water heater anywhere on the wall.
- Perfect for industrial applications.

### Specifications/Models

- Accommodates up to 120 gallon water heaters.
- Heavy duty wall mount system includes a E-100 restraint.

**WM-26** – for up to 65 gallon tank; super heavy duty construction for installations against the wall where the water heater needs to be elevated. Platform is 26" square.

**WM-30** – for up to 120 gallon tank; super heavy duty construction for installations where the water heater needs to be elevated. Platform is 30" square.



## Series TSE — Water Heater Straps for Zero Clearance

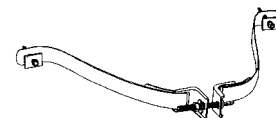
- For zero clearance water heaters
- Quick easy installation — Bolts directly into wall studs
- Adjusts easily to fit water heater

### Specifications/Models

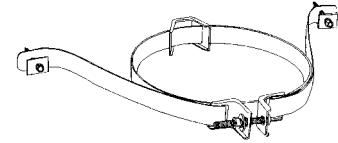
- Accommodates up to 75 gallon water heater.
- Kit contains four straps for restraining top and bottom of water heater.
- Lag bolts are pre-installed & held with paper keepers to prevent dropping behind the tank.

**TSE-75** – for up to 75 gallon tank; simple double straps for across-the-front installations.

**TSE-75P (Plastic wrap)** – same as TSE-75 except straps are packed in heavy duty polyolefin plastic shrink wrap.



# Spacemaker® by Watts Water Heater Restraints Series E-75, E-120 – Easy Adjust Water Heater Straps



- Quick easy installation — Bolts directly into wall studs
- Adjusts easily to fit water heater

## Specifications

- Accommodates up to 75 gallon water heater.
- Kit contains four straps for restraining top and bottom of water heater.
- Lag bolts are pre-installed & held with paper keepers to prevent dropping behind the tank.

## Models

**E-75** – for up to 75 gallon tank. Provides great flexibility in strapping the water heater, either to wrap the water heater with a non-flammable back spacer or strap across-the-front like the TSE-75.

**E-120** – for up to 120 gallon tank, same as the E-75 except it comes with enough strap to encircle or go across the front of a 120 gal. water heater.

For additional information, request literature F-Spcmkr.

## Series N36 (1/2", 3/4")

### Water Service Vacuum Relief Valves

- Automatically vents a closed system if vacuum occurs.
- Allows air to enter the system.
- Relieves vacuum conditions which could siphon the water from the system and burn out a water heater or collapse a tank.



N36

## Specifications

- Maximum Working Pressure: 200psi (13.8 bars).
- Maximum Temperature: 250°F (121°C).
- Size: 1/2" or 3/4" (15 or 20mm), NPT male inlet connection. Venting capacity: 1/2" size (15mm) and 3/4" size (20mm) are 15 cfm (425 lpm).

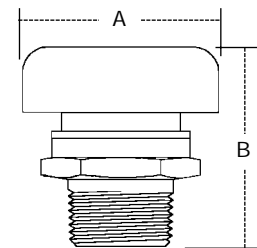
## Standards

- Design certified by CSA. Tested and rated under ANSI Z21.22 Relief Valves for Hot Water Supply Systems". CSA certified.
- Also suitable for steam service, max. pressure 15psi (103.4 kPa).

## Features

- Opens at less than 1/2" (15mm) vacuum

For additional information, request literature ES-N36.

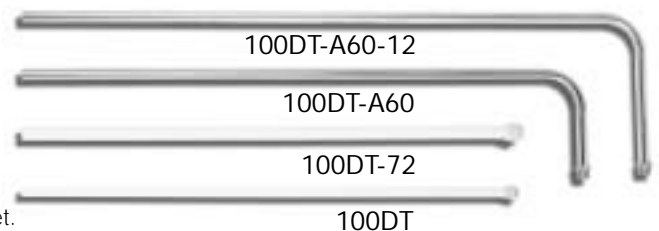


MODEL	SIZE (DN)		DIMENSIONS (APPROX.)				WEIGHT	
	in.	mm	A		B		oz.	gm.
N36 M1	1/2	15	2	50	2	50	4	113
N36 M1	3/4	20	2	50	2	50	4	113

## Models 100DT, 100DT-A (3/4")

### Drain Lines for T&P Relief Valves

- Connects to 3/4" (20mm) temperature and pressure relief valve drain connections.
- For use on T&P relief valves with up to 100,000 BTU/hr. rating.
- Requires no special tools or fittings; hand tightens to relief valve outlet.



## Models

- 100DT** – for use with side mounted relief valves. Drop length is 48".
- 100DT-72** – same as above except drop length is 72".
- 100DT-A60** – for use with top mounted relief valves. Drop length is 60".
- 100DT-A60-12** – for use with center top mounted relief valve. Drop length is 60".

## Standards

Drain line: Fully approved ASME A112.4.1UPC, IAPMO.  
Meets Dept. of Housing and Urban Development requirements.

For additional information, request literature ES-100DT.

# Series BRV (3/4", 1")

## Combination Ball Valve and Relief Valve

### Specifications

- Maximum Working Temperature: 210°F (99°C)
- Maximum Working Pressure: Valve body rated to 400psi (28 bars)

### Features

- Easy Installation – Installs in any position
- Low profile design
- Full port ball valve with virgin PTFE seats
- Blowout proof stem
- Stainless steel spring/Viton® ball relief valve components
- Secure compression or PEX end fitting drain tube connection
- Full line of pex connections
- Available in a 75, 80, 100 or 125psi (5.2, 5.5, 6.9, or 8.6 bars) pressure setting
- Available with threaded, solder or PEX end connections

For additional information, request literature ES-BRV.

### Available Models

INLET	OUTLET	RELIEF OUTLET
Sweat	Sweat	Compression
Thread	Thread	Compression
PEX	PEX	Compression
PEX	Thread	Compression
PEX	Thread	PEX
PEX	Sweat	Compression
PEX	Sweat	PEX
Thread	PEX	Compression
Sweat	PEX	Compression



BRVT  
THD x THD x Comp



BRVP x T x P  
PEX x THD x PEX



BRVP  
PEX x PEX x Comp

# Series DET-M1

## Potable Water Expansion Tanks for Domestic Hot Water Systems

- Controls thermal expansion of water in open domestic hot water supply systems.
- Absorbs the increased volume of water generated by the hot water heating source keeping system pressure below the pressure relief setting of the T&P relief valve.
- May be used with all types of direct-fired water heaters (gas, oil or electric) and all types of hot water storage tanks.
- Its pre-pressurized steel tank uses an expansion membrane to prevent air/water contact for long system life.

For additional information, request literature ES-DET-M1.

For information on ASME rated tanks, request literature ES-ETA, ES-ET-RA and ES-DETA.



DET-5-M1

### Standards

Listed by IAPMO, Certified to ANSI/NSF61

### Features

- Rugged butyl diaphragm
- In-line and free-standing models

MODEL	DET-5-M1	DET-12-M1	DET-20-M1	DET-35-M1
Max. Pressure – psi	150	150	150	150
Max. Temperature – °F	200	200	200	200
Tank Volume – Gal.	2.1	4.5	8.5	14.00
Tank Acceptance – Gal.	.85	1.8	3.2	5.6
Air Precharge – psi	40	40	40	40
Connection Size – inches†	3/4 Male	3/4 Male	3/4 Male	1 Female
Diameter – inches	8.5	10.0	12.5	16.0
Length – inches	11.5	115.0	19.2	21.7
Weight – lbs.	7	10	15	32

† – Connection size: (M)=Male, (F)=Female.



# Series DETA 5 – DETA 210

## ASME Pressurized Expansion Tanks for Potable Hot Water

- Designed to accept the expanded volume of hot water keeping the system pressure below the relief valve setting.
- For commercial and industrial potable hot water applications.
- ASME fixed bladder type precharged expansion tank.



DETA

### Specifications

- Maximum Working Pressure: 150psi (10 bars) Precharged to 40psi (275 kPa).
- Maximum Temperature: 240°F (115°C).

For additional information, request literature ES-DETA.

### Features

- ASME Section VIII Construction
- Fixed Butyl Bladder (FDA approved)
- Stainless Steel System Connection
- Precharged to 40psi (275 kPa) (Field Adjustable)

### Construction

**Shell:** Carbon steel

**System Connection:** Stainless steel

**Bladder:** Butyl (FDA approved)

**Exterior:** Primer coated

# Series PLT

## Potable water expansion tanks

- Designed to take in water displaced by thermal expansion and to maintain balanced pressure throughout the potable water supply.
- Expansion tanks for all types of Direct Fired Hot Water Heater (gas, oil or electric) and hot water storage tanks.



PLT-5

### Specifications

- Maximum Working Pressure: 150psi (10.3 bars).
- Maximum temperature 200°F (93°C).

For additional information, request literature ES-PLT.

### Features

- Polypropylene liner
- Rugged flexible butyl diaphragm
- Field adjustable pre-charge
- IAPMO and NSF listed
- Can be used with most standard water heater and storage tanks

MODEL	PLT-5	PLT-12
Max. Pressure – psi	150	150
Max. Temperature °F	200	200
Tank Volume – Gal	2.1	4.5
Tank Acceptance – Gal.	1.26	2.8
Air Precharge – psi	40	40
Connection Size – in. †	¾ Male	¾ Male
Diameter – inches	8	10.5
Length – inches	11	13.5
Weight – lbs.	5.5	10

† – Connection size: **(M)** = Male, **(F)** = Female.

## Series ILT

### In-Line Potable Water Expansion Tank

- Absorbs increased volume of water created by thermal expansion and maintains balanced pressure throughout potable system while allowing flow of water through the tank.
- Prevents plumbing system and/or water heater damage and unnecessary T&P relief valve discharge.
- Unique flow-through design provides safer and healthier drinking water by virtually eliminating conditions that promote microbial growth.

#### Standards

**ILT-5, ILT-12** listed by IAPMO.

For additional information, request literature ES-ILT

#### Features:

- Flow-through design virtually eliminates microbial growth
- Unique tubular design permits vertical or horizontal mounting; can be installed between floor joists or across ceiling rafters

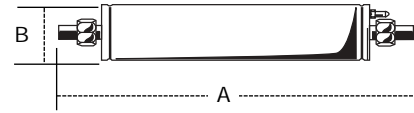
DESCRIPTION	ILT-5	ILT-12
Max. Pressure – psi	150	150
Max. Temp. – °F	160	160
Air Pre-charge – psi	40	40
Tank Volume – Gal.	1.20	1.93
Tank Acceptance – Gal.	1.15	1.85
Connections Size – in.	3/4" Female Pipe Thread/Solder/Pex	3/4" Female Pipe Thread/Solder/Pex
(A) Length – in.	31	46
(B) Diameter – in.	4	4
Weight – lbs.	9.5	13.5



ILT

Patent # 6,418,969

- Union fittings speed installation and allow for prefab piping. Available with solder, thread or PEX connections
- Galvanized steel housing eliminates need for protective epoxy coating
- Inline bi-directional orientation simplifies installation
- Compact, slim design allows ILT to be mounted in places ordinary tanks won't fit



## Series CWH-S (5/8" – 7/8")

### Flexible, Braided Stainless Steel Water Heater Connectors

- For connecting water heaters to the water supply
- Protects against the destructive effects of system pressure surges
- PVC tubing jacketed with braided SS

#### Models

**CWH-S-FF-L** – Size 3/4" x 3/4" (20 x 20mm), brass female iron pipe (FIP) threaded ends.

**CWH-S-AF-L** – Size 5/8" (16mm) compression end fitting x 3/4" (20mm) brass FIP threaded fitting.

**CWH-S-AF-L** – Size 7/8" (22mm) compression end fitting x 3/4" (20mm) brass FIP threaded fitting.

**CWH-S-AA-L** – Size 7/8" x 7/8" (22 x 22mm) compression end fittings.

**CWH-S-FM-L** – Size 3/4" (20mm) brass FIP thread fitting x 3/4" (20mm) brass male iron pipe threaded fitting.

**CWH-S-AM-L** – Size 7/8" (22mm) compression end fitting x 3/4" (20mm) brass male iron pipe threaded fitting.



CWH-S-FF-L

#### Specifications

Maximum Pressure: 150psi (10.3 bars).

Maximum Temperature: 180°F (82°C).

All hoses are NSF61 approved for safer drinking water.

For additional information, request literature F-Fixcon.

# Series PVS-1000

## Pre-engineered Valve Stations

Series PVS-1000 Pre-Engineered Valve Stations are custom configured water flow control systems that are assembled from proven, reliable Watts components to meet exacting project application requirements. Watts pre-engineered valve stations are factory pre-assembled, tested and optionally certified by independent agencies to ensure flow performance for critical building demands.



PVS-1000

### Benefits

Watts pre-engineered valve stations provide the following benefits:

- Reduction of installation time from days to hours, minimizing installations costs
- Redundant flow paths provide uninterrupted water flow while device is being tested or maintained, reducing overtime labor costs
- Operates below OSHA mandated maximum noise levels
- Corrosion resistant design reduces component maintenance costs
- Optional pre-installation performance certification ensures conformance to design criteria at site
- Reduction in the number of overall components needed through Watts' innovative design program
- One supplier of components, one source of responsibility, Watts, a leader in valve technology for over 125 years

### Applications

Watts pre-engineered valve stations are custom fit to your specifications and are ideal for a wide variety of flow control applications including:

- Hospitals
- Schools
- Multi-Family Dwellings
- Restaurants
- Industrial Facilities
- Other similar buildings

### Features

- Uninterrupted water flow during maintenance and emergency conditions
- Maximum flow performance with low pressure drops
- Wide flow control ranges meet standard end emergency peak flow requirements
- Standard flow design to >10,000 gpm
- Integral backflow prevention devices, meter, pressure regulators, automatic control valves, strainers, headers, shutoff valves, and instrumentation as needed to suit specific applications
- UL/FM, ASSE, IAPMO, USC certified or listed components as required for service
- Single point of connection for fire protection, potable water and irrigation services (where approved by local codes)
- Corrosion resistance material construction
- Redundant flow path design
- Standard vault, vertical, and horizontal mounting configurations
- Integral slip and alignment flanges correct for site variations and relieve pipe stress
- Field proven in over 100 installations and years of history
- Expansion capability
- Built-in protection for system upsets (i.e. seismic shocks)

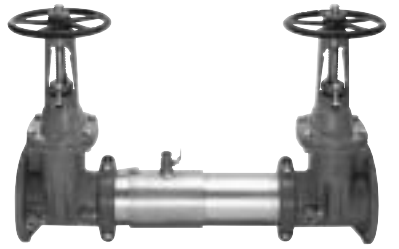
For additional information, request literature PG-ValveStations.

# SilverEagle™ Series 757, 757N

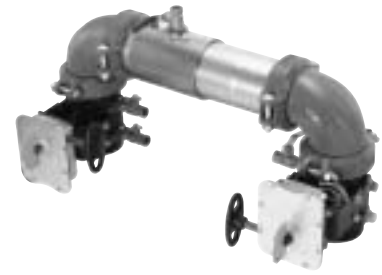
(2½" – 10")

## Double Check Valve Assemblies

- Designed to prevent backflow of pollutants that are objectionable but not toxic from entering the potable water supply.
- For non-health hazard continuous pressure applications.
- Provides protection against backsiphonage and backpressure backflow.



757 OSY



757N BFG

## Specifications

- Temperature Range: 33°F – 140°F (5°C – 60°C).
- Maximum Working Pressure: 175psi (12.1 bars).

## Models

add Suffix:

**NRS** – non-rising stem resilient seated gate valves.

**OSY** – UL/FM outside stem and yoke resilient seated gate valves.

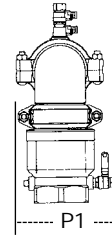
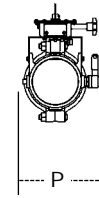
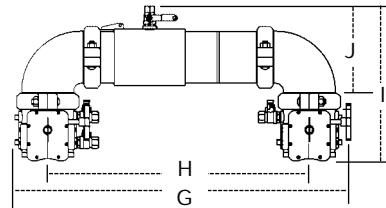
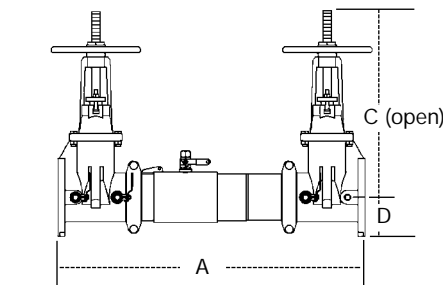
**BFG** – 2½" – 8" UL/FM grooved gear operated butterfly valves with tamper switch.

**QT** – 2½" – 3" quarter-turn ball valves.

Post indicator plate and operating nut available – consult factory

For additional information, request literature ES-757/757N.

For WattsBox Enclosures, request literature ES-WB.



### 757 / 757N

SIZE (DN)	DIMENSIONS (APPROX.)										WEIGHT															
	A		C (OSY)		C (NRS)		D		G		H		I		J		P		757NRS		757OSY		757N NRS		757N OSY	
in. mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.	lbs.	kgs.	lbs.	kgs.	lbs.	kgs.
2½ 65	31	787	16⅞	416	9⅞	238	3½	89	29⅞	738	22	559	15½	393	8⅜	223	9⅜	234	115	52	125	57	123	56	133	60
3 80	31⅞	805	18⅞	479	10⅞	260	3⅞	94	30⅞	768	22¾	578	17⅞	435	9⅞	233	10½	267	131	59	145	66	144	65	158	72
4 100	33⅞	856	22¾	578	12⅞	310	4	102	33	838	24	610	18½	470	9⅞	252	11⅜	284	161	73	161	73	184	83	184	83
6 150	44	1118	30⅞	765	16	406	5½	140	44¾	1137	33¾	857	23⅜	589	13⅞	332	15	381	273	124	295	134	314	142	336	152
8 200	50	1270	37¾	959	19⅞	506	6⅞	170	54⅞	1375	40⅞	1032	27⅞	697	15⅞	399	17⅞	437	438	199	480	218	513	233	555	252
10 250	57½	1460	45¾	1162	23⅞	605	8⅞	208	66	1676	50	1270	32½	826	17⅞	440	20	508	721	327	781	354	891	404	951	431

### 757BFG / 757N BFG

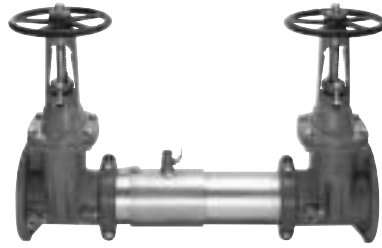
SIZE (DN)	DIMENSIONS (APPROX.)										WEIGHT									
	A		C		D		G		H		I		J		P		757BFG		757N BFG	
in. mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.	lbs.	kgs.
2½ 65	28	711	8	203	3½	89	29⅞	759	22	559	14⅞	379	8⅜	223	9	229	56	25	64	29
3 80	28½	724	8⅞	211	3⅞	94	30⅞	779	22¾	578	15⅞	392	9⅞	233	9½	241	54	24	67	30
4 100	29⅞	741	8⅞	227	3⅞	94	31⅞	811	24	610	16¼	412	9⅞	252	10	254	61	28	84	38
6 150	36½	927	10	254	5	127	43⅞	1097	33¾	857	19⅞	500	13⅞	332	10½	267	117	53	157	71
8 200	43	1092	12¼	311	6½	165	51⅞	1297	40⅞	1032	23⅞	592	15⅞	399	14⅞	361	261	118	337	153

### 757QT

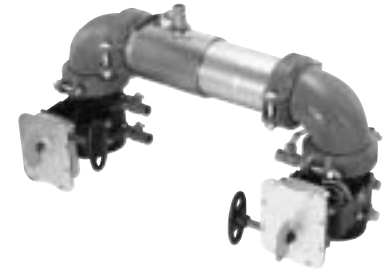
SIZE (DN)	DIMENSIONS (APPROX.)										WEIGHT									
	A		C		D		G		H		I		J		P		P1			
in. mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.
2½ 65	28⅞	735	4⅞	124	3⅞	97	30¼	768	24½	622	16⅞	421	11⅞	289	10⅞	265	8⅞	211	35	16
3 80	30⅞	767	4⅞	122	3⅞	98	30¼	768	24½	622	17⅞	437	11¼	258	10⅞	265	8⅞	217	45	21

# SilverEagle™ Series 757a, 757Na (2½" – 6")

## Double Check Valve Assemblies



757a OSY



757Na BFG

- Designed to prevent backflow of pollutants that are objectionable but not toxic for entering the potable water supply.
- For non-health hazard continuous pressure applications.
- Provides protection against backsiphonage and backpressure backflow.

### Specifications

- Temperature Range: 33°F – 140°F (5°C – 60°C).
- Maximum Working Pressure: 175psi (12.1 bars).

### Models

add Suffix:

**NRS** – non-rising stem resilient seated gate valves.

**OSY** – UL/FM outside stem and yoke resilient seated gate valves.

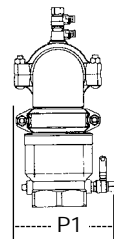
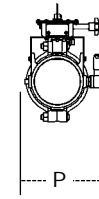
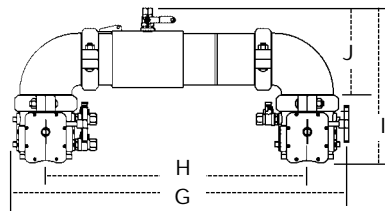
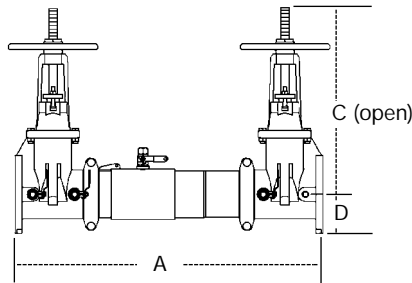
**BFG** – UL/FM grooved gear operated butterfly valves with tamper switch.

**QT** – 21½" – 3" quarter-turn ball valves.

Post indicator plate and operating nut available – consult factory

For additional information, request literature ES-757a/757Na.

For WattsBox Enclosures, request literature ES-WB.



### 757a / 757Na

SIZE (DN)	DIMENSIONS (APPROX.)										WEIGHT															
	A		C (OSY)		C (NRS)		D		G		H		I		J		P		757a NRS	757a OSY	757Na NRS	757Na OSY				
in. mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.	lbs.	kgs.				
2½ 65	31	787	16⅞	416	9⅞	238	3½	89	29⅞	738	22	559	15½	393	8⅜	223	9⅞	234	115	52	125	57	123	56	133	60
3 80	31⅞	805	18⅞	479	10¼	260	3⅞	94	30¼	768	22¾	578	17⅞	435	9⅞	233	10½	267	131	59	145	66	144	65	158	72
4 100	33⅞	856	22¾	578	12⅞	310	4	102	33	838	24	610	18½	470	9⅞	252	11⅞	284	161	73	161	73	184	83	184	83
6 150	44	1118	30⅞	765	16	406	5½	140	44¾	1137	33¾	857	23⅞	589	13⅞	332	15	381	273	124	295	134	314	142	336	152

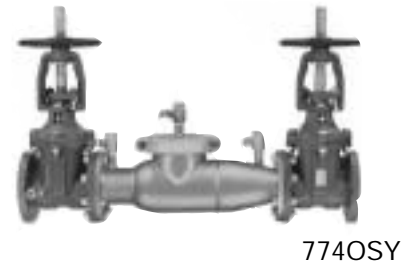
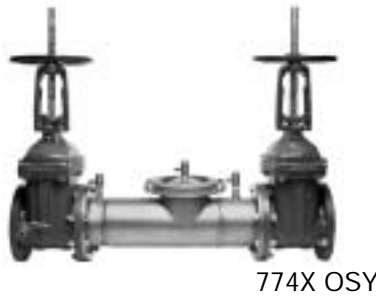
### 757a BFG / 757Na BFG

SIZE (DN)	DIMENSIONS (APPROX.)										WEIGHT									
	A		C		D		G		H		I		J		P		757a BFG	757Na BFG		
in. mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.	lbs.	kgs.
2½ 65	28	711	8	203	3½	89	29⅞	759	22	559	14⅞	379	8⅜	223	9	229	56	25	64	29
3 80	28½	724	8⅞	211	3⅞	94	30⅞	779	22¾	578	15⅞	392	9⅞	233	9½	241	54	24	67	30
4 100	29⅞	741	8⅞	227	3⅞	94	31⅞	811	24	610	16¼	412	9⅞	252	10	254	61	28	84	38
6 150	36½	927	10	254	5	127	43⅞	1097	33¾	857	19⅞	500	13⅞	332	10½	267	117	53	157	71

### 757aQT

SIZE (DN)	DIMENSIONS (APPROX.)										WEIGHT									
	A		C		D		G		H		I		J		P		P1			
in. mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.
2½ 65	28⅞	735	4⅞	124	3⅞	97	30¼	768	24½	622	16⅞	421	11⅞	289	10⅞	265	8⅞	211	35	16
3 80	30⅞	767	4⅞	122	3⅞	98	30¼	768	24½	622	17⅞	437	11¼	258	10⅞	265	8⅞	217	45	21

# Series 774 (2½" – 12") Series 774X (6" and 8") Double Check Valve Assemblies



- Designed to prevent the reverse flow of polluted water from entering the potable water system.
- For non-health hazard continuous pressure applications.
- Provides protection against backsiphonage and backpressure backflow.

## Specifications

- Temperature Range: 33°F – 110°F (5°C – 43°C)
- Maximum Working Pressure: 175psi (12.1 bars)

## Models

add Suffix:

- LF – without shutoff valves.
- NRS – non-rising stem resilient seated gate valves.
- OSY – UL/FM outside stem and yoke resilient seated gate 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
- S – cast iron strainer.

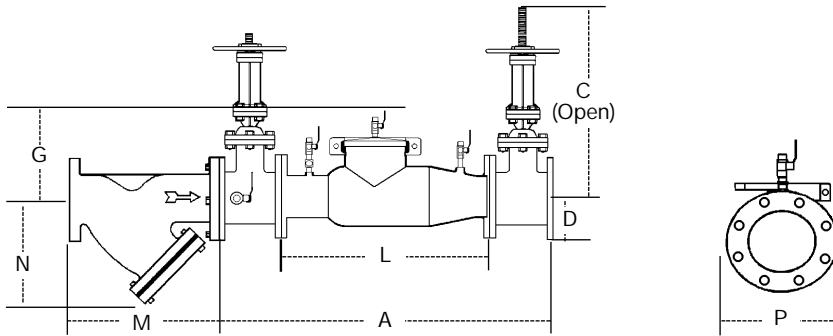
Post indicator plate and operating nut available – consult factory

For additional information, request literature ES-774 or ES-774X.

For WattsBox Enclosures, request literature ES-WB.

## Features

- Patented torsion spring check valve provides low head loss
- Short lay length is ideally suited for retrofit installations
- Stainless Steel body is half the weight of competitive designs reducing installation and shipping cost
- Stainless steel construction provides long term corrosion protection and maximum strength
- Single top access cover with two-bolt grooved style coupling for ease of maintenance
- Thermoplastic and stainless steel check valves for trouble-free operation
- No special tools required for servicing
- Compact construction allows for smaller vaults and enclosures
- May be installed in horizontal or vertical flow up position



774

SIZE (DN)	DIMENSIONS (APPROX.)												STRAINER DIMENSIONS		WEIGHT			
	A		C (OSY)		C (NRS)		D		G		L		P		M	N	w/Gates	w/o Gates
in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	lb. kg.	lb. kg.
2½ 65	38 965	16¾ 416	9¾ 238	3½ 89	10 254	22 559	12½ 318	10 254	6½ 165	155 70	68 31							
3 80	38 965	18¾ 479	10¼ 260	3¾ 95	10 254	22 559	13 330	10½ 257	7 178	230 104	70 32							
4 100	40 1016	22¾ 578	12¾ 310	4½ 114	10 254	22 559	14½ 368	12⅞ 308	8¼ 210	225 102	58 26							
6 150	48½ 1232	30⅞ 765	16 406	5½ 140	15 381	27½ 699	15½ 394	18½ 470	13½ 343	375 170	105 48							
8 200	52½ 1334	37¾ 959	19½ 506	6¾ 171	15 381	29½ 749	18¼ 464	21⅝ 549	15½ 394	561 254	169 77							
10 250	55½ 1410	45¾ 1162	23⅓ 605	8 200	15 381	29½ 749	19½ 495	26 660	18½ 470	763 346	179 81							
12 300	57½ 1461	53⅞ 1349	26¾ 679	9½ 241	15 381	29½ 749	21 533	29⅞ 759	21¾ 552	1033 469	209 95							

774X

SIZE (DN)	DIMENSIONS (APPROX.)												WEIGHT				
	A		C (OSY)		C (NRS)		D		G		L		P	S	w/Gates	w/o Gates	
in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	lb. kg.	lb. kg.
6 150	41½ 1054	30⅞ 765	16 406	5½ 140	11⅞ 283	20 508	16½ 419	11 279	328 149	58 26							
8 200	52½ 1334	37¾ 959	19½ 506	6¾ 171	17½ 445	29½ 749	17½ 445	13½ 343	540 245	120 54							

# Series 709 (2½" – 10")

## Double Check Valve Assemblies

- Designed to prevent the reverse flow of polluted water from entering the potable water system.
- For non-health hazard continuous pressure applications.
- Provides protection against backsiphonage and backpressure backflow.

### Specifications

- Temperature Range: 33°F – 110°F (5°C – 43°C)
- Maximum Working Pressure: 175psi (12.1 bars)

For additional information, request literature ES-709L.

For WattsBox Enclosures, request literature ES-WB.



709 OSY

### Features

- Replaceable bronze seats
- Maximum flow at low pressure drop
- Design simplicity for easy maintenance
- No special tools required for servicing
- Captured spring assemblies for safety
- Approved for vertical flow up installation

### Models

**add Suffix:**

**BB** – bronze body. Sizes 2½" – 3"  
(65 – 80mm)

**S** – cast iron strainer

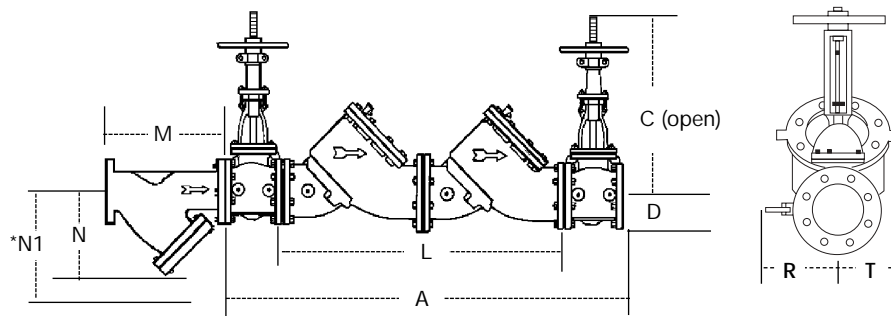
**S-FDA** – epoxy coated cast iron strainer

**LF** – without shutoff valves

**NRS** – non-rising stem resilient seated gate valves

**OSY** – UL/FM outside stem and yoke resilient seated gate valves

**QT-FDA** – FDA epoxy coated quarter-turn ball valves



### 709

SIZE (DN)		DIMENSIONS (APPROX.)										STRAINER DIMENSIONS				WEIGHT									
in.	mm	A		C(OSY)		C(NRS)		D		L		R		T		M		N		*N1		(OSY)		(NRS)	
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.	lbs.	kgs.
2½	65	39	991	16⅜	416	9⅜	238	3½	89	24	610	4	102	3	76	10	254	6½	165	10	254	195	88	167	76
3	80	40	1016	18⅞	479	10¼	260	3¾	95	24	610	5	127	3	76	10¼	260	7	178	10	254	201	91	167	76
4	100	52	1321	22¾	578	12⅜	310	4½	114	34	864	6	152	6	152	12⅞	308	8¼	210	12	305	428	194	368	167
6	150	63¼	1607	30⅞	765	16	406	5½	140	42½	1089	11	279	7½	191	18½	470	13½	343	20	508	860	390	627	284
8	200	75	1905	37¾	959	19⅛	506	6⅞	168	52	1321	11¼	286	9	229	21⅞	549	15½	394	22¾	578	1448	656	1201	545
10	250	90	2286	45¾	1162	23⅜	605	8	203	64	1626	12½	318	10¼	260	26	660	18½	470	28	711	2373	1076	2003	908

\*Dimensions needed for screen removal.

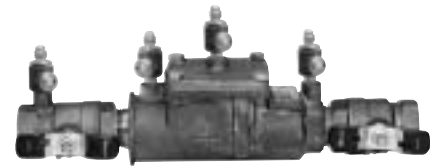
# Series 007 (1/2" - 3")

## Double Check Valve Assemblies

- Designed to prevent the reverse flow of polluted water from entering the potable water system.
- For non-health hazard continuous pressure applications.
- Provides protection against backsiphonage and backpressure backflow.

### Specifications

- Temperature Range: 1/2" - 2": 33°F - 180°F (5°C - 82°C); 2 1/2" - 3": 33°F - 110°F (5°C - 43°C) continuous, 140°F (60°C) intermittent
- Maximum Working Pressure: 175psi (12.1 bars)



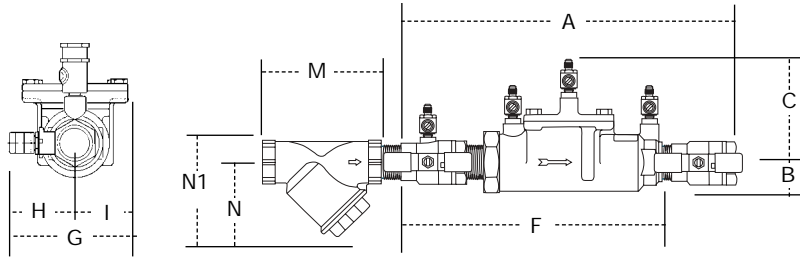
007M3QT

### Features

- Ease of maintenance - only one cover
- Top entry
- Replaceable seats and seat discs
- Modular construction
- Compact design
- Top mounted ball valve test cocks
- Low pressure drop
- No special tools required for servicing
- 1/2" - 1" (15 - 25 mm) have tee handles
- 1/2" - 2" (15 - 50mm) cast bronze body construction
- 2 1/2" - 3" (65 - 80mm) fused epoxy coated cast iron body

For additional information, request literature ES-007 or ES-SS007.

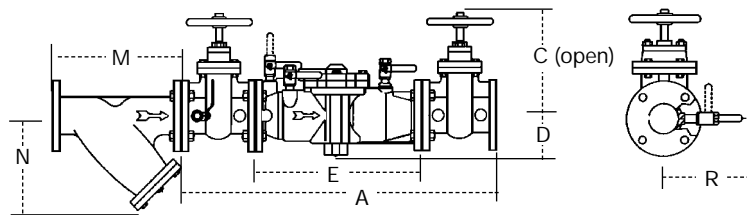
For WattsBox Enclosures, request literature ES-WB.



007QT

SIZE (DN)	DIMENSIONS (APPROX.)												STRAINER DIMENSIONS			WEIGHT						
	A		B		C		F		G		H		I		M		N		*N <sub>1</sub>		lbs.	kg.
in. mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		
1/2 15	10	254	4 5/8	117	2 7/16	62	5	127	3 3/8	85	2 5/16	59	2 1/16	52	2 3/4	70	2 1/4	57	10	254	4.5	2
3/4 20	11 1/8	282	4	102	3 1/8	79	6 3/16	157	3 7/16	87	2 1/8	54	1 5/16	33	3 3/16	81	2 3/4	70	10	254	5	2.3
1 25	13 1/4	337	5 1/8	130	4	102	7 1/2	191	3 3/8	85	1 11/16	43	1 11/16	43	3 3/4	95	3	76	12	305	12	5.4
1 1/4 32	16 3/8	416	5	127	3 5/16	84	9 1/2	241	5	127	3	76	2	50	4 7/16	113	3 1/2	89	20	508	15	6.8
1 1/2 40	16 3/4	425	4 7/8	124	3 1/2	89	9 3/4	248	5 13/16	148	3 1/8	79	2 11/16	68	4 7/8	124	4	103	22 3/4	578	15.86	7.2
2 50	19 1/2	495	6 1/4	159	4	102	13 3/8	340	6 1/8	156	3 7/16	87	2 11/16	68	5 5/16	151	5	127	28	711	25.75	11.7

\*Dimensions required for screen removal.



MODEL NO.	SIZE (DN)	DIMENSIONS (APPROX.)										STRAINER DIMENSIONS		WEIGHT			
		A		C		D		E		R		M		N		lb.	kg.
	in. mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		
007-NRS	2 1/2 65	33 1/8	841	9 3/8	238	4 5/16	109	18 1/8	460	8 3/4	222	10	254	6 1/2	165	155	70
007-OSY	2 1/2 65	33 1/8	841	16 3/8	416	4 5/16	109	18 1/8	460	8 3/4	222	10	254	6 1/2	165	158	72
007QT-FDA	2 1/2 65	33 1/8	841	6 3/8	162	4 5/16	109	18 1/8	460	8 3/4	222	10	254	6 1/2	165	155	70
007-OSY	3 80	34 1/8	867	18 1/8	479	4 5/16	109	18 1/8	460	8 3/4	222	10 1/8	267	7	178	185	84
007-NRS	3 80	34 1/8	867	10 1/4	260	4 5/16	109	18 1/8	460	8 3/4	222	10 1/8	267	7	178	185	84
007QT-FDA	3 80	34 1/8	867	6 3/8	162	4 5/16	109	18 1/8	460	8 3/4	222	10 1/8	267	7	178	155	70



# GoldenEagle® Series 719 (1/2" – 2")

## Double Check Valve Assemblies

- Designed to protect drinking water supplies from dangerous cross-connections in accordance with national plumbing codes and water authority requirements.
- For non-health hazard continuous pressure applications.
- Provides protection against backsiphonage and backpressure backflow.

## Specifications

Temperature Range: 33°F – 180°F (5°C – 82°C)

Maximum Working Pressure: 175psi (12.1 bars)

## Models

### Suffix:

S – bronze strainer

LF – without shutoff valves

LH – locking handle ball valves

SH – stainless steel ball valve handles

HC – 2 1/2" inlet/outlet fire hydrant fittings (2" valve)

QT – quarter-turn ball valves

C&T – testcock caps and tethers

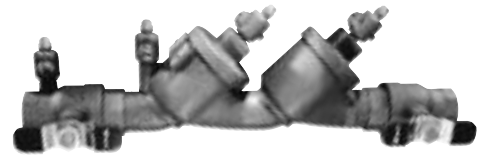
### Prefix:

U – union connections

AQT – street elbows with quarter-turn ball valves

For additional information, request literature ES-719

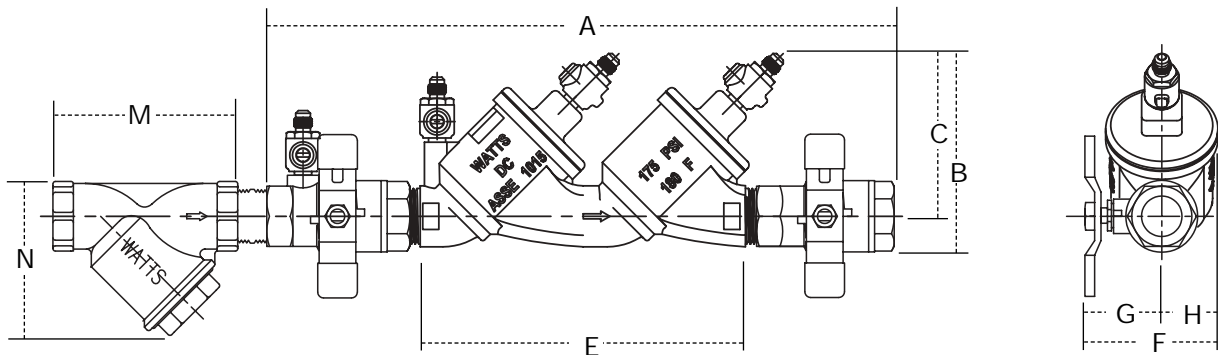
For WattsBox Enclosures, request literature ES-WB



719QT

## Features

- Manufactured from bronze alloy
- Separate access, top entry check valve design
- Reversible seat disc rubber, extends check valve life
- Chloramine resistant elastomers
- Replaceable seats and seat discs
- Compact design
- Top mounted screwdriver slotted ball valve test cocks
- Low pressure drop
- 1/2" – 1" (15 – 25mm) have Tee handles
- No special tools required for servicing
- Plastic on plastic check guiding reduces potential binding due to mineral deposits



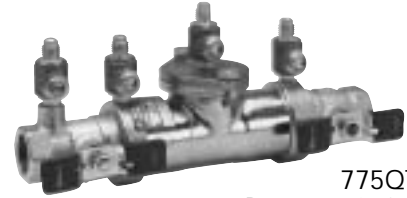
## 719QT

SIZE	DIMENSIONS (APPROX.)								STRAINER DIMENSIONS		WEIGHT												
	A		B		C		E(LF)		F		G		H		M		N		lbs.		kgs.		
in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.
1/2	15	9 7/8	251	3 11/16	94	2 15/16	75	5 3/4	147	2 1/2	63	1 11/16	43	3/4	20	2 1/4	57	2 3/4	70	2.84	1.29		
3/4	20	12 3/8	314	4 1/4	108	3 1/2	90	7 7/8	200	3 1/8	80	2 1/16	53	1 1/16	27	2 3/4	70	3 3/16	81	4.66	2.11		
1	25	14 13/16	376	4 7/16	116	3 13/16	98	9 5/8	244	3 13/16	96	2 7/16	63	1 5/16	34	3	76	3 3/4	95	7.44	3.37		
1 1/4	32	18 7/8	480	6 1/8	155	5 1/16	129	11 11/16	297	4 1/4	108	2 5/8	67	1 5/8	41	3 1/2	89	4 7/16	113	13.96	6.33		
1 1/2	40	18 7/8	480	6 1/8	155	5 1/16	129	11 11/16	297	4 3/4	120	3 1/8	79	1 5/8	41	4	102	4 7/8	124	16.12	7.31		
2	50	19 1/2	495	7 1/16	179	5 13/16	147	13 3/8	340	5 5/16	136	3 7/16	87	1 15/16	49	5	127	5 5/16	151	25.66	11.64		

# Copperhead® Series 775 (1/2" – 2")

## Double Check Valve Assemblies

- Designed to prevent the reverse flow of polluted water from entering the potable water system.
- For non-health hazard continuous pressure applications.
- Provides protection against backsiphonage and backpressure backflow.



775QT  
Patent# 6,021,805

### Specifications

- Temperature Range: 33°F – 180°F (5°C – 82°C)
- Maximum Working Pressure: 175psi (12.1 bars)

### Models

#### Suffix

QT – quarter-turn ball valves

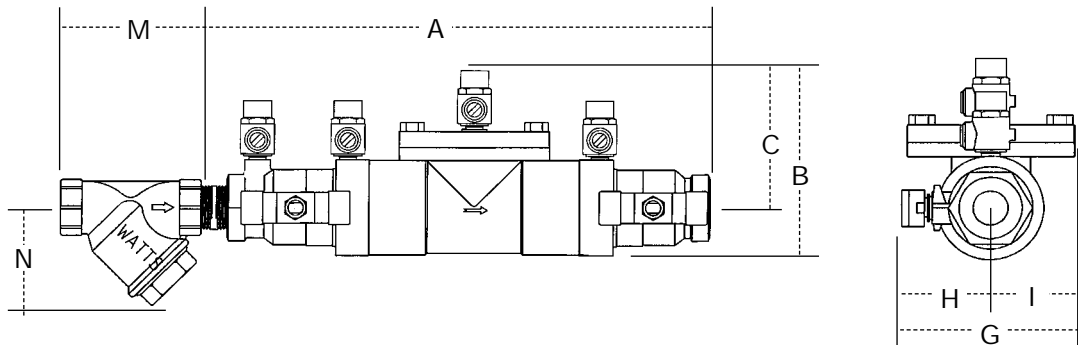
S – bronze strainer

For additional information, request literature ES-775.

For WattsBox Enclosures, request literature ES-WB.

### Features

- Tubular copper body creates smooth flow path and low head loss
- External/internal electroless nickel plated body acts as an oxygen barrier for corrosion resistance
- Threaded-in check modules eliminate the use of check retainers for lower pressure loss
- Short lay length allows for the use of smaller meter boxes and enclosures
- Bolted on, top entry stainless steel single access cover for ease of maintenance in meter box installations
- Modular check construction featuring non-reversible checks with captured springs for simplified servicing
- Check valve seats are replaceable without the use of special tools
- Top mounted test cocks provide easy access for testing

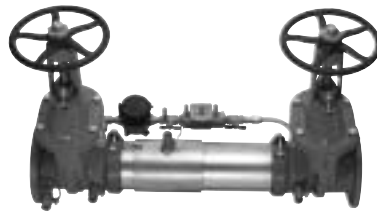


### 775QT

SIZE (DN)		DIMENSIONS (APPROX.)										STRAINER DIMENSIONS				WEIGHT			
in.	mm	A		B		C		G		H		I		M		N		lbs.	kg.
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		
1/2	15	9	228	3 5/8	92	2 5/8	67	3 3/16	81	1 5/8	41	1 9/16	40	3	76	3	76	4	1.8
3/4	20	9	228	3 5/8	92	2 5/8	67	3 3/16	81	1 5/8	41	1 9/16	40	3 1/2	89	3	76	4	1.8
1	25	11 1/4	286	4 1/2	114	3 5/16	84	3 1/2	89	1 7/8	47	1 5/8	41	4 3/4	121	3 1/4	83	6.31	2.9
1 1/4	32	15 3/8	390	6	152	4 7/16	113	6	152	3 1/4	82	2 3/4	69	4 1/2	114	3 1/2	89	17	7.7
1 1/2	40	15 3/8	390	6	152	4 7/16	113	6	152	3 1/4	82	2 3/4	69	4 3/8	111	4	102	17	7.7
2	50	18 1/2	460	6	152	4 7/16	113	6 3/4	171	3 1/4	82	2 3/4	69	5 3/8	137	5	102	26	11.8

# SilverEagle™ Series 757DCDA, 757NDCDA (2½" – 10")

## Double Check Detector Assemblies



757DCDA OSY



757DCDA BFG



757NDCDA OSY

- Designed to prevent backflow of pollutants that are objectionable but not toxic for entering the potable water supply.
- For non-health hazard continuous pressure applications.
- Provides protection against backsiphonage and backpressure backflow.
- Primarily installed on fire sprinkler systems when it is necessary to monitor unauthorized use of water.

## Specifications

- Temperature Range: 33°F – 140°F (5°C – 60°C).
- Maximum Working Pressure: 175psi (12.1 bars).

## Models

add Suffix:

**OSY** – UL/FM outside stem and yoke resilient seated gate valves.

**BFG** – 2½" - 8" UL/FM grooved gear operated butterfly valves with tamper switch.

**CFM** – cubic feet per minute meter.

**GPM** – gallons per minute meter.

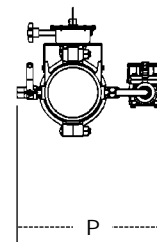
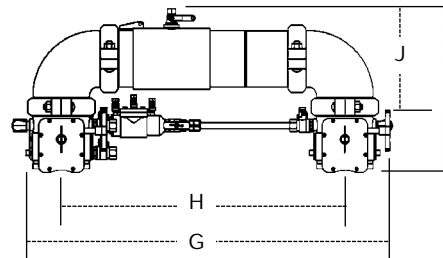
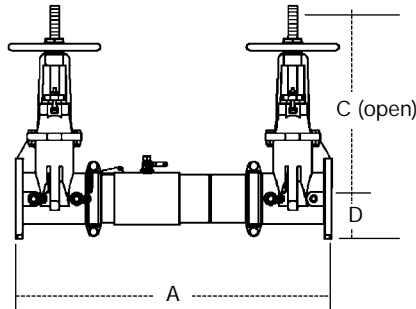
Post indicator plate and operating nut available – consult factory

For additional information, request literature ES-757DCDA/757NDCDA.

For WattsBox Enclosures, request literature ES-WB.

## Features

- Extremely compact design
- 70% Lighter than traditional designs
- 304 (Schedule 40) stainless steel housing and sleeve
- Groove fittings allow integral pipeline adjustment
- Patented tri-link check provides lowest pressure loss
- Unmatched ease of serviceability
- Available with grooved butterfly valve shutoffs
- May be used for horizontal, vertical or N pattern installations
- Replaceable check disc rubber



### 757DCDA / 757NDCDA

SIZE (DN)		DIMENSIONS (APPROX.)												WEIGHT							
in.	mm	A		C		D		G		H		I		J		P		757DCDA		757NDCDA	
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.	lbs.	kgs.
2½	65	31	787	16¾	416	3½	89	29⅛	738	22	559	15½	393	8⅜	223	13¾	335	139	63	147	67
3	80	31⅛	805	18⅞	479	3⅛	94	30¼	768	22¾	578	17⅞	435	9⅞	233	14½	368	159	72	172	78
4	100	33⅛	856	22¾	578	4	102	33	838	24	610	18½	470	9⅝	252	15⅝	386	175	79	198	90
6	150	44	1118	30⅞	765	5½	140	44¾	1137	33¾	857	23⅞	589	13⅞	332	19	483	309	140	350	159
8	200	50	1270	37¾	959	6⅛	170	54⅞	1375	40⅞	1032	27⅞	697	15⅞	399	21⅞	538	494	224	569	258
10	250	57½	1460	45¾	1162	8⅞	208	66	1676	50	1270	32½	826	17⅞	440	24	610	795	361	965	438

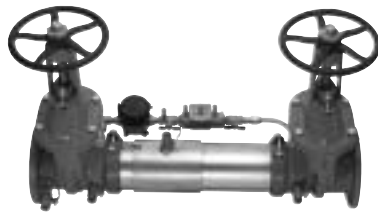
### 757DCDA BFG / 757NDCDA BFG

SIZE (DN)		DIMENSIONS (APPROX.)												WEIGHT							
in.	mm	A		C		D		G		H		I		J		P		757DCDA BFG		757NDCDA BFG	
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.	lbs.	kgs.
2½	65	28	711	8	203	3½	89	29⅞	759	22	559	14⅝	379	8⅜	223	13	330	70	32	78	35
3	80	28½	724	8⅝	211	3⅛	94	30⅛	779	22¾	578	15⅞	392	9⅞	233	13½	343	68	31	81	37
4	100	29⅞	741	8⅝	227	3⅛	94	31⅝	811	24	610	16¼	412	9⅝	252	14	356	75	34	98	44
6	150	36½	927	10	254	5	127	43⅞	1097	33¾	857	19⅞	500	13⅞	332	14½	368	131	59	171	78
8	200	43	1092	12¼	311	6½	165	51⅞	1297	40⅞	1032	23⅞	592	15⅞	399	18⅞	462	275	125	351	159

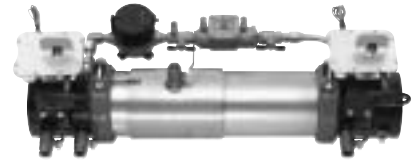
# SilverEagle™ Series 757aDCDA, 757NaDCDA (2½" – 10")

## Double Check Detector Assemblies

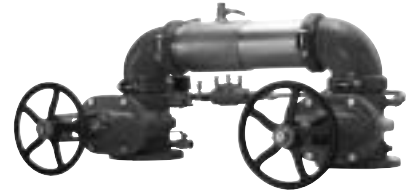
- Designed to prevent backflow of pollutants that are objectionable but not toxic for entering the potable water supply.
- For non-health hazard continuous pressure applications.
- Provides protection against backsiphonage and backpressure backflow.
- Primarily installed on fire sprinkler systems when it is necessary to monitor unauthorized use of water.



757aDCDA OSY



757aDCDA BFG



757NaDCDA OSY

## Specifications

- Temperature Range: 33°F – 140°F (5°C – 60°C).
- Maximum Working Pressure: 175psi (12.1 bars).

## Models

### add Suffix:

**OSY** – UL/FM outside stem and yoke resilient seated gate valves.

**BFG** – UL/FM grooved gear operated butterfly valves with tamper switch.

**CFM** – cubic feet per minute meter.

**GPM** – gallons per minute meter.

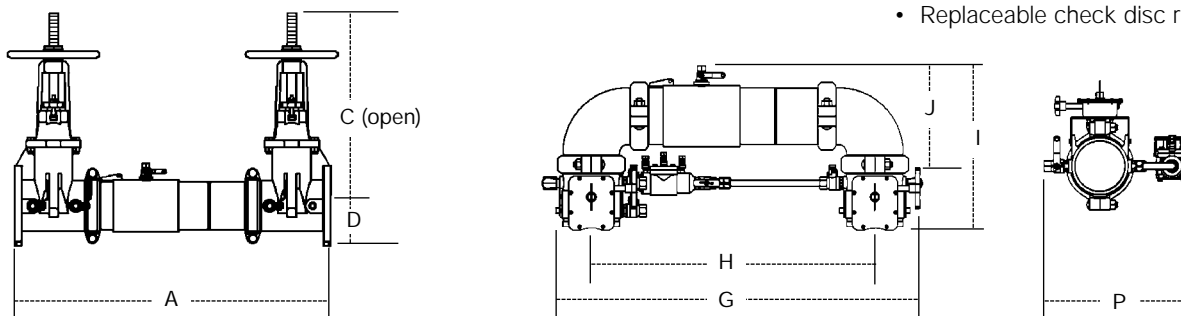
Post indicator plate and operating nut available – consult factory

For additional information, request literature ES-757aDCDA/757NaDCDA.

For WattsBox Enclosures, request literature ES-WB.

## Features

- Extremely compact design
- 70% Lighter than traditional designs
- 304 (Schedule 40) stainless steel housing and sleeve
- Groove fittings allow integral pipeline adjustment
- Patented bi-link check provides lowest pressure loss
- Unmatched ease of serviceability
- Available with grooved butterfly valve shutoffs
- May be used for horizontal, vertical or N pattern installations
- Replaceable check disc rubber



### 757aDCDA/757NaDCDA

SIZE (DN)		DIMENSIONS (APPROX.)										WEIGHT									
in.	mm	A		C		D		G		H		I		J		P		757aDCDA		757NaDCDA	
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.	lbs.	kgs.
2½	65	31	787	16¾	416	3½	89	29⅞	738	22	559	15½	393	8⅜	223	13⅜	335	139	63	147	67
3	80	31⅞	805	18⅞	479	3⅞	94	30¼	768	22¾	578	17⅞	435	9⅞	233	14½	368	159	72	172	78
4	100	33⅞	856	22¾	578	4	102	33	838	24	610	18½	470	9⅞	252	15⅜	386	175	79	198	90
6	150	44	1118	30⅞	765	5½	140	44¾	1137	33¾	857	23⅞	589	13⅞	332	19	483	309	140	350	159

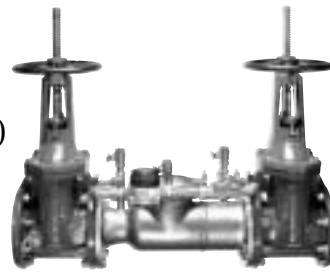
### 757aDCDA BFG / 757NaDCDA BFG

SIZE (DN)		DIMENSIONS (APPROX.)										WEIGHT									
in.	mm	A		C		D		G		H		I		J		P		757aDCDA BFG		757NaDCDA BFG	
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.	lbs.	kgs.
2½	65	28	711	8	203	3½	89	29⅞	759	22	559	14⅞	379	8⅜	223	13	330	70	32	78	35
3	80	28½	724	8⅞	211	3⅞	94	30⅞	779	22¾	578	15⅞	392	9⅞	233	13½	343	68	31	81	37
4	100	29⅞	741	8⅞	227	3⅞	94	31⅞	811	24	610	16¼	412	9⅞	252	14	356	75	34	98	44
6	150	36½	927	10	254	5	127	43⅞	1097	33¾	857	19⅞	500	13⅞	332	14½	368	131	59	171	78

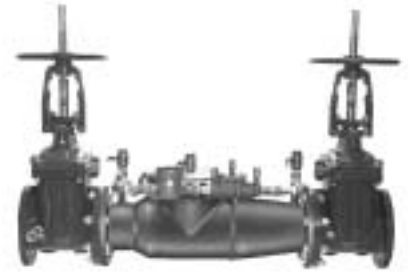
# Series 774DCDA (2½" – 12") Series 774XDCDA (6" and 8")

## Double Check Detector Assemblies

- Designed to prevent the reverse flow of polluted water from entering the potable water system.
- For non-health hazard continuous pressure applications.
- Provides protection against backsiphonage and backpressure backflow.
- Detects system leaks or unauthorized use of the water supply.



774XDCDA OSY



774DCDA OSY

### Specifications

- Temperature Range: 33°F – 110°F (5°C – 43°C)
- Maximum Working Pressure: 175psi (12.1 bars)

### Models

**add Suffix:**

**CFM** – cubic feet per minute meter.

**GPM** – gallons per minute meter.

**LF** – without shutoff valves.

**OSY** – UL/FM outside stem and yoke resilient seated gate 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

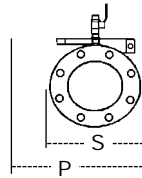
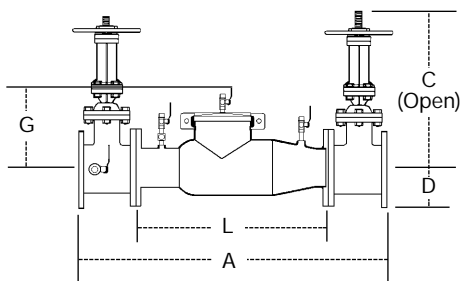
Post indicator plate and operating nut available – consult factory

### Features

- Patented torsion spring check valve provides low head loss
- Short lay length is ideally suited for retrofit installations
- Stainless steel body is half the weight of competitive designs reducing installation and shipping cost
- Stainless steel construction provides long term corrosion protection and maximum strength
- Single top access cover with two-bolt grooved style coupling for ease of maintenance
- Thermoplastic and stainless steel check valves for trouble-free operation
- No special tools required for servicing
- Compact construction allows for smaller vaults and enclosures
- Furnished with 5/8" x 3/4" bronze meter (gpm or cfm)
- Detects underground leaks and unauthorized water use
- May be installed in horizontal or vertical flow up position

For additional information, request literature ES-774DCDA or ES-774XDCDA.

For WattsBox Enclosures, request literature ES-WB.



### 774DCDA

SIZE (DN)		DIMENSIONS (APPROX.)										WEIGHTS					
in.	mm	A		C (OSY)		D		G		L		P		w/Gates		w/o Gates	
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lb.	kg.	lb.	kg.
2½	65	38	965	16¾	416	3½	89	10	254	22	559	12½	318	155	70	68	31
3	80	38	965	18⅞	479	3¾	95	10	254	22	559	13	330	230	104	70	32
4	100	40	1016	22¾	578	4½	114	10	254	22	559	14½	368	240	109	73	33
6	150	48½	1232	30⅞	765	5½	140	15	381	27½	699	15½	394	390	177	120	54
8	200	52½	1334	37¾	959	6¾	171	15	381	29½	749	18¼	464	572	259	180	82
10	250	55½	1410	45¾	1162	8	200	15	381	29½	749	19½	495	774	351	190	86
12	300	57½	1461	53⅞	1349	9½	241	15	381	29½	749	21	533	1044	474	220	100

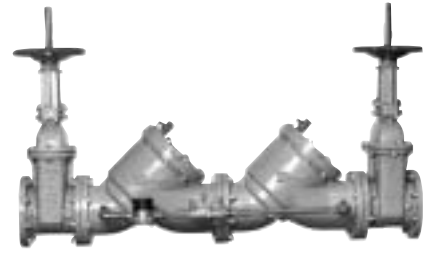
### 774XDCDA

SIZE (DN)		DIMENSIONS (APPROX.)										WEIGHT							
in.	mm	A		C (open)		D		G		L		P		S		w/Gates		w/o Gates	
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lb.	kg.	lb.	kg.
6	150	41½	1054	30⅞	765	5½	140	11⅞	283	20	508	16½	419	11	279	341	155	71	32
8	200	52½	1334	37¾	959	6¾	171	17½	445	29½	749	17½	445	13½	343	555	252	135	61

# Series 709DCDA (3" – 10")

## Double Check Detector Assemblies

- Designed to prevent the reverse flow of polluted water from entering the potable water system.
- For non-health hazard continuous pressure applications.
- Provides protection against backsiphonage and backpressure backflow.
- Detects system leaks or unauthorized use of the water supply.



709DCDA OSY

### Specifications

- Temperature Range: 33°F – 110°F (5°C – 43°C)
- Maximum Working Pressure: 175psi (12.1 bars)

### Models

add Suffix:

**OSY** – UL/FM outside stem & yoke resilient seated gate valves

**CFM** – cubic feet per minute meter

**GPM** – gallons per minute meter

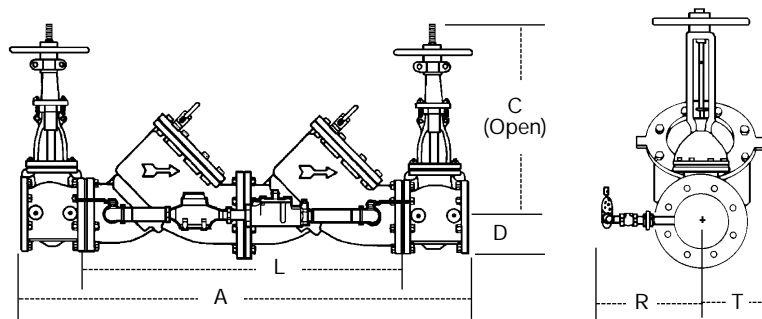
**LF** – without shutoff valves

For additional information, request literature ES-709DCDA.

For WattsBox Enclosures, request literature ES-WB.

### Features

- Body construction fused epoxy coated cast iron
- Replaceable bronze seats
- Maximum flow at low pressure drop
- Compact for economy combined with performance
- Design simplicity for easy maintenance
- Furnished with 5/8" x 3/4" (16 x 19mm) meter Model 25, bronze
- No special tools required for servicing



### 709DCDA

SIZE (DN)		DIMENSIONS (APPROX.)										WEIGHT			
in.	mm	A		C		D		L		R		T		lbs.	kg.
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		
3	80	40	1016	18 <sup>7</sup> / <sub>8</sub>	479	3 <sup>3</sup> / <sub>4</sub>	95	24	610	14	356	3	76	190	86
4	100	52	1321	22 <sup>3</sup> / <sub>4</sub>	578	4 <sup>1</sup> / <sub>2</sub>	114	34	864	15	381	6	152	403	183
6	150	63 <sup>1</sup> / <sub>4</sub>	1607	30 <sup>1</sup> / <sub>8</sub>	765	5 <sup>1</sup> / <sub>2</sub>	140	42 <sup>1</sup> / <sub>4</sub>	1073	16	406	7 <sup>1</sup> / <sub>2</sub>	191	727	330
8	200	75	1905	37 <sup>3</sup> / <sub>4</sub>	959	6 <sup>5</sup> / <sub>8</sub>	168	52	1321	17	432	9	229	1327	602
10	250	90	2286	45 <sup>3</sup> / <sub>4</sub>	1162	8	203	64	1626	18	457	10 <sup>1</sup> / <sub>4</sub>	260	2093	949

# Series 007DCDA (2" – 3")

## Double Check Detector Assemblies

- Designed to prevent the reverse flow of polluted water from entering the potable water system.
- For non-health hazard continuous pressure applications.
- Provides protection against backsiphonage and backpressure backflow.
- Detects system leaks or unauthorized use of the water supply.



007DCDA

### Specifications

- Temperature Range: 33°F – 110°F (5°C – 43°C) continuous; 140°F (60°C) intermittent
- Maximum Working Pressure: 175psi (12.1 bars)

### Models

#### Suffix

**OSY** – UL/FM outside stem & yoke resilient seated gate valves

**CFM** – cubic feet per minute meter

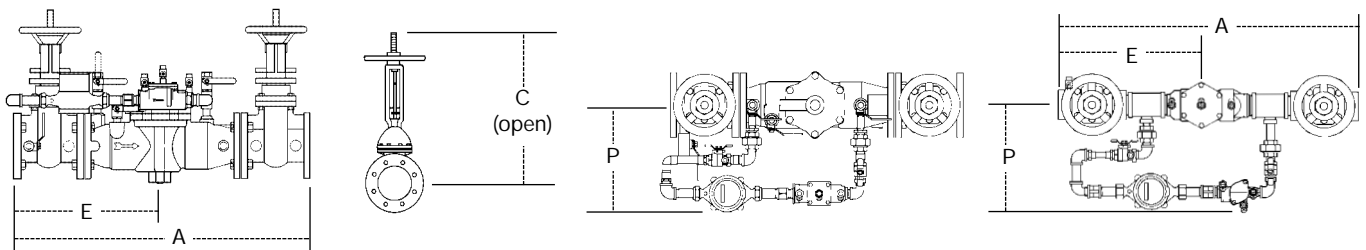
**GPM** – gallons per minute meter

**LF** – without shutoff valves

For additional information, request literature ES-007DCDA.  
For WattsBox Enclosures, request literature ES-WB.

### Features

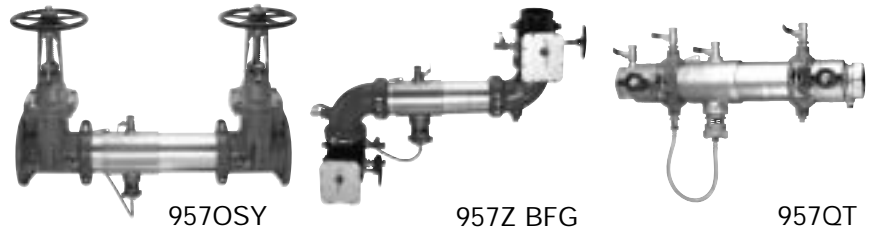
- Fused epoxy coated cast iron unibody (2½" & 3")
- Replaceable bronze seats
- Maximum flow at low pressure drop
- Compact for ease of installation
- Design simplicity for easy maintenance
- No special tools required for servicing
- Bronze body ball valve test cocks
- Modular spring loaded checks
- Furnished with bronze 5/8" x 3/4" (16 x 19mm) meter



### 007DCDA

SIZE (DN)		DIMENSIONS (APPROX.)								WEIGHT	
<i>in.</i>	<i>mm</i>	A		C (OSY)		E		P		<i>lbs.</i>	<i>kg.</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>		
2	50	35 1/8	892	13 1/2	343	16 3/4	279	12 1/4	311	97	44
2½	65	33 1/4	844	16 3/8	416	16 3/8	416	12 5/16	313	164	74
3	80	34 1/4	870	18 7/8	479	15 5/8	422	12 5/16	313	196	89

# SilverEagle™ Series 957, 957N, 957Z (2½" – 10")



## Reduced Pressure Zone Assemblies

- Designed to provide protection to the potable water system from contamination in accordance with national plumbing codes.
- For health hazard continuous pressure applications.
- Provides protection against backpressure and backsiphonage backflow.

## Specifications

- Temperature Range: 33°F – 140°F (5°C – 60°C).
- Maximum Working Pressure: 175psi (12.1 bars).

## Models

### add Suffix:

**NRS** – non-rising stem resilient seated gate valves.

**OSY** – UL/FM outside stem and yoke resilient seated gate valves.

**BFG** – 2½" - 6" UL/FM grooved gear operated butterfly valves with tamper switch.

**QT** – 2½" – 3" quarter-turn ball valves.

Post indicator plate and operating nut available – consult factory

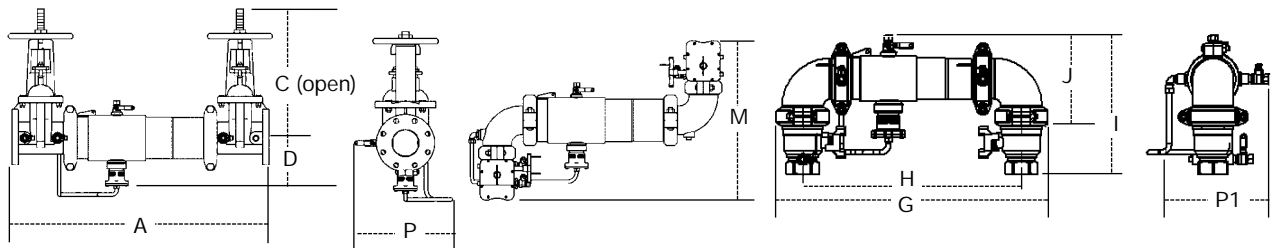
For additional information, request literature ES-957/957N/957Z.

For information on Air Gaps, Vent Elbows and Test Cocks see page 52 or request literature ES-AG/EL/TC.

For Wattsbox Enclosures, request literature ES-WB.

## Features

- Sizes 2½" – 3" available with quarter-turn ball valve shutoffs
- 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 provides lowest pressure loss
- Unmatched ease of serviceability
- Available with grooved butterfly valve shutoffs
- May be used for horizontal, vertical, N pattern or Z pattern installations
- Bottom mounted cast stainless steel relief valve
- Replaceable check disc rubber



SIZE (DN)	DIMENSIONS (APPROX.)										WEIGHT																	
	A		C (OSY)		C (NRS)		D		G		H		I		J		M		P		957 (NRS)		957 (OSY)		957N (NRS)		957N (OSY)	
in. mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.	lbs.	kgs.	lbs.	kgs.	lbs.	kgs.
2½ 65	31	787	16¾	416	9¾	238	6½	165	29½	738	22	559	15½	393	8¾	223	21¾	548	9¾	234	118	54	128	58	126	57	136	62
3 80	31½	805	18¾	479	10¼	260	6½	170	30¼	768	22¾	578	17½	435	9¾	233	23¾	587	10½	267	134	61	148	67	147	67	161	68
4 100	33½	856	22¾	578	12¾	310	7	178	33	838	24	610	18½	470	9¾	252	26½	673	11¾	284	164	74	164	74	187	85	187	85
6 150	44	1118	30¾	765	16	406	8½	216	44¾	1137	33¾	857	23¾	589	13½	333	32¾	832	15	381	276	125	298	135	317	144	339	154
8 200	50	1270	37¾	959	19½	506	9½	246	54½	1375	40¾	1032	27¾	697	15½	399	37¾	943	17¾	437	441	200	483	219	516	234	558	253
10 250	57½	1460	45¾	1162	23¾	605	11¾	285	66	1676	50	1270	32½	826	17¾	440	46¾	1178	20	508	723	328	783	355	893	405	950	431

## 957 BFG

SIZE (DN)	DIMENSIONS (APPROX.)								WEIGHT							
	G		H		I		J		M		P		957N BFG/957Z BFG			
in. mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.
2½ 65	32½	826	23½	597	15½	394	9½	241	21¾	555	11¾	300	67	30		
3 80	34	864	24½	622	16½	414	10½	256	23¾	587	12¾	308	70	32		
4 100	35¾	905	26	660	17¾	437	10¾	279	24¾	634	12¾	321	87	39		
6 150	46½	1181	35½	908	20½	521	13½	343	28¼	718	15	382	160	73		

## 957QT

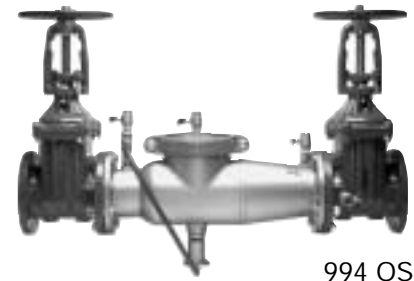
SIZE (DN)	DIMENSIONS (APPROX.)											WEIGHT										
	A		C		D		G		H		I		J		M		P		P1		957QT	
in. mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.
2½ 65	28½	735	4¾	124	6¾	174	30¼	768	24½	622	16¾	421	11¾	289	20½	532	11¾	287	11¾	287	46	21
3 80	30¾	767	4¾	122	6¾	174	30¼	768	24½	622	17¾	437	11¼	258	22¾	564	11¾	287	11¾	287	56	25



# Series 994 (2½" – 10")

## Reduced Pressure Zone Assemblies

- Designed to prevent the reverse flow of polluted water from entering the potable water system.
- For health hazard continuous pressure applications.
- Provides protection against backsiphonage and backpressure backflow.



994 OSY

### Specifications

- Temperature Range: 33°F – 110°F (5°C – 43°C) continuous; 140°F (60°C) intermittent
- Maximum Working Pressure: 175psi (12.1 bars)

### Models

add suffix:

**LF** – without shutoff valves.

**NRS** – non-rising stem resilient seated gate valves.

**OSY** – UL/FM outside stem & yoke resilient seated gate valve.

**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

**S** – cast iron strainer.

Post indicator plate and operating nut available – consult factory

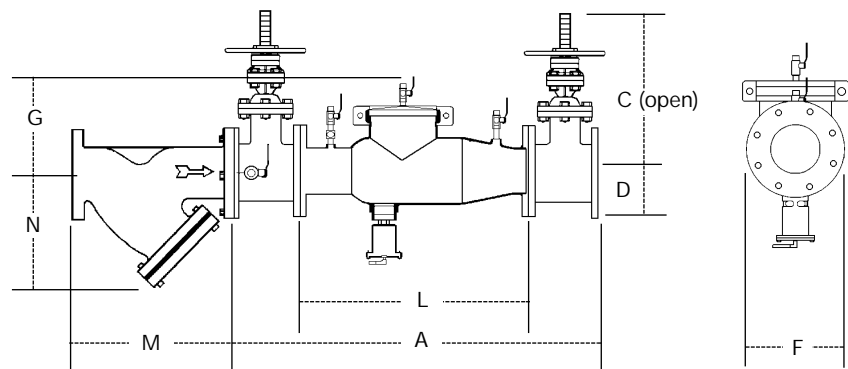
For additional information, request literature ES-994.

For information on Air Gaps, Vent Elbows and Test Cocks, see page 52 or request literature ES-AG/EL/TC.

For WattsBox Enclosures, request literature ES-WB.

### Features

- Stainless steel construction provides long term corrosion resistance and maximum strength
- Stainless steel body is half the weight of competitive designs reducing installation and shipping costs
- Short end to end dimensions makes retrofit easy
- Bottom mounted relief valve reduces clearance requirements when installed against an outside wall
- Patented torsion spring check valves provide maximum flow at low pressure drop
- Thermoplastic & stainless steel check valves for trouble-free operation
- No special tools required for servicing
- Compact construction allows for smaller enclosures
- Stainless steel relief valve features a balanced rolling diaphragm to eliminate sliding seals and lower maintenance costs



994

SIZE (DN)		DIMENSIONS (APPROX.)												WEIGHT									
		A		C (NRS)		C (OSY)		D		F		G		L		M		N		w/Gates		w/o Gates	
in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kg.	lbs.	kg.
2½	65	37	940	9¾	238	16¾	416	10½	267	7	178	10	254	22	559	10	254	6½	165	148	67	60	27
3	80	38	965	10¼	260	18¾	479	10½	267	7½	191	10	254	22	559	10⅞	257	7	178	226	103	62	28
4	100	40	1016	12¾ <sub>16</sub>	310	22¾ <sub>4</sub>	578	10½	267	9	229	10	254	22	559	12⅞	308	8¼	210	235	107	65	30
6	150	48½	1232	16	406	30⅞	765	11½	292	11	279	15	381	27½	699	18½	470	13½	343	380	172	110	50
8	200	52½	1334	19 <sup>15</sup> / <sub>16</sub>	506	37¾ <sub>4</sub>	959	12½	318	13½	343	15	381	29½	749	21 <sup>5</sup> / <sub>8</sub>	549	15½	394	571	259	179	81
10	250	55½	1410	23 <sup>13</sup> / <sub>16</sub>	605	45¾ <sub>4</sub>	1162	12½	318	16	406	15	381	29½	749	26	660	18½	470	773	351	189	86

## Series 994 BLT (2½" FNPT x 3" MNPT)

## Series 994 HMB (2½"-7NST x 3")

### Hydrant Meter Backflow Preventers

- Designed to retrofit backflow protection of potable water from fire hydrants or other non-permanent, temporary water service connections where flow is in one direction only and the possibility of cross-connection exists.
- Large flow capacity-rated at over 500gpm with less than 14psi loss per ASSE, USC and AWWA standards for Reduced Pressure Principle devices.
- Meets AWWA C701 meter requirements (Series HMB).
- Ideal for use with existing hydrant meter hookups (Series BLT).

### Specifications

- Typical Operating Range: (100% +/- 1.5%) 5 to 660gpm.
- Maximum Continuous Flow: 450gpm.
- Maximum Intermittent Flow: 660gpm.
- Typical Low Flow (Min 95%):4gpm.
- Pressure Loss at Max. Flow: 37psi @ 450gpm.
- Continuous Operation: 23psi @ 350gpm.

### Options (BLT Series)

#### Inlet Modules

- 3" female or male hydrant thread.
- 2½" female or male hydrant thread.
- 2½" male NPT thread.
- Customer specified.

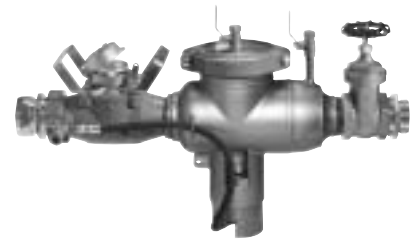
#### Outlet Modules

- 3" gate w/female or male hose thread.
- 2½" gate w/ female or male hose thread.
- 3" gate valve only, w/3" INPT thread.
- 2½" gate valve only, w/2½" FNPT.
- Customer specified.

#### Foot Modules

- Uneven surface saddle (supplied standard with unit).
- Flat surface adapter.
- Customer specified.

For additional information on the HMB, request literature S-994HMB; on the BLT, request literature ES-994BLT.



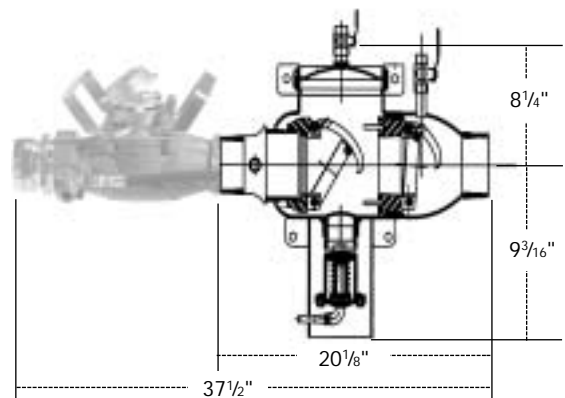
994HMB



994BLT

### Features

- Heavy duty relief valve cover prevents vandalism and protects valve from damage when 994HMB is transported to another fire hydrant location
- In-line flow restrictor protects the meter measuring element and the backflow preventer components from damage due to excessive flow (994HMB only)
- Backflow preventer made from 300 Series stainless steel for corrosion resistance
- Portable, lightweight design makes device easily transportable between job sites
- Accurately measures flow (HMB series) and protects the water supply from possible contamination
- Built-in support leg is adjustable in the field, no matter the installation
- Factory assembled and tested; no field assembly required; eliminates leaks, fouls, and improper assembly

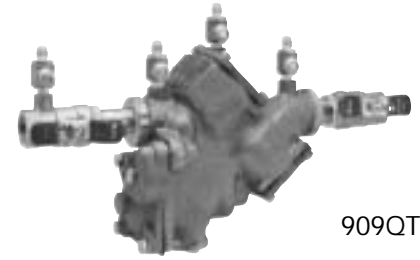


MODEL	WEIGHT	
	lbs.	kgs.
994BLT	62	28
994HMB-GPM	66	30
994HMB-CFM	66	30

# Series 909 (3/4" – 2")

## Reduced Pressure Zone Assemblies

- Designed to prevent the reverse flow of polluted water from entering the potable water system.
- For health hazard continuous pressure applications.
- Unique patented "air-in/water-out" design provides high capacity relief valve discharge performance during emergency conditions of backsiphonage and backpressure with both checks fouled.



909QT

### Specifications

- Temperature Range: 33°F – 140°F (5°C – 60°C) continuous; 180°F (82°C) intermittent
- Maximum Working Pressure: 175psi (12.1 bars)

### Models

#### Suffix

QT – quarter turn ball valves

S – bronze strainer

HW – stainless steel check modules for hot and harsh water conditions

LF – without shutoff valves

LH – locking handle ball valves (open position)

HC – inlet/outlet fire hydrant fitting (2" only)

PC – polymer coating

#### Prefix

C – clean and check strainer - 3/4" and 1" only (20 and 25mm)

U – union connections - 3/4" and 1" only (20 and 25mm)

FAE – flanged adapter ends - 1 1/4", 1 1/2", 2" only (32, 40, 50mm)

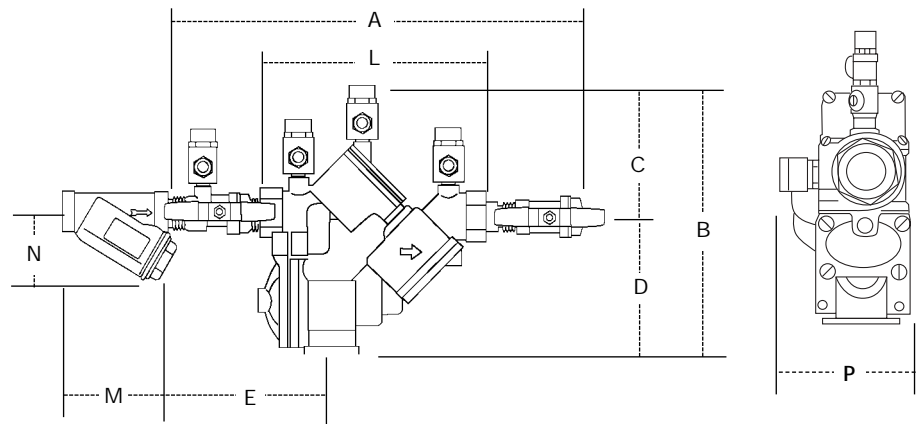
For additional information, request literature ES-909S.

For information on Air Gaps, Vent Elbows and Test Cocks see page 52 or request literature ES-AG/EL/TC.

For WattsBox Enclosures, request literature ES-WB.

### Features

- Modular design
- Replaceable bronze seats
- Compact for installation ease
- Horizontal or vertical (up or down) installation
- No special tools required for servicing



### 909

SIZE (DN)	DIMENSIONS (APPROX.)										STRAINER DIMENSIONS		WEIGHT								
	A		B		C		D		E		L		P		M		N				
in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kg.		
3/4	20	14 3/8	365	8 3/4	222	4	102	4 3/4	121	6 3/4	171	7 5/16	186	3 7/8	98	3 3/16	81	2 3/4	70	14	6
1	25	15 3/8	391	8 3/4	222	4	102	4 3/4	121	7	178	7 5/16	186	3 7/8	98	3 3/4	95	3	76	15	7
1 1/4	32	18 1/2	470	11 5/8	295	5 1/2	140	6 1/2	165	7 1/2	191	10 3/8	264	5 1/4	133	4 7/16	113	3 1/2	89	40	18
1 1/2	40	19	483	11 5/8	295	5 1/2	140	6 1/2	165	7 1/2	191	10 3/8	264	5 1/4	133	4 7/8	124	4	102	40	18
2	50	19 1/2	495	11 5/8	295	5 1/2	140	6 1/2	165	7 3/4	197	10 3/8	264	5 1/4	133	5 15/16	151	5	127	40	18

# Series 909 (2½" – 10")

## Reduced Pressure Zone Assemblies

- Designed to prevent the reverse flow of polluted water from entering the potable water system.
- For health hazard continuous pressure applications.
- Unique patented "air-in/water-out" design provides high capacity relief valve discharge performance during emergency conditions of backsiphonage and backpressure with both checks fouled.

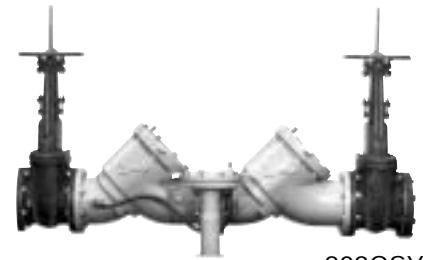
### Specifications

- Temperature Range: 33°F – 110°F (5°C – 43°C) continuous; 140°F (60°C) intermittent
- Maximum Working Pressure: 175psi (12.1 bars)

For additional information, request literature ES-909L.

For information on Air Gaps, Vent Elbows and Test Cocks see page 52 or request literature ES-AG/EL/TC.

For WattsBox Enclosures, request literature ES-WB.



909OSY

### Models

**add Suffix:**

**BB** – Bronze body, sizes 2½" & 3" (65 and 80mm)

**LF** – without shutoff valves

**NRS** – non-rising stem resilient seated gate valves

**OSY** – UL/FM outside stem and yoke resilient seated gate valves

**QT** – quarter-turn ball valve

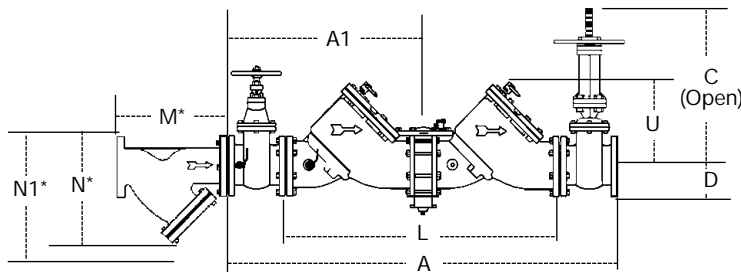
**QT-FDA** – FDA epoxy coated quarter-turn ball valve shutoffs

**S** – cast iron strainer

**S-FDA** – FDA epoxy coated strainer

### Features

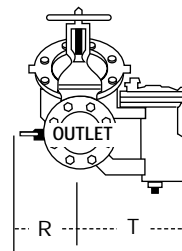
- Replaceable bronze seats
- Stainless steel internal parts
- No special tools required for servicing
- Captured spring check assemblies
- Fused epoxy coated & lined checks
- Industrial strength sensing hose
- Field reversible relief valve
- Air-in/water-out relief valve design provides maximum capacity during emergency conditions



### Strainer Dimensions

SIZE (DN)		DIMENSIONS (APPROX.)						WEIGHT	
		M		N1†		N			
in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.
2½	65	10	254	10	254	6½	165	28	12.7
3	80	10⅞	257	10	254	7	178	34	15.4
4	100	12⅞	308	12	305	8¼	210	60	27
6	150	18½	470	20	508	13½	343	133	60
8	200	21⅝	549	22¾	578	15½	394	247	112
10	250	26	660	28	711	18½	470	370	168

† – Dimension required for screen removal



### 909

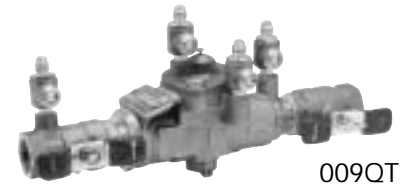
SIZE (DN)		DIMENSIONS (APPROX.)											WEIGHT														
		A		A1		C		D	L	clearance for check U	R	R (QT)	T	NRS		OSY		QT									
in.	mm	in.	mm	in.	mm	in.	mm							in.	mm	in.	mm	in.	mm	lbs.	kgs.	lbs.	kgs.	lbs.	kgs.		
2½	65	41¼	1048	20⅝	524	16⅜	416	9⅞	238	5¼	133	26⅞	663	11	279	4	102	16	406	9⅞	230	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	27⅞	702	22¾	578	12⅞	310	6	152	37	940	14	356	6	152	19¾	502	14⅞	365	455	206	470	213	352	160
6	150	65½	1664	32¾	832	30⅞	765	16	406	6	152	44½	1130	16	406	11	279	26	660	14⅞	365	718	326	798	362	762	346
8	200	78½	2000	39⅞	1000	37¾	959	19⅝	506	9¾	248	55¼	1403	21	533	11¼	286	11¼	286	19¼	489	1350	612	1456	660	2286	1037
10	250	93⅞	2378	46⅞	1190	45¾	1162	23⅝	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.

# Series 009 (1/4" – 3")

## Reduced Pressure Zone Assemblies

- Designed to prevent the reverse flow of polluted water from entering the potable water system.
- For health hazard continuous pressure applications.
- Provides protection against backsiphonage and backpressure backflow.



009QT

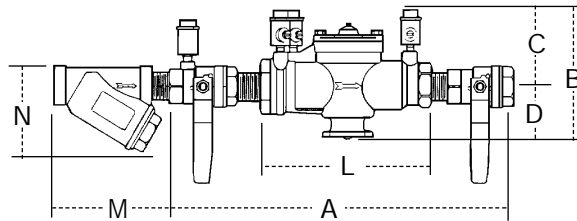
### Specifications

- Temperature Range: 1/4" – 2" 33°F – 180°F (5°C – 82°C); 2 1/2" – 3" 33°F – 110°F (5°C – 43°C) continuous, 140°F (60°C)
- Maximum Working Pressure: 175psi (12.1 bars)

For additional information, request literature ES-009.

For information on Air Gaps, Vent Elbows and Test Cocks see page 52 or request literature ES-AG/EL/TC.

For WattsBox Enclosures, request literature ES-WB.

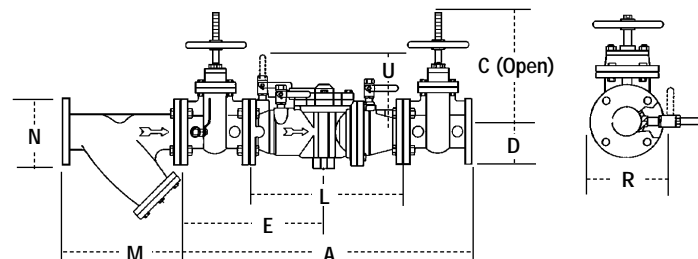


### Features

- Single access cover and modular check construction for ease of maintenance
- Top entry - all internals immediately accessible
- Captured springs for safe maintenance
- Internal relief valve for reduced installation clearances
- Replaceable seats for economical repair
- Bronze body construction for durability 1/4" – 2" (8 – 50mm)
- Fused epoxy coated cast iron body - 2 1/2" and 3" (65 and 80mm)
- Ball valve test cocks - screwdriver slotted - 1/4" – 2" (8 – 50mm)
- Large body passages provide low pressure drop
- Compact, space saving design
- No special tools required for servicing

### 009 1/4" – 2"

SIZE (DN)		DIMENSIONS (APPROX.)										STRAINER DIMENSIONS				WEIGHT	
in.	mm	A		B		C		D		L		M		N		lbs.	kg.
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		
1/4	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
3/8	10	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	15	10	250	4 5/8	117	3 3/8	86	1 1/4	32	5 1/2	140	2 3/4	70	2 1/4	57	5	2
3/4	20	10 3/4	273	5	127	3 1/2	89	1 1/2	38	6 3/4	171	3 3/16	81	2 3/4	70	6	3
1	25	16 3/4	425	5 1/2	140	3	76	2 1/2	64	9 1/2	241	3 3/4	95	3	76	12	5
1 1/4	32	17 3/8	441	6	150	3 1/2	89	2 1/2	64	11 3/8	289	4 7/16	113	3 1/2	89	15	6
1 1/2	40	17 7/8	454	6	150	3 1/2	89	2 1/2	64	11 1/8	283	4 7/8	124	4	102	16	7
2	50	21 3/4	543	7 3/4	197	4 1/2	114	3 1/4	83	13 1/2	343	5 15/16	151	5	127	30	13



### 009 2 1/2" and 3"

MODEL NO.	SIZE (DN)		DIMENSIONS (APPROX.)										STRAINER DIMENSIONS				WEIGHT					
	in.	mm	A		C		D		E		L		R		U		M		N		lbs.	kgs.
009LF	2 1/2	65	—	—	—	—	5 1/4	133	—	—	18 1/8	460	—	—	10 5/8	270	10	254	6 1/2	165	76	34
009OSY	2 1/2	65	33 1/4	845	16 3/8	416	5 1/4	133	16 3/8	416	18 1/8	460	7 3/4	197	10 5/8	270	10	254	6 1/2	165	166	75
009NRS	2 1/2	65	33 1/4	845	9 3/8	238	5 1/4	133	16 3/8	416	18 1/8	460	7 3/4	197	10 5/8	270	10	254	6 1/2	165	189	86
009QT	2 1/2	65	33 1/4	845	6	152	5 1/4	133	16 3/8	416	18 1/8	460	7 3/4	197	10 5/8	270	10	254	6 1/2	165	150	68
009LF	3	80	—	—	—	—	5 1/4	133	—	—	18 1/8	460	—	—	10 5/8	270	10 1/8	257	7	178	76	34
009OSY	3	80	34 1/4	870	18 7/8	470	5 1/4	133	16 5/8	422	18 1/8	460	8 3/4	222	10 5/8	270	10 1/8	257	7	178	198	90
009NRS	3	80	34 1/4	870	10 1/4	260	5 1/4	133	16 5/8	422	18 1/8	460	8 3/4	222	10 5/8	270	10 1/8	257	7	178	191	87
009QT	3	80	34 1/4	870	7	178	5 1/4	133	16 5/8	422	18 1/8	460	8 3/4	222	10 5/8	270	10 1/8	257	7	178	158	71

# GoldenEagle® Series 919 (3/4" – 2")

## Reduced Pressure Zone Assemblies

- Designed to prevent the reverse flow of polluted water from entering the potable water system.
- For health hazard continuous pressure applications.
- Provides protection against backsiphonage and backpressure backflow.

### Specifications

- Temperature Range: 33°F – 180°F (5°C – 82°C)
- Maximum Working Pressure: 175psi (12.1 bars)

### Models 3/4" – 2" (20 – 50mm)

#### Suffix:

QT – quarter-turn ball valves

S – bronze strainer

LF – without shutoff valves

AQT – elbow fitting for 360° rotation

ZQT – inlet & outlet flow up

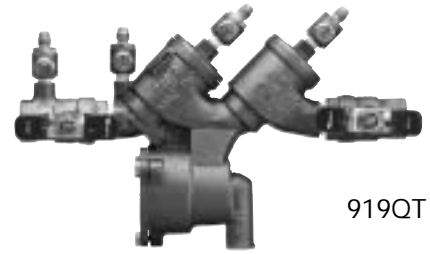
#### Prefix:

U – union connections

For additional information, request literature ES-919.

For information on Air Gaps, Vent Elbows and Test Cocks see page 52 or request literature ES-AG/EL/TC.

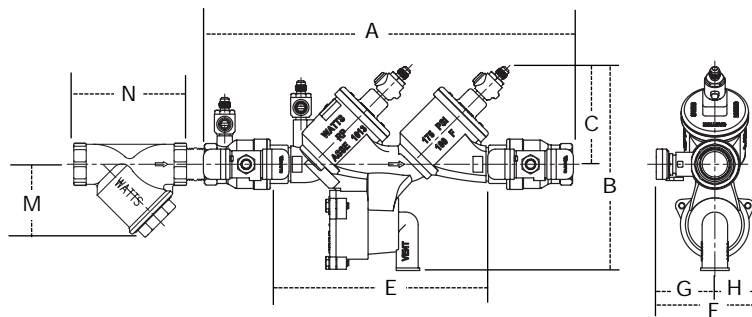
For WattsBox Enclosures, request literature ES-WB.



919QT

### Features

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



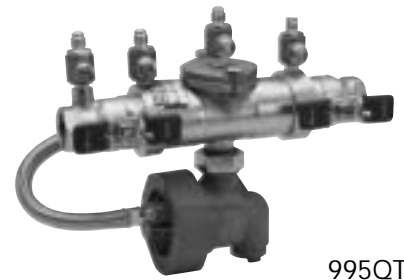
### 919QT/919QT-S

SIZE (DN)	DIMENSIONS (APPROX.)										STRAINER DIMENSIONS		WEIGHTS									
	A		B		C		E (LF)		F		G		H		M		N		QT		QT-S	
in. mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.	lbs.	kgs.
3/4 20	12 3/8	314	4 1/4	108	3 1/2	90	7 7/8	200	3 5/8	92	2 1/16	53	1 9/16	39	3 3/16	81	2 3/4	70	8.25	3.74	10	4.54
1 25	14 13/16	376	4 9/16	116	3 13/16	98	9 5/8	244	4	102	2 7/16	63	1 9/16	39	3 3/4	95	3	76	11.84	5.37	13.84	6.28
1 1/4 32	18 7/8	480	6 1/8	155	5 1/16	129	11 11/16	297	5 1/8	130	2 5/8	67	2 1/2	64	4 7/16	113	3 1/2	89	22.25	10.09	26.25	11.91
1 1/2 40	18 7/8	480	6 1/8	155	5 1/16	129	11 11/16	297	5 5/8	143	3 1/8	79	2 1/2	64	4 7/8	124	4	102	28.25	12.81	32	14.52
2 50	19 1/2	495	7 1/16	179	5 13/16	147	13 3/8	340	5 15/16	151	3 7/16	87	2 1/2	64	5 5/16	151	5	127	37.25	16.90	45	20.41

# Copperhead® Series 995 (1/2" – 1 1/2")

## Reduced Pressure Zone Assemblies

- Designed to prevent the reverse flow of polluted water from entering the potable water system.
- For health hazard continuous pressure applications.
- Provides protection against backsiphonage and backpressure backflow.



995QT  
Patent# 6,021,805

## Specifications

- Temperature Range: 33°F – 180°F (5°C – 82°C) continuous; 140°F (60 C) intermittent
- Maximum Working Pressure: 175psi (12.1 bars)

## Models

add suffix:

S – bronze strainer.

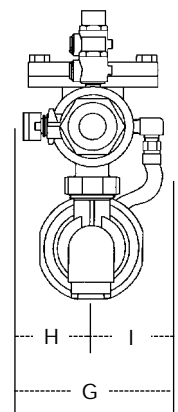
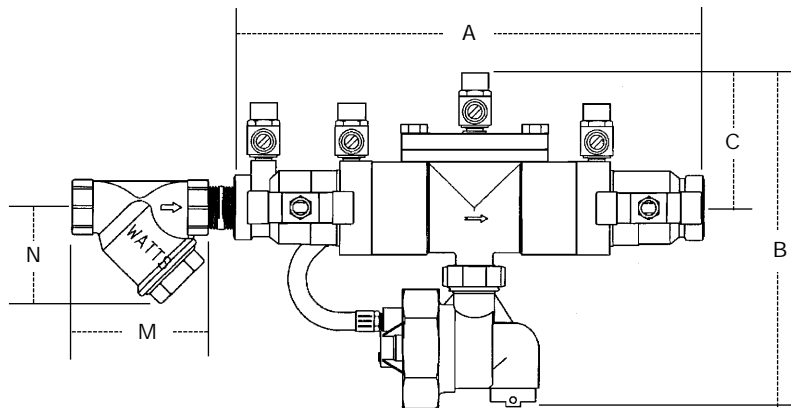
For additional information, request literature ES-995.

For information on Air Gaps, Vent Elbows and Test Cocks, see page 52 or request literature ES-AG/EL/TC.

For WattsBox Enclosures, request literature ES-WB.

## Features

- Tubular lead free copper body creates smooth flow path and low head loss
- External/internal electroless nickel-plated body acts as an oxygen barrier for corrosion resistance
- Threaded-in check modules eliminate the use of check retainers for lower pressure loss
- Bottom mounted relief valve reduces end-to-end dimensions allowing smaller enclosures and space requirements
- Separate relief valve access cover allows the check modules to be serviced independently of the relief valve
- Unique relief valve cover nut design eliminates use of cover bolts and simplifies alignment
- Flexible stainless steel braided hose, senses supply pressure at the mid-point of the body to reduce fouling
- Check relief valve seats are replaceable without the use of special tools
- Modular check valves feature captured springs and replaceable disc rubber
- Bolted on, top entry stainless steel check valve cover features an O-ring seal to limit torque requirements
- Crush seal check module O-ring for positive seating



### 995QT

SIZE (DN)		DIMENSIONS (APPROX.)										STRAINER DIMENSIONS				WEIGHT			
in.	mm	A		B		C		G		H		I		M		N		lbs.	kg.
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		
1/2	15	9	228	7 1/4	184	2 5/8	67	3 5/8	92	1 5/8	41	2	51	3	76	3	76	5	2
3/4	20	9	228	7 1/4	184	2 5/8	67	3 5/8	92	1 5/8	41	2	51	3 1/2	89	3	76	5	2
1	25	11 1/2	292	8 1/16	205	3 5/16	84	4 1/8	105	2	51	2 1/8	54	4 3/4	121	3 1/4	83	7	3
1 1/4	32	15 3/8	390	11	279	4 7/16	113	6	152	3 1/4	82	2 3/4	69	4 1/2	114	3 1/2	89	18	8
1 1/2	40	15 3/8	390	11	279	4 7/16	113	6	152	3 1/4	82	2 3/4	69	4 7/8	124	4	102	18	8

# SilverEagle™ Series 957RPDA, 957NRPDA, 957ZRPDA (2½" – 10")



957NRPDA OSY

## Reduced Pressure Detector Assemblies

- Designed to provide protection to the potable water system from contamination in accordance with national plumbing codes.
- For health hazard continuous pressure applications.
- Provides protection against backsiphonage and backpressure backflow.
- Primarily installed on fire sprinkler systems when it is necessary to monitor unauthorized use of water.

## Specifications

- Temperature Range: 33°F – 140°F (5°C – 60°C).
- Maximum Working Pressure: 175psi (12.1 bars).

## Models

add Suffix:

**OSY** – UL/FM outside stem and yoke resilient seated gate valves.

**BFG** – 2½" – 6" N or Z pattern only with UL/FM grooved gear operated butterfly valves with tamper switch.

**CFM** – cubic feet per minute meter

**GPM** – gallons per minute meter

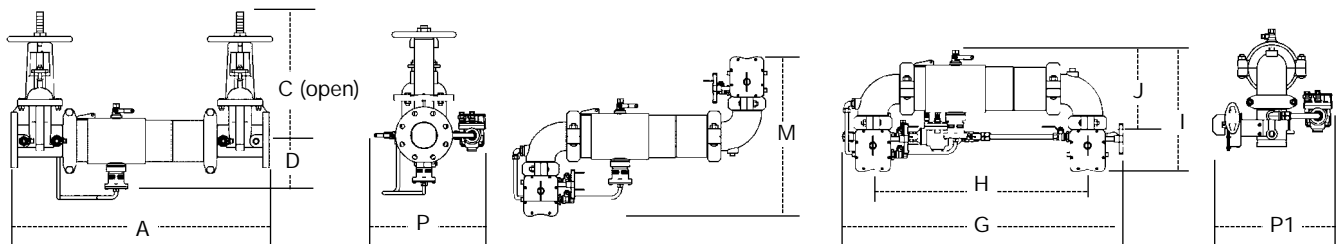
For additional information, request literature ES-957RPDA/957NRPDA/957ZRPDA.

For information on Air Gaps, Vent Elbows and Test Cocks see page 52 or request literature ES-AG/EL/TC.

For WattsBox Enclosures, request literature ES-WB.

## Features

- 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 provides lowest pressure loss
- Unmatched ease of serviceability
- Available with grooved butterfly valve shutoffs.
- Bottom mounted cast stainless steel relief valve
- Replaceable check disc rubber
- Metered bypass to detect leakage or theft of water from the fire sprinkler system



### 957RPDA OSY

SIZE (DN)	DIMENSIONS (APPROX.)												WEIGHT										
	A		C		D		G		H		I		J		M		P		957RPDA OSY	957NRPDA OSY			
in. mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.	lbs.	kgs.	
2½	65	31	787	16⅜	416	6½	165	29⅛	738	22	559	15½	393	8⅓	223	21⅞	548	13⅜	335	142	64	150	68
3	80	31⅛	805	18⅞	479	6⅞	170	30¼	768	22¾	578	17⅞	435	9⅜	233	23⅞	587	14½	368	162	73	175	79
4	100	33⅛	856	22¾	578	7	178	33	838	24	610	18½	470	9⅝	252	26½	673	15⅝	386	178	81	201	91
6	150	44	1118	30⅞	765	8½	216	44¾	1137	33¾	857	23⅞	589	13⅞	332	32¾	832	19	483	312	142	353	160
8	200	50	1270	37¾	959	9⅞	246	54⅞	1375	40⅝	1032	27⅞	697	15⅞	399	37⅞	943	21⅞	538	497	225	572	259
10	250	57½	1460	45¾	1162	11⅜	285	66	1676	50	1270	32½	826	17⅝	440	46⅞	1178	24	610	797	362	964	437

### 957RPDA BFG

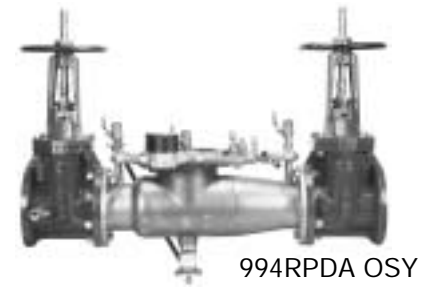
SIZE (DN)	DIMENSIONS (APPROX.)										WEIGHT				
	G		H		I		J		M		P1		957RPDA BFG		
in. mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.	
2½	65	32½	826	23½	597	15½	394	9½	241	21⅜	555	15⅜	402	81	37
3	80	34	864	24½	622	16⅝	414	10⅞	256	23⅞	587	16⅞	410	84	38
4	100	35⅝	905	26	660	17⅞	437	10⅝	279	24⅝	634	16⅝	422	101	46
6	150	46½	1181	35⅞	908	20½	521	13½	343	28¼	718	19	483	174	79



# Series 994RPDA (2½" – 6")

## Reduced Pressure Detector Assemblies

- Designed to prevent the reverse flow of polluted water from entering the potable water system.
- For health hazard continuous pressure applications.
- Provides protection against backsiphonage and backpressure backflow.
- Detects system leaks or unauthorized use of water supply.



994RPDA OSY

### Specifications

- Temperature Range: 33°F – 110°F (5°C – 43°C)
- Maximum Working Pressure: 175psi (12.1 bars)

### Models

#### Suffix

**LF** – without shutoff valves

**OSY** – UL/FM outside stem & yoke resilient seated gate valves

**CFM** – cubic feet per minute meter

**GPM** – gallons per minute meter.

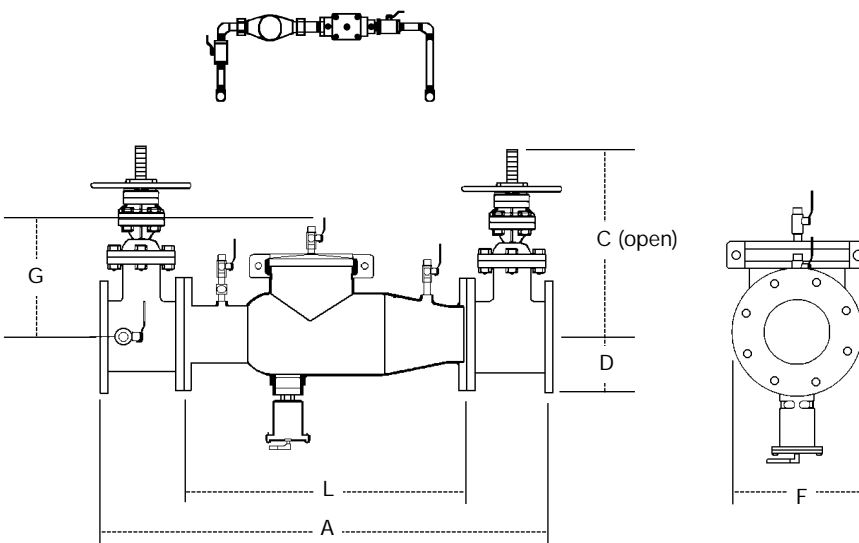
For additional information, request literature ES-994RPDA

For information on Air Gaps, Vent Elbows and Test Cocks, see page 52 or request literature ES-AG/EL/TC.

For WattsBox Enclosures, request literature ES-WB.

### Features

- Stainless steel construction provides long term corrosion resistance and maximum strength
- Stainless steel body is half the weight of competitive designs reducing installation and shipping costs
- Short end-to-end dimensions makes retrofit easy
- Bottom mounted relief valve reduces clearance requirements when installed against an outside wall
- Patented torsion spring check valves provide maximum flow at low pressure drop
- Thermoplastic and stainless steel check valves for trouble-free operation
- No special tools required for servicing
- Compact construction allows for smaller enclosures
- Stainless steel relief valve features a balanced rolling diaphragm to eliminate sliding seals and lower maintenance costs
- Detects underground leaks and unauthorized water use.
- GPM or CFM meter available



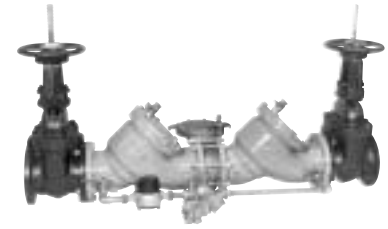
### 994RPDA

SIZE (DN)		DIMENSIONS (APPROX.)										WEIGHT					
in.	mm	A		C (open)		D		F		G		L		w/Gates		w/o Gates	
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kg.	lbs.	kg.
2½	65	37	940	16¾	416	10½	267	7	178	10	254	22	559	148	67	60	27
3	80	38	965	18¾	479	10½	267	7½	191	10	254	22	559	226	103	62	28
4	100	40	1016	22¾	578	10½	267	9	229	10	254	22	559	235	107	65	30
6	150	48½	1232	30¾	765	11½	292	11	279	15	381	27½	699	380	172	110	50

# Series 909RPDA (2½" – 10")

## Reduced Pressure Detector Assemblies

- Designed to prevent the reverse flow of polluted water from entering the potable water system.
- For health hazard continuous pressure applications.
- Provides protection against backsiphonage and backpressure backflow.
- Detects system leaks or unauthorized use of water supply.



909RPDAOSY

### Specifications

- Temperature Range: 33°F – 140°F (5°C – 60°C)
- Maximum Working Pressure: 175psi (12.1 bars)

### Models

Suffix

**OSY** – UL/FM outside stem & yoke resilient seated gate valves

**LF** – without shutoff valves (4" – 10") (100 – 250mm)

**CFM** – cubic feet per minute meter

**GPM** – gallons per minute meter

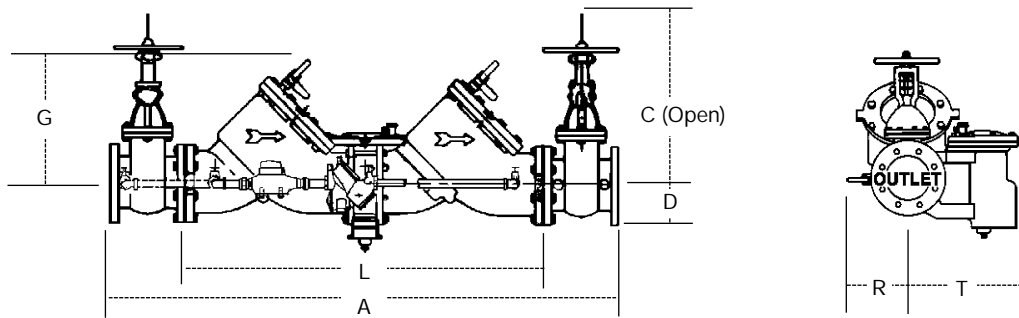
For additional information, request literature ES-909RPDA.

For information on Air Gaps, Vent Elbows and Test Cocks, see page 52 or request literature ES-AG/EL/TC.

For WattsBox Enclosures, request literature ES-WB.

### Features

- Body construction fused epoxy coated cast iron
- Replaceable bronze seats
- Maximum flow at low pressure drop
- Compact for economy combined with performance
- Design simplicity for easy maintenance
- Furnished with 5/8" x 3/4" (16 x 19mm) recordall meter
- Air-in/water-out relief valve design provides maximum capacity during emergency conditions
- No special tools required for servicing



### 909RPDA

SIZE (DN)		DIMENSIONS (APPROX.)												WEIGHT			
in.	mm	A		C (OSY)		D		G		L		R		T		lbs.	kgs.
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		
2½	65	42⅞	1070	16⅜	416	5¼	133	7	178	26⅞	664	14	356	9	229	230	104
3	80	42⅞	1070	18⅞	479	5¼	133	7	178	26⅞	664	14	356	9	229	230	104
4	100	55⅞	1400	22¾	578	6	152	9½	241	37	940	15	381	13⅞	346	470	213
6	150	65½	1664	30⅞	765	6	152	14½	368	44½	1130	16	406	13⅞	346	798	362
8	200	78½	1988	37¾	959	9¾	248	18½	470	55¼	1403	17	432	18½	470	1456	660
10	250	93⅝	2378	45¾	1162	9¾	248	21½	546	67½	1715	18	457	18½	470	2230	1012

# Air Gaps and Elbows

for Reduced Pressure Zone Assemblies

**Air Gaps** for use with backflow preventers on horizontal installations. Can be easily mounted to body.

**Vent Elbows** are used with Watts air gaps for vertical installation of reduced pressure zone backflow preventers.

For additional information, request literature ES-AG/EL/TC.



Air Gaps

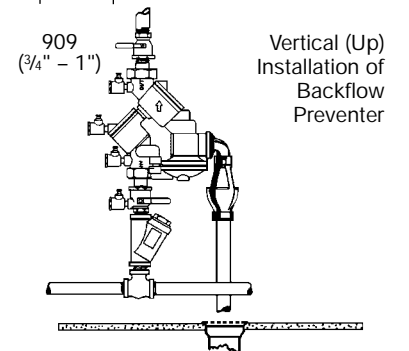
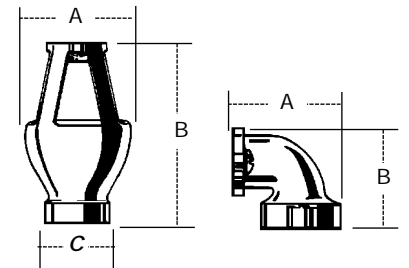


Elbow

\*Epoxy coated

## Air Gaps

MODEL	SERIES/SIZES	DIMENSIONS (APPROX.)						WEIGHT	
		A		B		C		lbs.	kg.
		in.	mm	in.	mm	in.	mm		
909AG-A	1/4" - 1/2" 009, 3/4" 009M2/M3 1/2" - 1" 995	2 3/8	60	3 1/8	79	1/2	13	.63	.28
909AG-C	3/4" - 1" 009/909 1 - 1 1/2" 009M2, 1 1/4" - 2" 995	3 1/4	83	4 7/8	124	1	25	1.50	.68
909AG-F	1 1/4" - 3" 009/909 1 1/4" - 2" 009M1, 2" 009M2	4 3/8	111	6 3/4	171	2	51	3.25	1.47
909AG-K	4" - 6" 909 8" - 10" 909M1	6 3/8	162	9 5/8	244	3	76	6.25	2.83
909AG-M	8" - 10" 909	7 3/8	187	11 1/4	286	4	102	15.50	7.03
919AGC	3/4" & 1" 919	2 3/8	60	3 1/8	79	1/2	13	.63	.28
919AGF	1 1/4" - 2" 919	4 3/8	111	8 7/8	214	3	76	4.26	1.93
957AG	2 1/2" - 10" 957	7 1/2	190	10 3/16	258	2	51	1.5	.68
957AG (Splash Guard)	2 1/2" - 10" 957	-	-	-	-	-	-	-	-
994AGK-P	2 1/2" - 10" 994	8	203	11 1/4	286	2	51	1.50	0.68
995AG	3" - 6" 995	5	127	8	203	2 3/8	60	-	-



**Vent Elbows** — Use with Watts Air Gaps for vertical installation of reduced pressure zone assemblies.

909EL-A	1/4" - 1/2" 009, 3/4" 009M2/M3, 1/2" - 1" 995	-	-	-	-	-	-	-	-
* 909EL-C	3/4" - 1" 009/909, 1" - 1 1/2" 009M2, 1 1/4" - 2" 995	2 3/8	60	2 3/8	60	-	-	.38	.17
* 909EL-F	1 1/4" - 2" 009M1, 1 1/4" - 2" 009/909 2" 009M2	3 5/8	92	3 5/8	92	-	-	2	.91
* 909EL-H	2 1/2" - 3" 009/909	-	-	-	-	2	51	-	-
994EL-F (vertical)	2 1/2" - 10" 994	4 7/8	124	9	229	2	51	4	1.8

# Test Cocks

For Use With Backflow Preventers, Isolation Valve for Gauges, Isolation Valves for Small Equipment Lines

## TC

- Full port ball valve design
- Screwdriver slot to open and close
- Available 1/8" M x 1/4" F or 1/4" M x 1/4" F



## SAE-TC Adapter

- 1/4" female SAE x 7/16" FPT
- Adapts to SAE-TC for use with pressure gauge and/or site tube



## SilverEagle TC

- 1/2" TC for 2 1/2" - 4" series 757 and 957
- 3/4" TC for 6" - 10" series 757 and 957
- Full port ball valve design

## SAE-TC

- Full port ball valve design
- Screwdriver slot operation
- 1/8" M x SAE



## SAE-TC Brass Cap

for protection of 1/8" SAE-TC (not shown) (four required per backflow preventer)

# Caps & Tethers (Plastic, Brass)

Plastic cap and tether (four required per backflow preventer)

- Fits 1/4" female test cocks
- Plastic dust cap and rubber tether
- RK-TC 1/8"

## SAE Brass cap, O-ring and tether

- Fits 1/8" M x SAE test cocks
- Brass dust cap with O-ring seal and rubber tether
- RK-SAE-TC



Plastic Cap and Tether



Brass Cap and Tether

## Series 9 (1/4" – 3/8")

### Dual Check Vacuum Breakers

- Used to prevent the flow of contaminated water into the potable water supply.
- Use where water spillage will not cause damage.

#### Models

**N9C** – Dual check backflow preventer with atmospheric vent. For continuous pressure applications. Sizes 1/4" (8mm) and 3/8" (10mm) NPT female inlet and outlet connections. Max. pressure 125psi (8.6 bars).

**N9** – the same as N9C except in brass finish.

**NLF9** – Has a 3/8" (10mm) NPT male inlet connection. Max. pressure 150psi (10.3 bars). For non-continuous pressure applications.

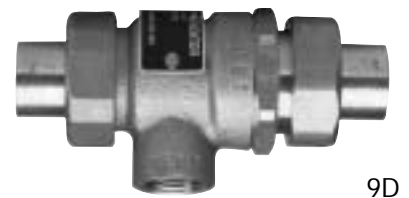
**N9-CD** – In-line field testable, dual check backflow preventer with atmospheric vent. Non-removable design. Size 3/4" (20mm) hose thread female inlet x 3/4" (20mm) HT male outlet connection. Max. pressure 150psi (10.3 bars). Max. temperature 180°F (82°C).

**9D** – Dual check backflow preventer with atmospheric vent for continuous pressure. Sizes 1/2" (15mm) and 3/4" (20mm) NPT female union inlet and outlet connections. Max. pressure 175psi (12.1 bars). Min. pressure required 25psi (172.4 kPa). Max. temperature 250°F (121°C).

**9DS** – same as Model 9D with solder ends.

**9BD** – Special backflow preventer for vending machine water supply lines. Complies with FDA food additive regulations. Standard size: 3/8" (10mm) flare copper tube (FCT) inlet and outlet. Max. pressure 150psi (10.3 bars). Max. temperature 140°F (60°C).

For additional information, request literature ES-9, ES-N9-CD, or ES-9D-M3,M2.



9D



N9-CD

## Series 912HP (3/4", 1")

### High Pressure Hose Drop Backflow Preventer

- For isolation protection on high pressure plumbing supply lines, such as high pressure hose drops which are used for the washdown of equipment and facilities.
- Ideally suited for food processing plants.
- Provides and backpressure backflow protection to prevent the reverse flow of potentially contaminated water from the processing and rendering areas into the potable water supply.
- Maximum Working Pressure: 400psi (27.5 bars).
- Maximum Temperature: 160°F (71°C).

#### Specifications

For non-health hazard applications where continuous pressure conditions exist. Incorporates the use of a bronze ball valve shutoff on the inlet of the assembly and a dual check with atmospheric vent specifically designed to handle the temperature and pressure conditions commonly found in the meat processing industry.

For dimensional and additional information, request literature ES-912HP.



912HP  
Patent# 6,397,878B1

#### Features

- Female national pipe thread inlet and male national pipe thread outlet connections
- Ball valve design includes reinforced/enhanced PTFE seats and electroless nickel plated brass ball
- Blow-out proof pressure retaining stem
- Low profile oval handle
- In the event of fouling of the downstream check valve, leakage would be vented to atmosphere thereby providing a visual indication of failure of the check assembly
- Can be installed vertically (flow up or flow down) or horizontally
- Integral stainless steel screen protects the check assembly from fouling due to dirt and debris

# Series 008PCQT (3/8" – 1")

## Spill Resistant, Anti-siphon Vacuum Breakers

- Health hazard backflow preventer for continuous pressure applications.
- Designed for indoor point of use applications.
- Prevents backsiphonage of contaminated water into the potable water supply.
- Install 6" above the flood rim if field applied. Install 1" when factory installed or deck/machine mounted.
- Standardly furnished with internal polymer coating.

### Specifications

- Sizes 3/8" – 1" (10 – 25mm). NPT female connections.
- Temperature Range: 33°F – 180°F (5°C – 83°C).
- Maximum Working Pressure: 150psi (10.34 bar).

For additional information, request literature ES-008PCQT.

MODEL	SIZE (DN)		DIMENSIONS (APPROX.)								WEIGHT	
	in.	mm	A		B		C		D		lbs.	kg.
008PCQT	3/8	10	4 1/8	107	5 1/2	140	1 9/16	40	3 15/16	100	1.6	.7
008PCQT	1/2	15	4 3/8	111	5 1/2	140	1 9/16	40	4 3/16	106	1.7	.5
008PCQT	3/4	20	4 5/16	125	7	178	2 3/8	60	4 5/8	117	3.8	1.7
008PCQT	1	25	5	127	7 1/2	191	2 3/8	60	5 1/8	130	4.8	2.2

**Note:** A strainer is recommended to be installed ahead of the backflow preventer to prevent the fouling of the check assembly and resultant spillage from the valve during re-pressurization. Do not install in concealed locations or areas where water leakage due to normal wear of the internal parts can cause damage.



008PCQT

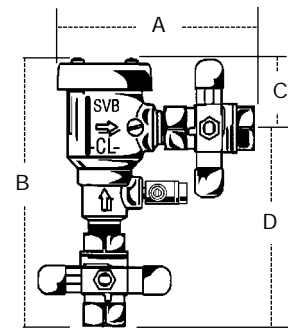
### Models

#### add Suffix:

**SC** – satin chrome finish — with stem, wrench flats in place of Tee handles (contact factory).

**S** – bronze strainer.

**L** – left sided test cock.



# Series 800M4QT, 800M4FR (1/2" – 2")

## Pressure Vacuum Breakers

- With tee handle quarter-turn shutoffs on sizes 1/2" – 1" (15 – 25mm).
- Lever handles 1 1/4" – 2" (32 – 50mm).
- For health hazard cross-connections subject to continuous pressure.
- Install 12" (305mm) above highest downstream point of water.
- Designed to prevent backsiphonage of contaminated water into the potable water supply.
- Sizes 1/2" – 2" (15 – 50mm). NPT female connections.

### Specifications

- Temperature Range: 33°F – 140°F (5°C – 60°C).
- Maximum Working Pressure: 150psi (10.3 bar).

For additional information, request literature ES-800M4QT or ES-800M4FR.

For WattsBox Enclosures, request literature ES-WB.



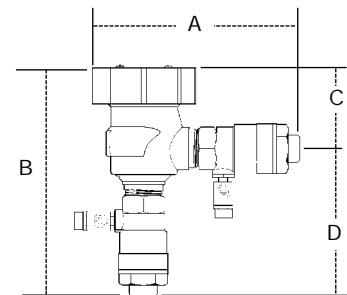
800M4QT

### Models

**800M4FR** – Model 800M4QT with relief valve for freeze protection. Patent #5551473. Sizes 1/2" – 2" (15 – 50mm).

**800MQT** – compact model with self-contained ball valve shutoffs. Sizes 1/2" and 3/4" (15 and 20mm).

MODEL	SIZE (DN)		DIMENSIONS (APPROX.)								WEIGHT	
	in.	mm	A		B		C		D		lbs.	kg.
800M4QT/800M4FR	1/2	15	5	127	6 1/4	159	2 9/16	65	3 1 1/16	94	3.5	1.6
800M4QT/800M4FR	3/4	20	5 3/8	137	6 1/2	165	2 9/16	65	3 15/16	100	3.5	1.6
800M4QT/800M4FR	1	25	5 1/2	139	7 1/2	191	2 3/4	70	4 3/4	121	6.0	2.7
800M4QT/800M4FR	1 1/4	32	8 3/8	219	9	229	3 1/4	83	5 3/4	146	11.0	4.9
800M4QT/800M4FR	1 1/2	40	9	229	9 1/2	241	3 1/4	83	6 1/4	159	13.5	6.1
800M4QT/800M4FR	2	50	9 1/2	241	9 5/8	245	3 1/4	83	6 3/8	162	18.5	8.4
800MQT	1/2	15	4 7/8	124	5 3/8	137	2 1/2	64	2 7/8	73	3.0	1.4
800MQT	3/4	20	4 7/8	124	5 3/8	137	2 1/2	64	2 7/8	73	3.0	1.4



# Series 188A, 288A, 289, N388 (1/4" – 3")

## Anti-Siphon Vacuum Breakers

- Vacuum breakers are designed to protect against the backsiphonage of contaminated water into the potable water supply.
- For health hazard cross-connections not subject to continuous pressure.
- Install 6" (150mm) above highest downstream point of water.

### Specifications

- NPT female inlet and outlet connections, Models 188A/288A.
- Maximum temperature 180°F (82°C) at 125psi (8.6 bars) working pressure.

For additional information, request literature ES-188A, ES-288A, ES-289 or ES-N388.



289

### Models

**188A** – Sizes: 3/4" – 2" (20 – 50mm) irrigation vacuum breaker. Plain brass finish.

**288A** – Sizes: 1/4" – 3" (8 – 80mm), plain brass finish.

**288AC** – Sizes: 1/4" – 1" (8 – 25mm), polished chrome finish.

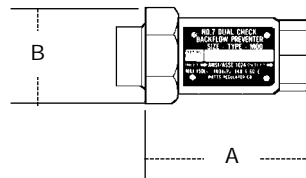
**289** – Sizes: 3/8" – 1" (10 – 25mm) spill-resistant atmospheric vacuum breakers. NPT male connections.

**N388** – Sizes: 1/4" and 3/8" (8 – 10mm) with NPT female bottom inlet and outlet connections. Bronze body.

# Series 7 (3/8" – 1")

## Dual Check Valves

- For use at the drinking water supply service entrance or with individual outlets.
- Designed for non-health hazard residential water system containment and continuous pressure applications.
- Bronze body construction.
- Uses two compact replaceable check modules.
- Buna-N seals and stainless steel springs.
- Installed immediately downstream of the residential water meter.



7

### Features

- Can be installed vertically or horizontally
- Available with an extensive combination of inlet/outlet sizes, types of thread and end connections including retrofit compression fittings and hose connections
- Can be installed in a variety of piping configurations, and in conjunction with a wide range of meter horns, copper setters and meter boxes
- Testable dual check model available, Series L7U2-2

For additional information, request literature PG-7.

### Specifications

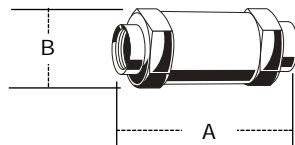
- Temperature Range: 33°F – 140°F (5°C – 60°C) continuous; 180°F (82°C) intermittent.
- Minimum Working Pressure: 10psi (69 kPa).
- Maximum Working Pressure: 150psi (10 bars).

MODEL	SIZE (DN)	DIMENSIONS				WEIGHT		
		A		B		lbs.	kg.	
	in.	mm	in.	mm	in.	mm		
7C	3/8"	10	2 7/8"	73	1 1/4"	32	1.6	0.7
7U2-2	1/2"	15	4 3/8"	111	2 3/8"	60	1.75	0.8
7U2-2	3/4"	20	4 3/8"	111	2 3/8"	60	1.75	0.8
7U2-2	1"	25	4 3/8"	111	2 3/8"	60	1.75	0.8

# Series Cu7 (1/2" – 1")

## Copper-Body Dual Check Valves

- Straight line, poppet-type construction minimizing pressure drop.



Cu7

### Features

- Can be installed vertically or horizontally
- Lead free copper body
- Modular check valves for easy maintenance
- Chloramine resistant materials of construction
- Double unions for installation ease
- Replaceable seats
- Center stem guides for reliable seating

### Specifications

- Temperature Range: 33°F – 180°F (5°C to 82°C) continuous.
- Minimum Working Pressure: 10psi (69 kPa).
- Maximum Working Pressure: 175psi (12.1 bars).

For additional information, request literature, PG-7.

SIZE (DN)	DIMENSIONS				WEIGHT		
	A		B		lbs.	kg.	
in.	mm	in.	mm	in.	mm		
1/2"	15	4 7/16"	113	2 3/8"	60	1.7	0.8
3/4"	20	4 7/16"	113	2 3/8"	60	1.7	0.8
1"	25	4 11/16"	119	2 3/8"	60	2.0	0.9

## Series 8 (3/8" – 3/4")

### Hose Connection Vacuum Breakers

- Health hazard, backsiphonage protection, non-continuous pressure.
- Designed for attaching to sill cocks and other hose connections.

### Specifications

- Sizes 3/4" (20mm) hose thread (HT) female inlet x 3/4" (20mm) HT male outlet connection.
- Maximum Pressure: 125psi (8.6 bar). Maximum Temperature: 180°F (82°C).

### Models

**8\*** – Brass body, removable, non-draining.

**8A\*** – Patented "non-removable" feature, drainable. Interlocking spring prevents removal once installed.

**8B\*** – Brass body, with breakaway set screw to prevent removal, drainable.

**8C, 8BC and 8AC** – same as above in chrome finish.

**NF8C** – Specifically designed for wall and yard hydrants, permits manual draining for freezing conditions. Chrome finish.

**NF8** – same as above with brass finish.

**8P** – Thermoplastic body with patented "non-removable" feature and equipped to allow sill cock to be drained.

**S8C** – Designed for tub and shower hand spray sets. Chrome finish.

**S8** – same as above with plain brass finish.

**8FR** – Freeze relief feature. Protects the valve from freeze damage with or without the hose attached. (Patent Pending)

**\*Note:** Model 8, 8A, and 8B are not suitable for frost-free hydrants.

See Model NF8. For additional information, request literature ES-8.

MODEL	SIZE (DN)		DIMENSIONS (APPROX.)				WEIGHT	
	in.	mm	A		B		oz.	gm.
8	3/4 HT	20	1 3/8	35	1 1/2	38	4.0	113.4
8A	3/4 HT	20	1 1/2	38	1 3/4	38	4.0	113.4
8AC	3/4 HT	20	1 1/2	38	1 1/2	38	4.0	113.4
8B	3/4 HT	20	1 1/2	38	1 3/8	35	4.0	113.4
8BC	3/4 HT	20	1 3/8	35	1 1/2	38	4.0	113.4
8C	3/4 HT	20	1 3/8	35	1 1/2	38	4.0	113.4
NF8	3/4 HT	20	1 1/2	38	2	50	5.3	151.2
NF8C	3/4 HT	20	1 1/2	38	2	50	5.3	151.2
8P	3/4 HT	20	1 3/4	44	1 3/8	35	2.0	56.7
S8	1/2 F**	15	1 1/4	32	1 1/2	38	1.5	42.5
S8C	1/2 F**	15	1 1/4	32	1 1/2	38	4.0	113.4
S8C	3/8 F**	10	1 1/4	32	1 1/2	38	4.0	113.4
8FR	3/4 HT	20	1 3/4	44	1 1/2	38	4.0	113.4

HT = Hose threaded connections, female inlet x male outlet connection;

\*\* Female NPT threaded inlet x male NPT outlet connection.

## Series Gov. 80M1 (10", 11 1/2", 12 1/2")

### Ball Cock and Thermal Expansion Relief Valve

- Triple purpose product: toilet tank ball cock fill valve, anti-siphon backflow preventer and thermal expansion pressure relief valve.

### Specifications

- Maximum operating temperature 110°F (43.3°C).
- Standard heights 10", 11 1/2" or 12 1/2" (250, 292, or 318mm).

For additional information, request literature S-Gov80.

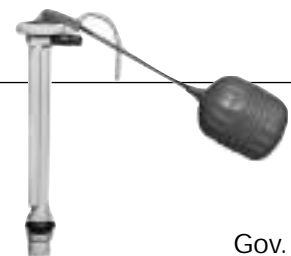
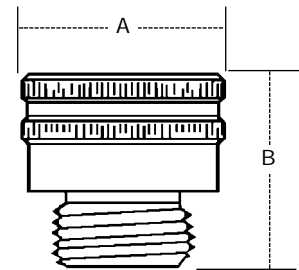
For more products to protect against thermal expansion, see pages 25 – 27.



8B



8FR



Gov. 80-M1

### Standards

Listed by IAPMO and CSA certified for anti-siphon ball cocks, FDA approved under CFR-21-177-2600, ANSI/ASSE No. 1002.

## Series SD2 (1/4" – 3/8")

### Dual Check Valve

- Recommended for use on Post-Mix Carbonated Beverage Equipment and dispensing equipment for tea and coffee.
- Prevents the reverse flow of potentially contaminated water into the potable water supply due to backpressure backflow.
- Designed for protection of the water supply from carbonated water.
- For continuous or intermittent pressure conditions.

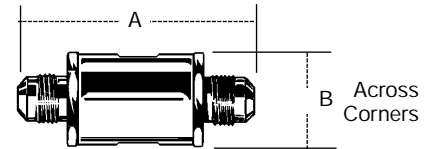


SD2

### Models

- SD2-MN – 1/4" (8mm) Male NPT.
- SD2-MN – 3/8" (10mm) Male NPT.
- SD2-FN – 1/4" (8mm) Female NPT.
- SD2-FN – 3/8" (10mm) Female NPT.
- SD2-MF – 1/4" (8mm) SAE Male Flare.
- SD2-MF – 3/8" (10mm) SAE Male Flare.
- SD2-FF – 1/4" (8mm) SAE Female Flare.
- SD2-FF – 3/8" (10mm) SAE Female Flare.

For additional information, request literature ES-SD2.



MODEL	SIZE (DN)		DIMENSIONS (APPROX.)			
	in.	mm	A		B	
			in.	mm	in.	mm
SD2-MN	1/4	8	3	76	1 1/16	27
SD2-MF	1/4	8	2 13/16	71	1 1/16	27
SD2-MN	3/8	10	3	76	1 1/16	27
SD2-MF	3/8	10	3	76	1 1/16	27
SD2-FN	1/4	8	3	76	1 1/16	27
SD2-FF	1/4	8	2 13/16	71	1 1/16	27
SD2-FN	3/8	10	3	76	1 1/16	27
SD2-FF	3/8	10	3	76	1 1/16	27

## Series SD3 (1/4" – 3/8")

### Dual Check Valve with Atmospheric Port

- Recommended for use on Post-Mix Carbonated Beverage Equipment and dispensing equipment for tea and coffee.
- Prevents the reverse flow of potentially contaminated water into the potable water supply due to backpressure backflow.
- Designed for protection of the water supply from carbon dioxide and carbonated water.
- For continuous or intermittent pressure conditions.
- Wye strainer for water supply installations

### Models

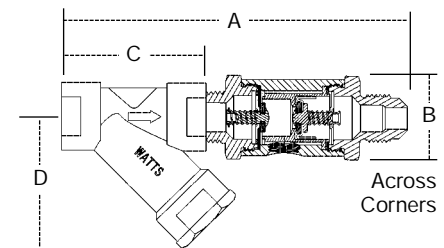
- SD3-MN – 1/4" (8mm) Male NPT.
- SD3-MN – 3/8" (10mm) Male NPT.
- SD3-MF – 1/4" (8mm) Female NPT.



SD3

- SD3-MF – 3/8" (10mm) Female NPT.
- SD3-MF – 1/4" (8mm) SAE Male Flare.
- SD3-MF – 3/8" (10mm) SAE Male Flare.

For additional information, request literature ES-SD3.



MODEL	SIZE (DN)		DIMENSIONS (APPROX.)							
	in.	mm	A		B		C		D	
			in.	mm	in.	mm	in.	mm	in.	mm
SD3-MN	1/4	8	4 1/2	114	1 1/16	27	1 7/8	48	1 11/16	43
SD3-MF	1/4	8	4 3/8	111	1 1/16	27	1 7/8	48	1 11/16	43
SD3-MN	3/8	10	4 1/2	114	1 1/16	27	1 7/8	48	1 11/16	43
SD3-MF	3/8	10	4 1/2	114	1 1/16	27	1 7/8	48	1 11/16	43
SD3-FN	1/4	8	4 1/2	114	1 1/16	27	1 7/8	48	1 11/16	43
SD3-FN	3/8	10	4 1/2	114	1 1/16	27	1 7/8	48	1 11/16	43

## Series TWS (3/4", 1")

### Through the Wall Water Supply Shutoff with Provision for a Backflow Preventer

- For use on irrigation sprinkler systems.
- Provides access to the home's water supply from the outside.
- Water supply shutoff is key operated.
- For use with pressure vacuum breaker (PVB), atmospheric vacuum breaker (AVB), double check (DC) or reduced pressure zone (RPZ) backflow preventers.
- Non-freeze wall hydrant.
- Specifications
  - Sizes 3/4", 1" (20, 25mm), NPT male outlet connection.
  - 8", 10", 12" (200, 250, 300mm) shaft lengths.
  - Temperature Range: 33°F – 140°F (5°C – 60°C) continuous; 180°F (82°C) intermittent.



TWS

- Maximum Working Pressure: 175psi (12.1 bars).

For additional information, request literature ES-TWS.



## Series SS07F (4" – 10")

### Stainless Steel Single Detector Checks

- For automatic fire sprinkler systems
- With optional by-pass assembly, detects leakage or misuse of water in fire line
- By-pass assembly kits with GPM/CFM meter. Size 3/4" (20mm).

#### Specifications

- Temperature Range: 33°F – 110°F (5°C – 43°C).
- Rated Working Pressure: 175psi (12.1 bar).
- 125# flanged connections.



SS07F

For additional information, request literature ES-SS07F.

## Series TR (4" – 10")

### Transition Riser

- Durable and easy to install underground transition fitting to connect the municipal water supply into the building overhead fire system.

#### Features

- Reduces installation time and labor costs associated with field assembly
- Corrosion resistant stainless steel construction type 304SST

- Ease of installation and lightweight allows one person to position and handle the riser
- Minimal site preparation; joint restraint one-piece construction reduces time and labor; no missing parts, no leaks; easily identifiable for approvals
- UL/FM approved
- Available in 4" – 10" (102 – 254mm) with various lengths to meet all local requirements



TR

- Designed to meet NFPA 24 Section 8-3.2
- AWWA C900 Inlet
- AWWA C606 Outlet

For additional information, request literature S-TR.

## Model TK-7

- Water column sight tube for testing dual check and double check valves.
- Tests individual check modules of the Watts Model 7, 709 and 007.

**Wgt. 5 lbs. (2.3 kg)**



TK-7

For additional information, request literature PG-TK.

## Model TK-9A

- +/- 2% accuracy full scale
- Test kit easily connects to any testable backflow preventer assembly
- Designed for testing all testable backflow preventers

Maximum Pressure: 175psi (12.1 bars)

Maximum Temperature: 210°F (98.9°C)

**Wgt. 8 lbs. (3.6 kg)**



TK-9A

For additional information request literature PG-TK.

## Model TK-99D

- Features 0.25% full scale accuracy
- Compact, hand held, digital backflow preventer test kit
- LCD display with oversized differential characters and separate supply pressure readout gauge, high impact casing
- Tests RPZ's, Double checks or PVB's

**Wgt. 3 lbs. (1.4 kg)**



TK-99D

For additional information, request literature PG-TK.

## Model TK-99E

- +/- 1% accuracy full scale
- Compact test kit with color coded valves, hoses and top mounted bleed valves
- Designed for testing all testable backflow preventers

Wgt. 8 lbs. (3.6 kg)



For additional information, request literature PG-TK.

TK-99E

## Model TK-DL

with Digital Print-Out and Computer Download Capability.

- +/- 0.2% accuracy full scale
- An advanced piece of test equipment designed to make pressure and differential gauges obsolete in the testing of backflow preventers
- Accuracy, portability, versatility and documentation
- Contains hoses, adapters, digital print-out unit and a rugged case

Wgt. 15 lbs. (6.8 kg).



For additional information, request literature PG-TK.

TK-DL

## Series W-SPL and W-FLG

Make-Up Spools and Flanges

- For backflow preventers 2½" – 10" (65 – 250mm)
- Make-up spools for use when retrofitting a backflow preventers into an installation where an existing backflow preventer is being replaced
- Make-up flanges for use in piping applications where there is a need for additional fitting lay length



For additional information, request literature F-Spools/Flanges.

## Series WB WattsBox

Backflow Preventer Freeze Protection Enclosures

- Especially made for PVB, Double check and RPZ backflow preventer assemblies that are subjected to freezing conditions.
- Construction is reinforced aluminum or fiberglass. Designed to meet NFPA guidelines.
- Easy access for testing/certification of backflow preventer.
- Removable for maintenance purposes.
- Available with or without thermostatically controlled heat source to provide protection to -30°F (-34°C). RPZ, protected against intrusion of foreign matter.
- WattsBox enclosures are lockable and can be anchored.



WB

### Specifications

- Flip top access, fiberglass construction enclosures for ¾" – 3" (20 – 80mm) pipe size backflow preventers and ¾" – 2" (20 – 50mm) PBV's.
- Front access panel, aluminum construction enclosures for 2½" – 10" (65 – 250mm) backflow preventers.

For additional information, request literature ES-WB.

## Series WattsRock

### Options

- WattsRock shell – WPLRN
- WattsRock shell with insulation – WPLR
- WattsRock shell with insulation and heat – WPHR

### Features

- Durable polyethylene shell
- Drain sizing for full port discharge
- Vandal protection
- Lifelike shape and coloring
- Testing/maintenance access
- Available in two natural stone shades — slate grey and earthtone brown



WattsRock

For additional information, request literature S-WattsRock or ES-WB.

# Series B6000 (1/4" – 4")

## B6001 (3/8" – 3")

### Standard Port, Bronze Ball Valves

- Two-piece ball valves
- For residential, commercial and industrial applications
- Suitable for a full range of liquids and gases

### Specifications

- Pressure Rating: 1/4" – 3" (8 – 80mm) – 600psi (41 bars) WOG (non-shock) – 150psi (10 bars) WSP.  
4" (100mm) – 400psi (27.5 bars) WOG (non-shock) – 125psi (8.6bars) saturated steam, over 150psi (10 bars) requiring SS trim.
- Temperature Range: 0° to 450°F (-18° – 232°C) at 50psi (3.4 bars) for reinforced/enhanced PTFE seats. 0° – 350°F (-18° – 177°C) at 50psi (3.4 bars) for Virgin PTFE seats.

### Models

**B6000** – Sizes 1/4" – 4" (8 – 100mm), NPT female connections.

**B6001** – Sizes 3/8" – 3" (10 – 80mm), solder connections.

**B6000 – UL:** UL approved for:

- Flammable liquids (YRBX).
- Compressed gas (YQNZ).
- Fire protection (HNFx), sizes 1/4" – 2" (8 – 50mm).
- LP Gas (YSDT), sizes 1/4" – 3" (8 – 80mm).
- Natural/Manufactured gas (YRPV), sizes 1/4" – 3" (8 – 80mm).
- For #1 and #2 Fuel Oil (MHKZ), sizes 1/4" – 3" (8 – 80mm).

### Standards

Meets Federal Specification WW-V-35C, and complies with MSS-SP-110.



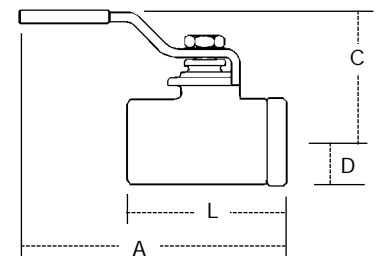
B6001

### Features

- Sizes: 1/4" – 3" (8 – 80mm) have reinforced/enhanced PTFE seats
- 4" (100mm) has virgin PTFE seats
- Chrome plated brass ball
- Adjustable stem packing gland
- Blow out proof, pressure retaining stem

For additional information, request literature ES-B6000.

For ball valve options, refer to page 64.

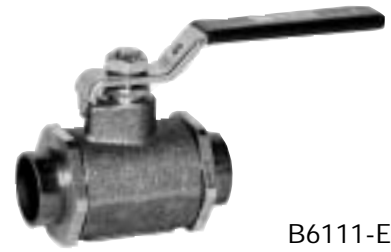


MODEL	SIZE (DN)		BALL		DIMENSIONS (APPROX.)								WEIGHT	
	in.	mm	Orifice in.	Orifice mm	A		C		D		L		lbs.	kg.
B6000	1/4	8	3/8	9.5	5	127	1 3/4	45	5/8	16	2 1/16	52	0.6	0.3
B6000	3/8	10	3/8	9.5	5	127	1 3/4	45	5/8	16	2 1/16	52	0.6	0.3
B6000	1/2	15	1/2	13.0	5	127	1 3/4	45	5/8	16	2 1/4	58	0.6	0.3
B6000	3/4	20	1 1/16	17.0	5 5/16	135	2	51	3/4	19	2 3/16	72	1.0	0.5
B6000	1	25	7/8	22.0	5 1/2	140	2 1/4	57	7/8	22	3 7/16	87	1.6	0.7
B6000	1 1/4	32	1	25.0	7	178	2 1/2	64	1 1/8	29	3 3/8	99	2.2	1.0
B6000	1 1/2	40	1 1/4	32.0	7	178	3	76	1 5/16	33	4 1/4	108	3.2	1.5
B6000	2	50	1 1/2	38.0	11	279	3 5/16	84	1 1/2	38	4 13/16	122	4.9	2.2
B6000	2 1/2	65	2	51.0	11 9/16	294	4	102	2 3/16	56	6 1/2	165	13.2	5.9
B6000	3	80	2 1/2	64.0	11 5/8	295	4 1/4	108	2 3/8	60	6 13/16	173	17.5	7.9
B6000	4	100	3	76.0	15 5/8	384	4 13/16	122	2 15/16	75	7 11/16	195	29.3	13.3
B6001	3/8	10	3/8	9.5	5 1/16	129	1 1/2	38	5/8	16	2 5/16	50	0.5	0.2
B6001	1/2	15	1/2	13.0	5 3/16	132	1 3/4	44	5/8	16	2 3/8	60	0.6	0.3
B6001	3/4	20	1 1/16	17.0	5 3/4	146	2	51	3/4	19	3 5/16	84	1.1	0.5
B6001	1	25	7/8	22.0	6	150	2 1/4	57	7/8	22	3 3/4	95	1.4	0.6
B6001	1 1/4	32	1	25.0	8	203	2 3/4	64	1 1/8	29	4 1/2	114	2.0	0.9
B6001	1 1/2	40	1 1/4	32.0	8 1/8	206	3	76	1 5/16	33	5	127	3.3	1.5
B6001	2	50	1 1/2	38.0	11 7/16	290	3 5/16	84	1 1/2	38	6 1/4	159	5.2	2.4
B6001	2 1/2	65	2	51.0	12 1/8	307	4	102	2 3/16	56	7 5/8	194	13.2	6.0
B6001	3	80	2 1/2	64.0	12 5/16	312	4 1/4	108	2 3/8	60	8 3/16	208	15.6	7.1

## Series B6111-EZ (1/2" – 1")

### Standard Port, Bronze Ball Valve

Series B6111-EZ easy sweat bronze ball valves have union copper tailpieces threaded to the body that detach for easy soldering, eliminating seat damage. Because tailpieces are copper, soldering is simpler and faster than soldering brass or bronze.



B6111-EZ

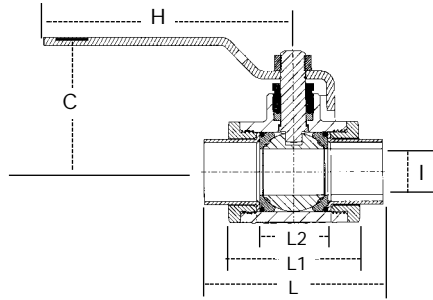
### Specifications

Pressure Rating: 600psi (41bars) WOG  
Maximum Temperature: 250°F (121°C)

### Options

Same as B-6001; except Virgin PTFE (VT) seats and UL listing.

For additional information, request literature ES-B6111.



### Features

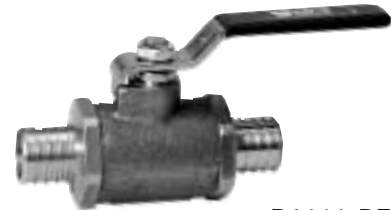
- Copper ends for fast, easy soldering
- Union ends eliminate seat damage from soldering
- Space saving compact lay-length
- Adjustable stem packing, blow-out proof stem and bubble tight shutoff
- Bronze body
- Flow capacities equal to the B6001

SIZE (DN)		DIMENSIONS (APPROX.)										WEIGHT			
in.	mm	C		H		I		L		L1		L2		lbs.	kg.
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		
1/2	15	1 3/4	44	3 3/4	95	1/2	13	2	51	1 13/16	46	7/8	22	0.58	.26
3/4	20	2	51	3 3/4	95	1 1/16	17	2 3/4	70	2	51	1 1/8	29	0.94	.43
1	25	2 1/8	54	3 3/4	95	3/4	19	3 5/16	84	2 5/16	59	1 7/16	37	1.24	.56

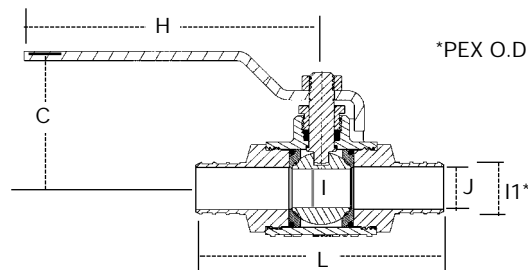
## Series B6111-PEX (1/2" – 1")

### Standard Port, Bronze Ball Valve

Series B6111-PEX bronze ball valves have ribbed, PEX end connections for use with standard PEX tubing and clamp rings.



B6111-PEX



SIZE (DN)		DIMENSIONS (APPROX.)										WEIGHT			
in.	mm	C		H		I		L1*		J		L		lbs.	kg.
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		
1/2	15	1 3/4	44	3 3/4	95	1/2	13	1/2	13	3/8	10	3 1/8	79	0.70	.32
3/4	20	1 3/4	44	3 3/4	95	1/2	13	1 1/16	17	9/16	14	3 1/8	79	0.66	.30
1	25	2	51	3 3/4	95	1 1/16	17	7/8	22	3/4	19	3 7/8	98	1.16	.53

\*Per ANSI B16.22, the maximum operating pressure of a 50-50 tin-lead solder joint connection is 200psi @ 100°F for sizes up to and including 1", and decreases with higher temperatures and larger sizes. Other solders such as 95/5 tin-antimony may be used to achieve higher pressure ratings.

# Series B6080, B6081 (1/2" – 2")

## Bronze, Full Port Ball Valves

- Two-piece construction
- For residential, commercial and industrial applications
- PTFE seats and seals

### Specifications

- Pressure Rating: 600psi (41.3 bars) WOG (non-shock) and 150psi (10.2 bars) WSP.
- Temperature Range: 0° – 350°F (-18° – 177°C) at 50psi (3.4 bars).
- Complies with MSS-SP-110.

### Models

**B6080** – Sizes: 1/2" – 2" (15 – 50mm), NPT female connections.

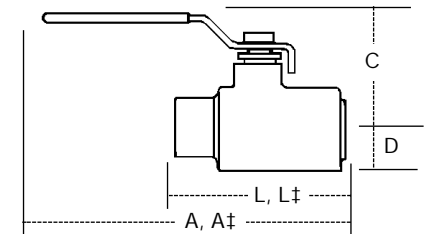
**B6081** – Sizes: 1/2" – 2" (15 – 50mm), solder connections.

For ball valve options, refer to page 64.

For additional information, request literature ES-B6080.



B6080



SIZE (DN)		BALL ORIFICE		THREADED		SOLDER		DIMENSIONS (APPROX.)				THREADED		SOLDER		WEIGHT	
				A		A†		C		D		L		L†			
in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kg.
1/2	15	1/2	13	4 <sup>25</sup> / <sub>32</sub>	121	4 <sup>7</sup> / <sub>8</sub>	124	1 <sup>5</sup> / <sub>8</sub>	41	7/ <sub>8</sub>	22	2 <sup>9</sup> / <sub>32</sub>	58	2 <sup>9</sup> / <sub>16</sub>	65	0.6	0.3
3/4	20	3/4	19	5	127	5 <sup>5</sup> / <sub>16</sub>	135	1 <sup>3</sup> / <sub>4</sub>	45	1	25	2 <sup>13</sup> / <sub>16</sub>	71	2 <sup>13</sup> / <sub>16</sub>	71	1.0	0.5
1	25	1	25	5 <sup>7</sup> / <sub>16</sub>	138	5 <sup>11</sup> / <sub>16</sub>	145	2	50	1 <sup>1</sup> / <sub>4</sub>	32	3 <sup>9</sup> / <sub>16</sub>	91	3 <sup>7</sup> / <sub>8</sub>	98	1.8	0.8
1 <sup>1</sup> / <sub>4</sub>	32	1 <sup>1</sup> / <sub>4</sub>	32	7 <sup>9</sup> / <sub>16</sub>	192	7 <sup>7</sup> / <sub>16</sub>	192	2 <sup>7</sup> / <sub>8</sub>	73	1 <sup>1</sup> / <sub>2</sub>	38	4 <sup>1</sup> / <sub>8</sub>	105	4 <sup>5</sup> / <sub>16</sub>	110	4.0	1.8
1 <sup>1</sup> / <sub>2</sub>	40	1 <sup>1</sup> / <sub>2</sub>	38	7 <sup>11</sup> / <sub>16</sub>	195	7 <sup>7</sup> / <sub>8</sub>	200	3	76	1 <sup>5</sup> / <sub>8</sub>	41	4 <sup>7</sup> / <sub>16</sub>	113	4 <sup>3</sup> / <sub>4</sub>	121	5.5	2.5
2	50	2	50	10 <sup>11</sup> / <sub>16</sub>	272	11	279	4	102	2	50	5 <sup>3</sup> / <sub>8</sub>	137	6	152	10.0	4.5

# Series EMVII-6400SS (1/4" – 3")

## Electric Motor Valves

- Combination quarter-turn shutoff ball valve and electric actuator
- Compact and completely assembled
- Sizes: 1/4" – 2" (8 – 50mm) are 600psi (41 bars) WOG (non-shock); sizes 2 1/2" – 3" (65 – 80mm), 400psi (27.6 bars) WOG (nonshock).
- Maximum Operating Temperature: 250°F (121°C).
- 24VAC and 115VAC models.

### Specifications

- Steam Working Pressure: 15psi (103 kPa).

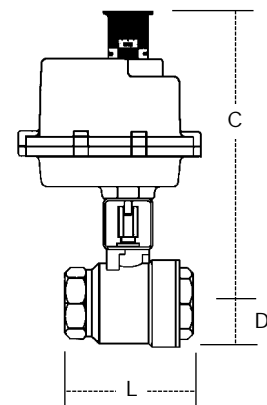
For additional information, request literature F-CEMVII.



EMV II-6400-SS

MODEL	SIZE (DN)		DIMENSIONS (APPROX.)						WEIGHT	
	in.	mm	C		D		L		lbs.	kg.
† EMVII-6400SS-115-8	1/4	8	7 <sup>7</sup> / <sub>8</sub>	200	5 <sup>5</sup> / <sub>8</sub>	16	2 <sup>1</sup> / <sub>4</sub>	57	8.75	3.9
† EMVII-6400SS-115-8	3/8	10	7 <sup>7</sup> / <sub>8</sub>	200	5 <sup>5</sup> / <sub>8</sub>	16	2 <sup>1</sup> / <sub>4</sub>	57	8.75	3.9
† EMVII-6400SS-115-8	1/2	15	7 <sup>7</sup> / <sub>8</sub>	200	5 <sup>5</sup> / <sub>8</sub>	16	2 <sup>1</sup> / <sub>4</sub>	57	8.75	3.9
† EMVII-6400SS-115-35	3/4	20	8	200	3 <sup>3</sup> / <sub>4</sub>	19	2 <sup>7</sup> / <sub>8</sub>	73	9.25	4.2
† EMVII-6400SS-24-40	1	25	8 <sup>1</sup> / <sub>8</sub>	206	1	25	3 <sup>3</sup> / <sub>8</sub>	86	10.25	4.6
† EMVII-6400SS-115-35	1 <sup>1</sup> / <sub>4</sub>	32	8 <sup>7</sup> / <sub>8</sub>	225	1 <sup>1</sup> / <sub>8</sub>	29	4	100	10.75	4.9
† EMVII-6400SS--24-40	1 <sup>1</sup> / <sub>2</sub>	40	9 <sup>1</sup> / <sub>8</sub>	232	1 <sup>3</sup> / <sub>8</sub>	35	4 <sup>3</sup> / <sub>8</sub>	111	11.75	5.3
† EMVII-6400SS-24-40	2	50	9 <sup>1</sup> / <sub>2</sub>	241	1 <sup>5</sup> / <sub>8</sub>	41	4 <sup>7</sup> / <sub>8</sub>	124	14.25	6.5
†† EMVII-6400SS-115-25	2 <sup>1</sup> / <sub>2</sub>	65	14	356	–	–	6 <sup>1</sup> / <sub>2</sub>	165	23.00	10.4
†† EMVII-6400SS-115-25	3	80	14 <sup>1</sup> / <sub>2</sub>	368	–	–	6 <sup>7</sup> / <sub>8</sub>	175	27.50	12.5

† Sizes 1/4" – 2" (8 – 50mm) are available 115-8, 115-35 and 24-40. †† Sizes 2 1/2" & 3" (65 and 80mm) also available 24-25.



## Series B6300, B6301 (1/2" – 1")

### Ball & Waste, Full Port, Bronze Ball Valves

- For draining or venting of downstream line when valve is in the closed position



B6301

#### Specifications

- Pressure Rating: 400psi (27.6 bars) WOG (non-shock)  
Temperature Range: 0° – 350°F (-18° – 177° C) at 50psi (3.4 bars)

#### Models

**B6300** – Sizes 1/2" – 1" (15 – 25mm), NPT threaded connections.

**B6301** – Sizes 1/2" – 1" (15 – 25mm), solder connections.

For additional information, request literature ES-B6300.

5

Ball Valves

## Series B6780 (1/4" – 2"), B6781 (1/2" – 1")

### Diverter, Bronze, Full Port Ball Valves

- Two-piece construction
- Three-way diverter valve
- For residential, commercial and industrial applications



B6780

#### Specifications

- Pressure Rating: 400psi (27.6 bars) WOG (non-shock) and 125psi (8.6 bars) saturated steam.
- Temperature Range: 32° – 350°F (0° – 177°C) at 50psi (3.4 bars).

#### Models

**B6780-M1** – Sizes 1/4" – 2" (8 – 50mm), NPT female connections.

**B6781** – Sizes 1/2" – 1" (15 – 25mm), solder connections.

For additional information, request literature ES-B6780.

## Series B6002 (1/4" – 1")

### Male Connection, Standard Port Bronze Ball Valves

- Male NPT connection x NPT female connection



B6002

#### Specifications

- Sizes: 1/4" – 1" (8 – 25mm), have male NPT connection x female NPT connection.
- Pressure Rating: 600psi (41 bars) WOG (non-shock), 150psi (10.3 bars) saturated steam.
- Temperature Range: -20° – 450°F (-29° – 232°C) at 50psi (3.4 bars).
- Chrome plated brass ball.
- Blow-out proof stem.
- High cycle life reinforced PTFE stem packing seal and thrust washer.

For additional information, request literature ES-B6002.

## Series B6004 (1/2" – 1")

### Standard Port, Bronze Ball Valves

- Male serrated connection x NPT female connection
- Especially for plastic and rubber hose applications



B6004

### Specifications

- Sizes 1/2" – 1" (15 – 25mm), serrated male connection x female NPT connection.
- Barbed connection sized to accept standard hose I.D. matching valve pipe size.
- Pressure and temperature operating limits are governed by the type of hose and clamps used.
- Temperature Range: -20° – 450°F (-29° – 232°C) at 50psi (3.4 bars).
- High cycle life reinforced PTFE stem packing seal and thrust washer.

For additional information, request literature F-CBBV.

## Series B6010, B6011, B6012 B6013, B6014, B6015 (1/2" – 2")

### Union End, Standard Port, Bronze Ball Valves

- Maintenance of ball valve can be done without dismantling pipe line
- Two-piece construction



B6010

### Specifications

- Sizes 1/2" – 2" (15 – 50mm).
- Pressure Rating: 400psi (27.6 bars) WOG (non-shock) threaded and solder ends; not steam rated due to union gasket.
- Temperature Range: 0° – 225°F (-18° – 107°C) at 200psi (13.8 bars).

### Models

**B6010** – union NPT female connection x NPT female connection, 1/2" – 2" (15-50mm).

**B6011** – Solder union connection x solder connection, 1/2" – 2" (15 – 50mm).

**B6012** – Solder connection x union NPT threaded female connection, 1/2" – 2" (15 – 50mm).

**B6013** – Solder connection x NPT male connections, 1/2" – 1" (15 – 25mm).

**B6014** – NPT female x NPT male union, 1/2" – 1" (15 – 25mm).

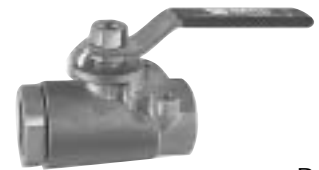
**B6015** – NPT female connection x union solder connection, 1/2" – 2" (15- 50mm).

For additional information, request literature ES-B6010.

## Series B6400 (1/4" – 4")

### Standard Port Ball Valves with Mounting Pad

- Two-piece construction
- Bronze body
- Chrome plated brass ball
- For commercial and industrial applications



B6400

### Specifications

- Sizes 1/4" – 4" (8 – 100mm), NPT female connections.
- Pressure Rating: 1/4" – 2" (8 – 50mm) 600psi (41 bars) WOG (non-shock); 150psi (10.3 bars) WSP .  
2 1/2" – 4" (65 – 100mm) 400psi (27.6 bars) WOG (non-shock); 125psi (8.6 bars) WSP.
- Temperature Range: -55°F – 425°F (-48° – 218°C) at 50psi (3.4 bars).

For ball valve options, refer to page 64.

For additional information, request literature ES-B6400.

## Series B6400-SE (1/4" – 2")

### Safety Exhaust, Standard Port Ball Valves

- Two-piece construction
- Bronze body
- Chrome plated brass ball
- For industrial air applications
- Ideal for use where protection of machine tools is critical
- Unidirectional valve vents downstream air when in closed position



B6400-SE

### Specifications

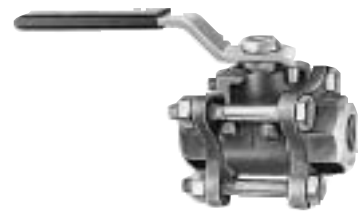
- Sizes: 1/4" – 2" (8 – 50mm), NPT female connections.
- Pressure Rating: 175psi (12 bars).
- Temperature Range: 50° – 120°F (10° – 49°C).

For additional information, request literature ES-B6400-SE.

## Series B6800 (1/4" – 2") B6801 (1/2" – 2")

### Forged Brass, Full Port Ball Valves

- Three-piece, in-line maintenance design
- For commercial and industrial applications



B6800

### Specifications

- Pressure Ratings: 1/4" – 1" (8 – 25mm) 600psi (41.3 bars) WOG (non-shock); 1 1/4" – 2" (32 – 50mm) rated at 400psi (27.6 bars) WOG (non-shock); 150psi (10.3 bars) WSP all sizes. Over 150psi (10.3 bars) WSP requires SS trim.
- Temperature Range: 0° – 450°F (-18 – 232°C) at 50psi (3.4 bars).

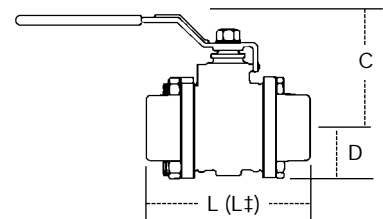
### Models

**B6800** – Sizes: 1/4" – 2" (8 – 50mm) NPT female connections.

**B6801** – Sizes: 1/2" – 2" (15 – 50mm) solder connections.

**B6800SE** (safety exhaust) — for downstream exhaust 1/4" – 2" (8 – 50mm), Virgin PTFE seats and seals, rated at 145psi (10 bars) WOG, maximum 50° – 120°F (10° – 49°C).

For additional information, request literature ES-B6800.



MODEL	SIZE (DN)		BALL ORIFICE		DIMENSIONS (APPROX.)						WEIGHT	
	in.	mm	in.	mm	C		D		L (L±)		lbs.	kg.
B6800, –	1/4	8	3/8	10	1 3/4	44	7/8	22	2 3/8	60	1.1	0.5
B6800, –	3/8	10	3/8	10	1 3/4	44	7/8	22	2 3/8	60	1.1	0.5
B6800, B6801‡	1/2	15	1/2	13	1 3/4	44	7/8	22	2 3/8	60	1.1	0.5
B6800, B6801‡	3/4	20	3/4	19	2 1/4	57	1 7/8	48	3 1/4	83	2.5	1.1
B6800, B6801‡	1	25	1	25	2 3/4	70	1 3/8	35	3 7/8	98	4.1	1.9
B6800, B6801‡	1 1/4	32	1 1/4	32	3	76	1 1/2	38	4 1/2	114	6.3	2.9
B6800, B6801‡	1 1/2	40	1 1/2	38	3 1/2	89	1 3/4	44	5	127	9.3	4.2
B6800, B6801‡	2	50	2	50	3 7/8	98	2	50	6 5/8	168	13.8	6.3

‡ = Solder connections



# Series B6000-CC (1/2" – 3/4") B6001-CC (1/2" – 3/4")

Bronze, 2-piece Standard Port Ball Valves

- B6000-CC has female NPT x 3/4" hose end with end cap and chain.
- B6001-CC has solder end x 3/4" hose end with end cap and chain.



B6000-CC

## Specifications

- Pressure Rating: 200psi (13.8 bars) CWP (non-shock).

For additional information, request literature ES-B6000.

## Ball Valve Options and Repair Kits

SUFFIX	DESCRIPTION	MODELS	SIZES	KIT DESCRIPTION
AD	Assembled Dry	All	All	*
BS	Balance Stop Plate	B6000/B6001 B6080/B6081 B6800/B6801 B6400	1/4 – 3 1/4 – 2 3/4 – 2 1/4 – 3	BHK
G	Grounded Ball & Stem	All SS Models	1/4 – 3	*
GS	Grounded Stem	All	All	*
OC	Oxygen Clean – PTFE Seat & Seal only Cleaned, tagged & packaged to meet CSA G-4.1	B6801 Only	All	*
SC	Satin Chrome	B6000/B6001	All	*
SE	Safety Exhaust	B6400/B6800/B6801	All	*
SS	Stainless Steel Ball & Stem	All	All	BSK-SS
T	Special Tagged	All	All	*
UL	UL Approved	B6000/B6001 B6800/B6801	1/4 – 2	*
VT (01)	Virgin Teflon Seat & Seal PTFE	All	All	SSK-01
Z15	Without Lever & Nut	B6000/B6001 B6800/B6801	All	*
04	Mineral Filled PTFE	B6000/B6001 B6800/B6801/B6400	All	*

### HANDLE OPTIONS

LC	Latch Lock Lever Handle Closed Position (without lock)	B6800/B6800SE B6400SE	1/4 – 2	LL-HK (specify closed position)
LH	Locking Lever Handle (without lock)	B6000/B6001 B6400/B6400SE B6800/B6801	1/2 – 2 1/4 – 4 1/2 – 2	LH-HK
LL	Latch Lock Lever Handle (without lock)	B6000/B6001 B6400/B6400SE B6800/B6801	1/2 – 2 1/4 – 4 1/2 – 2	LL-HK
OV	Oval Handle	All	All	OH-HK
RH	Round Handle	All	1/4 – 2	RH-HK
SH	Stainless Steel Lever Handle & Nut	All	1/4 – 2	SH-HK0
TH	Tee Handle	All	All	TH-HK
XH	Extended Lever Handle	All	1/4 – 2	XHK-LH

\* NOTE: Ball valve option only, no kit available

For additional information, request literature PL-RP-BV.



Locking Handle



Oval Handle



Round Handle



Tee Handle



Extended Handle

## Series FBV, FBVS (1/2" – 2")

### Bronze Full Port Ball Valves

- Excellent for throttling and balancing applications
- For non-abrasive liquids or gases
- Two-piece construction

#### Specifications

- PTFE seats.
- Pressure Rating: 1/2" – 2" (15 – 50mm), 600psi (41.3 bars) WOG (non-shock), and 125psi (8.6 bars) WSP.  
2 1/2" & 3" (non-shock) (65 – 80mm) 400psi (27.6 bars) WOG and 125psi (8.6 bars) saturated steam.
- Temperature Range: 0° – 350°F (-18° – 177°C) at 50psi (3.4 bars).

#### Models

**FBV** – NPT female connections

**FBVS** – solder connections.



FBV

For additional information, request literature ES-FBV.

## Series FBV-3, FBVS-3 (1/4" – 3")

### 2-piece Full Port Brass Ball Valves

- Sizes 1/4" – 3" (8-80mm)
- Approved MSS-SP-110
- Sizes 1/2" – 2" (15-20mm) approved CSA (threaded only), UL, and FM

#### Specifications

- Pressure Rating:
  - 1/4" – 2" (8 – 20mm) **FBV-3 and FBVS-3** pressure rated at 600psi (41 bars) WOG (non-shock), and 150psi (10.3 bars) WSP.
  - 2 1/2" and 3" (65 – 80) **FBV-3** pressure rated at 600psi (41 bars) WOG (non-shock), and 125psi (8.6 bars) WSP.
  - 2 1/2" and 3" (65 – 80) **FBVS-3** pressure rated at 400psi (27.5 bars) WOG (non-shock), and 125psi (8.6 bars) WSP.

#### Models

**FBV-3** – Sizes 1/4" – 3" (8 – 80mm), NPT female connections.

**FBVS-3** – Sizes 1/2" – 3" (15 – 80mm), solder connections.

**FBV-3-SS** – Sizes 1/2" – 2" (15 – 50mm), NPT female connections, with stainless steel ball and stem

**FBVS-3-SS** – Sizes 1/2" – 2" (15 – 50mm), solder connections, with stainless steel ball and stem



FBVS-3

#### Handle Options

Available with 2" stem extension, memory stop, oval and tee handles.

For additional information, request literature ES-FBV-3.

## Series IT6300, IS6301 (1/2" – 1")

### Ball & Waste, Full Port Brass Ball Valves

- Drain cock allows draining of downstream line when valve is in closed position.

#### Specifications

- Pressure Rating: 600psi (41 bars) WOG (non-shock).

#### Models

**IT6300** – Sizes 1/2" – 1" (15 – 25mm), NPT threaded connections.

**IS6301** – Sizes 1/2" – 1" (15 – 25mm), solder connections.



IT-6300

For additional information, request literature ES-IT-6300.

## Series WBV-3, WBVS-3 (1/8" – 4")

### 2-piece Standard Port Brass Ball Valves

- Suitable for full range of liquids and gases.
- Virgin PTFE stem packing seal.
- Adjustable stem packing gland.
- Vinyl insulator on heavy duty Zinc plated carbon steel handles.
- 1/4-turn open or close operation.
- Low operating torque.

#### Specifications

- Pressure Rating: 400psi (27.6 bars) WOG (non-shock).

#### Models

**WBV-3** – Sizes 1/8" – 4" (3 – 100mm), NPT threaded connections.

**WBVS-3** – Sizes 3/8" – 3" (10 – 80mm), solder connections.



WBVS-3

#### Handle Options

Available with 2" stem extension, memory stop, oval and tee handles.

For additional information, request literature ES-WBV-3.

## Series WBVC (1/2" – 1")

### Standard Port Brass Ball Valves

- For a full range of gases and liquids on commercial, residential and industrial applications

#### Models

**WBVC** – Sizes 1/2" – 1" (15 – 25mm), male NPT compression connections.



WBVC

For additional information, request literature ES-WBVC.

## Series S-FBV-1, C-FBV-1 (1/4" – 3")

### Stainless Steel and Carbon Steel Full Port Ball Valves

- Two-piece, full port, investment cast ball valves
- For residential, commercial and industrial applications

#### Specifications

- Pressure Rating: 1000psi (69 bars) WOG (non-shock), 125psi (8.6 bars) WSP

#### Standards

Conforms to Federal Specification WW-V-35C, Type II, Composition BZ, Style 3.

#### Models

**C-FBV-1** – Sizes: 1/4" – 3" (8 – 80mm) carbon steel, NPT female connections.

**S-FBV-1** – Sizes: 1/4" – 3" (8 – 80mm) stainless steel, NPT female connections.



S-FBV-1

For additional information, request literature ES-S/CFBV.

## Series PBV (1/2" – 2")

### Plastic Ball Valves, Full Port

- Compact and true union style PVC plastic ball valves
- For water supply to residential, commercial and industrial water and waste water treatment, chemical plants, agriculture, irrigation, and salt water applications
- Socket and threaded connections
- Schedule 40 and 80

#### Specifications

- Bi-directional.
- EPDM body seal, union ring seal and stem seal.
- PTFE seats.

For additional information, request literature ES-PBV or ES-TPBV.



PBV

#### Compact PVC Plastic Ball Valves

Sizes 1/2" – 2" (15 – 50mm),

**PBVS** – socket connections

**PBVT** – threaded connections

#### True Union Plastic Ball Valves (TPBV)

Sizes 1/2" – 2" (15 – 50mm) have

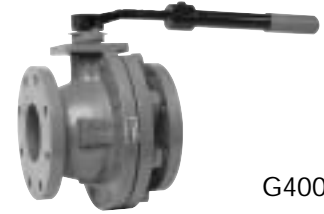
Two union socket weld connectors and two union threaded connectors to allow a choice of end connections.

## Series G4000M1 (2" – 6")

## Series G4000M (8" – 10")

Cast Iron, Flanged, Full Port Ball Valves

- Fast quarter-turn operation
- 304 Stainless steel ball and stem
- Same end-to-end dimensions (ANSI B16.10) and flange dimensions (ANSI B16.1) as an ANSI Class 125 cast iron, flanged gate valve



G4000M1

### Models

**G4000M1 Predator™ Series** – Sizes 2" – 6" (50 – 150mm), flanged ball valves with 125psi (8.6 bars) steam rating. 200psi (13.8 bars) CWP (non-shock) at 140°F (60°C).

**G4000M1 GO** – Sizes 2" – 6" (50 – 150mm), same as G-4000M1, except comes with manual gear operator.

**G4000-FDA** – Sizes: 2" – 6" (50 – 150mm) interior and exterior fused epoxy coating, FDA approved, with lever handle. 200psi (13.8 bars) CWP (non-shock) at 140°F (60°C).

**G4000M** – Sizes 8", 10" (200, 250mm), with manual gear operator. 200psi (13.8 bars) CWP (non-shock) at 140°F (60°C).

**G4000M-FDA** – Sizes 8" – 10" (200 – 250mm), FDA approved fused epoxy coating, with manual gear operator. 200psi (13.8 bars) CWP (non-shock) at 140°F (60°C).

For pneumatic or electric actuated valve operation, consult your Watts agent or Customer Service at (978) 689-6066.

For additional information, request literature F-CG4000A.

## Series GBV (3/8" – 1")

Gas Ball Valves

- Brass two-piece body construction
- Available with tee handle or square handle

### Models

**GBV** – Sizes 3/8" – 1" (10 – 25mm), NPT female connections and tee handle.

**GBV-SQH** – Sizes 3/8" – 1" (10 – 25mm), NPT female connections and square handle.

**GBV-FL** – Sizes 1/2" x 3/8", 1/2" x 1/2", 3/4" x 15/16" (15 x 10, 15 x 15, 20 x 24mm), Female NPT x Flare connections and tee handle.

**GBV, GBV-SQH and GBV-FL** – rated 32°F to 125°F (0° – 52°C). CSA approved @ 1/2, 2 and 5psi (3.4, 13.8, 34.5 kPa). UL listed @ 5psi (34.4 kPa).

**GBV-ST** – Sizes 1/2" x 1/2", 3/4" x 3/4" with side tap.

For additional information, request literature ES-GBV/GBV-1.



GBV



GBV-ST

## Series GBV-1 (1/2" – 3/4")

One-piece Gas Ball Valve

- Sizes 1/2" and 3/4" (15 – 20mm) NPT female connections.
- New Blowout Proof Stem Design.

### Features

- Patented Blowout Proof Stem Design
- One-piece Body
- UL approved @ 5psi (34.4 kPa)
- Approved by CSA @ 1/2, 2 and 5psi (3.4, 13.8, 34.5 kPa). UL listed @ 5psi (34.4 kPa)
- Capacity: 1/2" @ 295 ft.3/hr., 3/4" @ 760 ft.3/hr
- Tested under Standards Z21.15 IAS Requirement

For additional information, request literature ES-GBV/GBV-1.



GBV-1

## Series B-3000, B-3001 (1/2" – 2")

### Class 125, Bronze Gate Valves

- Threaded bonnet.
- Non-rising stem (NRS)
- Solid wedge disc.

#### Specifications

- Pressure Rating: 125psi (8.6 bars) WSP to 335° F (178°C) /200psi (13.8 bars) WOG non-shock.
- Complies with MSS-SP-80 Type 1.

#### Models

**B-3000** – Sizes 1/2" – 2" (15 – 50mm), ANSI/ASME B1.20.1 threaded end connections.

**B-3001** – Sizes 1/2" – 2" (15 – 50mm), ANSI/ASME B16.18 solder end connections.



B-3000

For additional information, request literature F-GGCV.

## Series B-3100, B-3101 (1/2" – 2")

### Class 125, Bronze Gate Valves

- Threaded bonnet.
- Rising stem.
- Solid wedge disc.

#### Specifications

- Pressure Rating: 125psi (8.6 bars) WSP to 335° F (178°C) /200psi (13.8 bars) WOG non-shock.
- Complies with MSS-SP-80 Type 1.

#### Models

**B-3100** – Sizes 1/2" – 2" (15 – 50mm), ANSI/ASME B1.20.1 threaded end connections.

**B-3101** – Sizes 1/2" – 2" (15 – 50mm), ANSI/ASME B16.18 solder end connections.



B-3101

For additional information, request literature F-GGCV.

## Series B-3110, B-3111 (1/2" – 2")

### Class 150, Bronze Gate Valves

- Union bonnet.
- Rising stem.
- Solid wedge disc.

#### Specifications

- Pressure Rating: 150psi (10.3 bars) WSP to 366°F (186°C)/300psi (21 bars) WOG non-shock.
- Complies with MSS-SP-80 Type 1.

#### Models

**B-3110** – Sizes 1/2" – 2" (15 – 50mm), ANSI/ASME B1.20.1 threaded end connections.

**B-3111** – Sizes 1/2" – 2" (15 – 50mm), ANSI/ASME B16.18 solder end connections.



B-3110

For additional information, request literature F-GGCV.

## Series B-3030 (1/2" – 2")

### Class 300, Bronze Gate Valves

- Union bonnet.
- Rising stem.
- Solid wedge disc.

#### Specifications

- Pressure Rating: 300psi (21 bars) WSP to 421°F (216°C)/1000psi (69 bars) WOG non-shock.
- Complies with MSS-SP-80 Type 1.

#### Models

**B-3030** – Sizes 1/2" – 2" (15 – 50mm), ANSI/ASME B1.20.1 threaded end connections.



B-3030

For additional information, request literature F-GGCV.

## Series B-4000 (1/4" – 3"), B-4001 (3/8" – 2")

### Class 125, Bronze Globe Valves

- Union bonnet.
- Inside screw
- Rising stem.
- G/F PTFE disc.

#### Specifications

- Pressure Rating: 150psi (10.3 bars) WSP to 366°F (186°C)/300psi (21 bars) WOG non-shock.
- Complies with MSS-SP-80 Type 2.

#### Models

**B-4000** – Sizes 1/4" – 3" (8 – 80mm), ANSI/ASME B1.20.1 threaded end connections.

**B-4001** – Sizes 3/8" – 2" (10 – 50mm), ANSI/ASME B16.18 solder end connections.



B-4000

For additional information, request literature F-GGCV.

## Series B-4030 (1/4" – 2")

### Class 300, Bronze Globe Valves

- Union bonnet.
- Bronze disc.
- Integral seat.
- Inside screw.
- Rising stem.

#### Specifications

- Pressure Rating: 300psi (21 bars) WSP to 421°F (216°C)/600psi (41 bars) WOG non-shock.
- Complies with MSS-SP-80 Type 1.

#### Models

**B-4030** – Sizes 1/4" – 2" (8 – 50mm), ANSI/ASME B1.20.1 threaded end connections.



B-4030

For additional information, request literature F-GGCV.

## Series B-5000, B-5001 (1/2" – 2")

### Class 125, Bronze Swing Check Valves

- Screw cap.
- Integral seat.
- Wye pattern swing type disc.

#### Specifications

- Pressure Rating: 125psi (8.6 bars) WSP to 353°F (178°C)/200psi (13.8 bars) WOG non-shock.
- Complies with MSS-SP-80 Type 3.

#### Models

**B-5000** – Sizes 1/2" – 2" (15 – 50mm), ANSI/ASME B1.20.1 threaded end connections.

**B-5001** – Sizes 1/2" – 2" (15 – 50mm), ANSI B16.18 solder end connections.



B-5001

For additional information, request literature F-GGCV.

## Series B-5030 (1/2" – 2")

### Class 300, Bronze Check Valves

- Wye pattern.
- Integral seat.
- Swing type disc.

#### Specifications

- Pressure Rating: 300psi (21 bars) WSP to 421°F (216°C)/600psi (41.3 bars) WOG non-shock.
- Complies with MSS-SP-80 Type 3.

#### Models

**B-5030** – Sizes 1/2" – 2" (8 – 50mm), ANSI/ASME B1.20.1 threaded end connections.



B-5030

For additional information, request literature F-GGCV.

## Series 6 (1/4" – 1")

### Brass Midi Check Valves

- Install in a horizontal or vertical position
- Positive back stop
- Silent operation

#### Specifications

- Maximum Working Pressure: 200psi (13.8 bars).
- Maximum Temperature: 180°F (82°C).

#### Models

**Series 6** – Sizes 1/4" – 1" (8 – 25mm), NPT threaded female connections.

For additional information, request literature ES-6/P6.



6

## Series 600, 601S (1/4" – 2")

### Bronze Silent Check Valves

#### Models

##### 600

- Teflon® seat and brass disc.
- Install in a horizontal or vertical position.
- Stainless steel guide rod and spring.
- Silent check operation.
- Prevents water hammer.

Sizes 1/4" – 2" (8 – 50mm), NPT threaded female connections; 15psi (1 bar) steam, and 400psi (27.6 bars) WOG.

##### 601S

- Similar to Model 600 but especially designed for well pump service and other applications requiring tight seating.
- Bronze seat with Viton® disc.

Sizes 1/2" – 1" (15 – 25mm), solder connections; 400psi (27.6 bars) WOG. Max. temp. 180°F (82°C).



600

**600-Z3** – Sizes 3/4", 1 1/2" (20, 40mm), NPT female connection; 150psi (10.3 bars) steam. Heavy duty construction; stainless steel disc, spring and guide rod.

For additional information, request literature ES-600 or ES-600-Z3.

## Series ICV-125 (2" – 24")

### "Super Check" Wafer Silent Check Valve

#### Specifications

- Designed for HVAC and general service applications.
- A Buna-N seat, bonded to the valve body, provides leak tight sealing from -40°F – +250°F (-40°C – 121°C).
- Designed and tested according to API 594 for use between ANSI Class 125 or 150 flanges.
- Lightweight, compact design, easy installation.
- PTFE bearings and 316 stainless steel springs.
- Standard ASTM A216 cast iron body with aluminum-bronze disc plates.
- 2" – 24" (50 – 600mm) 200psi (13.8 bars) CWP (non-shock).
- Silent check valve eliminates water hammer effect.



ICV-125

For additional information, request literature F-CICV-125.

## Series ICVW-125 (2" – 10")

### Wafer, Silent Check Valve

#### Specifications

- Designed for HVAC and general applications.
- Can be installed either horizontally or vertically to provide shutoff to 200psi @ 150°F. Consult factory for proper installation in vertical position.
- For use between ANSI Class 125 and Class 250 flanges.
- ASTM A-126 Class B cast iron body with B-62 bronze globe style disc and seat.
- 316SS conical spring.
- Silent check valve operation eliminates water hammer effect.



ICVW-125

For additional information, request literature F-GGCV.

## Series ICVF-125 (2" – 12")

Class 125, Flanged Silent Check Valve

### Specifications

- Designed for HVAC and general applications.
- Can be installed either horizontally or vertically to provide shutoff to 200psi @ 150°F. Consult factory for proper installation in vertical position.
- For use between ANSI Class 125 and Class 250 flanges.
- ASTM A-126 Class B cast iron body with B-62 bronze globe style disc and seat.
- 316SS conical spring.
- Silent check valve operation eliminates water hammer effect.



ICVF-125

For additional information, request literature F-GGCV.

## Series F-503 (2" – 24")

Class 125, Cast Iron Gate Valves

- Outside stem & yoke (OSY)
- Bolted bonnet
- Solid wedge disc
- Bronze mounted

### Specifications

- Pressure Rating: 125psi (8.6 bars) WSP to 353°F (178°C).
- Pressure Rating: 200psi (13.8) WOG non-shock (2" – 12").
- Complies with MSS-SP-70 Type 1.

### Models

**F-503** – Sizes 2" – 24" (50 – 610mm), ANSI B16.1 flanged connections.



F-503

For more information, request literature F-GGCV.

## Series F-502 (2" – 10")

Class 125, Cast Iron Gate Valves

- Non-rising stem (NRS)
- Bolted bonnet with open/close indicator
- Solid wedge disc
- Bronze mounted

### Specifications

- Pressure Rating: 125psi (8.6 bars) WSP to 353°F (178°C)/200psi (13.8 bars) WOG non-shock.
- Complies with MSS-SP-70 Type 1.

### Models

**F-502** – Sizes 2" – 10" (50 – 254mm), ANSI B16.1 flanged connections.



F-502

For more information, request literature F-GGCV.

## Series F-501 (2" – 8")

Class 125, Iron Globe Valves

- Outside stem & yoke (OSY)
- Bronze mounted
- Bolted bonnet

### Specifications

- Pressure Rating: 125psi (8.6 bars) WSP to 353°F (178°C)/200psi (13.8 bars) WOG
- Complies with MSS-SP-85 Type 1.

### Models

**F-501** – Sizes 2" – 8" (50 – 203mm), ANSI B16.1 flanged connection.



F-501

For more information, request literature F-GGCV.



## Series F-511 (2" – 10")

### Class 125, Iron Check Valves

- Cast iron body
- Bronze trim
- Bolted cover

#### Specifications

- Pressure Rating: 125psi (8.6 bars) WSP/200psi (13.8 bars) WOG.
- Complies with MSS-SP-71 Type 1.

#### Models

**F-511** – Sizes 2" – 10" (50 – 254mm), IBBM, ANSI B16.1 flanged connections.



F-511

For additional information, request literature F-GGCV.

## Series 408-OSY-RW (2½" – 12")

### OSY Flanged Gate Valves

- ASTM A-126 Class B cast iron shutoff valves
- UL Listed, FM approved
- ANSI B16.1 flanged connections
- Complies with MSS-SP-70
- For distribution service and fire main shutoff

#### Specifications

- Pressure Rating: 175psi (12 bars) CWP.
- Maximum Temperature: 140°F (60°C).
- Epoxy coated.
- Resilient wedge (Buna-N).

#### Models

**408-OSY-RW** – Sizes 2½" – 12" (65 – 300mm), flanged connections.



408-OSY-RW

For additional information, request literature ES-408-OSY-RW.

## Series 403RT-RW (2" – 8")

### Ring-tite Gate Valve

- Irrigation and water shutoff distribution service
- Resilient wedge gate

#### Specifications

- Pressure Rating: 200psi (13.8 bars) CWP.
- Maximum Temperature: 140°F (60°C).

#### Models

**403RT-RW** – Sizes 2" – 8" (50 – 200mm), ring tite connections.

ASTM A126 Class B cast iron. Epoxy coated internally and externally.



403RT-RW

For additional information, request literature ES-403RT-RW.

## Series 405, 406 (2" – 12")

### NRS Flanged Gate Valves

- ASTM A-126 Class B cast iron shutoff valves for water service

#### Specifications

- Pressure Rating: 200psi (13.8 bars) CWP.
- Epoxy coated.
- Maximum Temperature: 140°F (60°C).
- ANSI B16.1 flanged connections.

#### Models

**405RW** – Sizes 2" – 12" (50 – 300mm), flanged connections. Non-rising stem, resilient wedge design. For irrigation and water distribution service.

**406-NRS-RW** – Sizes 2" – 12" (50 – 300mm), flanged connections. AWWA C509 specifications. Resilient wedge design. Non-rising stem. For potable water, water distribution service, sewage disposal facilities.

**406E** – Sizes 2" – 12" (50 – 300mm), flanged connections. MSS-SP70. IBBM style, non-rising stem.



406E

For additional information, request literature ES-405RW, ES-406-NRS-RW or ES-406E.

## Series 411 (2" – 12")

### Class 125, Iron Swing Check Valves

- For water service on municipal and private fire mains and sprinkler systems
- UL/FM Listed, except 2" and 12"

#### Specifications

- Pressure Rating: 200psi (13.8 bars) WOG.
- Maximum Temperature: 180°F (82°C).
- ASTM A-126 Class B cast iron body.
- Complies with MSS-SP-71.

#### Models

**411** – Sizes 2" – 12" (50 – 300mm), cast iron body and disc, with Buna-N disc seat, ANSI B16.1 flange connections, epoxy coated internally and externally.



411

For additional information, request literature ES-411.

## Series GV, GVS, GLV (1/4" – 4")

### Bronze Shutoff Valves

- For shutoff service on water, steam, oil or compressed gas

#### Specifications

- Pressure Rating: 125psi (8.6 bars) WSP/200psi (13.8 bars) WOG

#### Models

**GV gate valves** – Sizes 1/4" – 4" (8 – 100mm), NPT female threaded connections, non-rising stem.

**GVS gate valves** – Sizes 3/8" – 3" (10 – 80mm), solder connections, non-rising stem.

**GLV globe valves** – Sizes 1/4" – 2" (8 – 50mm), NPT female threaded connections, swivel type disc.



GV

For additional information, request literature ES-GV, ES-GVS or ES-GLV.

## Series WGV (1/2" – 4")

### Brass Gate Valves

- For shutoff service
- Non-rising stem (NRS)

#### Specifications

- Pressure Rating: 200psi (13.8 bars) WOG.
- Maximum Temperature: 180°F (82°C).

Watts recommends use of the GV series gate valves for buried service.

#### Models

- **WGV (round handle)** – Sizes 1/2" – 4" (15 – 100mm), NPT female threaded connections.
- **WGVS (round handle)** – Sizes 1/2" – 2" (15 – 50mm), solder connections.
- **WGV-X (cross handle)** – Sizes 3/8" – 3" (10 – 80mm), NPT female threaded connections.



WGV

For additional information, request literature ES-WGV.

## Series WGV-1, WGVS-1, WGVC (1/2" – 4")

### Brass Gate Valves

- For general shutoff applications
- Non-rising stem (NRS)

#### Specifications

- Pressure Rating: 200psi (13.8 bars) WOG.
- Maximum Temperature: 180°F (82°C).

#### Models

- **WGV-1** – Sizes 1/2" – 4" (15 – 100mm), NPT threaded connections.
  - **WGVS-1** – Sizes 1/2" – 2" (15 – 50mm), solder connections.
  - **WGVC** – Sizes 1/2", 3/4" (15 – 20mm), compression ends.
- Watts recommends use of the GV series gate valves for buried service.



WGVC

For additional information, request literature ES-WGVC.

## Series 805-1, 807-1 (1/2" – 2")

### Stainless Steel Gate and Globe

- Corrosion resistant
- Cast stainless construction

#### Specifications

- Pressure Rating: 125psi (8.6 bars) WSP and 200psi (13.8 bars) WOG. ANSI B1.20.1 threaded ends.

#### Models

- **805-1 (gate valve)** – Sizes 1/2" – 2" (15 – 50mm), non-rising stem, NPT female connections.
- **807-1 (globe valve)** – Sizes 1/2" – 2" (15 – 50mm), rising stem, NPT female connections.



805-1

For additional information, request literature ES-805-1 or ES-807-1.

For assistance, contact your local authorized Watts agent or visit our website at [www.wattsreg.com](http://www.wattsreg.com)

## Series ECV, LCV, NCV, MFCV (3/4" – 2")

### Well System Check Valves

- For medium and heavy duty service on well systems

#### Models

**ECV** – Bronze, medium duty industrial/commercial applications. Sizes: 3/4" – 2" (20 – 50mm), NPT threaded female connections.

**LCV** – Bronze, light duty commercial/residential use. Sizes: 3/4" – 1 1/4" (20 – 32mm), NPT female connections.

**NCV-125** – ABS. Size 1 1/4" (32mm), NPT female connections.

**MFCV-SS** – Stainless steel, lead-free 303 stainless steel. Sizes 1 1/4" x 1", 1 1/4" x 1 1/4", NPT male x female connections.



ECV/LCV

For additional information, request literature S-MFCV-SS.

## Series WCV (1/2" – 4")

### Brass Swing Check Valves

- For one-way flow of water and steam applications

#### Models

**WCV** – Sizes 1/2" – 4" (15 – 100mm), NPT threaded female connections. Pressure rating 125psi (8.6 bars) WSP/200psi (13.8 bars) WOG.

**WCVS** – Sizes 1/2" – 2" (15 – 50mm), solder connections. Pressure rating 125psi (8.6 bars) WSP/200psi (13.8 bars) WOG.

**WCV-2** – Sizes 1/2" – 2" (15 – 50mm), NPT threaded female connections. Rubber seat material is NBR. Pressure rating 200psi (13.8 bars) WOG. Maximum temperature 140°F (60°C).



WCV

For additional information, request literature ES-WCV.

## Series 806-1 (1/2" – 2")

### Wye-type Stainless Steel Check Valves

- For water and steam one-way flow

#### Specifications

Pressure Rating: 125psi (8.6 bars) WSP @ 350°F (177°C) /200psi (13.8 bars) WOG @ 150°F (66°C).

#### Models

**806-1** – Sizes 1/2" – 2" (15 – 50mm) NPT threaded female connections.



806-1

For additional information, request literature ES-806-1.

## Series CV, CVY (3/8" – 4")

### Bronze Swing Check Valves

- For one way flow on water, steam, gas or oil lines
- Used to prevent reverse fluid flow

#### Specifications

• Pressure Rating: 125psi (8.6 bars) WSP and 200psi (13.8 bars) WOG.

#### Models

**CV** – 90° straight pattern – Sizes: 3/8" – 4" (10 – 100mm), NPT threaded female connections.

**CVS** – 90° straight pattern – Sizes: 1/2" – 3" (15 – 80mm), solder end connections.

**CVY** – Wye pattern – Sizes: 3/8" – 2" (10 – 50mm), NPT female connections.

**CVYS** – Wye pattern – Sizes: 1/2" – 2" (15 – 50mm), solder end connections.



CVY

For additional information, request literature ES-CV, ES-CVY, ES-CVS or ES-CVYS.

## Series 77S (1/4" – 3")

### Cast Iron Wye-pattern Strainers

- For liquid or steam service
- Install strainers up stream of equipment that need protection from scale, rust, dirt, etc

#### Specifications

Pressure Rating: (non-shock) 250psi WSP (17.2 bars) @ 406°F (208°C), 400psi WOG (27.6 bars) @ 150°F (66°C).

For additional information, request literature F-C77.

#### Models

**77S-M1** – Sizes: 1/4" – 3" (8 – 80mm), NPT threaded female inlet/outlet connections. Sizes 1/4" – 2 1/2" (8 – 65mm) have 20 mesh strainer screen; 3" size has 3/64" perforated screen. Working pressures same as 77SI.



77S

**77SI** – Sizes: 1/4" – 3" (8 – 80mm), NPT threaded female connections. Sizes 1/4" – 2" (8 – 50mm) have 20 mesh strainer screen. Size 2 1/2" (65mm) and 3" (80mm) have 3/64" (1mm) perforated screens.

## Series 77F-DI-125, 77F-DI-250, 77F-DI-FDA (2" – 12")

### Iron Body, Flanged End, Wye-pattern Strainers

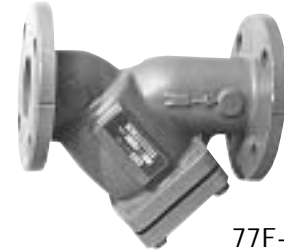
- For liquid and steam service to protect check valves, backflow preventers and similar controls from foreign matter.
- ANSI Class 125 and 250

#### Models

**77F-DI-125** – cast iron body, ANSI Class 125 flanged connections. Pressure rating of (non-shock) 125psi (8.6 bars) WSP @ 353°F (178°C), 200psi (13.8 bars) WOG @ 210°F (99°C).

**77F-DI-250** – ductile iron body, ANSI Class 250 flanged connections. Pressure ratings of (non-shock) 250psi (17.2 bars) WSP @ 406°F (208°C), 500psi WOG (34.4 bars) @ 150°F (66°C). Models 77F-DI-125 and 77F-DI-250 comply with MIL-S 16293 Type II.

**77F-DI-FDA** – Class 125 flanged connections. Double coated, electrostatically applied heat fused epoxy coating on interior/exterior. FDA approved suitable for potable water/food contact. Ideal for liquid service where a non-corrosive construction/clean cosmetic appearance is required. Water pressure 200psi (13.8 bars) @ 140°F (60°C). Not for use on steam or gas.



77F-DI-FDA

**Note:** Self-cleaning can be accomplished by opening a valve or removing the closure plug attached to the blow-off outlet.

**Blow-Off Outlet:** Tapped NPT female. Plug not provided.

**End Flanges:** The dimensions and drilling of end flanges conform to the American cast iron flange standard, Class 125 and 250 (ANSI B16.1.)

For additional information, request literature ES-77F-DI or F-C77.

## Series 777 (1/4" – 4")

### Bronze Wye-type Strainers

- For liquid or steam service to protect valves or similar controls from foreign matter

#### Specifications

Maximum Working Pressure: 400psi WOG (27.6 bars) and 125psi WSP (8.6 bars). Sizes 1/4" – 2 1/2" (8 – 65mm) have a 20 mesh strainer screen. Size 3" (80mm) has 3/64" (1mm) perforated screen, and 4" (100mm) has 1/8" (3mm) perforated screen.

#### Models

**777** – solid retainer cap for strainer screen. Sizes: 1/4" – 4" (8 – 100mm) NPT female threaded inlet/outlet connections.

**777S** – retainer cap tapped for closure plug (plug not furnished) – Sizes 1/2" – 4" (15-100mm), NPT female threaded connections.

**777SI** – wye type, threaded connections, 400 WOG/125 WSP with tapped retainer cap and closure plug. Sizes 3/8" – 3" (10 – 80mm).

**S777** – solid retainer cap – Sizes 1/2" – 2" (15 – 50mm), solder end connections.

**S777S** – retainer cap tapped and plugged – Size 1/2" – 2" (15 – 50mm), solder end connections.



777

**S777SI** – wye type, solder connections, 400 WOG/125WSP with tapped retainer cap and closure pug. Sizes 1/2" – 2" (15 – 50mm).

† Maximum pressure rating for solder models is 400psi (27.6 bars) @ 150°F (66°C) and requires 95-5 solder. (Ref. ANSI B16.18) They are steam rated @ 15psi (1 bar) maximum.

For additional information, request literature F-C77.

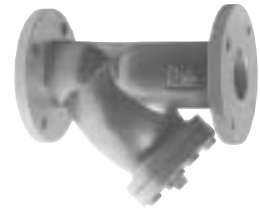
## Series 77F-BI (2" – 8")

### Bronze, Flanged, Wye-pattern Strainers

- For liquid or steam service

#### Specifications

Sizes 2" – 12" (50 – 300mm), bronze ASTM B-62 body, screen cover and plug (furnished), and 304SS screen openings of  $\frac{3}{64}$ " (1mm) for 2" – 3" and  $\frac{1}{8}$ " (3mm) for 4" – 8". The 77F-BI is U.L. listed. Flanges in accordance with ANSI B16.1, Class 125. Working pressures of 150psi WSP (10.3 bars) @ 406°F (208°C), 225psi (15.5 bars) @ 150°F (66°C).



77F-BI

For additional information, request literature F-C77.

## Series 27 ( $\frac{1}{8}$ " – $\frac{1}{2}$ ")

### Bronze Compact "V"-pattern Water Strainers

- For beverage dispensers, ice cube machines, dental equipment, instrument control systems and similar applications

#### Models

27 – Sizes  $\frac{1}{8}$ " –  $\frac{1}{2}$ " (3 – 15mm), NPT female threaded connections. Strainer screen is 24 mesh for sizes  $\frac{3}{8}$ ",  $\frac{1}{2}$ " (10, 15mm), size  $\frac{1}{4}$ " (8mm) has 30 mesh, and  $\frac{1}{8}$ " (3mm) has 40 mesh screen. Maximum pressure 250psi WWP (17.2 bars).



27

For additional information, request literature F-C77.

## Model 745 ( $\frac{3}{4}$ ")

### 45° Wye-pattern Bronze Strainers

- For applications where scheduled cleaning of the strainer screen makes a hand removable knurled retainer cap desirable

#### Models

745 – Size  $\frac{3}{4}$ " (20mm), NPT female connections, 80 mesh strainer screen. 250psi WOG (17.2 bars) @ 210°F (99°C), and 50psi WSP (345 kPa) @ 280°F (138°C).



745

For additional information, request literature F-C77.

## Series 17 ( $\frac{3}{4}$ " – 1")

### Bronze In-line Single Union End Strainers

- For quick removal of equipment for cleaning, or where feed line separation is required

#### Models

17 – Sizes  $\frac{3}{4}$ ", 1" (20, 25mm), union end, NPT threaded female connections, #40 mesh strainer screen standard.

#### Specifications

- Pressure Rating: 250psi (17.2 bars) WOG @ 180°F (82°C).



17

For optional screens, consult factory. For additional information, request literature F-C77.

## Series 88CSI ( $\frac{1}{2}$ " – 2")

### Cast Steel, Wye-Pattern Strainers

- For liquid or steam service
- Threaded NPT or socket weld

#### Specifications

Sizes  $\frac{1}{2}$ " – 2" (15 – 50mm), ASTM A-216 WCB body, ASTM A-105 retainer cap and plug (furnished), non-asbestos cap gasket, and 304SS screens of  $\frac{1}{32}$ " (.8mm) for  $\frac{1}{2}$ "-1 $\frac{1}{2}$ " and  $\frac{3}{64}$ " (1mm) for 2". Working pressures of 600psi WSP (41.3 bars) @ 489°F (254°C), 1480psi WOG (102 bars) @ 100°F (38°C).



88CSI

88CSI-T – Threaded NPT.  
88CSI-SW – Socket Weld.

For additional information, request literature F-C77.

## Series 77F-CSI (1/2" – 12")

Cast Steel, Flanged, Wye-pattern Strainers

- For liquid or steam service

### Specifications

Sizes 1/2" – 12" (15 – 300mm), ASTM A-216 WCB body and screen cover, ASTM A-105 plug (furnished), PTFE gasket, and 304SS screens of 1/32" (.8mm) for 1/2"-1 1/2", 3/64" (1mm) for 2" – 3" (50 – 80mm) and 1/8" (3mm) for 4" – 12" (100 – 300mm).

Flanges in accordance with ANSI B16.1, Class 150. Working pressures of 150psi WSP (10.3 bars) @ 400°F (204°C), 285psi WOG (19.6 bars) @ 100°F (38°C).



77F-CSI

For additional information, request literature F-C77.

## Series 87SI (1/2" – 3")

Stainless Steel, Wye-pattern Strainers

- For liquid or steam service
- Threaded NPT or socket weld

### Specifications

Sizes 1/2" – 2" (15 – 50mm), ASTM A-351 316SS body and retainer cap, PTFE cap gasket, and 304SS screens of 1/32" (.8mm) for 1/2" – 2" (15 – 50mm) and 3/64" (1mm) for 2 1/2" – 3" (65 – 80mm). Working pressures of 300psi WSP (20.7 bars) @ 400°F (204°C), 720psi WOG (49.6 bars) @ 100°F (38°C).



87SI

For additional information, request literature F-C77.

## Series 88S (1/4" – 2")

Stainless Steel Wye-pattern Strainers

- For liquid and steam service to protect mechanical equipment from debris
- ANSI Class 600: Liquids 1440psi (99 bars) @ 100°F (38°C), Steam 600psi (41 bars) @ 489°F (254°C)

### Specifications

Sizes 1/4" - 2" (8-50mm), NPT threaded female connections, perforated strainer screen 1/16" (2mm). All 316SS construction.



88S

For additional information, request literature F-C77.

## Series 77F-CSSI (1/2" – 12")

Stainless Steel, Wye-pattern Strainers

- For liquid or steam service

### Specifications

Sizes 1/2"- 12" (15 – 300mm), ASTM A-351 316SS body and screen cover, ASTM A-182 316SS plug (furnished), PTFE gasket, and 304SS screens of 1/32" (.8mm) for 1/2" – 1 1/2", 3/64" (1mm) for 2" – 3" (50 – 80mm), and 1/8" (3mm) for 4" – 12" (100 – 300mm).

Flanges in accordance with ANSI B16.1 Class 150. Working pressures of 150psi WSP (10.3 bars) @ 400°F (204°C), 275psi WOG (18.9 bars) @ 100°F (38°C).



77F-CSSI

For additional information, request literature F-C77.

## Series 77F-SS, 77G-SS (2 1/2" – 12")

Stainless Steel Wye-pattern Strainers, Flanged and Grooved

- Light weight, 304SS corrosion resistant alternative to cast iron strainers
- For liquid service
- Complies with NSF 61 and FDA standards
- Blow off outlet tapped NPT female

### Specifications

- Sizes 2 1/2" – 12" (65-300mm).
- Pressure Rating: 200psi (13.8 bars) WOG (nonshock) at 150°F (66°C).
- ANSI B16.1 Class 125 flange dimensions and drilling.



77G-SS

For additional information, request literature ES-77F/77G.

## Series 97FB-CI (2" – 12")

### Cast Iron, Simplex Basket Strainers

- For liquid and steam service

#### Specifications

Sizes 2" – 12" (50 – 300mm), ASTM A-126 Class B cast iron body, screen cover, and plug (furnished). Non-asbestos gasket and 304SS perforated screens of  $\frac{3}{64}$ " (1mm) for 2" – 3" (50 – 80mm),  $\frac{1}{8}$ " (3mm) for 4" – 12" (100 – 300mm).

Flanges in accordance with ANSI B16.1 Class 125.

#### Models

**97FB-CIB** – Bolted cover.

**97FB-CIC** – Clamp cover.

#### Working Pressures:

**97FB-CIB** – 125psi (8.6 bars) WSP/  
200psi (13.8 bars) WOG.

**97FB-CIC** – 50psi (3.4 bars) WOG.



97FB-CIB

For additional information,  
request literature F-C77.

## Series 97FB-CSSI (2" – 12")

### Cast 316SS Flanged Basket Strainers

- For liquid service only

#### Specifications

Body, cover, and plug are constructed of ASTM A-351 Grade CF8M cast 316SS. The gasket materials is PTFE. All perforated strainer screens are 304SS.

#### Models

**97FD-CSSIB** – Bolted screen retainer cover.

**97FD-CSSIC** – Clamp screen retainer cover.

#### Working Pressures:

**97FD-CSSIB** – 275psi (13.8 bars) WOG.

**97FD-CSSIC** – 50psi (3.4 bars) WOG.



97FB-CSSIB

For additional information,  
request literature F-C77.

## Series 97FD-CI (5" – 14")

### Cast Iron, Duplex Basket Strainers

- For liquid service only

#### Specifications

Sizes 5" – 14" (125 – 350mm), ASTM A-126, Class B cast iron body, screen cover, and plug (furnished). Non-asbestos gasket and 304SS perforated screens of  $\frac{1}{8}$ " (3mm). Flanges in accordance with ANSI B16.1 Class 125.

#### Models

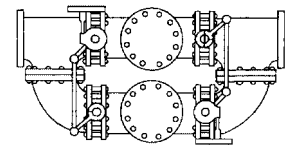
**97FD-CIB** – Bolted cover.

**97FD-CIC** – Clamp cover.

#### Working Pressures:

**97FD-CIB** – 200psi (13.8 bars) WOG.

**97FD-CIC** – 50psi (3.4 bars) WOG.



97FD-CIB

For additional information,  
request literature F-C77.

## Series 97FB-FSFE (3" – 10")

### UL/FM Fire Service Steel Strainer

- Used in conjunction with a water spray system to protect system against clogging that can be caused by particles fouling the small discharge opening of the sprinkler heads. Designed to trap foreign material  $\frac{1}{8}$ " diameter or larger

#### Specifications

- Epoxy coated steel strainer, flange x flange, groove x groove or groove x flange with multiple cleanouts.
- 304 stainless steel strainer element.
- Sizes 3", 4", 6", 8" and 10" (80, 100, 150, 200mm).
- Maximum Working Pressure: 175psi (12 bars).
- Temperature Range: 140°F (60°C).
- Body material Corrosion resistant fusion-bonded epoxy-lined and coated steel.
- Flanges AWWA Class "D" Grooves AWWA C606.

For additional information, request literature S-97FB-FSFE.



97FB-FSFE

For assistance, contact your local authorized Watts agent or visit our website at [www.wattsreg.com](http://www.wattsreg.com)

## Series P777-100 (1/4", 3/8")

### Plastic Body Wye Strainers

- 45° acetal plastic wye strainers for OEM applications requiring an inexpensive corrosion resistant material

#### Specifications

- Pressure Rating: 300psi CWP.
- NSF approved acetal plastic.

#### Models

**P777-100** – Sizes 1/4", 3/8" (8, 10mm) has 100 mesh screen, NPT female connections.



P777-100

For additional information, request literature F-C77.

## Series 777C-M1 (3/4" x 1")

### Bronze Combination Strainer and Check Valve

- Used with backflow preventers to protect check assemblies from fouling due to dirt and debris
- Especially well suited for use on RPZ assemblies on dead end service

#### Specifications

- Maximum Pressure: 200psi (13.8 bars).
- Maximum Temperature: 210°F (99°C).

#### Models

**777C-M1** – Size 3/4" x 1" (20 x 25mm) female inlet x male outlet connection.



777C-M1

For additional information, request literature ES-777C-M1.

## Series TCSS, TBSS (3/4" – 24")

### Stainless Steel Temporary Strainers

- Used temporarily to protect downstream equipment at start up from debris left in pipelines after construction
- For liquid or steam service

#### Specifications

- Sizes 3/4" – 24" (20 – 600mm), constructed of 11 gauge 304SS flange ring and perforated screens of 3/64" (1mm) for 3/4" – 3" (20 – 80mm) and 1/8" (3mm) for 4" – 24" (100 – 600mm). Temporary conical and basket strainer lengths are provided in 100%, 150% and 200% of open area of pipe I.D.

#### Models

- **TBSS** – basket shape.
- **TCSS** – cone shape.



TCSS

For additional information, request literature F-C77.



## Series CSM-61 (1/2" – 3")

### Flow Measurement Valves

- Used for hot or chilled water units for system balancing/flow measurement

#### Models

**CSM-61-M1-T** – bronze body – Sizes 1/2" – 3" (15 – 80mm), NPT female threaded inlet/outlet.

**CSM-61-M1-S** – bronze body – Sizes 1/2", 3/4", 1", 2 1/2" (15, 20, 25, 65mm), solder connections.

**CSM-61-M2-S** – bronze body – Sizes 1 1/4", 1 1/2" and 2" (32, 40, 50mm), solder connections.

#### Applications

- Fan coil units
- Unit ventilators
- Water source heat pumps
- Finned radiation
- Reheat coils
- Unit heaters
- Small domestic hot water lines



CSM-61-M1

- Convectors
- Small residential boilers/circuits

For additional information, request literature ES-CSM-61.

## Series CSM-61-LF-S (1/2" – 3/4")

### Low Flow Measurement Valves

- Used for low flow rate hot or chilled water units for system balancing/flow measurement

#### Applications

- Fan coil units
- Unit ventilators
- Water source heat pumps
- Finned radiation
- Reheat coils
- Unit heaters
- Small domestic hot water lines
- Convectors
- Small residential boilers/circuits



CSM-61-LF

For additional information, request literature ES-CSM-61-LF.

## Series CSM-81 (2 1/2" – 8")

### Flow Measurement Valves

- Used for hot or chilled water units for system balancing/flow measurement

#### Models

**CSM-81-F** – semi-steel body – Size 2 1/2" – 8" (65 – 200mm), flanged connections.

#### Applications

- Fan coil units
- Unit ventilators
- Water source heat pumps
- Finned radiation
- Reheat coils
- Unit heaters
- Small domestic hot water lines
- Convectors
- Small residential boilers/circuits



CSM-81-F

For additional information, request literature ES-CSM-81.

## Series CSM-91 (2 1/2" – 12")

### Large Flow Measurement Valves

- For medium and large flow rate HVAC systems and pump package/cooling towers
- Easy installation and positive shut off for servicing equipment
- Incorporates a micrometer type handwheel adjustment
- Tamper-proof memory stop

#### Models

**CSM-91\*** – Sizes 2 1/2" – 12" (65 – 300mm), grooved end connections. Ductile iron body ASTM A536 GR65-45-12. Maximum working pressure 375psi (25.8 bars). Maximum temperature 230°F (110°C).



CSM-91

\* Note: Series CSM-91 valves are shipped as a straight pattern from the factory. To convert to an angle pattern, refer to IS-Sheet shipped with valve.

For additional information, request literature ES-CSM-91.

## Series TDV (2½" – 12")

Combination Balancing, Shutoff, and Check Valve for Single, Double, and Vertical In-line Pump Applications

- Combines functions of a positive hand-tight shutoff valve, check valve and flow control valve into one versatile package



TDV

### Models

**TDV** – Sizes 2½" – 12" (65 – 300mm), grooved end connections. Ductile iron body. Anti-rotation lugs on inlet/outlet of the body.

- Grooved ends: Maximum working pressure 375psi (25.8 bars). Maximum temperature 230°F (110°C).

**Note:** Series TDV valves are shipped as a straight pattern from the factory. To convert to an angle pattern, refer to instruction sheet shipped with valve.

For additional information, request literature ES-TDV.

## Series FMO (2½" – 12")

Flow Measurement Orifices

- An accurate corrosion-resistant stainless steel orifice retained in a cast iron wafer fitting with pressure tabs



FMO

### Specifications

- Maximum Working Pressure (water only): 250psi (17.2 bars).
- Maximum Working Temperature: 300°F (149°C).
- Sizes 2½" – 12" (65 – 300mm). The entire unit compresses between standard ANSI Class 125 or Class 250 cast iron flanges, eliminating the need for expensive tapped or orifice flanges. They may also be used with ANSI Class 150 or Class 300 steel flanges.

For additional information, request literature ES-FMO.

## Series PG

Pressure Differential Gauges for Testing Flow Measurement Valves/Orifices for Watts Series CSM/FMO.

- Used to check differential pressures across system components

### Models

**PG-2** – 0 – 16 ft. of water  
(0 – 4,876.8 kgs./m<sup>2</sup>).

**PG-3** – 0 – 35 ft. of water  
(0-10,668 kgs./m<sup>2</sup>).

**PG-4** – 0 – 100 in. of water  
(0 – 2,540 kgs./m<sup>2</sup>).

**PG-5** – 0 – 200 in. of water  
(0 – 5,080 kgs./m<sup>2</sup>).

**PG-6** – 0 – 50 in. of water  
(0 – 1,270 kgs./m<sup>2</sup>).

**PG-8** – 0 – 135 in. of water  
(0 – 3,429 kgs./m<sup>2</sup>).



PG-8

For additional information, request literature ES-PG-2-6, ES-PG-8.

# Series DBF (2" – 12"), BF (2" – 48")

## Butterfly Valves

- For positive shutoff service on commercial, irrigation, HVAC and industrial applications

### Specifications

\*DBF – Sizes 2" – 12" (50 – 300mm), pressure 200psi (13.8 bars) WOG.

BF – Sizes 2" – 24" (50 – 600mm), pressure 200psi (13.8 bars) WOG for 2" – 12" (50 – 300mm) and 150psi (10.3 bars) for 14" – 48" (350 – 1200mm).

#### Sample Ordering Number: 10-DBF-03-121-1G

10 = 10-inch (250mm) size; DBF-03 = full lug style butterfly valve;

1 = cast iron body; 2 = aluminum bronze disc; 1 = 416SS shaft;

1 = EPDM seat; and G = gear operator.

**Designation Definitions:** Add the appropriate designations required.

**DBF for sizes:** 2" – 12" (50 – 300mm)

**BF for sizes:** 2" – 48" (50 – 1200mm)

#### Style

03 - Full lug

04 - Wafer

#### Body

1 - Cast Iron (ASTM-A126 Class B)

2 - Ductile Iron (ASTM-A536)  
30" – 48" only

#### Disc

1 - Ductile Iron (ASTM-A126)

2 - Aluminum Bronze (ASTM-A296)

3 - 316 Stainless Steel (ASTM-A351)

#### Shaft

1 - 416 Stainless Steel \*(316SS shaft on 316SS disc models)

2 - 431 Stainless Steel Sizes  
30" – 48" (750 – 1200mm)

#### Seat

### Standards

For use with ANSI Class 125 or 150 flanges. Complies with API 609 and MSS-SP-67.

SF – Assembled silicone free (available in DBF models only).

#### Electric Actuators

PF – Reversing Actuator – Output torque: 400 – 2000 in.-lb. (45 – 226 N-m).

For additional information, request literature F-PF.

#### Pneumatic

PA/PAS – Double rack and pinion, Double acting and spring return, Output torque: 180 – 7,000 in.-lb. (20 – 791 N-m).

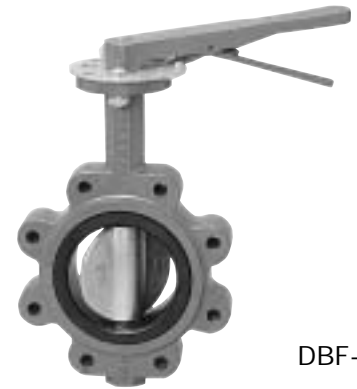
#### Notes:

\*DBF series butterfly valves use domestic and foreign components that have been assembled and tested in the U.S.A.

\*\*Kits for suffix (G) gear operator & (P) positioning/locking service with handle are available.

Gear Operators – High mechanical efficiency reduces the required input effort. Two self-locking adjusting screws give a  $\pm 5^\circ$  adjustment at end of  $90^\circ$  travel.

For additional information, request literature F-P/E-AC.



DBF-03

### Features

- Full lug and wafer styles
- Cast iron body, 416 stainless steel shaft
- Mounting pad for 10-position lever, gear operator, or actuator
- Extended neck for 2" (50mm) of insulation
- Pinned disc
- Dead-end service rated

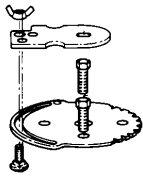
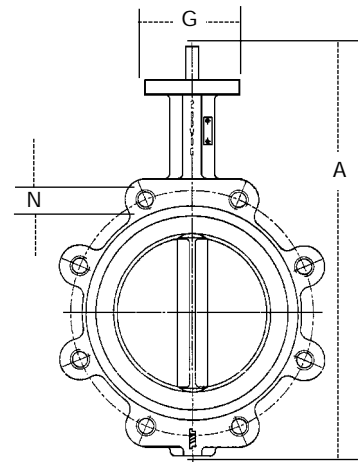
For additional information, request literature F-CDBF.

SIZE		DIMENSIONS (APPROX.)				TAPPED LUG DATA		†WEIGHT			
(DN)		A		G		N (Bolt)		(03) Full Lug		(04) Wafer	
in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kg.	lbs.	kg.
2	50	10 <sup>3</sup> / <sub>4</sub>	273	3 <sup>1</sup> / <sub>16</sub>	77	5/8-11UNCx1 <sup>1</sup> / <sub>4</sub>	16x32	8	4	5	3
2 <sup>1</sup> / <sub>2</sub>	65	11 <sup>5</sup> / <sub>8</sub>	295	3 <sup>1</sup> / <sub>16</sub>	77	5/8-11UNCx1 <sup>3</sup> / <sub>8</sub>	16x35	10	5	7	4
3	80	12 <sup>1</sup> / <sub>8</sub>	308	3 <sup>1</sup> / <sub>16</sub>	77	5/8-11UNCx1 <sup>3</sup> / <sub>8</sub>	16x35	10	5	7	4
4	100	13 <sup>5</sup> / <sub>8</sub>	346	3 <sup>5</sup> / <sub>8</sub>	92	5/8-11UNCx1 <sup>1</sup> / <sub>2</sub>	16x38	17	8	11	5
5	125	14 <sup>5</sup> / <sub>8</sub>	371	3 <sup>5</sup> / <sub>8</sub>	92	3/4-11UNCx1 <sup>3</sup> / <sub>4</sub>	19x44	23	11	16	8
6	150	15 <sup>5</sup> / <sub>8</sub>	397	3 <sup>5</sup> / <sub>8</sub>	92	3/4-11UNCx1 <sup>3</sup> / <sub>4</sub>	19x44	29	14	19	9
8	200	18 <sup>7</sup> / <sub>8</sub>	479	4 <sup>1</sup> / <sub>2</sub>	115	3/4-11UNCx2 <sup>1</sup> / <sub>8</sub>	19x54	39	18	30	14
10	250	21 <sup>1</sup> / <sub>4</sub>	540	4 <sup>1</sup> / <sub>2</sub>	115	7/8-11UNCx2 <sup>1</sup> / <sub>4</sub>	22x57	61	28	45	21
12	300	24 <sup>5</sup> / <sub>8</sub>	625	5 <sup>1</sup> / <sub>2</sub>	140	7/8-11UNCx2 <sup>1</sup> / <sub>4</sub>	22x57	113	52	73	34
14	350	26 <sup>3</sup> / <sub>4</sub>	679	5 <sup>1</sup> / <sub>2</sub>	140	1-8UNCx2 <sup>1</sup> / <sub>4</sub>	25x57	154	70	97	44
16	400	30	762	7 <sup>3</sup> / <sub>4</sub>	197	1-8UNCx3 <sup>3</sup> / <sub>8</sub>	25x86	200	91	138	63
18	450	31 <sup>1</sup> / <sub>2</sub>	800	7 <sup>3</sup> / <sub>4</sub>	197	1 <sup>1</sup> / <sub>8</sub> -7UNCx4	29x102	272	124	182	83
20	500	35 <sup>5</sup> / <sub>8</sub>	905	7 <sup>3</sup> / <sub>4</sub>	197	1 <sup>1</sup> / <sub>8</sub> -7UNCx5	29x127	396	180	260	118
24	600	43	1092	10 <sup>7</sup> / <sub>8</sub>	276	1 <sup>1</sup> / <sub>4</sub> -7UNCx5 <sup>3</sup> / <sub>4</sub>	32x146	610	277	465	211
30	760	54 <sup>13</sup> / <sub>16</sub>	1391	11 <sup>13</sup> / <sub>16</sub>	300	1 <sup>1</sup> / <sub>4</sub> -7UNC-2B	32	1388	630	-	-
36	900	61 <sup>3</sup> / <sub>4</sub>	1567	11 <sup>13</sup> / <sub>16</sub>	300	1 <sup>1</sup> / <sub>2</sub> -6UNC-2B	40	2058	934	-	-
42	1050	74 <sup>1</sup> / <sub>8</sub>	1882	11 <sup>13</sup> / <sub>16</sub>	300	1 <sup>1</sup> / <sub>2</sub> -6UNC-2B	40	2794	1268	-	-
48	1200	81 <sup>25</sup> / <sub>32</sub>	2077	13 <sup>13</sup> / <sub>16</sub>	350	1 <sup>1</sup> / <sub>2</sub> -6UNC-2B	40	3954	1794	-	-

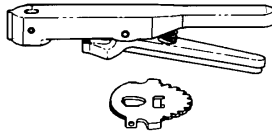
† Weights are for valves with stainless steel discs.

Weights for 2" – 12" have 10- position lever handles; 14" – 24" with bare stem; 30" – 48" with gear operator.

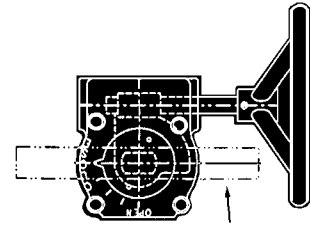
For additional dimensional data, request literature F-CDBF.



Positioning/Locking Kit



Standard Handle/Latch Plate



Gear Operator

SIZE (DN)		GEAR OPERATOR	POSITIONING/LOCKING	CHAINWHEELS		
in.	mm	Kit No.	Kit No.	Kit No.	Chain	2" Sq. Nut
2	50	GA-1-M3	#1 POS-LOCK-M2	#2 BCWK	#2 BCWC	OPN-BFG
2 <sup>1</sup> / <sub>2</sub>	65	GA-1-M3	#1 POS-LOCK-M2	#2 BCWK		OPN-BFG
3	80	GA-1-M3	#1 POS-LOCK-M2	#2 BCWK		OPN-BFG
4	100	GA-2-M3	#2 POS-LOCK-M2	#2 BCWK		OPN-BFG
5	125	GA-3-M3	#3 POS-LOCK-M2	#2 BCWK		OPN-BFG
6	150	GA-3-M3	#3 POS-LOCK-M2	#2 BCWK		OPN-BFG
8	200	GA-4-M3	#4 POS-LOCK-M2	#3 BCWK	#3 BCWC	OPN-BFG
10	250	GA-5-M3	#5 POS-LOCK-M2	#3 BCWK		OPN-BFG
12	300	GA-6-M3	#6 POS-LOCK-M2	#3 BCWK		OPN-BFG
14	350	GA-6-M3	N/A	#3 BCWK		OPN-BFG
16	400	GA-7-M3	N/A	#4 BCWK		----
18	450	GA-8-M3	N/A	#4 BCWK		----
20	500	GA-9-M3	N/A	#4 BCWK		----
24	600	GA-10-M3	N/A	#5 BCWK	#5 BCWC	----

Chain Wheel Kits attach to gear actuator handwheel.

2" (50mm) nuts are installed on gear operator shafts.

To operate Watts' butterfly valves with 2" (50mm) square nut, a gear operator must be used by removing gear handwheel and installing 2" (50mm) nut on gear shaft. Valve should be installed in line such that gear shaft is vertical for 2" (50mm) nut operation.

# Series 1156F, 1450F (1/2")

## Feed Water Pressure Regulators and Dual Controls for Hot Water Boilers

- Used on boiler feed lines to provide make up water to the system
- Highest capacity performance
- Unique unitized construction for ease of maintenance

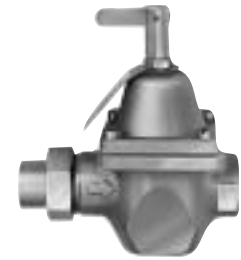
### Specifications

#### Feed water regulators

- Maximum Working Pressure: 100psi (689.5 kPa).
  - Maximum Temperature: 212°F (100°C).
  - Regulator set at 15psi (103.4 kPa), adjustment range 10-25psi (68.9-172.4 kPa).
- For additional information, request literature PG-HHS.

MODEL	SIZE (DN)		DIMENSIONS (APPROX.)				WEIGHT	
	in.	mm	A		B		lbs.	kg.
			in.	mm	in.	mm		
<b>HIGH CAPACITY FEED WATER REGULATORS</b>								
1156F	1/2	15	3 1/2	89	5 7/8	137	2.1	0.95
1156F-A	1/2	15	3 1/2	89	5 3/4	146	2.1	0.95
T1156F	1/2	15	4 1/4	108	5 3/8	137	2.2	1.0
S1156F	1/2	15	4 1/8	105	5 3/8	137	2.3	1.0
B1156F*	1/2	15	3 1/2	89	5 3/8	137	2.1	1.0
SB1156F*	1/2	15	4 3/8	108	5 3/8	137	2.2	1.0
TB1156F*	1/2	15	4 1/8	105	5 3/8	137	2.3	1.0
N256*	3/4	20	4	100	6 3/8	162	3.5	1.6
<b>DUAL CONTROLS – REGULATOR AND RELIEF VALVE</b>								
1450F	1/2	15	6 1/2	165	5 3/8	137	3.3	1.5
T1450F	1/2	15	7 3/8	184	5 3/8	137	3.3	1.5
S1450F	1/2	15	7	178	5 3/8	137	3.5	1.6
<b>STRAINER, REGULATOR AND RELIEF VALVE</b>								
T145B*	1/2	15	4	100	6 3/8	162	3.3	1.5
<b>REGULATOR AND STRAINER</b>								
T156B*	1/2	15	8 1/2	216	5 3/8	137	2.5	1.1

\*Bronze Body



S1156F

### Models

**1156F/1156F** – A NPT threaded inlet and outlet.

**1156F** – A 1/2" female bottom connection for installation of expansion tank.

**S1156F** – union solder inlet.

**T1156F** – union threaded inlet.

**B1156F** – bronze body with NPT threaded inlet and outlet.

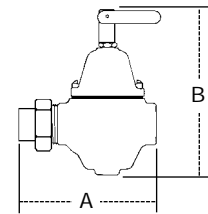
**SB1156F** – bronze body with union solder inlet.

**TB1156F** – bronze body with union threaded inlet.

**Series 1450F** – combines features of 1156F and rugged iron body diaphragm relief valve. Set @ 30psi.

### Features

- High capacity fast fill and purge capability
- Built-in check and strainer
- Iron and bronze construction



# Series 911 (1/2")

## Combination Backflow Preventer and Fill Valve for Hot Water Boilers

- Used on boiler supply feed lines to provide make-up water to the boiler and prevent backflow when supply pressure falls below system pressure
- An assembly of Watts 9D Backflow Preventer and 1156F feed water pressure regulator

### Specifications

- Maximum Working Pressure: 100psi (689.5 kPa).
- Maximum Temperature: 212°F (100°C).
- Boiler fill valve set at 15psi (103.4 kPa). Adjustable range 10 – 25psi (68.9 – 172.4 kPa).

### Models

**911** – NPT x NPT connections.

**911S** – solder x NPT connections.

**B911** – all bronze construction.

For additional information, request literature PG-HHS.

MODEL	SIZE (DN)		DIMENSIONS (APPROX.)				WEIGHT	
	in.	mm	A		B		lbs.	kg.
			in.	mm	in.	mm		
911	1/2	15	8 1/2	216	5 1/4	133	4.2	1.9
911S	1/2	15	8 1/2	216	5 1/4	133	4.2	1.9
B911	1/2	15	8 1/2	216	5 1/4	133	4.2	1.9
B911S	1/2	15	8 1/2	216	5 1/4	133	4.2	1.9

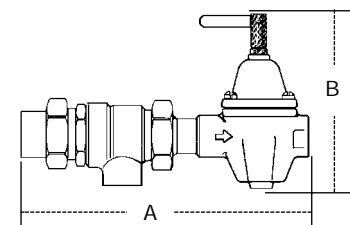
For assistance, contact your local authorized Watts agent or visit our website at [www.wattsreg.com](http://www.wattsreg.com)



911

### Features

- Pre-assembled for ease of installation
- Easy service accessibility
- High capacity fill valve for quick system filling and purging
- Size 1/2" x 1/2" (15 x 15mm).



## Series ET (1/2" – 3/4")

### Non-potable Water Expansion Tanks for Hot Water Heating Systems

- Designed to control the thermal expansion of hot water in closed loop heating systems

#### Specifications

- Maximum Working Pressure: 60psi (413.7 kPa).
- Maximum Temperature: 240°F (116°C).

#### Round expansion tanks: Model

**ET-15, 30, 60:** Size: 1/2" (15mm); NPT male connection.

**ET-90:** Size: 3/4" (20mm); NPT male connection.



ET-15

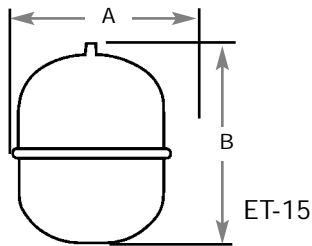
#### Option

##### add Suffix:

**ASF** – for one Model ET (expansion tank), one Model AS (air scoop) and one Model FV-4 (float vent) in a package. Specify 1" (25mm) or 1 1/4" (32mm) size for air scoop.

For additional information, request literature PG-ThermalExpansion.

For information on ASME rated tanks, request literature ES-ETA, ES-ET-RA and ES-DETA.



MODEL	VOLUME		ACCEPTANCE		CONNECTION		DIMENSIONS (APPROX.)						WEIGHT	
	<i>gals.</i>	<i>liters</i>	<i>gals.</i>	<i>liters</i>	Size (DN)	A		B		C		<i>lbs.</i>	<i>kg.</i>	
ROUND TANKS					<i>in.</i>	<i>mm</i>	<i>in.</i>	<i>mm</i>	<i>in.</i>	<i>mm</i>	<i>in.</i>	<i>mm</i>		
ET-15*	2.1	8	1.4	5.0	1/2	15	7 7/8	200	11 7/8	301	–	–	5.0	2.3
ET-30*	4.7	18	3.0	11.4	1/2	15	10 5/8	270	15	381	–	–	8.0	3.6
ET-60	6.6	25	4.3	16.0	1/2	15	12 1/4	311	15	381	–	–	14.0	6.4
ET-90	13.0	49	8.0	30.0	3/4	20	15	381	21 1/8	536	–	–	26.5	12.0

\* Available in pallet quantities: ET-15 contains 78 pcs., ET-30 contains 48 pcs.

## Series ETA 15 – ETA 240

### ASME Pressurized Expansion Tanks for Heating and Cooling Systems

- Designed to absorb the expansion forces and control the pressure in heating and cooling systems
- ASME fixed bladder type precharged expansion tank

#### Specifications

- Maximum Design Pressure: ETA 15 through ETA 60: 150psi (10 bars). ETA 80 through ETA 240: 125psi (8.5 bars). Precharged to 12psi (83 kPa)
- Maximum Temperature: 240°F (115°C).

#### Features

- ASME Section VIII Construction.
- Heavy Duty Butyl Bladder.
- Precharged to 12psi (Field Adjustable).

#### Construction

**Shell:** Carbon steel  
**Bladder:** Heavy duty Butyl  
**Exterior:** Primer coated

For additional information, request literature ES-ETA.



ETA

# Series ET-RA 35 – ET-RA 2000

## ASME Pressurized Expansion Tanks for Heating and Cooling Systems

- Designed to absorb the expansion forces and control the pressure in heating and cooling systems
- ASME removable bladder type pre-charged expansion tank



ET-RA

### Specifications

- Maximum Design Pressure: 125psig\* (8.5 bars).
  - Maximum Design Temperature: 240°F (115°C). Precharged to 12psi (83 kPa).
- \*200 and 250psig available.

### Features

- ASME Section VIII Code Construction
- Removable Butyl Bladder
- Precharged to 12psi (Field Adjustable)

### Construction

**Shell:** Carbon steel  
**Bladder:** Heavy duty Butyl  
**Exterior:** Primer coated  
 For additional information, request literature ES-ET-RA.

## Combination Packages

**Series HP** – includes air scoop, 1/8" and 1/2" (3 and 15mm) service check valves, float vent, fill valve (some models include combination fill valve and backflow preventer) and expansion tank.

**Series HP Bronze** – includes bronze air scoop, (2) 1/2" service check valves, 1/2" FV-4M1 float vent, bronze combination fill valve and backflow preventer and expansion tank.

**Series HPP** – boiler trim out package

**Series ET-ASF** – includes air scoop, float vent, and expansion tank.  
 For additional information request literature PG-HHS.



MODEL	AIR SCOOP		SERVICE CHECK VALVE		FLOAT VENT		FILL VALVE B1156	FILL VALVE / BACKFLOW PREVENTER		FLOW CHECK 2000-M5 1" 25mm	EXPANSION TANK		
	1" 25mm	1/4" 32mm	1/8" 3mm	1/2" 15mm	FV-4M1 1/8" 3mm	DUO VENT 1/8" 3mm		911S	B911S		ET-15	ET-30	ET-90

### SERIES HP — BOILER TRIM-OUT PACKAGES

HP-C	X		X	X	X			X				X	
HP-D		X	X	X	X			X				X	
HP-15C	X		X	X	X			X			X		
HP-15D		X	X	X	X			X			X		
HP-30 BC	X		X	X		X			X			X	
HP-30 BD		X	X	X		X			X			X	
HP-15 BC	X		X	X		X			X		X		
HP-15 BD		X	X	X		X			X		X		
HP-15 BF		X	X	X	X		X				X		
HP-30 BF		X	X	X	X		X					X	
HPP	X		X	X	X			X		X		X	

### SERIES ET-ASF — COMBINATION PACKAGES

ET-15-ASF	X				X						X		
ET-15-ASF		X			X						X		
ET-30-ASF	X				X							X	
ET-30-ASF		X			X							X	
ET-60-ASF	X				X								X
ET-60-ASF		X			X								X

### SERIES HP BRONZE — BOILER TRIM OUT PACKAGES

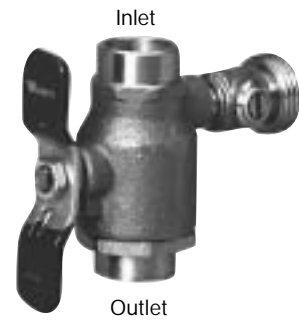
MODEL*	AIR SCOOP				SERVICE CHECK VALVE	FLOAT VENT	FILL VALVE/ BACKFLOW PREVENTER	EXPANSION TANK	
	AS-B-S		AS-B-T					ET-15 1/2"	ET-30 1/2"
	1"	1/4"	1"	1/4"	1/2"	FV-4M1 1/2"	B911S 1/2"		
HP-15C-AB-S	X				2	X	X	X	
HP-15D-AB-S		X			2	X	X	X	
HP-15C-AB-T			X		2	X	X	X	
HP-15D-AB-T				X	2	X	X	X	
HP-30C-AB-S	X				2	X	X		X
HP-30D-AB-S		X			2	X	X		X
HP-30C-AB-T			X		2	X	X		X
HP-30D-AB-T				X	2	X	X		X

\*S = Solder air scoop, T = threaded air scoop end connections.

# Series RPV (3/4", 1", 1 1/4")

## Residential Purge and Balancing Valve

- Provides a unique and low cost solution for start-up purging and balancing of hydronic heating loops.
- Rugged, dual-ball valve design
- High-volume purging
- Accurate balancing and drip tight shutoff



RPV

### Specifications

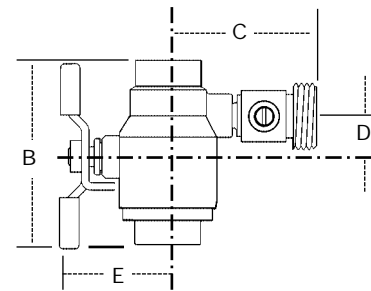
- 3/4" solder and threaded connections.
- 1" and 1 1/4" solder connection.
- Maximum Working Pressure: 50psi (344 kPa).
- Maximum Inlet Temperature: 250°F (121°C).

For additional information, request literature S-RPV.

### Features

- One-piece convenience — no extra assembly required
- Maximum air purging — purges 500 foot loop in 10 seconds
- Positive shutoff dual-ball valve design — drip tight seal on balance port maximizes effectiveness of purging
- Hose thread connection for purge

MODEL	INLET X OUTLET	SIZE (DN)		DIMENSIONS (APPROX.)						WEIGHT			
		in.	mm	B		C		D		E		lbs.	kg.
RPV-S	Solder x Solder	3/4	20	2 15/16	75	2 3/8	60	1 1/16	17	1 3/4	44	1.1	0.5
RPV-T	FNPT x FNPT	3/4	20	2 15/16	75	2 3/8	60	1 1/16	17	1 3/4	44	1.2	0.5
RPV-TS	FNPT x Solder	3/4	20	2 15/16	75	2 3/8	60	1 1/16	17	1 3/4	44	1.2	0.5
RPV-ST	Solder x FNPT	3/4	20	2 15/16	75	2 3/8	60	1 1/16	17	1 3/4	44	1.2	0.5
RPV-S	Solder x Solder	1	25	3 3/4	95	2 3/8	60	7/8	22	2 3/8	60	1.2	0.5
RPV-S	Solder x Solder	1 1/4	32	4 1/2	114	2 7/8	73	1 1/16	27	2 7/8	73	1.2	0.5



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Hydronics / Steam Heating Products

# Model PB56 (3/4")

## Purge and Balancing Valve

- Designed for exceptionally high capacity purging

### Specifications

- Maximum Working Pressure: 50psi (344.8 kPa).
- Maximum Temperature: 250°F (121°C).
- Size 3/4" (20mm), inlet x outlet solder connections with 3/4" (20mm) male hose thread connection for blow-off.

For additional information, request literature PG-HHS.

### Features

- Self-contained, tight-seating, ball type purge valve
- Hose thread connection for purge
- Balancing adjustment
- Bronze body



PB56



## Series AS, AS-T (1" – 3")

### Air Scoops for Separation of Air from Water in Hydronic Heating Systems



- Efficient separation of air
- Heavy cast iron construction
- Provides complete, continuous, purging and venting of air in the hot water heating system when installed in conjunction with the Watts Model ET expansion tank and Model FV4 float-vent
- AS model includes 1/2" tapping for fill valve piping

#### Specifications

- Maximum Working Pressure: 125psi (8.6 bars).
- Maximum Temperature: 275°F (135°C).

For additional information, request literature S-AS/AST.

**AS** – Sizes 1", 1 1/4", 1 1/2", 2", 2 1/2", 3" (25 – 80mm), NPT female inlet/outlet connections. Has 1/8" (3mm) female threaded connection for float vent and 1/2" (15mm) female threaded connection for expansion tank.

**AS-T** – Sizes 1" and 1 1/4" (25 – 32mm), have 1/2" feed water tapping.

## Series AS-B

### Bronze Air-Scoop

- Bronze construction
- Sizes 1", 1 1/4" NPT, sweat or threaded inlet/outlet connections
- Standardly furnished with tapings for boiler fill, expansion tank and air vent
- Comes standard with 1/2" Watts model FV4-M1 float vent to provide complete, continuous purging and venting of air in the system

#### Specifications

- Maximum Working Pressure: 125psi (862 kPa).
- Maximum Operating Temperature: 275°F (135°C).

For additional information, request literature S-AS-B.



#### Models

**AS-B** – sweat connections

**AS-B-T** – threaded connections

## Series DuoVent (1/8" – 1/4")

### High Capacity Air Vent with Manual Vent Feature

Provides automatic air venting for hot or cold water distribution systems. The vent feature provides tremendous air elimination capability for lightening fast venting of residential and commercial systems.

The DuoVent valve utilizes a float to actuate the valve plug which is located at the top of the valve. Once the air is displaced and the system pressure is sustained, the valve plug seals and prevents any water from escaping from the system.

The float vent can also operate as an anti-vacuum device since it will permit air to enter the system when it must be drained.



DuoVent

#### Specifications

- Sizes: 1/8", 1/4" (3 – 8mm) NPTF.
- Maximum Working Temperature: 240°F (116°C).
- Minimum Working Pressure: 1.45psi (10 kPa).
- Maximum Working Pressure: 150psi (10 bars).

For additional information, request literature ES-DuoVent.

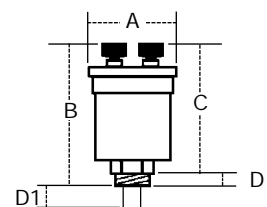
#### Maintenance

No maintenance is normally necessary. However, the DuoVent can be disassembled for inspection or cleaning.

#### Features

- Body and cover are brass construction
- Air vent with silicone rubber seal
- Impurities do not usually affect functioning as max. float line of water is always lower than the valve seal
- Float is high temperature resistant polyethylene
- Suitable for use with glycol systems

MODEL	SIZE (DN)		DIMENSIONS (APPROX.)						WEIGHT					
	in.	mm	A		B		C		D		lbs.	kg.		
DuoVent	1/8	3	1 5/16	33	3	76	2 11/16	68	5/16	8	5/16	8	4.2	119
DuoVent	1/4	8	1 5/16	33	3 1/8	79	2 11/16	68	7/16	11	5/16	8	4.2	119



## Series FV-4M1 (1/8" – 1")

### Automatic Vent Valve

- Provides automatic air venting for hot or cold water distribution systems
- Purges air that may be in the water system

#### Specifications

- Sizes 1/8" – 1" (3 – 25mm) NPTF.
- Max. Working Temp.: 240°F (116°C).
- Min. Working Pressure: 1.45psi (10 kPa).
- Max. Working Pressure: 150psi (10 bars).
- Float is high temperature resistant polyethylene.
- Suitable for use with glycol systems.

For additional information, request literature ES-FV4-M1.



## Series P3 (1/2")

### Multi-orifice Flow Control for Tankless Heaters

- Designed to limit the flow of water to equipment
- Used for tankless heater installations

#### Specifications

- Maximum Pressure: 150psi (10.3 bars).
- Maximum Temperature: 250°F (121°C).

Size 1/2" (15mm), solder connection. Multi-orifice cylinder, adjusts to 2.5, 3, 3.5 or 4 gpm (10, 11, 13 or 15 lpm).

For additional information, request literature ES-P3.



## Series HAV (1/8", 1/4")

### Automatic Vent for Hot Water Heating Systems

- The HAV valve utilizes moisture retaining discs to control air release. As discs dry they allow air to escape, when wet they provide positive shutoff.
- Positive shutoff ball check.
- Heat resistant handwheel.
- Simple two piece construction.

#### Specifications

- Sizes 1/8" (3mm) and 1/4" (8mm).
- Working Pressure: minimum 1.45psi (10 kPa), maximum 125psi (8.6 bars).

- Water Temperature: minimum 140°F (60 °C), maximum 240°F (116 °C).
- Suitable for water only additives: only inhibited glycol based additives are permissible.

For additional information, request literature ES-HAV.



## Series IPF (1/2" – 2")

### Isolation Pump Flanges for Circulator Pumps

- Fits most circulator pumps
- Includes mounting nuts and bolts
- Brass body & flange
- Quarter turn open and close operation
- Available with threaded or solder connections
- Sizes 1/2" – 1" (15 – 25mm) Sweat (IPF-S), 1/2" - 2" (15 – 50mm) Threaded (IPF-T)

#### Specifications

- 600 WOG pressure rating

For additional information, request literature ES-IPF



## Series 2000-M5 (3/4" – 3")

### Hydronic Two-way Universal Flow Checks

- For forced hot water heating systems to provide positive gravity shutoff when circulator is not running

#### Specifications

- Maximum Working Pressure: 50psi (344.8 kPa) for sizes 3/4" – 1 1/4" (20 – 32mm).
- Maximum Working Pressure: 125psi (8.6 bars) for 1 1/2" – 3" (40-80mm).
- Maximum Temperature: 250°F (121°C).

#### Models

**2000-M5** – combines angle and horizontal checks, sizes 3/4" – 3" (20 – 80mm), iron

body construction. Sizes 3/4" – 1 1/2" (20 – 40mm) have female threaded connections. Sizes 2" – 3" (50 – 80mm) have one flanged outlet x two female threaded connections. One connection can be used for the installation of an expansion tank when installed at angle check.

**2000S-M5** – straight pattern, sizes 3/4" – 1" (20 – 25mm), bronze body construction, solder inlet and outlet connections.



2000-M5



2000S-M5

For additional information, request literature ES-2000.

## Model BES

### Boiler Energy Saver

- Reduces energy costs by lowering boiler water temperature during periods of warm weather, resulting in an annual savings of up to 15%
- Increases occupant comfort by reducing temperature overswing during periods of warmer weather, eliminating the need to constantly adjust a thermostat
- Requires no separate room temperature sensing devices, outdoor temperature sensors or secondary thermostatic controls. Built in solid-state microprocessor accumulates data from two heating zones to control boiler water temperature
- Installation is quick and easy; all wiring is low voltage and done at the boiler. No outdoor sensors or complicated controls or settings.
- Compatible with domestic hot water systems through the use of a parallel connection



BES

For additional information, request literature S-BES.

## Series G, GH, MG, MGH (1/2" – 1")

### Thermostatic Steam Traps

- Removes condensate, air and non-condensable gases from heating systems to conserve steam
- Sensitive enough to close tightly in the presence of steam

#### Specifications

- Balanced pressure duplex phosphor bronze diaphragm sensitive within 3°F (-16°C).
- Stainless steel valve seat.
- Diaphragm and seat both replaceable.

#### Models

**G and GH** – for low pressure and vacuum heating applications (25" Hg Vacuum to 25psi).

**MG and MGH** – for medium pressure and vacuum heating applications (25" Hg Vacuum to 50psi).



1GAP

For additional information, request literature ES-GTST.

## Series QF

### Quik-Fix™ Steam Trap Replacement Kits

- Quick, easy and economical
- Simplifies and standardizes inventory
- Upgrades old traps instantly
- Adapts to most existing traps
- Uses existing cover

For additional information, request literature ES-QF.



QF

## Series G, MG (3/4" – 2")

### Float and Thermostatic Steam Traps

- Fail safe operation – in case of float failure, trap discharges condensate and air
- Air vent parts accessible without disturbing piping
- Straight-through connections save installation time, labor, space, headroom

#### Specifications

- Stainless valve head and seats.
- Seamless copper float.
- Condensate valve rotates to ensure even wear, longer valve and seat life.

#### Models

**6G-15 through 111MG-15** – for steam main drip and process equipment applications (25" Hg to 15psi).

**7MG-30 through 111MG-30** – for steam main drip and process equipment (25" Hg to 30psi).

**6G-50 through 111MG-50** – for steam main drip and process equipment applications (25" Hg to 50psi).



6G

For additional information, request literature ES-G.

## Series WIB (1/2" – 1")

### Inverted Bucket Steam Traps

- Designed for reliable condensate removal on virtually all types of steam equipment.
- Can be used for very high pressures and will drain condensate at saturation temperature.

#### Specifications

- Maximum Working Pressure: 250psi (17 bars).
- 1/2" - 1" (15-25mm) pipe sizes.
- Working parts removable without disturbing piping.

Inverted Bucket Traps have very limited air venting capabilities and it is recommended that an auxiliary air vent be utilized if any quantity of air is anticipated.



WIB

For additional information, request literature for ES-WIB.

## Series WFT (3/4" – 2")

### Float/Thermostatic Steam Traps

- Designed to provide continuous air venting and separate condensate draining with maximum efficiency
- "H" pattern body on all 3/4", 1", 1 1/4" (20, 25, 32mm), has been designed to offer maximum installation flexibility.
- Larger sized traps, 1 1/2", 2" (40, 50mm), the inlet and outlet taps are located in the cover, allowing for the larger capacities needed.
- Traps can be serviced without disturbing system piping.

#### Specifications

- Valve and seat combinations 15, 30, 75, (103, 207, 517 kPa) 125psi (8.6 bars) differential pressures.
- Maximum Working Pressure: 250psi (17 bars) @ 406°F (673°C).
- All stainless steel internal components.
- All stainless steel balanced pressure thermostatic air vent.
- Wide selection 3/4" – 2".



WFT

For additional information, request literature ES-WFT.

## Series WFTC (3/4" - 1 1/4"), WFTK (1 1/2" - 2")

### Float and Thermostatic Steam Trap Cover Assemblies and Repair Kits

- High quality replacement kits for Spirax Sarco FT series steam traps

#### Models

**WFTC** – Sizes: 3/4" - 1 1/4" (20 - 32mm), cover assembly consisting of a complete, factory assembled unit consisting of cover, cover gasket, condensate valve, float, linkage and thermostatic vent which simply bolts on for ease of repair. No pipe connections need to be broken; no reduction in the trap's capacity.

**WFTK** – Sizes: 1 1/2" - 2" (40 - 50mm), complete kit contains a thermostatic air vent, float, linkage, valve, seat and cover gasket. Used for large traps having piping connections into the cover plate.



WFTC

For additional information, request literature ES-WFTC/WFTK.

## Series WTD-600 (3/8" - 1")

### Thermodynamic Steam Traps

- Designed to drain steam mains, steam tracing lines, and small process equipment efficiently
- Discharges condensate at near to steam temperature

#### Specifications

**WTD-600** – Sizes: 3/8" - 1" (10 - 25mm), NPT female threaded connections.

Maximum Working Pressure: 600psi (41 bars).



WTD-600

For additional information, request literature ES-WTD.

## Series RA (1/2" - 2")

### Steam Radiator Valves

- Angle, convector or gate valves
- Teflon® stem packing

#### Models

**RA-1-AP** – 1/2" - 2" (15 - 50mm), angle valves, bronze body, FIP x male union connections.

**RA-2-AP** – 1/2" - 1 1/4" (20 - 32mm), angle valve, brass body, FIP x male union connections.

**RA-CV** – 1", 1 1/4" (25, 32mm), angle convector valve, bronze body, female union x FIP connections.

**RA-1-SW** – 1/2" - 1 1/2" (15 - 40mm), gate valve with FIP x male union connections.



RA-1-AP

For additional information, request literature ES-RA-1-AP, ES-RA-1-SW, ES-RA-2-AP, or ES-RA-CV.

## Series SV (1/8" - 3/4")

### Steam Air Vents

- Designed to vent air on non-vacuum steam heating systems
- Used on radiators, convectors, and steam mains

#### Models

**SV** – Size: 1/8" (3mm) non-adjustable angle connection.

**SVA** – Size: 1/8" (3mm), adjustable angle connection.

**SVS-1** – Size: 1/8" (3mm), non-adjustable straight connection.

**SVS-2** – Size: 1/4" (8mm), non-adjustable straight connection.

**SVS-3** – Size: 3/4" male inlet or 1/2" female inlet connection (20 or 15mm), non-adjustable straight connection.



SVA

For additional information, request literature ES-SV.

## Series FS10-C, FS-20 (1")

### Paddle-type Flow Switches Actuated by Liquid Flow

- For automatic controls or safety devices
- Used to monitor liquid flow in pipelines servicing water and heating systems, air conditioning and processing installations

#### Specifications

- Maximum Working Pressure: 150psi (10.3 bars).
- Maximum Temperature: 300°F (149°C).

#### Models

**FS10-C** – Size: 1" (25mm), NPT male connection, standard unit.

**FS10-CL** – Size: 1" (25mm), NPT male connection, standard unit with indicator light.

**FS-20** – Nema 4X rated water-tight, dust-tight and corrosion resistant enclosure provides an accurate monitoring of flow in pipelines servicing outdoor or wet applications. Sizes: 1" (25mm), NPT male connection. Maximum pressure 150psi (10.3 bars). Maximum temperature 300°F (149°C).



FS10-CL

For additional information, request literature F-FS10C/FS10F/FS20.

## Series FS10-F (1")

### Water Flow Detectors for Automatic Fire Protection Sprinkler Service

- UL listed/FM/ULC approved. For use on fire sprinkler branch lines

#### Specifications

- Maximum Working Pressure: 175psi (12.1 bars).
- Maximum Temperature: 300°F (149°C).
- Factory set and sealed for flow rate of 4-10 gpm (15.2-38 LPM).

#### Models

**FS-10F/FS-10-FL** – Size: 1" (25mm), NPT male connection. For pipe sizes 1", 1¼" or 1½" (25, 32 or 40mm) using standard ASTM tees; FL model has indicator light.

For additional information, request literature F-FS10C/FS10F/FS20.

## Series N50 (1")

### Low Water Cut-offs

- Protects hot water heating boilers against emergency low water conditions
- Used on low pressure process boilers

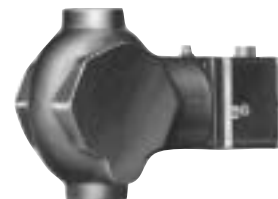
#### Specifications

- Float chamber has 1" (25mm) NPT female top and bottom connections.

#### Models

**N50S** – Single switch assembly for burner service with extra terminal for line voltage single pole, double throw service.

**N50D** – Dual switch assembly for line voltage burner service and independent low (or high) voltage alarm, feed valve or pump starter.



N50

For additional information, request literature IS-N89.

## Series 142, 144 (1/2")

### Boiler Water Feeders for Process Boilers

- Used on pressing machines and other small process boilers

#### Specifications

- Maximum Steam Pressure: 100psi (689.5 kPa).
- Maximum Water Pressure: 125psi (8.6 bars).

**Note:** The water pressure must be at least 10psi (68.9 kPa) higher than steam pressure.

#### Models

**142** – Used on pressing machines when feed through float chamber is permissible. Direct feed through float chamber.

**142S** – With strainer.

**144** – Water is fed automatically as needed to maintain the correct water operating level in boiler. External water feed connections. Water feed connection 1/2" (15mm) NPT female. Float chamber connection 1" (25mm) NPT female.

**144S** – With strainer.



142

For additional information, request literature IS-142.

## Series SAN89, SAN50 (1/2", 1")

### Float and Switch Assemblies for Servicing Low Water Cut-offs

- One piece unit facilitates installation and assures user of the most up-to-date construction

#### Models

**SAN89D** – Complete float and dual switch assembly. Maximum steam pressure 15psi (103.4 kPa).

**SAN89S** – Same as above, but with single switch assembly for Watts N89S and N101S.

**SAN50D** – Complete assembly with dual switch. Maximum boiler pressure 50psi (344.8 kPa).

**SAN50S** – Same as above, but furnished with single switch assembly.



SAN89

For additional information, request literature IS-N89.

## Series HBV (1/2" – 1")

### Hydronic Balancing Ball Valves

- Used with forced hot water systems

#### Specifications

- Sizes 1/2" – 1" (15 – 25mm), solder x solder connections
- Maximum Working Pressure (non-shock) 400psi (27.6 bars) WOG.



HBV

For additional information, request literature ES-HBV.

## Series HWA (1/2" – 1 1/2")

### Bronze Hot Water Angle Valves

- Used on gravity (hot water) heating systems only

#### Specifications

- Maximum Working Pressure: 60psi (4.2 bars) non-shock for hot water.

#### Models

**HWA** – Sizes 1/2" – 1 1/4" (15 – 32mm), FIP female x threaded male union. Sizes 1/2" (15mm) & 3/4" (15 – 20mm), bronze body, solder x threaded male union connections.



HWA

For additional information, request literature ES-HWA.

## Series OTV (1/2")

### Oil Tank Valves

- Metal to metal seats
- Heavy duty brass construction
- Screwed bonnet
- Rising stem

#### Specifications

- Maximum Working Pressure: WOG 125psi (8.6 bars).

#### Models

**OTV-FL** – Sizes 1/2" (15mm) male connection x 3/8" (10mm) female connection.  
**OTV-M** – Sizes 1/2" (15mm) male connection x 3/8" (10mm) male connection.



OTV

For additional information request literature ES-OTV.

## Series UL (1/2" – 1 1/4")

### Bronze Union Elbows for Steam/Hot Water Systems

- Pressure-tested elbow.

#### Specifications

- Working Pressure non-shock saturated steam: 15psi (103.4 kPa), hot water 60psi (413.7 kPa).

#### Models

**UL-1** – Sizes: 1/2" – 1 1/4" (15 – 32mm), FIP female threaded x male threaded union.  
**UL-2** – Sizes: 1/2" & 3/4" (15 and 20mm), solder x male union connections.



UL-1

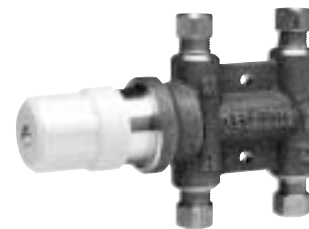
For additional information, request literature ES-UL.



# Series USG-B (3/8")

## Under Sink Guardian™ Professional

- Designed for the Plumbing Professional for single fixture protection
- ASSE 1016 listed
- Heavy-duty brass body with 3/8" compression fittings that accommodate the supply lines used in most kitchen sinks or bathroom lavatories
- Quickly installs between stop valves and faucets
- Maintain, ±3°F mixed water temperatures up to maximum outlet temperature of 120°F
- Built-in check valves
- Includes locking cap



USG-B  
Patent# 6,315,209

### Specifications

- Minimum Supply Pressure Required: 30psi (207 kPa).
- Minimum Flow Rate Required: 0.5 gpm (1.9 lpm).
- Hot Inlet Temperature: 120°F – 180°F (49°C – 82°C).
- Cold Inlet Temperature: 39°F – 85°F (4°C – 29°C).
- Minimum Inlet Temperature Differential: 15°F (-9°C).
- Temperature Adjustment Outlet: Range 80°F – 120°F (27°C – 49°C).
- Maximum Inlet Temperature: 180°F (82°C).
- Maximum Working Pressure: 150psi (10 bars).

For additional information, request literature ES-USG-B.

MODEL	FINISH	CONNECTION SIZE	HEIGHT		WIDTH		WEIGHT	
			in.	mm	in.	mm	lbs.	kgs.
USG-B	Bronze	3/8" Compression	5 3/16	132	3 1/8	79	1.5	0.68
USG-B-SC	Satin Chrome	3/8" Compression	5 3/16	132	3 1/8	79	1.5	0.68
USG-B-strainer*	Bronze	3/8" Compression	5 3/16	132	3 1/8	79	1.5	0.68
USG-B-SC-strainer*	Satin Chrome	3/8" Compression	5 3/16	132	3 1/8	79	1.5	0.68

\*Strainer - includes two inlet strainers

# Series USG-P

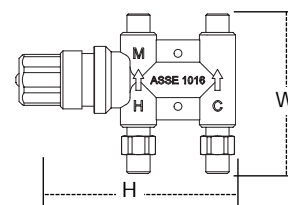
## Under Sink Guardian™

- ASSE 1016 listed
- Thermoplastic body with 3/8" compression fittings that accommodate the supply lines used in most kitchen and bathroom lavatories
- Quickly installs between stops valves and faucets
- Maintain, ±3°F mixed water temperatures up to maximum outlet temperature of 120°F
- Built-in check valves prevent cross flow
- Includes tamper resistant locking cap



USG-P  
Patent# 6,315,209

For additional information, request literature ES-USG-P.



### Specifications

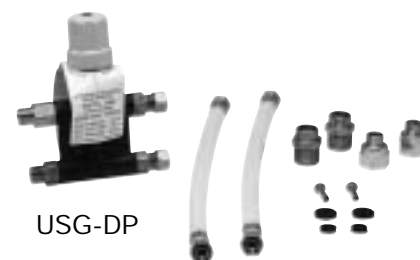
- Minimum Supply Pressure: 30psi (207 kPa)
- Hot Inlet Temperature: 120°F – 180°F (49°C-82°C)
- Cold Inlet Temperature: 40°F – 85°F (4°C-29°C)
- Minimum Inlet Temperature Differential: 15°F (-9°C)
- Temperature Out: 80°F – 120°F (27°C – 49°C)
- Maximum Working Pressure: 150psi (10.34 bars)

MODEL	FINISH	CONNECTION SIZE	HEIGHT		WIDTH		WEIGHT	
			in.	mm	in.	mm	lbs.	kgs.
USG-P	Thermoplastic	3/8" Compression	5 3/16	132	3 1/8	79	1.5	0.68

### Also Available:

**USG-DP** – Complete installation kit in display packaging, includes two each of the following:

- 3/8" x 3/8" x 12" compression x compression flexible braided pvc connectors
- 3/8" x 1/2" No 66-CP adapters
- 1/16" x 1/2" adapters
- Ferrule for use with pex or polybutylene supply tubing



USG-DP

# Series MMV (1/2" – 1")

## Thermostatic Mixing Valves

- For use in domestic water systems at the point of use to provide accurate outlet temperature control
- ASSE 1016 listed

### Specifications

- Bronze, 1/2" (15mm) size, temperature range of 80°F – 120°F (29°C – 49°C) ± 3°F.
- Brass, 3/4" & 1" (20 and 25mm) sizes, temperature range of 80°F – 120°F (29°C – 49°C) ± 3°F.
- Maximum Working Pressure: 150psi (10 bars).
- Maximum Continuous Inlet Temperature: 225°F (107°C).

### Models

**UT** – union thread connections, 1/2" – 1" (15 – 25mm).

**US** – union solder connections, 1/2" – 1" (15 – 25mm).

**PEX** – union PEX connections, 1/2" – 1" (15 – 25mm).

**CPVC** – union CPVC connections, 1/2" – 1" (15 – 25mm).

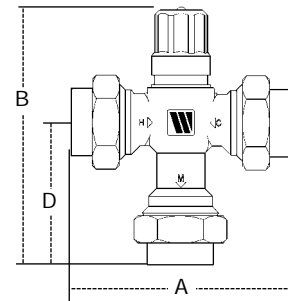
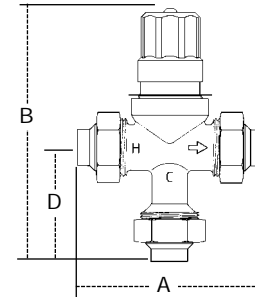
For additional information, request literature ES-MMV.

MODEL	SIZE (DN)		DIMENSIONS (APPROX.)						WEIGHT	
	in.	mm	A		B		D		lbs.	kg.
MMV-US	1/2	15	4	102	5 3/8	137	2 1/2	64	1.4	.64
MMV-UT	1/2	15	4	102	5 3/8	137	2 1/2	64	1.4	.64
MMV-US	3/4	20	5 1/8	130	5 5/8	143	3 1/4	83	1.5	.68
MMV-UT	3/4	20	5 1/8	130	5 5/8	143	3 1/4	83	1.5	.68
MMV-US	1	25	5 1/8	130	5 3/4	146	3 1/4	83	1.6	.73
MMV-UT	1	25	5 1/8	130	5 3/4	146	3 1/4	83	1.6	.73



1/2"MMV-UT

3/4"MMV-UT



# Model L111 (1/2")

## Thermostatic Mixing Valve

- Maintains desired mixed water temperature at point of use for single showers or lavatories
- ASSE 1016 listed
- Brass body construction with polyetherimide control cartridge and polypropylene tamper-resistant cover to ensure long life

### Specifications

- 1/2" (15mm) threaded female inlet and outlet.
- Minimum Working Pressure: 15psi (103 kPa).
- Maximum Working Pressure: 125psi (8.6 bars)
- Temperatures for inlets: hot, 120°F to 180°F (49°C – 82°C); cold, 33°F to 85°F (1°C – 29°C).
- Minimum Differential Temperature: 10°F (5°C).
- Outlet Temperature: ranges from 80°F to 120°F (27°C – 49°C); adjustable by contractor; accurate within ±3°F (4°C).

For additional information, request literature ES-L111.

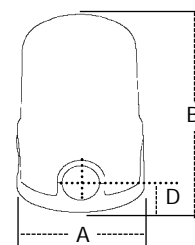
### Options

**CS-U** – integral check, strainer, and stop valves. Sizes: 1/2", 3/4", 1" (15 – 25mm).

MODEL	SIZE (DN)		DIMENSIONS (APPROX.)						WEIGHT	
	in.	mm	A		B		D		lbs.	kg.
L111	1/2	15	3	76	4	102	1 1/16	175	3.5	1.5



L111  
(shown with CS-U Check Stops Installed)



# Series 1170, L1170 (1/2" – 1")

## Hot Water Temperature Control Valves

- Mixes hot and cold water in domestic hot water systems to reduce temperature of the hot water supply
- Double throttling design combines control of hot and cold water to provide sensitive response to changes in water temperature passing through mixing chamber
- Provides additional safety by restricting water flow to a trickle upon loss of cold water flow
- ASSE 1017 listed



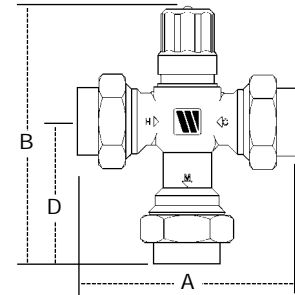
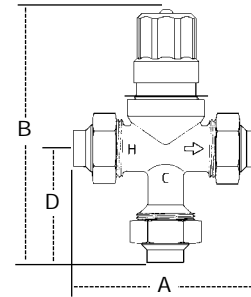
1/2" 1170-UT

3/4" 1170-UT

### Specifications

- Bronze, 1/2" (15mm) size, temperature range of 100°F – 180°F (38°C – 82°C); operating temperature, not to exceed 225°F (107°C) max. at inlet; max. pressure 150psi (10 bars).
- Brass, 3/4" & 1" (20, 25mm) sizes, temperature range of 100°F – 180°F (38°C – 73°C); operating temperature, not to exceed 225°F (107°C) max. at inlet; max. pressure 150psi (10 bars).
- UT – union thread connections, 1/2" – 1" (15 – 25mm).
- US – union solder connections, 1/2" – 1" (15 – 25mm).
- PEX – union PEX connections, 1/2" – 1" (15 – 25mm).
- CPVC – union CPVC connections, 1/2" – 1" (15 – 25mm).
- L – Low Temperature Range: 80°F – 120°F (27°C – 49°C).

For additional information, request literature ES-1170/L1170.



MODEL	SIZE (DN)		DIMENSIONS (APPROX.)						WEIGHT	
	in.	mm	A		B		D		lbs.	kg.
1170-US/UT	1/2	15	4	100	5 3/8	137	2 1/2	65	1.4	.64
1170-US/UT	3/4	20	52	130	5 5/8	143	3 1/4	83	1.5	.68
1170-US/UT	1	25	52	130	5 3/4	146	3 1/4	83	1.6	.73
L1170-US/UT	1/2	15	4	100	5 3/8	137	2 1/2	65	1.4	.64
L1170-US/UT	3/4	20	52	130	5 5/8	143	3 1/4	83	1.5	.68
L1170-US/UT	1	25	52	130	5 3/4	146	3 1/4	83	1.6	.73

# Series 70A (1/2")

## Hot water extender tempering valves

- For residential installations, mixes cold and hot water to extend capacity of water heater, storage tanks and hot water boiler tankless heaters

### Specifications

**70A-F** – Sizes 1/2" (15mm), solder connections, temperature range 120° – 160°F (49° – 71°C).

**70A-T** – Sizes 1/2" (15mm), NPT female connections, temperature range 120° – 160°F (49° – 71°C).

**70A** – Sizes 3/4" (20mm), solder connections, temperature range 120° – 160°F (49° – 71°C).

**70A-T** – Sizes 3/4" (20mm), NPT female connections, temperature range 120° – 160°F (49° – 71°C).

**L70A-F** – Sizes 1/2" (15mm),

solder connections, temperature range 100° – 130°F (38° – 54°C).

**L70A-T** – Sizes 1/2" (15mm), NPT female connections, temperature range 100° – 130°F (38° – 54°C).

**L70A** – Sizes 3/4" (20mm), solder connections, temperature range 100° – 130°F (38° – 54°C).

**L70A-T** – Sizes 3/4" (20mm), NPT female connections, temperature range 100° – 130°F (38° – 54°C).



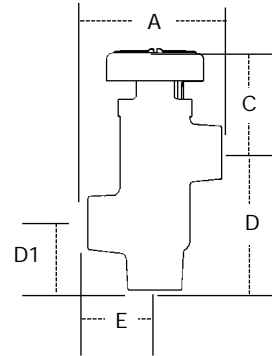
70A

### Features

- All brass or bronze construction
- Adjustable knob for temperature control
- High capacity
- Low pressure drop

For additional information, request literature ES-70A.

MODEL	SIZE (DN)		DIMENSIONS (APPROX.)								WEIGHT			
	in.	mm	A		C		D		D1		E		lbs.	kg.
70A-F	1/2	15	2	50	2 3/4	70	1	25	1 3/8	41	1 3/16	21	0.68	.30
70A-T	1/2	15	2 3/4	70	2 3/4	70	1 5/8	41	1 3/8	41	1 3/16	21	1.30	.59
70A	3/4	20	2 3/4	70	2 3/4	70	1 3/8	41	1 3/8	41	1 3/16	21	0.96	.44
70A-T	3/4	20	2 3/4	70	2 3/4	70	1 3/8	41	1 3/8	41	1 3/16	21	1.20	.54
L70A-F	1/2	15	2	50	2 3/4	70	1	25	1 3/8	41	1 3/16	21	0.60	.29
L70A-T	1/2	15	2 3/4	70	2 3/4	70	1 5/8	41	1 3/8	41	1 3/16	21	1.30	.59
L70A	3/4	20	2 3/4	70	2 3/4	70	1 3/8	41	1 3/8	41	1 3/16	21	0.96	.44
L70A-T	3/4	20	2 3/4	70	2 3/4	70	1 3/8	41	1 3/8	41	1 3/16	21	1.20	.54



# Series N170 (3/4" – 2")

## Hot water extender tempering valves

- For commercial applications, mixes cold and hot water to extend capacity of water heater, storage tanks and hot water boiler tankless heaters

### Specifications

- Maximum Working Pressure: 150psi (10.3 bars).
- Maximum Working Temperature: 210°F (99°C).

### Models

**N170** – Sizes 3/4" – 2" (20 – 50mm), NPT female threaded connections, temperature range 130° – 180°F (54° – 82°C).

**N170L** – Sizes: 3/4" – 2" (20 – 50mm), NPT female threaded connection, temperature range 100° – 130°F (38° – 54°C).



N170

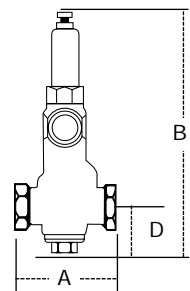
### Options

HT – for high temperature hot water supply applications

### Features

- Static adjustment screw seal
- All bronze construction
- Interchangeable thermostat
- High capacity
- Low pressure drop

For additional information, request literature ES-N170.



MODEL	SIZE (DN)		DIMENSIONS (APPROX.)						WEIGHT	
	in.	mm	A		B		D		lbs.	kg.
N170-M2	3/4	20	4 1/8	105	9 1/4	235	2	50	5.2	2.4
N170-M2	1	25	4 3/4	114	9 1/4	235	2	50	5	2.3
N170-M2	1 1/4	32	6	150	9 7/8	251	2	50	8.7	3.9
N170-M2	1 1/2	40	6	150	9 7/8	251	2 1/8	54	8.3	3.8
N170-M2	2	50	6 3/8	162	9 7/8	251	2 1/8	54	9.8	4.4
N170L-M2	3/4	20	4 1/8	105	9 1/4	235	2	50	5.2	2.4
N170L-M2	1	25	4 1/2	114	9 1/4	235	2	50	5	2.3
N170L-M2	1 1/4	32	6	150	9 7/8	251	2	50	8.7	3.9
N170L-M2	1 1/2	40	6	150	9 7/8	251	2 1/8	54	8.3	3.8
N170L-M2	2	50	6 3/8	162	9 7/8	251	2 1/8	54	9.8	4.4

## Series ZRO-4

### ZeroWaste Reverse Osmosis System

- First point of use Reverse Osmosis system that wastes no water
- World's most efficient system, compared to other systems that waste four or more gallons for every gallon produced
- Provides bottled-quality water to any home

For additional information, request literature S-ZRO-4.



ZRO-4

#### Features

- Reduces: Arsenic, TDS, Lead, Copper, Barium, Fluoride, Cadmium, Hexavalent Chromium
- Ideal for low pressure private wells
- No air gap required
- No drain connection needed
- IAMPO certified
- 25 Gallon per day membrane
- Easy installation
- Provides high quality drinking water in the convenience of the home

## Series RO-5M

### One Piece Manifold Under Sink Reverse Osmosis System

- Provides welcome replacement to the inconvenience and expense of delivered water.
- Produces water that rivals and often exceeds quality of bottled water.

For additional information, request literature PF-RO-5M.



RO-5M

#### Features

- Reduces: Arsenic, Barium, Cadmium, Copper, Hexavalent Chromium, Trivalent Chromium, Cryptosporidium, Toxoplasma, Entamoeba, Fluoride, Giardia, Lead, Nitrite, Nitrate, Radium 226/228, Selenium, TDS, and Turbidity
- NSF tested and certified to Standard 58
- Easier to install by eliminating 17 connections creating a seamless water path
- Includes air gap faucet to meet plumbing codes
- 50 Gallon per day membrane

## Series WHF

### Whole House Filter

For additional information, request literature PL-PureWater.

#### Features

- 6 gpm flow rate
- 50 micron polyspund sediment filter
- Clear housing
- Bypass valved head
- 3/4" ports with brass reinforced inserts



WHF

## Series UC-2

### Under Counter Two Stage System

For additional information, request literature S-UC-2.

#### Features

- Reduces: lead, Chlorine, bad tastes and odors
- NSF tested and certified to Standard 53 for the reduction of Lead and Cysts
- California Prop 65 certified
- Ideal for RV's and boats when space is limited
- Includes dedicated faucet or can be connected to cold water line
- Heavy duty 10 gauge bracket resists high vibration applications



UC-2

# M Series

## Tap Water Reverse Osmosis Systems

- Designed to utilize the latest in low energy membrane technology by using the highest production membranes available.
- For commercial water purification applications.

For additional information, request literature S-M-Series

### Features

- Stainless steel membrane vessels
- 1:1 waste water recovery M-450, M-1000, M-2400
- UL 508A listing
- Low energy TFC membranes
- Stainless steel front panel
- Panel mounted flow meters
- Low pressure safety shut down
- Built-in sediment and carbon pretreatment on systems up to 2400 gpd
- Powder coated frame
- Low voltage electronics
- Liquid filled pressure gauges
- Tank pressure gauge
- Performance tested and sanitized
- Voltage options including: 115V, 220V, 50Hz, 60Hz
- Low inlet pressure alarm



M-2400



M-4800

### Optional Features

- Auto membrane flush at shut down.
- Auto bypass with audible alarm.
- Three-stage sediment, KDF, carbon pretreatment.
- Post treatment.
- Panel mounted TDS monitor.

### Available Sizes

- **M-450:** \*450 gpd or .33 gpm.
- **M-1000:** \*1000 gpd or .69 gpm.
- **M-2400:** \*2400 gpd or 1.67 gpm.
- **M-4800:** \*4800 gpd or 3.33 gpm.
- **M-7200:** \*7200 gpd or 5.00 gpm.
- **M-9600:** \*9600 gpd or 6.67 gpm.

\*Production may vary depending on feed water temperature and chemistry. Pressure tank storage systems may not meet the exact gpd specified above.

# Series UV-3

## Ultra Violet Three-Stage System

### Features

- Reduces; lead, Chlorine, bad tastes and odors
- NSF tested and certified to Standard 53 for the reduction of Lead and Cysts
- California Prop 65 certified
- Ideal for RV's and boats
- Includes dedicated faucet or can be connected to cold water line



For additional information, request literature S-UC-3.

UC-3

# Series RV Water Guard

## Multipurpose Filtration System

- Solves common problem of dirt and sand build up in boat and RV water supply lines by attaching to the line to filter any incoming water.

### Features

- Reduces: Chlorine, bad tastes and odors
- Ideal for RV's and boats
- Connects to cold water fill line either on board or with hose bibb adapter when refilling holding tank
- Heavy duty 10 gauge bracket is ideal for high vibration applications
- High flow 1/2" ports



RV-WaterGuard

For additional information, request literature S-RV-WaterGuard.

# WM Series

Commercial / Industrial Reverse Osmosis Systems

## Model WM-120 PT (pressure tank application)

- Wall mountable
- (2) 75 gpd membranes by Applied™
- (3) 20" slimline pre filters
- Gauge and flush kit
- Line pressure RO system

For additional information, request literature PL-PureWater.



WM-120-PT

## Model WM-450 PT (pressure tank application)

- Wall mountable
- (2) 10" Big Blue sediment filters
- (1) 10" Big Blue carbon filter membrane by Applied™
- 50% recovery kit
- 1/2 hp motor
- Low inlet pressure safety switch
- Filter wrench
- 20' drain and tank tubing

For additional information, request literature PL-PureWater.



WM-450-PT

## Model WM-450 FT (atmospheric tank application)

- Wall mountable
- (2) 10" Big Blue sediment filters
- (1) 10" Big Blue carbon filter
- (1) 2" x 26" low energy membrane by Applied™
- 50% recovery kit
- 1/2 hp motor
- Low inlet pressure safety switch
- Filter wrench
- (2) Float controls included
- 20' drain and tank tubing

For additional information, request literature PL-PureWater.



WM-450-FT

# Ice Filtration Systems

Commercial / Residential Ice Makers

## Model Ice 1

- 1/2" high flow parts
- 20 micron sediment filter
- 5 micron carbon block filter
- Poly phosphate (limescale inhibitor)
- Gauge and flush kits

For additional information, request literature PL-PureWater.



Ice 1

## Model Ice 2

- 1/2" high flow parts
- 20 micron sediment filter
- 20" 5 micron carbon block filter
- Poly phosphate (lime scale inhibitor)
- Gauge and flush kits

For additional information, request literature PL-PureWater.



Ice 2

# Water Softeners

## 32K Fleck 5000 Softener

- 1" bypass
- Cabinet model
- Timer valve
- 10% cross link resin

## 48K Alternating Twin

- Alternating twin softener
- 1" bypass
- Metered valve
- 10% cross link resin
- 3 tank system

## 1.5 Cubic Feet Carbon Bed Filter

- 1" bypass
- Timer valve

## 32K2-Tank Fleck 5600

- 2 tank softener
- 1" bypass
- Metered valve
- 10% cross link resin

## 98K Alternating Twin

- Alternating twin softener
- 1½" bypass
- 10% cross link resin
- 3 tank system

## 1 Cubic Feet Multi Media Filter

- 1" bypass
- Timer valve

For additional information, request literature PL-PureWater.



32K Fleck 5000 Softener



32K Tank Fleck 5600

## Mini Softeners

### 4K Mini Softener

- 7 gpm flow rate
- Tank size 6" D x 12" H
- 10% Cross link resin

### 8K Mini Softener

- 9 gpm flow rate
- Tank size 6" D x 18" H
- 10% Cross link resin



4K Mini Softener



8K Mini Softener

For additional information, request literature PL-PureWater.



## Series 05 (1/8" – 3/4")

### Mini Water Hammer Arrestors

- Controls water pressure shock
- Residential and light commercial applications

#### Specifications

Sizes 3/8" – 3/4" (10 – 20mm).

Maximum Working Pressure: 150psi (10.3 bars).

Temperature Range: 33° – 180°F (0.55° – 82°C).

#### Models

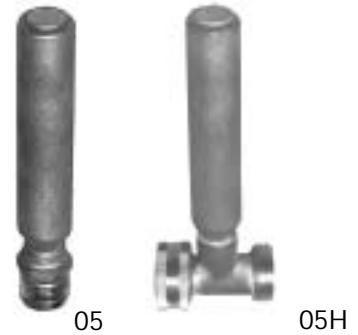
**05** – for 3/8" and 3/4" (10 – 15mm) NPT connections.

**05H** – for 3/4" (20mm) hose connection.

**05S** – for 1/2" (15mm) sweat connection.

**05C** – for 1/2" (15mm) compression connection.

For additional information, request literature ES-05.



#### Features

- May be installed in concealed location with access panels
- Factory air-charged, not rechargeable
- Installed with standard pipe tee at any angle

## Series 15 (1/2" – 2")

### Water Hammer Arrestors

- Controls water pressure shock
- Commercial and industrial applications
- ASSE 1010 and ANSI 112.26.1M approved, PDI WH201 approved and certified, Listed by IAMPO

#### Features

- 150psi (10 bars) operating pressure
- Copper body
- EPDM seals and O-rings
- Brass piston and cap
- Installed at any angle
- Pre-charged air chamber
- NPT solid hex brass adapter
- May be installed in concealed locations
- Factory air charged, permanently capped and epoxy sealed
- No. 15AK adapter for installing 1 1/4", 1 1/2", and 2" (32, 40, 50mm) sizes in a 1" (25mm) NPT fitting.



CONNECTIONS		AIR PRELOAD		CROSS REF.	FIXTURES
NPT	mm	psi	kPa	PDI Standard	Units
1/2"	15	60	413.7	A	1-11
3/4"	20	60	413.7	B	12-32
1"	25	60	413.7	C	33-60
1 1/4"	32	60	413.7	D	61-113
1 1/2"	40	60	413.7	E	114-154
2"	50	60	413.7	F	155-330

For additional information, request literature ES-15 or F-WHA.

## Series 150A (1/2" – 3/4")

### Water Hammer Arrestors

- Used to control noise from water hammer in pipes

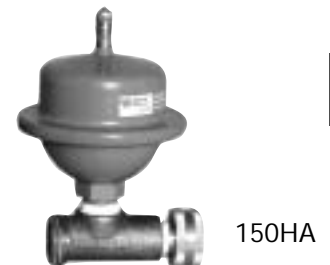
#### Specifications

- Maximum Working Pressure: 150psi (10.3 bars).
- Maximum Velocity: 10 fps. Maximum
- Shock Pressure: 200psi (13.8 bars).

#### Models

**150A** – Size 1/2" (15mm).

**150A-HA** – Size 3/4" (20mm), with hose threaded connection for washing machines.



#### Features

- Pre-charged air chamber
- Sealed-in diaphragm
- Rechargeable

For additional information, request literature ES-150A or F-WHA.

# Series DWB DuoClozure™ Wall Box (1/2")

Includes Watts Series 2-M2 Washing Machine shutoff Valve

- Features a decorative white faceplate which can be painted or papered to match wall deco.
- Used to manually eliminate water pressure on supply hoses and prevent catastrophic water damage
- Connects to 1½" or 2" drain piping
- Side or top water supply piping
- Supplied with water pressure test plugs

## Specifications

Maximum Working Pressure: 150psi (10.3 bars).

Maximum Working Temperature: 180°F (82°C).

## Models

**2M2 DWB** – Size ½" (15mm) ell solder connections for concealed piping.



DWB

## Features

- Decorative look and the convenience of the Watts Duo-Cloz™ valve in one complete package
- Easy to install. Complete with adjustable stud mounting brackets
- Supplied with water pressure test plugs

For additional information, request literature PG-LR.

# Series A2C-M1, IntelliFlow™ (1/2")

Automatic Washing Machine Shutoff Valve

- Automatically closes water supply valves when washing machine shuts off thus virtually eliminating water pressure on the supply hoses when machine is not in use; prevents disastrous flooding from burst hoses
- Allows hot and cold water to flow through the washing machine supply hoses to the appliance

## Models

**A2C-M1** – Size: ½" (15mm), connections.

- Includes A2-LS leak sensor.

**A2CWB-M1** – Size: ½" (15mm), includes recessed wall box.

- Maximum Pressure: 150psi (10.3 bars).
- Maximum Temperature: 180°F (82°C).
- Includes A2-LS leak sensor.

**KA2-A** – Size ½" (15mm) Installation Kit.

**KA2-R** – Size ½" (15mm) Installation Kit.

**KA2C-BD** – Size ½" (15mm) Installation Kit.

**A2-LS** – Leak sensor.

**A2-IntelliTimer** – Used in conjunction with Watts IntelliFlow in 220 VAC power applications. (Purchased separately)



A2C-M1



A2-LS



A2-Intellitimer

## Features

- Replaceable seats and internal strainer
- Ease of installation
- Includes leak sensor

For additional information, request literature F-IntelliFlow.

## Series 2-M2 (1/2")

### Duo-Cloz™ Washing Machine Water Shutoff Valve

- Manual valve eliminates water pressure on supply hoses and prevents catastrophic water damage
- Controls both hot and cold water simultaneously

#### Specifications

Maximum Pressure: 150psi (10.3 bars).  
Maximum Temperature: 180°F (82°C).

#### Models

**2-M2SC** – Satin chrome finish.

**2T-M2, 2T-M2SC** – Size 1/2" (15mm) threaded and solder copper dual adapter with two-way male connectors.

#### Features

- Single lever on-off
- Bronze body construction
- May be used with Model 05H and Model 150A-HA water hammer arrestors



2-M2

For additional information, request literature ES-2-M2.

## Series APU

### SpringFit Access Panels

- Conceals plumbing, wires, cables and spa pumps
- Two sizes 9"x 9" or 15" x 15" to fit any size shape hole from 5"x 6" to 15" x 15"
- No exact measurements required
- Can be painted or wallpapered



APU

For additional information, request literature PF-SpringFit.

## Series A200 (1/2")

### "Flow Through" Trap Primers

- Assures delivery of water to floor drain traps to prevent evaporation of the water seal

#### Models

**A200T** – Size: 1/2" (15mm), threaded ends.

**A200S** – Size: 1/2" (15mm), solder ends.

#### Features

- Complete flow cycle operates valve twice
- Built-in air gap
- Bronze body
- Celcon® seat and disc



A200

For additional information, request literature ES-A200.

## Series F1131 (1/2")

### Gas Log Lighter Valves

- Designed to provide the safety and control of a manual key operated, positive shutoff, multi-turn globe valve for gas fireplaces
- Multi-turn globe style design
- Available in polished brass or chrome finish
- Available in angle or straight pattern
- Key included

#### Specifications

- Brass body construction
- Teflon® seat packing
- Zinc alloy escutcheon tubes

For additional information, request literature ES-F1131.



F1131

## Series BD (1/2" x 3/4", 3/4" x 3/4")

### Brass Boiler Drain Shutoffs for Water Service

- 3/4" (20mm) Hose thread connection on outlet
- Dual solder or IP connection models
- Angle and straight pattern models

#### Specifications

- Maximum Working Pressure: 200psi (13.8 bars) WOG.
- Maximum Working Temperature: 180°F (82°C).

#### Models

**BD1C** – Size 1/2" (15mm) dual connection, solder or male IPS x 3/4" (20mm) hose thread connection, angle pattern.

**BD2** – Size 3/4" (20mm) male IPS x 3/4" (20mm) hose thread connection, angle pattern.

**BD2C** – Size: 3/4" (20mm) male IPS x 3/4" (20mm) hose thread connection, angle pattern.

**BD3F** – Size: 1/2" (15mm) female IPS x 3/4" (20mm) hose thread connection, angle pattern.

**BD4F** – Size: 3/4" (20mm) female IPS x 3/4" (20mm) hose thread connection, angle pattern.

**BD5** – Size: 1/2" (15mm) straight pattern, solder or male IPS x 3/4" (20mm) hose thread connection.

**BD6** – Size: 3/4" (20mm) straight pattern, male IPS x 3/4" (20mm) hose thread connection.

For additional information, request literature ES-BD.



BD-1C

## Series BD-QT (1/2" x 3/4") (3/4" x 3/4")

### Quarter-turn Brass Boiler Drain Shutoffs for Water Service

- Designed to provide the speed and convenience of quarter-turn ball valve performance for boiler drain or sill cock applications

#### Specifications

- Maximum Working Pressure: 200psi (13.8 bars) WOG.
- Maximum Working Temperature: 250°F (121°C).

#### Features

- 3/4" (20mm) Hose thread connection on outlet.
- Available 3/4" x 3/4" MIP or Solder.
- Positive shutoff.
- Quarter-turn ball valve design.
- Rugged aluminum Tee-handle design.



3/4" BD-QT

- Adjustable Teflon® stem packing.

For additional information, request literature S-BD-QT.

## Series FH, FHB (1/2" x 1/2", 3/4" x 1/2", 3/4" x 3/4")

### Frost-proof Automatic Draining Wall Hydrants

- Designed to provide freeze protection for external water supply
- 3/4" hose outlet provided with FH and FHB models
- FHB Series designed with backflow preventer to prevent contamination of the potable water supply from either backsiphonage or backpressure
- Residential and light commercial applications

#### Models

**FH-1-M1** – Sizes: 4" – 14" (100 – 350mm), 1/2" (15mm) copper or 1/2" (15mm) male IPS inlet.

**FH-2-M1** – Sizes: 4" – 14" (100 – 350mm), 3/4" (20mm) male IPS or 1/2" (15mm) female IPS inlet.

**FHB-1** – For wall sizes: 4" – 14" (100 – 350mm), 1/2" (15mm) copper or 1/2" (15mm) male IPS inlet.

**FHB-2** – For wall sizes: 4" – 14" (100 – 350mm), 3/4" (20mm) male IPS or 1/2" (15mm) female IPS inlet.

**FHB-2 3/4** – For wall sizes: 12" (300mm), 3/4" (20mm) copper inlet or 3/4" (20mm) male IPS.

For additional information, request literature ES-FH or ES-FHB.



FHB

#### Features

- Self-drains automatically
- Positive seat water shutoff
- ASSE 1019 approved FHB models only

## Series HY42

### Frost-proof Wall Hydrant with Backflow Preventer

- Automatic draining wall hydrant designed to blend with modern architecture
- Commercial and industrial applications

#### Models

**HY42** – Wall thickness sizes: 2 1/2" – 18" (65 – 450mm), 1" (25mm) male IPS or 3/4" (20mm) female IPS inlet connections.

For additional information, request literature ES-HY42.

#### Features

- Brass valve body
- Replaceable EPDM seat surface
- One piece valve plunger that controls flow and drainage



HY42

- Tamper-resistant tee key operates hydrant
  - Brass pipe casing
  - Chrome on brass exterior finish
- HY42 Box** – mounting box available

## Series SC (1/2", 3/4")

### Sill Cock Faucets

- Hose bibb type faucets with tee handle or handwheel

#### Specifications

- Maximum Working Pressure: 125psi (8.61 bars) CWP.

#### Models

##### Tee Handle Sillcock

**SC-1** – Size: 1/2" (15mm) no kink hose faucet dual inlet connection (male IPS or solder).

**SC-2** – Size: 3/4" (20mm) no kink hose solder connection x 3/4" (20mm) hose connection.

##### Lawn Faucet Sillcock with Cast Iron Handwheel

**SC-3** – Size: 1/2" or 3/4" (15 or 20mm), solder connection x 3/4" (20mm) hose end.

**SC-4** – Size: 1/2" or 3/4" (15 or 20mm), female IPS inlet connection x 3/4" (20mm) hose.

##### Hose Bibb Hex Shoulder Sillcock with Tee Handle

**SC-5** – Size: 1/2" (15mm) male IPS or solder inlet connection x 3/4" (20mm) hose.

**SC-6** – Size: 3/4" (20mm) male IPS 3/4" (20mm) hose connections.



SC-1

SC-3

SC-6

For additional information, request literature ES-SC.

# Series 375, 500, 750, 1000, 1250, 1500, 2000 (3/8" – 2")

## Heavy Duty Mechanical Float Valves for Controlling Water Flow

- Pipe-threaded for pipe connections and straight-pipe threaded for locknut
- Machined flange for support against tank wall
- All bronze body construction
- Serrated arms for quick easy adjustment of water level
- High tensile manganese bronze long and short arms
- No jam single lever action
- Replaceable seals

**Non-Threaded Outlet** – High capacity valve that can be tank wall-mounted. Inlet side has a machined flange and is female NPT pipe threaded for inlet connection and male straight-pipe threaded for locknut.

**Threaded Outlet (500TO, 750TO)** – High capacity valve with same inlet feature as standard valve, with MNPT thread on the outlet. Like the standard valves, this valve can be tank wall-mounted.

Maximum Pressure: 165psi.  
Maximum Temperature: 180°F.

For additional information, request literature F-FV.



500



500TO

## Heavy Duty Floats

### Copper

(CX, C4 through C8, C10 and C12)

- High grade copper construction
- Firmly bonded overlapping joints (lead free solder)
- Maximum Temperature: 200°F

### Plastic

(PX, P1, P6 through P8, P12 and P16)

- Non-electrolytic, highly corrosion resistant
- Unaffected by salts and caustic fluids
- All injection molded
- Maximum Temperature: 140°F.



CX



PX

For additional information, request literature F-FV.

# Series ST375, ST500, ST750, ST1000, ST1250, ST1500, ST2000 (3/8" – 2")

## Standard Duty Mechanical Float Valves for Controlling Water Flow

- No jam single lever action
- Replaceable seals.
- Cotter pin pivot arm assembly.
- Replaceable plungers.
- Maximum Working Pressure: 125psi.
- Maximum Temperature: 180°F.

- 3/8" – 1" – Bronze body with MNPT threaded inlet and outlet.
- 1 1/4" – 2" – Bronze body with female NPT inlet-open outlet.

For additional information, request literature F-FV.



ST-1500



ST-750

## Heavy Duty Cooler Valves

### Bronze Body

### Specifications

- Machined in-seat
- Buna N seals
- Adjustable brass arms
- Polyethylene float
- Maximum Working Pressure: 100psi.
- Maximum Temperature: 140°F.

### Model

**STD-CA** – 3/8" MIP OD x 1/8" FIP ID pipe connection.

**C3/8TF** – 3/8" copper tube compression inlet connection.

**C1/4TF-1** – 1/4" copper tube compression inlet connection.



STD-CA

**C1/4TFAEA** – 1/4" copper tube compression inlet connection.

For additional information, request literature F-FV.

# Tube Fitting Mini Cooler Valves

## Brass Body

- Machined in-seat
- Buna-N seals
- Adjustable brass arms
- Polyethylene float

## Models

**M<sup>1</sup>/<sub>4</sub>TF** – 1/4" copper tube compression inlet connection.

**M<sup>1</sup>/<sub>4</sub>TFSS** – 1/4" copper tube compression inlet connection.



M<sup>1</sup>/<sub>4</sub>"FSS

For additional information, request literature F-FV.

# RL600

## Automatic Livestock Watering Kits

- 1 1/2" MNPT threaded with 1/2" FNPT threaded inlet.
- Consists of RL600V nozzle and arm assembly, RL600SC stem and chain assembly and P6 float. For use on Rubbermaid® brand livestock tanks.
- RL600 plus universal tank adapter (No. UA600) for use in all livestock tanks.

## Features

- High capacity
- Easy installations
- Animal proof
- Resist freezing
- Durable



RL600

For additional information, request literature F-FV.

# Series SW, SS (3/8" – 3/4")

## Stop and Waste Shutoff Valves

- Available as stop and waste shutoffs or for shutoff only service

## Specifications

- Maximum Working Pressure: 150psi (10.3 bars) WOG.
- Maximum Temperature: 80°F (27°C).

## Stop and waste valves

## Models

**SWS** – Sizes: 3/8", 1/2", 3/4" (10, 15, 20mm) solder connections.

**SWC** – Sizes: 1/2", 3/4" (15, 20mm) compression ends.

**SWT** – Sizes: 1/2", 3/4" (15, 20mm) NPT female connections.

## Stop only valves

**SS** – Sizes: 1/2", 3/4" (15, 20mm) solder connections.

**SSC** – Sizes: 1/2", 3/4" (15, 20mm) compression ends.



SWC

**ST** – Sizes: 1/2", 3/4" (15, 20mm) NPT female connections.

**ST-C** – Sizes: 1/2", 3/4" (15, 20mm) NPT female connections with cross style handle.

For additional information, request literature ES-SS or ES-SW.

# Series WAMV (3/4" x 3/4", 1" x 3/4")

## Brass Angle Meter Valves

- For residential or light commercial incoming water supply service

## Models

**WAMV** – Size 3/4" flare x 3/4" female IPS (20 x 20mm) connections. Size 1" flare x 3/4" female IPS (25 x 20mm) connections.

**WAMV-W** – Size: 3/4" flare x 3/4" female IPS (20 x 20mm) connections with waste feature.

**WAMV-W** – Size: 1" flare x 3/4" female IPS (25 x 20mm) connections with waste feature. Maximum pressure 125psi (8.6 bars).

For additional information, request literature ES-WAMV.



WAMV

## Features

- Cast brass
- With or without waste feature

# Series WAS (1/2")

## Anti-sweat Valve for Water Closets

- Mixes hot water with cold supply water to avoid condensation build up on the outside of the water closet

## Specifications

- Maximum Temperature: 180°F (82°C).

## Models

**WAS** – Size 1/2" (15mm), compression ends or IPS male connections.



WAS

For additional information, request literature ES-WAS.

# Series 3000 (1/2" – 4")

## Dielectric Unions/Fittings

- Protects against destructive effect of galvanic and stray current corrosion
- For residential, commercial and industrial applications

### Specifications

- Supplied with GA gaskets suitable for water, air, oil, natural gas, gasoline, propane, kerosene, mineral oil and alkalis. For other applications, consult factory.
- Dielectric Unions are rated to 180°F (82°C) at 250psi (17.2 bars) conforming to ANSI B16.39. Pipe threads are in accordance with ANSI B2.1.
- Dielectric Flange Fittings are rated at 175psi (12.1 bars) conforming to B16.42 (iron), B16.24 (bronze).

### Standards

Unions meet the requirements of ANSI B16.39, including hydrostatic strength, tensile strength and air pressure testing.

Flange fittings conform to B16.42 (iron), B16.24 (bronze).

All pipe threads are in accordance with ANSI B2.1 and solder joints meet national plumbing standards.

Gray Iron . . . . .	ASTM A48-83
Malleable Iron Parts . . . . .	ASTM A197-79
Steel Parts . . . . .	ASTM A108
Brass Parts . . . . .	ASTM B16
Bronze Parts . . . . .	ASTM B584
Zinc Parts . . . . .	ASTM B633-85
Insulators . . . . .	Watts #1425
Standard Gasket A . . . . .	Buna

### Models

**3001A** – Sizes 1/2" – 2" (15 – 50mm), female iron pipe thread to solder connection.

**3002** – Sizes 1/2" x 3/8", 3/4" x 1/2", 1" x 3/4" (15 x 10, 20 x 15, 25 x 20mm), female iron pipe thread to reduced solder connection.

**3003** – Sizes 1/2" – 2" (15 – 50mm), female iron pipe thread to female brass pipe.

**3004** – Sizes 1/2" – 2" (15 – 50mm), female iron pipe thread to female iron pipe thread (galvanized).

**3005A** – Sizes 1/2" – 3/4" (15 – 20mm), male iron pipe thread to solder connection.

**3006** – Sizes 1/2" – 2" (15 – 50mm), female iron pipe thread to female iron pipe thread (black).

**3007** – Sizes 1/2" x 3/8" – 3/4" x 1/2" (15 x 10mm – 20 x 15mm), male iron pipe thread to female solder connection.

**3008** – Sizes 1/2" – 1" (15 – 25mm), female brass pipe thread to female solder connection.

### Flanged Fittings

**3100** – Sizes 2" – 4" (50 – 100mm), iron pipe thread to copper solder joint.

**3110** – Sizes 2 1/2" – 4" (65 – 100mm), solder copper fitting, bronze (125 class flange).

**3200** – Sizes 2" – 4" (50 – 100mm), iron pipe thread to iron pipe thread.

For additional information, request literature F-3000.



3002



3100

### Optional Gasket

**add Suffix:**

**GB** – EPDM gasket for use in steam or hot water applications up to 300°F (149°C) at 50psi (3.4 bars)

### Features

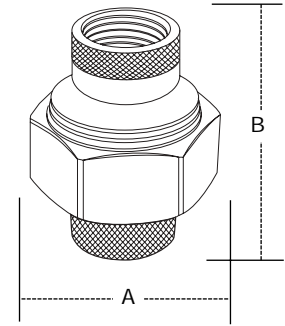
- Meets federal specifications for both tensile strength and thread end connections
- All dielectric unions individually factory certified to withstand a minimum of 600 volts on a dry line with no flashover
- Watts dielectric fittings/unions are designed and manufactured to the highest quality standards

### Bolt Insulators – for insulating flange bolts – Installation Kit

BOLT SIZE		QTY./CARTON	WEIGHT	
<i>in.</i>	<i>mm</i>		<i>lbs.</i>	<i>kg.</i>
1/2	15	100	1.75	.8
5/8	16	100	1.75	.8
3/4	20	100	2	.9
7/8	22	100	2	.9



MODEL	SIZE (DN)		DIMENSIONS (APPROX.)				WEIGHT	
	in.	mm	A		B		oz.	gm.
3001A	1/2	15	1 1/2	32	1 7/8	48	6.0	170
3001A	3/4	20	1 5/8	41	2 1/8	54	6.7	190
3001A	1	25	1 7/8	48	2 1/2	64	9.3	264
3001A	1 1/4	32	2 1/4	57	3	76	13.3	377
3001A	1 1/2	40	2 3/4	70	3	76	13.3	377
3001A	2	50	3 1/2	89	3	76	34.7	984
3002	1/2 x 3/8	15x10	1 1/2	38	1 7/8	48	6.7	190
3002	3/4 x 1/2	20x15	1 5/8	41	1 7/8	48	6.7	190
3002	1 x 3/4	25x20	1 7/8	48	2 1/2	64	10.7	303
3003	1/2	15	1 5/8	41	2 1/4	57	6.7	190
3003	3/4	20	1 7/8	48	2 1/4	57	14.7	417
3003	1	25	2 1/4	57	2 1/2	64	20.0	567
3003	1 1/4	32	2 3/4	70	2 3/4	70	26.7	757
3003	1 1/2	40	3 1/2	89	2 3/4	70	48.0	1366
3003	2	50	4 1/8	105	3 1/8	79	69.3	1965
3004	1/2	15	1 5/8	41	2 1/4	57	6.7	190
3004	3/4	20	1 7/8	48	2 1/4	57	14.7	417
3004	1	25	2 1/4	57	2 1/2	64	20.0	567
3004	1 1/4	32	2 3/4	70	2 3/4	70	26.7	757
3004	1 1/2	40	3 1/2	89	2 3/4	70	45.0	1276
3004	2	50	4 1/8	105	3 1/8	79	8.7	247
3005A	1/2	15	1 1/2	38	2 5/8	67	8.6	244
3005A	3/4	20	1 5/8	41	3	76	12.6	377
3006	1/2	15	1 5/8	41	2 1/4	57	6.7	190
3006	3/4	20	1 7/8	48	2 1/4	57	14.7	417
3006	1	25	2 1/4	58	2 1/2	64	20.0	567
3006	1 1/4	32	2 3/4	70	2 3/4	70	26.7	757
3006	1 1/2	40	3 1/2	89	2 3/4	70	45.3	1284
3006	2	50	4 1/8	105	3 1/8	79	64.0	1814
3007	1/2 x 3/8	15x10	1 1/2	38	2 5/8	67	6.7	190
3007	3/4 x 1/2	20x15	1 5/8	41	3	76	6.7	190
3008	1/2	15	1 1/2	38	1 7/8	48	6.7	190
3008	3/4	20	1 5/8	41	2 1/8	54	10.7	303
3008	1	25	1 7/8	48	2 1/2	64	14.7	417



**FLANGED FITTINGS**

3100	2	50	5 1/8	130	3 1/4	83	128	3629
3100	2 1/2	65	5 7/8	149	3 1/2	89	192	5443
3100	3	80	6 3/4	171	3 3/4	95	224	6350
3100	4	100	9 1/8	232	4 3/8	111	480	13608
3110	2 1/2	65	5 7/8	149	3 1/2	89	192	5443
3110	3	80	6 3/4	171	3 3/4	95	240	6804
3110	4	100	9 1/8	232	4 3/8	111	288	8165
3110LF	2 1/2	65	5 7/8	149	3 1/2	89	96	44
3110LF	3	80	6 3/4	171	3 1/2	89	120	54
3110LF	4	100	9 1/8	232	4 3/8	111	144	65
3200	2	50	5 1/8	130	2 1/8	54	128	3629
3200	2 1/2	65	5 7/8	149	2 3/4	70	192	5443
3200	3	80	6 3/4	171	2 3/4	70	240	6804
3200	4	100	9 1/8	232	3	76	496	14062

## Series CDC-S (3/8" – 3/4")

### Braided Stainless Steel Water Supply Connectors for Dishwashers

- Supplied with elbow fittings
- PVC tubing jacketed with braided stainless steel
- Superior resistance to chlorinated water
- Available lengths: 48", 60", 72"

#### Models

**CDC-S-CE** – Size: 3/8" (10mm) brass nut compression end fitting x 3/8" (10mm) compression end fitting with a brass male iron pipe thread elbow attached to the compression end fitting.

**CDC-S-FE** – Size: 1/2" (15mm) brass nut female iron pipe (FIP) thread connector x 3/8" (10mm) compression end fitting with a brass male iron pipe thread elbow attached to the compression end fitting.



CDC-S-FE

**Note:** National residential plumbing codes reference the maximum operating temperature as 140°F (60°C). Plumbing fixtures are designed to ANSI-ASME A112 18.1 at 125psi (8.6 bars). For other applications requiring higher operating temperatures or pressures, please contact Watts Regulator Technical Service at (978) 689-6130.

For additional information, request literature F-Flxcon.

## Series CFC-S (3/8" – 1/2")

### Flexible, Braided Stainless Steel Water Supply Connectors for Faucets

- PVC tubing jacketed with braided stainless steel
- Excellent for difficult installations involving misalignment of piping or cramped locations
- Superior resistance to vibration and bursting
- Available lengths: 12", 16", 20", 24", 30", 36", 48", 60", 72"

#### Models

**CFC-S-CC** – Size: 3/8" x 3/8" (10 x 10mm) brass nut compression end fittings.

**CFC-S-CF** – Size: 1/2" (15mm) brass compression end fitting x 1/2" (15mm) brass female iron pipe (FIP) thread fitting.

**CFC-S-CF** – Size: 3/8" (10mm) brass compression end fitting x 1/2" (15mm) brass FIP thread fitting.

**CFC-S-CF** – Size: 7/16" (11mm) brass compression end fitting x 1/2" (15mm) brass FIP thread fitting.

**CFC-S-FF** – Size: 1/2" x 1/2" (15 x 15mm) brass FIP thread fittings.

**CFC-S-TF** – Size: 1/2" (15mm) brass fine thread female end x 1/2" (15mm) brass FIP thread fitting.

**CFC-S-TF** – Size: 3/8" (10mm) brass fine thread female end x 1/2" (15mm) brass FIP thread fitting.



CFC-S-CC

#### Delta Style Faucet Connector:

**CFC-S-CO** – Size: 3/8" (10mm) brass compression end fitting x 3/8" (10mm) brass OD compression end fitting.

Maximum Pressure: 150psi (10.3 bars).  
Maximum Temperature: 180°F (82°C).

All hoses are NSF61 approved for safer drinking water.

**Note:** National residential plumbing codes reference the maximum operating temperature as 140°F (60°C). Plumbing fixtures are designed to ANSI-ASME A112 18.1 at 125psi (8.6 bars). For other applications requiring higher operating temperatures or pressures, please contact Watts Regulator Technical Service at (978) 689-6130.

For additional information, request literature F-Flxcon.

## Series CFC-P (3/8" – 1/2")

### Flexible, Reinforced PVC Water Supply Connectors for Faucets

- PVC tubing jacketed with braided nylon and an outer protective layer of PVC
- Resistance to the effects of vibration and bursting from extreme pressure surges
- Available lengths: 12", 16", 20", 24", 30", 36", 48", 60", 72"

#### Specifications

- Maximum Working Pressure: 125psi (8.6 bars).
- Maximum Temperature: 140°F (60°C).

#### Models

**CFC-P-CC** – Size: 3/8" x 3/8" (10 x 10mm) brass nut compression end fittings.

**CFC-P-CF** – Size: 3/8" (10mm) brass compression end fitting x 1/2" (15mm) brass female iron pipe (FIP) thread fitting.

**CFC-P-CF** – Size: 1/2" (15mm) brass compression end fitting x 1/2" (15mm) brass FIP thread fitting.

**CFC-P-CF** – Size: 7/16" (11mm) brass compression end fitting x 1/2" (15mm) brass FIP thread fitting.

**CFC-P-FF** – Size: 1/2" x 1/2" (15 x 15mm) brass FIP thread fittings.

**CFC-P-TF** – Size: 1/2" (15mm) brass fine thread FIP fitting x 1/2" (15mm) brass FIP thread fitting.



CFC-P-CF

**CFC-P-TF** – Size: 3/8" (10mm) brass fine thread FIP fitting x 1/2" (15mm) brass FIP thread fitting.

**Note:** National residential plumbing codes reference the maximum operating temperature as 140°F (60°C). Plumbing fixtures are designed to ANSI-ASME A112 18.1 at 125psi (8.6 bars). For other applications requiring higher operating temperatures or pressures, please contact Watts Regulator Technical Service at (978) 689-6130.

For additional information, request literature F-Flxcon.

# Model CIC-P (1/4")

## Flexible, Reinforced PVC Water Supply Connectors for Ice Makers

- PVC tubing jacketed with braided nylon and an outer protective layer of PVC
- Available lengths: 6', 10', 20'

### Specifications

- Maximum Working Pressure: 125psi (8.6 bars).
- Maximum Working Temperature: 140°F (60°C).

### Models

**CIC-P** – Size: 1/4" x 1/4" (8 x 8mm) brass compression end fittings.



CIC-P

**Note:** National residential plumbing codes reference the maximum operating temperature as 140°F (60°C). Plumbing fixtures are designed to ANSI-ASME A112 18.1 at 125psi (8.6 bars). For other applications requiring higher operating temperatures or pressures, please contact Watts Regulator Technical Service at (978) 689-6130.

For additional information, request literature F-Flxcon.

# Series CTC-S (3/8" – 1/2")

## Flexible, Braided Stainless Steel Water Supply Connectors for Toilets

- Superior hook-up for toilet water supply
- Resists damage from extreme pressure surges
- PVC tubing jacketed with braided stainless steel
- Available lengths: 6", 9", 12", 16", 20"

### Specifications

- Maximum Working Pressure: 150psi (10.3 bars).
- Maximum Working Temperature 180°F (82°C).

### Models

**CTC-S-CB** – Size: 3/8" (10mm) brass compression end fitting x 7/8" (22mm) ballcock end fitting.

**CTC-S-CB** – Size: 7/16" (11mm) brass compression end fitting x 7/8" (22mm) ballcock end fitting.

**CTC-S-CB** – Size: 1/2" (15mm) brass compression end fitting x 7/8" (22mm) ballcock end fitting.

**CTC-S-FB** – Size: 1/2" (15mm) brass female iron pipe (FIP) thread fitting x 7/8" (22mm) ballcock end fitting.

**CTC-S-TB** – Size: 3/8" (10mm) brass fine thread FIP end x 7/8" (22mm) ballcock end fitting.

**CTC-S-TB** – Size: 1/2" (15mm) brass fine thread FIP end x 7/8" (22mm) ballcock end fitting.



CTC-S-FB

**Note:** National residential plumbing codes reference the maximum operating temperature as 140°F (60°C). Plumbing fixtures are designed to ANSI-ASME A112 18.1 at 125psi (8.6 bars). For other applications requiring higher operating temperatures or pressures, please contact Watts Regulator Technical Service at (978) 689-6130.

For additional information, request literature F-Flxcon.

# Series CTC-P (3/8" – 7/8")

## Flexible, Reinforced PVC Water Supply Connectors for Toilets

- Efficient hook-up for water supply to toilet
- PVC tubing jacketed with braided nylon and an outer protective layer of PVC
- Available lengths: 6", 9", 12", 16", 20"

### Specifications

- Maximum Working Pressure: 125psi (8.6 bars).
- Maximum Working Temperature: 140°F (60°C).

### Models

**CTC-P-CB** – Size: 3/8" (10mm) brass compression end fitting x 7/8" (22mm) ballcock end fitting.

**CTC-P-CB** – Size: 7/16" (11mm) brass compression end fitting x 7/8" (22mm) ballcock end fitting.

**CTC-P-CB** – Size: 1/2" (15mm) brass compression end fitting x 7/8" (22mm) ballcock end fitting.

**CTC-P-TB** – Size: 3/8" (10mm) brass fine thread female iron pipe (FIP) fitting x 7/8" (22mm) ballcock end fitting.

**CTC-P-TB** – Size: 1/2" (15mm) brass fine thread FIP fitting x 7/8" (22mm) ballcock end fitting.

**CTC-P-FB** – Size: 1/2" (15mm) brass FIP thread fitting x 7/8" (22mm) ballcock end fitting.



CTC-P-CB

**Note:** National residential plumbing codes reference the maximum operating temperature as 140°F (60°C). Plumbing fixtures are designed to ANSI-ASME A112 18.1 at 125psi (8.6 bars). For other applications requiring higher operating temperatures or pressures, please contact Watts Regulator Technical Service at (978) 689-6130.

For additional information, request literature F-Flxcon.

## Series CWH-S (5/8" – 7/8")

### Flexible, Braided Stainless Steel Water Heater Connectors

- For connecting water heaters to the water supply
- Protects against the destructive effects of system pressure surges
- PVC tubing jacketed with braided SS
- Available lengths: 12", 15", 18", 24", 36", 48", 60"

#### Specifications

- Maximum Working Pressure: 150psi (10.3 bars).
- Maximum Working Temperature: 180°F (82°C).
- All hoses are NSF 61 approved for safer drinking water.

#### Models

**CWH-S-FF-L** – Size: 3/4" x 3/4" (20x20mm), brass female iron pipe (FIP) threaded ends.

**CWH-S-AF-L** – Size: 5/8" (16mm) compression end fitting x 3/4" (20mm) brass FIP threaded fitting.

**CWH-S-AA-L** – Size: 7/8" (22mm) compression end fitting x 3/4" (20mm) brass FIP threaded fitting.

**CWH-S-AM-L** – Size: 7/8" x 7/8" (22 x 22mm) compression end fittings.

**CWH-S-FM-L** – Size: 3/4" (20mm) brass FIP thread fitting x 3/4" (20mm) brass male iron pipe threaded fitting.

**CWH-S-AM-L** – Size: 7/8" (22mm) compression end fitting x 3/4" (20mm) brass male iron pipe threaded fitting.

**Note:** National residential plumbing codes reference the maximum operating temperature as 140°F (60°C). Plumbing fixtures are designed to ANSI-ASME A112 18.1 at 125psi (8.6 bars). For other applications requiring higher operating temperatures or pressures, please contact Watts Regulator Technical Service at (978) 689-6130.

For additional information, request literature F-Flxcon.



CWH-S-FF-L

## Series CWM-S (3/4" x 3/4")

### Flexible, Braided Stainless Steel Washing Machine Water Supply Connectors

- Full flow capacity
- Superior resistance to the destructive effects of vibration/extreme pressure surges caused by washing machine solenoid valves
- PVC tubing jacketed with braided stainless steel
- Available lengths: 48", 60", 72"

#### Specifications

- Maximum Working Pressure: 150psi (10.3 bars).
- Maximum Working Temperature: 180°F (82°C).

#### Models

**CWM-S-HH** – Size 3/4" x 3/4" (20 x 20mm) female hose bibb connections.

**CWM-S-HL** – Size 3/4" x 3/4" (20 x 20mm) female hose bibb connections with one connection secured to a 90° elbow.

**Note:** National residential plumbing codes reference the maximum operating temperature as 140°F (60°C). Plumbing fixtures are designed to ANSI-ASME A112 18.1 at 125psi (8.6 bars). For other applications requiring higher operating temperatures or pressures, please contact Watts Regulator Technical Service at (978) 689-6130.

For additional information, request literature F-Flxcon.



CWM-S-HL

# Series DPG1 (2" – 4")

## Bottom Entry Pressure Gauges

- Available in dial sizes 2", 2½", 3", 4"
- ¼" NPT connection
- Working temperature: -4°F to 176°F (-20°C to 80°C)



DPG1-2

MODEL	DIAL SIZE	SCALE	
DPG1-2	2"	0 – 15psi	0 – 103 kPa
DPG1-2	2"	0 – 30psi	0 – 207 kPa
DPG1-2	2"	0 – 60psi	0 – 413 kPa
DPG1-2	2"	0 – 100psi	0 – 689 kPa
DPG1-2	2"	0 – 160psi	0 – 11 bars
DPG1-2	2"	0 – 200psi	0 – 14 bars
DPG1-2	2"	0 – 300psi	0 – 21 bars
DPG1-2½	2½"	0 – 15psi	0 – 103 kPa
DPG1-2½	2½"	0 – 30psi	0 – 207 kPa
DPG1-2½	2½"	0 – 60psi	0 – 413 kPa
DPG1-2½	2½"	0 – 100psi	0 – 689 kPa
DPG1-2½	2½"	0 – 160psi	0 – 11 bars
DPG1-2½	2½"	0 – 200psi	0 – 14 bars
DPG1-2½	2½"	0 – 300psi	0 – 21 bars
DPG1-3	3"	0 – 15psi	0 – 103 kPa
DPG1-3	3"	0 – 30psi	0 – 207 kPa
DPG1-3	3"	0 – 60psi	0 – 413 kPa
DPG1-3	3"	0 – 100psi	0 – 689 kPa
DPG1-3	3"	0 – 160psi	0 – 11 bars
DPG1-3	3"	0 – 200psi	0 – 14 bars
DPG1-3	3"	0 – 300psi	0 – 21 bars
DPG1-4	4"	0 – 15psi	0 – 103 kPa
DPG1-4	4"	0 – 30psi	0 – 207 kPa
DPG1-4	4"	0 – 60psi	0 – 413 kPa
DPG1-4	4"	0 – 100psi	0 – 689 kPa
DPG1-4	4"	0 – 160psi	0 – 11 bars
DPG1-4	4"	0 – 200psi	0 – 14 bars
DPG1-4	4"	0 – 300psi	0 – 21 bars
DPG1-4	4"	0 – 600psi	0 – 41 bars
DPG1-4	4"	0 – 1000psi	0 – 69 bars

# Series DPG3 (1½" – 3")

## Center Back Entry Pressure Gauges

- Available in dial sizes 1½", 2", 2½", 3"
- ⅛", ¼" NPT connection
- Working temperature -4°F to 176°F (-20°C to 80°C)



DPG3

MODEL	DIAL SIZE	SCALE	
DPG3-1½	1½"	0 – 60psi	0 – 413 kPa
DPG3-1½	1½"	0 – 160psi	0 – 11 bars
DPG3-2	2"	0 – 15psi	0 – 103 kPa
DPG3-2	2"	0 – 30psi	0 – 207 kPa
DPG3-2	2"	0 – 60psi	0 – 413 kPa
DPG3-2	2"	0 – 100psi	0 – 689 kPa
DPG3-2	2"	0 – 160psi	0 – 11 bars
DPG3-2	2"	0 – 200psi	0 – 14 bars
DPG3-2	2"	0 – 300psi	0 – 21 bars
DPG3-2½	2½"	0 – 15psi	0 – 103 kPa
DPG3-2½	2½"	0 – 30psi	0 – 207 kPa
DPG3-2½	2½"	0 – 60psi	0 – 413 kPa
DPG3-2½	2½"	0 – 100psi	0 – 689 kPa
DPG3-2½	2½"	0 – 160psi	0 – 11 bars
DPG3-2½	2½"	0 – 200psi	0 – 14 bars
DPG3-2½	2½"	0 – 300psi	0 – 21 bars
DPG3-3	3"	0 – 15psi	0 – 103 kPa
DPG3-3	3"	0 – 30psi	0 – 207 kPa
DPG3-3	3"	0 – 60psi	0 – 413 kPa
DPG3-3	3"	0 – 100psi	0 – 689 kPa
DPG3-3	3"	0 – 160psi	0 – 11 bars
DPG3-3	3"	0 – 200psi	0 – 14 bars
DPG3-3	3"	0 – 300psi	0 – 21 bars

## Series DPG5 (2" – 3")

### Top Entry Pressure Gauges

- Available in dial sizes 2", 2½", 3"
- ⅛", ¼" NPT connection
- Working temperature -4°F to 176°F (-20°C to 80°C)



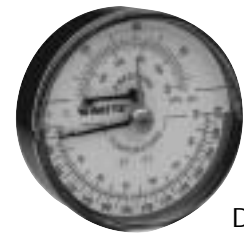
DPG5

MODEL	DIAL SIZE	SCALE	
DPG5-2 (⅛" connection)	2"	0 – 160psi	0 – 11 kPa
DPG5-2	2"	0 – 15psi	0 – 207 kPa
DPG5-2	2"	0 – 30psi	0 – 207 kPa
DPG5-2	2"	0 – 60psi	0 – 413 kPa
DPG5-2	2"	0 – 100psi	0 – 689 kPa
DPG5-2	2"	0 – 160psi	0 – 11 bars
DPG5-2	2"	0 – 200psi	0 – 14 bars
DPG5-2	2"	0 – 300psi	0 – 21 bars
DPG5-2½"	2½"	0 – 15psi	0 – 103kPa
DPG5-2½"	2½"	0 – 30psi	0 – 207kPa
DPG5-2½"	2½"	0 – 60psi	0 – 413kPa
DPG5-2½"	2½"	0 – 100psi	0 – 689kPa
DPG5-2½"	2½"	0 – 160psi	0 – 11 bars
DPG5-2½"	2½"	0 – 200psi	0 – 14 bars
DPG5-2½"	2½"	0 – 300psi	0 – 21 bars
DPG5-3	3"	0 – 15psi	0 – 103 kPa
DPG5-3	3"	0 – 30psi	0 – 207 kPa
DPG5-3	3"	0 – 60psi	0 – 413 kPa
DPG5-3	3"	0 – 100psi	0 – 689 kPa
DPG5-3	3"	0 – 160psi	0 – 11 bars
DPG5-3	3"	0 – 200psi	0 – 14 bars
DPG5-3	3"	0 – 300psi	0 – 21 bars

## Series DPTG1 and DPTG3 (2½" – 3")

### Combined Temperature and Pressure Gauges

- Series DPTG1 bottom entry 3" dial size
- Series DPTG3 center back entry, 2½" or 3" dial size
- Series DPTG3A center back entry with extended temperature element
- Series DPTG3L center back entry with extended mounting nut
- ½" NPT connection
- Working temperature 14°F to 176°F (-10°C to 80°C)



DPTG3

MODEL	DIAL SIZE	SCALE		TEMPERATURE RANGE °F	INCLUDES VR RETAINING VALVE
DPTG1-3	3"	0 – 50psi	0 – 345 kPa	60 – 320	N
DPTG1-3	3"	0 – 75psi	0 – 517 kPa	60 – 320	N
DPTG1-3	3"	0 – 100psi	0 – 689 kPa	60 – 320	N
DPTG3-2½"	2½"	0 – 50psi	0 – 340 kPa	60 – 320	Y
DPTG3-2½"	2½"	0 – 75psi	0 – 520 kPa	60 – 320	Y
DPTG3-2½"	2½"	0 – 200psi	0 – 14 bars	60 – 320	Y
DPTG3-2½"	2½"	0 – 75psi	0 – 520 kPa	60 – 320	N
DPTG3-3	3"	0 – 50psi	0 – 340 kPa	60 – 320	Y
DPTG3-3	3"	0 – 75psi	0 – 520 kPa	60 – 320	Y
DPTG3-3	3"	0 – 200psi	0 – 14 bars	60 – 320	Y
DPTG3A-2½"	2½"	0 – 75psi	0 – 520 kPa	60 – 320	N
DPTG3A-3	3"	0 – 75psi	0 – 520 kPa	60 – 320	N
DPTG3L-2½"	2½"	0 – 75psi	0 – 520 kPa	60 – 320	N
DPTG3L-3	3"	0 – 75psi	0 – 520 kPa	60 – 320	N

For assistance, contact your local authorized Watts agent or visit our website at [www.wattsreg.com](http://www.wattsreg.com)

## Series IWTG-Gas (2")

### Air Test Assembly Gauges

- Available in 2" dial size
- Includes 3/4" FPT x Schrader type air valve w/cap connection

MODEL	DIAL SIZE	SCALE	
		$^{\circ}F$	$^{\circ}C$
IWTG-Gas 2	2"	0 – 15psi	0 – 103 kPa
IWTG-Gas 2	2"	0 – 30psi	0 – 207 kPa
IWTG-Gas 2	2"	0 – 60psi	0 – 413 kPa
IWTG-Gas 2	2"	0 – 100psi	0 – 689 kPa



IWTG-Gas

## Series TB (1 1/2" – 4")

### Center Back Entry Bimetal Thermometers

- Available in dial sizes: 1 1/2", 2 1/2", 3", 4"
- Includes 1/2" NPT brass thermowell with set screw

MODEL	DIAL SIZE	SCALE		PROBE SIZE	
		$^{\circ}F$	$^{\circ}C$	<i>in.</i>	<i>mm</i>
TB-1 1/2-1	1 1/2"	32 – 176	0 – 80	1	25
TB-2 1/2-2	2 1/2"	32 – 140	0 – 60	2	51
TB-2 1/2-3	2 1/2"	32 – 248	0 – 120	3	76
TB-2 1/2-4	2 1/2"	32 – 248	0 – 120	4	102
TB-3-2	3"	-22 – 122	-30 – 50	2	51
TB-3-2	3"	32 – 140	0 – 60	2	51
TB-3-2	3"	32 – 248	0 – 120	2	51
TB-3-4	3"	-22 – 122	-30 – 50	4	102
TB-3-4	3"	32 – 140	0 – 60	4	102
TB-3-4	3"	32 – 248	0 – 120	4	102
TB-4-2	4"	-22 – 122	-30 – 50	2	51
TB-4-2	4"	32 – 140	0 – 60	2	51
TB-4-2	4"	32 – 248	0 – 120	2	51
TB-4-4	4"	-22 – 122	-30 – 50	4	102
TB-4-4	4"	32 – 140	0 – 60	4	102
TB-4-4	4"	32 – 248	0 – 120	4	102



TB

## Series TBR (3")

### Bottom Entry Bimetal Thermometers

- Available in 3" dial size
- Includes 1/2" NPT brass snap-in thermowell

MODEL	DIAL SIZE	SCALE		PROBE SIZE	
		$^{\circ}F$	$^{\circ}C$	<i>in.</i>	<i>mm</i>
TBR-3-2	3"	-22 – 122	-30 – 50	2	51
TBR-3-2	3"	32 – 248	0 – 120	2	51
TBR-3-3	3"	-22 – 122	-30 – 50	3	76
TBR-3-3	3"	32 – 140	0 – 60	3	76
TBR-3-4	3"	-22 – 122	-30 – 50	4	102
TBR-3-4	3"	32 – 140	0 – 60	4	102
TBR-3-4	3"	32 – 248	0 – 120	4	102



TBR



## Series TBP (2½")

### Pipe Mount Bimetal Thermometers

- Available in 2½" dial size
- Pipe mount – choice of spring mount (M) or strap mount (F)



TBP

MODEL	DIAL SIZE	SCALE	
		°F	°C
TBP-M-2½	2½"	32 – 248	0 – 120
TBP-F-2½	2½"	32 – 248	0 – 120

## Series TBC (2½")

### Center Back Entry Bimetal Thermometers

- Available in 2½" dial size
- Chimney mount-center back entry



TBC

MODEL	DIAL SIZE	SCALE		PROBE SIZE	
		°F	°C	in.	mm
TBC-2½-4	2½"	32 – 932	0 – 500	4	102
TBC-2½-6	2½"	32 – 932	0 – 500	6	152
TBC-2½-8	2½"	32 – 932	0 – 500	8	203
TBC-2½-12	2½"	32 – 932	0 – 500	12	305

## Series TA (9")

### Adjustable Angle Thermometers

- Available in 9" scale size



TA

MODEL	TEMPERATURE RANGE		STEM SIZE	
	°F	°C	in.	mm
TA-9-3½	-40 – 110	-40 – 43	3½	89
TA-9-3½	0 – 120	-17 – 48	3½	89
TA-9-3½	0 – 160	-17 – 71	3½	89
TA-9-3½	30 – 240	28 – 115	3½	89
TA-9-3½	30 – 300	28 – 148	3½	89
TA-9-6	-40 – 110	-40 – 43	6	152
TA-9-6	0 – 120	-17 – 48	6	152
TA-9-6	0 – 160	-17 – 71	6	152
TA-9-6	30 – 240	28 – 115	6	152
TA-9-6	30 – 300	28 – 148	6	152

## Series TL (5")

### Angle Thermometers

- Available in 5" scale size

MODEL	TEMPERATURE RANGE		STEM SIZE	
	°F	°C	in.	mm
TL-5-2	-40 – 110	-40 – 43	1 <sup>5</sup> / <sub>16</sub>	33
TL-5-2	20 – 180	-6 – 82	1 <sup>5</sup> / <sub>16</sub>	33
TL-5-2	30 – 240	28 – 115	1 <sup>5</sup> / <sub>16</sub>	33
TL-5-2	30 – 300	28 – 148	1 <sup>5</sup> / <sub>16</sub>	33

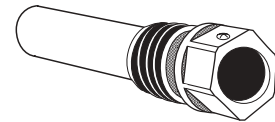


TL

## Series G-TB, G-TBR (1/2")

### Brass Thermowells

- Series G-TB with set screw for thermometer models TB and TBC
- Series G-TBR for thermometer model TBR



G-TB

## Series TP (1/4", 1/2")

### Test Plugs for Pressure and Temperature Test Readings

- Temperature and pressure probe inserts into the test plug for test readings
- No need to leave costly gauges in the supply line

#### Specifications

Used on various applications of gas, air, water or chemicals up to 500psi (34.5 bars). The pressure gauge adapter has a 0.076" (2mm) diameter probe of 300 series stainless steel with brass union nut. The probe operates in either 1/4" or 1/2" (8 or 15mm) NPT test plugs. Plug extensions are also available in 1/4" (8mm) and 1/2" (15mm) NPT sizes to accommodate insulated pipe situations.

**TP-N:** Neoprene (Blue) – Natural gas and petroleum products. Temperature range: -40°F to 200°F (-40°C to 93°C).

**TP-E:** EPDM (White) – Hot and cold water service. Temperature range: -40°F to 275°F (-40°C to 135°C).

**TP-V:** Viton (Green) – Hot oil service, chemical service. Temperature range: -10°F to 400°F (-23°C to 204°C).

For additional information, request literature ES-TP.



#### Features

- Economical means of balancing heating and air conditioning systems
- Eliminates shutting down system for temperature and pressure checks

## Trademarks

Celcon® is a registered trademark of Celanese, Limited.

Noryl® is a registered trademark of General Electric Company.

Teflon® is a registered trademark of the E.I. DuPont de Nemours & Company.

Viton® is a registered trademark of DuPont Dow Elastomers.



# For Technical Assistance Call Your Authorized Watts Agent.

			Telephone #	Fax #
	<b>HEADQUARTERS:</b> Watts Regulator Company	815 Chestnut St., North Andover, MA 01845-6098 U.S.A.	978 688-1811	978 794-1848
North East	Edwards, Platt & Deely, Inc.	271 Royal Ave., Hawthorne, NJ 07506	973 427-2898	973 427-4246
	Edwards, Platt & Deely, Inc.	368 Wyandanch Ave., North Babylon, NY 11703	631 253-0600	631 253-0303
	W. P. Haney Co., Inc.	51 Norfolk Ave., South Easton, MA 02375	508 238-2030	508 238-8353
Mid Atlantic	J. B. O'Connor Company, Inc.	P.O. Box 12927, Pittsburgh, PA 15241	724 745-5300	724 745-7420
	RMI	Glenfield Bus. Ctr., 2535 Mechanicsville Tpk., Richmond, VA 23223	804 643-7355	804 643-7380
	The Joyce Agency, Inc.	8442 Alban Rd., Springfield, VA 22150	703 866-3111	703 866-2332
	Vernon Bitzer Associates, Inc.	980 Thomas Drive, Warminster, PA 18974	215 443-7500	215 443-7573
	WMS Sales, Inc. (Main office)	9580 County Rd., Clarence Center, NY 14032	716 741-9575	716 741-4810
South East	Billingsley & Associates, Inc.	2728 Crestview Ave., Kenner, LA 70062-4829	504 602-8100	504 602-8106
	Billingsley & Associates, Inc.	478 Cheyenne Lane, Madison, MS 39110	601 856-7565	601 856-8390
	Francisco J. Ortiz & Co., Inc.	Charlyn Industrial Pk., Road 190 KM1.9 - Lot #8, Carolina, Puerto Rico 00983	787 769-0085	787 750-5120
	Mid-America Marketing, Inc.	203 Industrial Drive, Birmingham, AL 35211	205 879-3469	205 870-5027
	Mid-America Marketing, Inc.	1364 Foster Avenue, Nashville, TN 37210	615 259-9944	615 259-5111
	Mid-America Marketing, Inc.	5466 Old Hwy. 78, Memphis, TN 38118	901 795-0045	901 795-0394
	Smith & Stevenson Co., Inc.	4935 Chastain Ave., Charlotte, NC 28217	704 525-3388	704 525-6749
Target Marketing Enterprises, Inc.	118 West Grant St., Building M, Orlando, FL 32806	407 245-7838	407 245-7833	
	Watts Regulator Co.	2861-B Bankers Industrial Drive, Atlanta, GA 30360	770 209-3310	770 447-4583
North Central	Aspinall Associates, Inc.	6840 Hillsdale Court, Indianapolis, IN 46250	317 849-5757	317 845-7967
	Dave Watson Associates	1325 West Beecher, Adrian, MI 49221	517 263-8988	517 263-2328
	Disney McLane & Associates	428 McGregor Ave., Cincinnati, OH 45206	800 542-1682	877 476-1682
	BWA Company	17610 S. Waterloo Rd., Cleveland, OH 44119	216 486-1010	216 486-2860
	Mid-Continent Marketing Services Ltd.	1724 Armitage Ct., Addison, IL 60101	630 953-1211	630 953-1067
	Soderholm & Associates, Inc.	7150 143rd Ave. N.W., Anoka, MN 55303	763 427-9635	763 427-5665
	Stickler & Associates	333 North 121 St., Milwaukee, WI 53226	414 771-0400	414 771-3607
South Central	Hugh M. Cunningham, Inc.	13755 Benchmark, Dallas, TX 75234	972 888-3808	972 888-3838
	Mack McClain & Associates	11132 South Towne Square, Suite 202, St. Louis, MO 63123	314 894-8188	314 894-8388
	Mack McClain & Associates, Inc.	1450 NE 69th Place, Ste. 56 Ankeny, IA 50021	515 288-0184	515 288-5049
	Mack McClain & Associates, Inc.	15090 West 116th St., Olathe, KS 66062	913 339-6677	913 339-9518
	OK! Sales, Inc.	2200 Blue Creek Dr., Norman, OK 73026	405 360-6161	405 360-0092
	Phoenix Marketing, Ltd.	2416 Candelaria N.E., Albuquerque, NM 87107	505 883-7100	505 883-7101
Western	Delco Sales, Inc.	1930 Raymer Ave., Fullerton, CA 92833	714 888-2444	714 888-2448
	Delco Sales, Inc.	111 Sand Island Access Rd., Unit I-10, Honolulu, HI 96819	808 842-7900	808 842-9625
	Fanning & Associates, Inc.	6765 Franklin St., Denver, CO 80229-7111	303 289-4191	303 286-9069
	Hollabaugh Brothers & Associates	6915 South 194th St., Kent, WA 98032	253 867-5040	253 867-5055
	Hollabaugh Brothers & Associates	3028 S.E. 17th Ave., Portland, OR 97202	503 238-0313	503 235-2824
	P I R Sales, Inc.	3050 North San Marcos Place, Chandler, AZ 85225	480 892-6000	480 892-6096
	Preferred Sales	31177 Wiegman Road, Hayward, CA 94544	510 487-9755	510 476-1595
	R. E. Fitzpatrick Sales, Inc.	4109 West Nike Dr. (8250 South), West Jordan, UT 84088	801 282-0700	801 282-0600
Canada	Watts Industries (Canada) Inc. (Watts Regulator Co. Division)	5435 North Service Road, Burlington, Ontario L7L 5H7	905 332-4090	905 332-7068
	Con-Cur West Marketing, Inc.	#109-42 Fawcett Rd., Coquitlam, British Columbia V3K 6X9	604 540-5088	604 540-5084
	D.C. Sales, Ltd.	10-6130 4th St. S.E., Calgary, Alberta T2H 2A6	403 253-6808	403 259-8331
	D.C. Sales, Ltd.	11420 142 Street, Edmonton, Alberta T5M 1V1	780 496-9495	780 496-9621
	GTA Sales Team.	Greater Toronto Area	888 208-8927	888 479-2887
	Hydro-Mechanical Sales, Ltd.	3700 Joseph Howe Dr., Ste. 1 Halifax, Nova Scotia B3L 4H7	902 443-2274	902 443-2275
	Hydro-Mechanical Sales, Ltd.	297 Collishaw St., Ste. 7 (shipping) Moncton, New Brunswick E1C 9R2	506 859-1107	506 859-2424
	Hydro-Mechanical Sales, Ltd.	85 Tolt Rd., St. Phillips, Newfoundland A1B 3M7	709 895-0090	709 895-0091
	Le Groupe B.G.T., Inc.	23 du Buisson, Pont Rouge, Quebec G3H 1X9	418 832-2800	418 873-2505
	Le Groupe B.G.T., Inc.	86 des Entreprises #208, Boisbriand, Quebec J7G 2T3	450 434-9010	450 434-9848
	Mar-Win Agencies, Ltd.	1333 Clifton St., Winnipeg, Manitoba R3E 2V1	204 775-8194	204 786-8016
	Northern Mechanical Sales	P.O. Box 280 (mailing) 163 Pine St. (shipping), Garson, Ontario P3L 1S6	705 693-2715	705 693-4394
	Palser Enterprises, Ltd.	1885 Blue Heron Dr., #4, London, Ontario N6H 5L9	519 471-9382	519 471-1049
	RAM Mechanical Marketing	1301 Winnipeg St., Regina, Saskatchewan S4R 1K2	306 525-1986	306 525-0809
RAM Mechanical Marketing	510 Ave M South, Saskatoon, Saskatchewan S7M 2K9	306 244-6622	306 244-0807	
Walmar Mechanical Sales	24 Gurdwara Rd., Nepean, Ontario K2E 8B5	613 225-9774	613 225-0673	
0420	<b>EXPORT Hdqtrs.:</b> Watts Regulator Co.	815 Chestnut St., North Andover, MA 01845-6098 U.S.A.	978 688-1811	978 794-1848



Watts USA website: [www.wattsreg.com](http://www.wattsreg.com)  
Watts Canada website: [www.wattscanada.ca](http://www.wattscanada.ca)