Water Safety, Flow Control and Backflow Prevention Products
Condensed Catalog

watts.com
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?

Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong></td>
<td>Pressure Regulators &amp; Automatic Control Valves</td>
<td>4 – 20</td>
</tr>
<tr>
<td><strong>2</strong></td>
<td>Relief Valves</td>
<td>21 – 29</td>
</tr>
<tr>
<td><strong>3</strong></td>
<td>Water Heater Installation Products</td>
<td>30 – 38</td>
</tr>
<tr>
<td></td>
<td>(Drain Lines, Expansion Tanks, Water Heater Stands, Straps, Enclosures, WDS and TWH)</td>
<td></td>
</tr>
<tr>
<td><strong>4</strong></td>
<td>Backflow Preventers &amp; Accessories</td>
<td>39 – 67</td>
</tr>
<tr>
<td><strong>5</strong></td>
<td>Ball Valves</td>
<td>68 – 78</td>
</tr>
<tr>
<td><strong>6</strong></td>
<td>Gate / Globe / Check Valves</td>
<td>79 – 84</td>
</tr>
<tr>
<td><strong>7</strong></td>
<td>Strainers</td>
<td>85 – 89</td>
</tr>
<tr>
<td><strong>8</strong></td>
<td>Balancing &amp; Flow Measurement</td>
<td>90 – 91</td>
</tr>
<tr>
<td><strong>9</strong></td>
<td>Butterfly Valves</td>
<td>92 – 94</td>
</tr>
<tr>
<td><strong>10</strong></td>
<td>Hydronics / Steam Heating Products</td>
<td>95 – 108</td>
</tr>
<tr>
<td><strong>11</strong></td>
<td>Tempering Valves</td>
<td>109 – 112</td>
</tr>
<tr>
<td><strong>12</strong></td>
<td>Plumbing Specialties</td>
<td>113 – 121</td>
</tr>
<tr>
<td></td>
<td>(Wall Hydrants, Water Hammer Arrestors, Float Valves, Evaporative Cooler Kits, Trap Primers)</td>
<td></td>
</tr>
<tr>
<td><strong>13</strong></td>
<td>Dielectric Unions</td>
<td>122 – 123</td>
</tr>
<tr>
<td><strong>14</strong></td>
<td>Flexible Connectors</td>
<td>124 – 128</td>
</tr>
<tr>
<td><strong>15</strong></td>
<td>Gauges</td>
<td>129 – 135</td>
</tr>
<tr>
<td><strong>16</strong></td>
<td>Anti-Scale Systems</td>
<td>136</td>
</tr>
</tbody>
</table>
Series U5B-Z3 (½" - 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%Δ (see page 12)

Specifications

- Temperature Range: 33°F – 160°F (0.5°C – 71°C)
- Maximum Working Pressure: 300psi (20.7 bar)
- Adjustable Reduced Pressure Range: 25 – 75psi (172 – 517kPa)
- Standard Reduced Pressure Setting: 50psi (345kPa)

Standards


Models

U5B-Z3 – NPT threaded female union inlet x NPT female outlet w/built in thermal expansion bypass
U5B-S-Z3 – Solder Union inlet x NPT female outlet w/built in thermal expansion bypass
U5B-QC-Z3 – Single Union - Quick-Connect inlet end
5M3-Z6 – Water meter threaded connections and 7⅛" (190mm) lay length for new or existing meter box installations. For 3⁄8" (100mm), 5⁄8" x 3⁄4" (16 x 20mm) or 3⁄4" (20mm) meter setters or resetters

Options

add Suffix:

G  Gauge tapping
GG Gauge tapping and 160psi (11.0 bar) gauge
HP High pressure range 75 – 100psi (5.2 – 6.9 bar)
LP Low pressure range 10 – 35psi (69 – 241 kPa)

For additional information, request literature ES-U5

*NOTE: The bypass feature will not prevent the pressure relief valve from opening on the hot water supply system with pressure above 150psi (10.3 bar).

---

**Table: U5B-Z3 Models and Specifications**

<table>
<thead>
<tr>
<th>MODEL †</th>
<th>SIZE (IN)</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>mm</td>
</tr>
<tr>
<td>U5B-Z3</td>
<td>½</td>
<td>15</td>
<td>5</td>
<td>143</td>
<td>5</td>
<td>149</td>
</tr>
<tr>
<td>U5B-Z3</td>
<td>¾</td>
<td>20</td>
<td>6</td>
<td>157</td>
<td>6</td>
<td>175</td>
</tr>
<tr>
<td>U5B-Z3</td>
<td>1</td>
<td>25</td>
<td>6¾</td>
<td>168</td>
<td>7</td>
<td>187</td>
</tr>
<tr>
<td>U5B-Z3</td>
<td>1¼</td>
<td>32</td>
<td>7½</td>
<td>191</td>
<td>8</td>
<td>213</td>
</tr>
<tr>
<td>U5B-Z3</td>
<td>1½</td>
<td>40</td>
<td>9</td>
<td>240</td>
<td>9</td>
<td>238</td>
</tr>
<tr>
<td>U5B-Z3</td>
<td>2</td>
<td>50</td>
<td>10</td>
<td>276</td>
<td>12½</td>
<td>311</td>
</tr>
</tbody>
</table>

† Dimensions for all models are shown on literature ES-U5.
Series 25AUB-Z3 (½” – 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%Δ (see page 12)

Specifications

- Temperature Range: 33°F - 160°F (0.5°C - 71°C)
- Maximum Working Pressure: 300psi (20.7 bar)
- Adjustable Reduced Pressure Range: 25-75psi (172 - 517kPa)
- Standard Reduced Pressure Setting: 50psi (345kPa)

Standards


Models

25AUB-Z3 – NPT threaded female union inlet x NPT female outlet
25AUB-S-Z3 – Solder Union inlet x NPT female outlet
25AUB-QC-Z3 – Single Union – Quick-Connect union inlet
25AUB-DU-Z3 – Double Union – NPT threaded union female inlet and outlet
25AUB-S-DU-Z3 – 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
25AUB-DU-QC-Z3 – Double Union – Quick-Connect union inlet and outlet

Options

add Suffix:
G  Gauge tapping ½”
GG Gauge tapping and 160psi (11.0 bar) gauge
HP  High pressure range 75-125psi (5.2 – 8.6 bar)
LP  Low pressure range 10-35psi (69 – 241 kPa)
Z7  400psi (27.6 bar) initial pressure, ½” (20mm) models only

add Prefix:
LF  Lead Free* construction

For additional information, request literature ES-25AUB.

*The combined metal components of this product contacted by potable water contain less than one half of one percent (0.5%) of lead by weight.

**NOTE: The bypass feature will not prevent the pressure relief valve from opening on the hot water supply system with pressure above 150psi (10.3 bar).

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 epoxy coated spring cage and corrosion resistant adjusting & cage screws for accessible outdoor or pit installations

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
Series N45B-M1 (½” – 1”)
Water Pressure Reducing Valves

- Bronze body construction
- Ideal for residential and commercial applications
- Integral stainless steel strainer and built-in bypass
- Water savings up to 30%\(^\text{a}\) (see page 12)

Specifications
- Temperature Range: 33° F – 180° F (0.5°C - 82°C)
- Maximum Working Pressure: 400psi (27.6 bar)
- 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) and CSA Standard B356.
Certified by NSF to ANSI/NSF Standard 61-8 (LF N45B-M1 Models only). Listed by IAPMO, City of Los Angeles.

Models
N45B-M1 – NPT threaded female inlet x NPT female outlet
N45BU-M1 – NPT threaded union inlet x NPT female outlet
N45BU-S-M1 – Solder Union inlet x NPT female outlet
N45BU-QC-M1 – Single Union – Quick-Connect union inlet
N45BDU-M1 – Double Union – NPT threaded union female inlet and outlet
N45BDU-S-M1 – Double Union – Solder union inlet and outlet
N45BDU-PEX-M1 – Double Union – PEX union inlet and outlet
N45BDU-CPVC-M1 – Double Union – CPVC union inlet and outlet
N45BDU-QC-M1 – Double Union – Quick-Connect union inlet and outlet

Options
add Suffix:
G  Gauge tapping
GG  Gauge tapping and 160psi (11.0 bar) gauge

add Prefix:
LF  Lead Free\(*\) construction

For additional information, request literature ES-N45B

\*The combined metal components of this product contacted by potable water contain less than one half of one percent (0.5%) of lead by weight

**NOTE: The bypass feature will not prevent the pressure relief valve from opening on the hot water supply system with pressure above 150psi (10.3 bar).

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SIZE (DN)</th>
<th>IN.</th>
<th>MM</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>in.</td>
<td>in.</td>
<td>in.</td>
<td>lbs.</td>
</tr>
<tr>
<td>N45BDU-M1</td>
<td>½</td>
<td>15</td>
<td>119</td>
<td>6 ½</td>
<td>159</td>
<td>4 ¾</td>
<td>116</td>
<td>1 ½</td>
</tr>
<tr>
<td>N45BDU-M1</td>
<td>¾</td>
<td>20</td>
<td>119</td>
<td>6 ½</td>
<td>159</td>
<td>4 ¾</td>
<td>116</td>
<td>1 ½</td>
</tr>
<tr>
<td>N45BDU-M1</td>
<td>1</td>
<td>25</td>
<td>143</td>
<td>6 ½</td>
<td>159</td>
<td>4 ¾</td>
<td>116</td>
<td>1 ½</td>
</tr>
</tbody>
</table>

† 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 accessible outdoor or pit installations
- Water savings up to 30% (see page 12)

Specifications
- Temperature Range: 33°F – 180°F (0.5°C – 82°C)
- Maximum Working Pressure: 300psi (20.7 bar)
- 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
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

Options
add Suffix:
GG Gauge tapping and 160psi (11.0 bar) gauge

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

*NOTE: The bypass feature will not prevent the pressure relief valve from opening on the hot water supply system with pressure above 150psi (10.3 bar).

### 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 accessible outdoor or pit installations

### Specifications
- Temperature Range: 33°F – 180°F (0.5°C – 82°C)
- Maximum Working Pressure: 300psi (20.7 bar)
- 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
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

### Options
add Suffix:
- G Gauge tapping
- GG Gauge tapping and 160psi (11.0 bar) gauge

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

*NOTE: The bypass feature will not prevent the pressure relief valve from opening on the hot water supply system with pressure above 150psi (10.3 bar).

### Specifications
- Temperature Range: 33°F – 180°F (0.5°C – 82°C)
- Maximum Working Pressure: 300psi (20.7 bar)
- 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
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

### Options
add Suffix:
- G Gauge tapping
- GG Gauge tapping and 160psi (11.0 bar) gauge

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

*NOTE: The bypass feature will not prevent the pressure relief valve from opening on the hot water supply system with pressure above 150psi (10.3 bar).

### Specifications
- Temperature Range: 33°F – 180°F (0.5°C – 82°C)
- Maximum Working Pressure: 300psi (20.7 bar)
- 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
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

### Options
add Suffix:
- G Gauge tapping
- GG Gauge tapping and 160psi (11.0 bar) gauge

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

*NOTE: The bypass feature will not prevent the pressure relief valve from opening on the hot water supply system with pressure above 150psi (10.3 bar).
Series N45B-EZ-M1 (1/2" – 1")
Water Pressure Reducing Valves
• 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 12)

Specifications
• Temperature Range: 33°F – 180°F (0.5°C – 82°C)
• Maximum Working Pressure: 400psi (27.6 bar)
• 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
N45B-EZ-M1 – NPT threaded female inlet x NPT female outlet
N45BU-EZ-M1 – NPT threaded union inlet x NPT female outlet
N45BU-EZ-S-M1 – Solder Union inlet x NPT female outlet
N45BDU-EZ-M1 – Double Union – NPT threaded union female inlet and outlet
N45BDU-EZ-S-M1 – Double Union – Solder union inlet and outlet

Options
add Suffix:
G   Gauge tapping
GG  Gauge tapping and 160psi (11.0 bar) gauge

add Prefix:
LF  Lead Free* construction

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

*The combined metal components of this product contacted by potable water contain less than one half of one percent (0.5%) of lead by weight

**NOTE: The bypass feature will not prevent the pressure relief valve from opening on the hot water supply system with pressure above 150psi (10.3 bar).

<table>
<thead>
<tr>
<th>MODEL †</th>
<th>SIZE (DN)</th>
<th>DIMENSIONS (APPROX.)</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>in.</td>
<td>mm</td>
<td>in.</td>
</tr>
<tr>
<td>N45BDU-EZ-M1</td>
<td>1/2</td>
<td>15</td>
<td>41/8</td>
</tr>
<tr>
<td>N45BDU-EZ-M1</td>
<td>3/4</td>
<td>20</td>
<td>41/8</td>
</tr>
<tr>
<td>N45BDU-EZ-M1</td>
<td>1</td>
<td>25</td>
<td>51/8</td>
</tr>
</tbody>
</table>

† Dimensions for all models are shown on literature ES-N45B-EZ.
Series N45BDU-EZ (1¼” – 2”)
Water Pressure Reducing Valves

- Bronze body construction
- Ideal for residential and commercial applications
- Factory calibrated outlet pressure adjustment
- Easily adjustable pressure setting
- Water savings up to 30%Δ (see page 12)

Specifications

- Temperature Range: 33°F – 180°F (0.5°C – 82°C)
- Maximum Working Pressure: 300psi (20.7 bar)
- 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

add Suffix:
G  gauge tapping
GG gauge tapping and 160psi (11.0 bar) gauge

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

*NOTE: The bypass feature will not prevent the pressure relief valve from opening on the hot water supply system with pressure above 150psi (10.3 bar).

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*

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SIZE (DN)</th>
<th>A (in.)</th>
<th>B (in.)</th>
<th>C (in.)</th>
<th>D (in.)</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>N45BDU-EZ</td>
<td>1¼”</td>
<td>32</td>
<td>8½</td>
<td>213</td>
<td>9¼</td>
<td>240</td>
</tr>
<tr>
<td>N45BDU-EZ</td>
<td>1½”</td>
<td>40</td>
<td>8½</td>
<td>213</td>
<td>9½</td>
<td>244</td>
</tr>
<tr>
<td>N45BDU-EZ</td>
<td>2”</td>
<td>50</td>
<td>9¼</td>
<td>228</td>
<td>9½</td>
<td>251</td>
</tr>
<tr>
<td>N45BDU-EZ-S</td>
<td>1¼”</td>
<td>32</td>
<td>7½</td>
<td>201</td>
<td>9½</td>
<td>240</td>
</tr>
<tr>
<td>N45BDU-EZ-S</td>
<td>1½”</td>
<td>40</td>
<td>8½</td>
<td>207</td>
<td>9½</td>
<td>244</td>
</tr>
<tr>
<td>N45BDU-EZ-S</td>
<td>2”</td>
<td>50</td>
<td>9¼</td>
<td>235</td>
<td>9½</td>
<td>251</td>
</tr>
</tbody>
</table>

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
Series X65B (½" – 2")
Water Pressure Reducing Valves

- Ideal for residential or track housing segment
- Cartridge style valve
- Quick and easy installation or service in-line
- Orderable three ways: complete regulator, rough-in kit, cartridge assembly
- Sealed spring cage on all models for accessible outdoor or pit installations

Standards
Certified to ASSE Standard 1003, and listed by ASSE and IAPMO.

Models
X65B – NPT threaded female inlet x NPT female outlet
X65BU – NPT threaded union inlet x NPT female outlet
X65BUS – Solder union inlet x NPT female outlet
X65BDU – Double Union – NPT threaded union female inlet and outlet
X65BDUS – Double Union – Solder union inlet and outlet
X65BU-QC – Single Union – Quick-Connect union inlet x NPT female outlet*
X65BDU-QC – Double Union – Quick-Connect union inlet and outlet*
X65BDU-CPVC – Double Union – CPVC union inlet x CPVC union outlet**
X65BDU-PEX – Double Union – PEX union inlet x PEX union outlet*
X65B-HP – High Pressure – NPT threaded female inlet x NPT female outlet
*For sizes ½", ¾", 1 (15, 20, 25mm) only
**For sizes ¾", 1" (20, 25mm) only

Options
Add Suffix
G – Gauge tapping, 1/8" (3mm)
GG – Gauge tapping and 160psi (11.0 bar) gauge
HP – High pressure range 50–150psi (3.4 – 10.3 bar)

Features
- Cartridge style valve
- Double-union connections (inlet and outlet) option DU
- 100% balanced valve provides reliable flow performance
- Integral stainless steel strainer
- Thermoplastic seat
- Bronze body construction
- Serviceable in-line
- Bypass feature controls thermal expansion pressure*
- High-temperature resistant reinforced diaphragm for hot water
- Greater flow performance with lower fall off pressure for consistent operation

*NOTE: The bypass feature will not prevent the pressure relief valve from opening on the hot water supply system with pressure above 150psi (10.3 bar).

<table>
<thead>
<tr>
<th>SIZE (DN)</th>
<th>A (IN)</th>
<th>B (MAX STD)</th>
<th>B (MAX HP)</th>
<th>C</th>
<th>D (Dia)</th>
<th>E (Threaded)</th>
<th>E (Sweat)</th>
<th>E (GC)</th>
<th>F (Threaded)</th>
<th>F (Sweat)</th>
<th>F (GC)</th>
<th>WEIGHTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>mm</td>
<td>lbs.</td>
</tr>
<tr>
<td>½</td>
<td>15</td>
<td>3</td>
<td>76.7</td>
<td>5/8</td>
<td>137.7</td>
<td>6/16</td>
<td>169.9</td>
<td>1/16</td>
<td>32.8</td>
<td>2/16</td>
<td>61.2</td>
<td>3/16</td>
</tr>
<tr>
<td>¾</td>
<td>20</td>
<td>3/8</td>
<td>79.8</td>
<td>5/8</td>
<td>137.7</td>
<td>6/16</td>
<td>169.9</td>
<td>1/16</td>
<td>32.8</td>
<td>2/16</td>
<td>61.2</td>
<td>3/16</td>
</tr>
<tr>
<td>1</td>
<td>25</td>
<td>3/8</td>
<td>80.4</td>
<td>6/16</td>
<td>157.2</td>
<td>7/16</td>
<td>199.9</td>
<td>1/16</td>
<td>34.5</td>
<td>2/16</td>
<td>70.6</td>
<td>4/16</td>
</tr>
<tr>
<td>1 1/4</td>
<td>32</td>
<td>4/16</td>
<td>110.2</td>
<td>6/16</td>
<td>176.0</td>
<td>9/16</td>
<td>248.9</td>
<td>11/16</td>
<td>39.4</td>
<td>3/16</td>
<td>81.8</td>
<td>5/16</td>
</tr>
<tr>
<td>1 1/2</td>
<td>40</td>
<td>5/16</td>
<td>140.2</td>
<td>11/16</td>
<td>297.9</td>
<td>16/16</td>
<td>426.0</td>
<td>1/16</td>
<td>47.50</td>
<td>4/16</td>
<td>115.8</td>
<td>6/16</td>
</tr>
<tr>
<td>2</td>
<td>50</td>
<td>5/16</td>
<td>140.2</td>
<td>11/16</td>
<td>297.9</td>
<td>16/16</td>
<td>426.0</td>
<td>1/16</td>
<td>47.50</td>
<td>4/16</td>
<td>115.8</td>
<td>6/16</td>
</tr>
</tbody>
</table>
Series N55B-M1 (½" – 1")
Water Pressure Reducing Valves

- Bronze body construction
- Ideal for residential and commercial applications
- Integral stainless steel strainer and built-in bypass
- Water savings up to 30%Δ (see page 12)

Specifications

- Temperature Range: 33˚F – 180˚F (0.5°C – 82˚C)
- Maximum Working Pressure: 400psi (27.6 bar)
- Adjustable Reduced Pressure Range: 25-75psi (172 - 517kPa)
- Standard Reduced Pressure Setting: 50psi (345kPa)

Standards


Models

N55B-M1 – NPT threaded female inlet x NPT female outlet
N55BU-M1 – NPT threaded union inlet x NPT female outlet
N55BU-S-M1 – Solder Union inlet x NPT female outlet
N55BU-QC-M1 – Single Union x Quick-Connect union inlet
N55BDU-M1 – Double Union – NPT threaded union female inlet and outlet
N55BDU-S-M1 – Double Union – Solder union inlet and outlet
N55BDU-PEX-M1 – Double Union – PEX union inlet and outlet
N55BDU-CPVC-M1 – Double Union – CPVC union inlet and outlet
N55BDU-QC-M1 – Double Union – Quick-Connect union inlet and outlet

Options

add Suffix:
G  Gauge tapping
GG Gauge tapping and 160psi (11.0 bar) gauge
LP  Low pressure range 10 – 35psi (69 – 241 kPa)

add Prefix:
LF  Lead Free* construction

For additional information, request literature ES-N55B.

*The combined metal components of this product contacted by potable water contain less than one half of one percent (0.5%) of lead by weight

**NOTE: The bypass feature will not prevent the pressure relief valve from opening on the hot water supply system with pressure above 150psi (10.3 bar).

Features

- Double union inlet & outlet connections (option DU)
- 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 accessible outdoor or pit installations

<table>
<thead>
<tr>
<th>SIZE (DN)</th>
<th>DIMENSIONS (APPROX.)</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A  in.   mm</td>
<td>B  in.  mm</td>
</tr>
<tr>
<td>½</td>
<td>15  4½  103</td>
<td>6¼  159</td>
</tr>
<tr>
<td>¾</td>
<td>20  4¼  103</td>
<td>6¼  159</td>
</tr>
<tr>
<td>1</td>
<td>25  4½  124</td>
<td>6¼  159</td>
</tr>
</tbody>
</table>

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
Pressure Regulators & Automatic Control Valves

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com

Series N55B (1¼” – 2”)
Water Pressure Reducing Valves

- Bronze body construction
- Ideal for residential and commercial applications
- Sealed spring cage on all models for accessible outdoor or pit installations
- Water savings up to 30% Δ (see below)

Specifications
- Temperature Range: 33°F – 180°F (0.5°C – 82°C)
- Maximum Working Pressure: 300psi (20.7 bar)
- 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
N55B – NPT threaded female inlet x NPT female outlet
N55BU – NPT threaded union inlet x NPT female outlet
N55BU-S – Solder Union inlet x NPT female outlet
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 (11.0 bar) gauge

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

**NOTE: The bypass feature will not prevent the pressure relief valve from opening on the hot water supply system with pressure above 150psi (10.3 bar).**

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 accessible outdoor or pit installations

Δ 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”. 

---

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SIZE (OD)</th>
<th>DIMENSIONS (APPROX.)</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>A  in. mm</td>
<td>B  in. mm</td>
</tr>
<tr>
<td>N55BDU</td>
<td>1¼ 32</td>
<td>8¾ 213</td>
<td>10¾ 262</td>
</tr>
<tr>
<td>N55BDU</td>
<td>1½ 40</td>
<td>8¾ 213</td>
<td>10¾ 267</td>
</tr>
<tr>
<td>N55BDU</td>
<td>2 50</td>
<td>9 228</td>
<td>12¾ 319</td>
</tr>
<tr>
<td>N55BDU-S</td>
<td>1¼ 32</td>
<td>7¾ 201</td>
<td>10¾ 262</td>
</tr>
<tr>
<td>N55BDU-S</td>
<td>1½ 40</td>
<td>8¾ 207</td>
<td>10¾ 267</td>
</tr>
<tr>
<td>N55BDU-S</td>
<td>2 50</td>
<td>9¼ 235</td>
<td>12¾ 319</td>
</tr>
</tbody>
</table>

** 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 Bypass for Water Pressure Reducing Valves

Jumper kits are used in new construction as a temporary bypass, 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.

How to order jumper kits

Example: 3⁄4" JK P-345 S

<table>
<thead>
<tr>
<th>Size:</th>
<th>1⁄2&quot;, 3⁄4&quot;, 1&quot;, 1 1⁄4&quot;, 1 1⁄2&quot;, 2&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nipple Type:</td>
<td>B = Brass, P = Plastic</td>
</tr>
<tr>
<td>Fits Valve Model:</td>
<td>25 = 25AUB-Z3, 345 = N45, N55 (1⁄2&quot;, 1&quot;) 55 = N45, N55 (1 1⁄4&quot; - 2&quot;)</td>
</tr>
<tr>
<td>Connection:</td>
<td>M = Male brass solder, S = Female copper solder</td>
</tr>
</tbody>
</table>

Jumper Kit Exploded View

Kit consists of:
A = Union Nut (2)
B = Sweat Tailpiece (2)
C = Fiber Washer (2)
D = Jumper Nipple
E = Screen

For additional information, request literature ES-JumperKits.

JUMPER KITS COMPLETE KITS WITH PLASTIC NIPPLE

<table>
<thead>
<tr>
<th>Model</th>
<th>Size</th>
<th>in.</th>
<th>mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female x Female Copper Sweat Tailpiece</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JK-P-25 S</td>
<td>3⁄4&quot;</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>JK-P-345 S</td>
<td>3⁄4&quot;</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>JK-P-25 S</td>
<td>1&quot;</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>JK-P-345 S</td>
<td>1&quot;</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>JK-P-25 S</td>
<td>1 1⁄4&quot;</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>JK-P-55 S</td>
<td>1 1⁄4&quot;</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>JK-P-25 S</td>
<td>1 1⁄2&quot;</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>JK-P-55 S</td>
<td>1 1⁄2&quot;</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>JK-P-25 S</td>
<td>2&quot;</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>JK-P-55 S</td>
<td>2&quot;</td>
<td>50</td>
<td></td>
</tr>
</tbody>
</table>

| Female Copper Sweat x Male Brass Sweat Tailpiece |
| JK-P-345-FM S | 3⁄4" | 20 |
| JK-P-345-FM S | 1" | 25 |

| Male x Male Brass Sweat Tailpiece |
| JK-P-345-MM S | 1" | 25 |

COMPLETE KITS WITH BRASS NIPPLE

<table>
<thead>
<tr>
<th>Model</th>
<th>Size</th>
<th>in.</th>
<th>mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female x Female Copper Sweat Tailpiece</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JK-B-25 S</td>
<td>3⁄4&quot;</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>JK-B-345 S</td>
<td>3⁄4&quot;</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>JK-B-25 S</td>
<td>1&quot;</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>JK-B-345 S</td>
<td>1&quot;</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>JK-B-25 S</td>
<td>1 1⁄4&quot;</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>JK-B-55 S</td>
<td>1 1⁄4&quot;</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>JK-B-25 S</td>
<td>1 1⁄2&quot;</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>JK-B-55 S</td>
<td>1 1⁄2&quot;</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>JK-B-25 S</td>
<td>2&quot;</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>JK-B-55 S</td>
<td>2&quot;</td>
<td>50</td>
<td></td>
</tr>
</tbody>
</table>

Jumper Kits Include: Jumper Nipple, strainer screen, 2 fiber washers, 2 union nuts and tailpieces as described above.

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 (½” – 2½”)
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

Specifications
- Temperature Range: 33°F – 160°F (0.5°C – 71°C)
- Maximum Working Pressure: 300psi (20.7 bar)
- Adjustable Reduced Pressure Range: 25-75psi (172 – 517kPa)
- Standard Reduced Pressure Setting: 50psi (345kPa)
- Size ½” – 2” (15 – 50mm) have bronze body construction
- Size 2½” (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.

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

Options
add Suffix:
B  Built-in bypass feature
LP Low pressure range 10-35psi (69 – 241 kPa)
HP High pressure range ½”, ¾”, 1” (15, 20, 25mm) 50 – 145psi (3.4 – 10.0 bar);
1½” (32mm) 50 – 120psi (3.4 – 8.3 bar);
1½” – 2½” (40 – 65mm) 50 – 95psi (3.4 – 6.6 bar)

For additional information, request literature ES-223.

*NOTE: The bypass feature will not prevent the pressure relief valve from opening on the hot water supply system with pressure above 150psi (10.3 bar).

Models

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

Options
add Suffix:
B  Built-in bypass feature
LP Low pressure range 10-35psi (69 – 241 kPa)
HP High pressure range ½”, ¾”, 1” (15, 20, 25mm) 50 – 145psi (3.4 – 10.0 bar);
1½” (32mm) 50 – 120psi (3.4 – 8.3 bar);
1½” – 2½” (40 – 65mm) 50 – 95psi (3.4 – 6.6 bar)

For additional information, request literature ES-223.

*NOTE: The bypass feature will not prevent the pressure relief valve from opening on the hot water supply system with pressure above 150psi (10.3 bar).
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 (0.5°C – 71°C)
- Maximum Working Pressure: 300psi (20.7 bar)
- Adjustable Reduced Pressure Range: 25 – 75psi (172 – 517 kPa)
- Standard Reduced Pressure Setting: 50psi (345 kPa)

Models
- N223B – NPT threaded female inlet x NPT threaded female outlet
- N223B-S – NPT threaded female inlet x NPT threaded female outlet with strainer

Options
- add Suffix: HP High pressure range 75 – 125psi (517 – 861 kPa)

**NOTE: The bypass feature will not prevent the pressure relief valve from opening on the hot water supply system with pressure above 150psi (10.3 bar).**

For additional information, request literature ES-N223B.

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 bar) WSP
- Temperature Range: 33°F – 160°F (0.5°C – 71°C)
- Maximum Working Pressure: 175psi (12.1 bar)
- Adjustable Reduced Pressure Range: 25 – 75psi (172 – 517 kPa)
- Standard Reduced Pressure Setting: 50psi (345 kPa)
- Model N223FS includes strainer

For additional information, request literature ES-N223F.

Series 127W, F127W (3”, 4”)
High Capacity Water Pressure Reducing Valves

- Remote control water regulator
- Close pressure regulation
- Single seated

Models
- 127W – 3” (80mm) NPT threaded female inlet x female outlet connections, bronze body
- F127W – 3”, 4” (80, 100mm) flanged connections, iron body

Specifications
- Reduced Pressure Range: 25-100psi (172 – 690 kPa) depending on the supply pressure
- Temperature Range: 33°F – 160°F (0.5°C – 71°C)
- The 4” (100mm) size is tapped for the installation of a bypass line and an auxiliary regulator

For additional information, request literature ES-127W or ES-F127W.
Series N250 (1/2", 3/4")
Iron Body Water Pressure Reducing Valves
- 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 bar)
- Standard Reduced Pressure Setting: 50psi (345 kPa)
- Adjustable Reduced Pressure Range: 25 – 75psi (172 – 517 kPa)
- Temperature Range: 33°F – 160°F (0.5°C – 71°C)

Series 123LP (1/2", 3/4")
Water Pressure Reducing Valves
- NPT threaded female inlet and outlet connections
- Nominal size 1/2" (15mm) or 3/4" (20mm)
- Adjustable Pressure Range: 40 – 50psi (276 – 345 kPa)
- Temperature Range: 33°F – 140°F (0.5°C – 60°C)

Note: Cast Iron body regulators are not intended for buried or pit services.

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.
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: 1 1/4” – 24” (32mm – 600mm)
Angle Pattern: 1 1/2” – 12” (32mm – 300mm)
Body & Cover: Ductile Iron ASTM A536 64-45-12
Coatings: NSF Approved Fusion Bonded Epoxy Coated and Lined
Valve Trim: 1 1/4” – 8”: Stainless Steel 10” – 24”: Bronze
Elastomers: Buna-N (std)
Tubing/Fittings: Copper and Brass
Threaded: 400psi MWP (27.6 bar)
150 Flanged: 250psi MWP (17.2 bar)
300 Flanged: 400psi MWP (27.6 bar)

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.

Features
- Exclusive "Quad-Seal" seat disc Retained on 3 1/2 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 (⅛” – ½”)

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 ¼” low pressure gauge port and is available with all stainless steel construction, specify SS-263AP.

Specifications

- Sizes: ⅛”, ¼”, ⅜”, ½” (3-15mm)
- NPT threaded female inlet and outlet connections.
- Maximum Working Pressure: 300psi (20.7 bar)
- Maximum Temperature: 140°F (60°C).
- Available with Viton® trim.
- Specify suffix letter for reduced pressure range required.

<table>
<thead>
<tr>
<th>Model</th>
<th>SIZE (DN)</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>in. mm</td>
<td>in. mm</td>
<td>in. mm</td>
<td>in. mm</td>
<td>in. mm</td>
<td>oz. gm.</td>
</tr>
<tr>
<td>26A</td>
<td>⅛ 3</td>
<td>2¼ 54</td>
<td>⅝ 98</td>
<td>3 76</td>
<td>⅛ 22</td>
<td>16 454</td>
</tr>
<tr>
<td>26A</td>
<td>¼ 8</td>
<td>2¼ 54</td>
<td>⅝ 98</td>
<td>3 76</td>
<td>⅛ 22</td>
<td>16 454</td>
</tr>
<tr>
<td>26A</td>
<td>⅜ 10</td>
<td>2¼ 54</td>
<td>⅝ 98</td>
<td>3 76</td>
<td>⅛ 22</td>
<td>16 454</td>
</tr>
<tr>
<td>26A</td>
<td>½ 15</td>
<td>2¼ 54</td>
<td>⅝ 98</td>
<td>3 76</td>
<td>⅛ 22</td>
<td>16 454</td>
</tr>
<tr>
<td>263A</td>
<td>¼ 8</td>
<td>2¼ 54</td>
<td>¾ 124</td>
<td>3 100</td>
<td>⅛ 22</td>
<td>16 454</td>
</tr>
<tr>
<td>263A</td>
<td>⅜ 10</td>
<td>2¼ 54</td>
<td>¾ 124</td>
<td>3 100</td>
<td>⅛ 22</td>
<td>16 454</td>
</tr>
<tr>
<td>263A</td>
<td>½ 15</td>
<td>2¼ 54</td>
<td>¾ 100</td>
<td>3 100</td>
<td>⅛ 22</td>
<td>16 454</td>
</tr>
</tbody>
</table>

Models

- 26A 2-Way Regulator-Brass
- 263A 3-Way Regulator-Brass
- SS263A 3-Way Regulator-Stainless Steel

For additional information, request literature ES-26A, 263.

Series 560 (⅛” x ¼”, ⅜” x ⅜”)

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.

Models

- 560 – has female threaded ¼” and ⅜” (3 and 8mm) inlet and outlet connections.
- Female ⅛” (3mm) side tapping (plugged) for gauge. Initial pressures up to 300psi (20.7 bar). Maximum temperature 140°F (60°C).
- H560 – Water regulation for grid systems. ⅛” (20mm) female inlet and male outlet hose connections. Max. pressure 150psi (10.3 bar), 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.

For additional information, request literature ES-560/H560 or IS-IR-56/H560G.

Series IR-56 (⅛”)

Bronze Water Pressure Regulators

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

Specifications

- ⅛” (20mm) hose connection female inlet x male outlet.
- ⅛” (3mm) NPT female side tapping for gauge.
- Maximum Working Pressure: 150psi (10.3 bar).
- 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).

For additional information, request literature IS-IR-56/H560G.
Series P60 (¼”)
Mini Plastic Water Pressure Regulators

- Compact, superior corrosion resistant regulators
- For general purpose, OEM and irrigation applications
- Can be used with deionized water

Specifications
- ⅛” (8mm) NPT female connections
- Maximum Working Pressure: 300psi (20.7 bar)
- Maximum Temperature Range: 33°F – 150°F (0.5°C – 66°C)
- Reduced Pressure Range:
  - (A) 0 – 25psi (0 – 172 kPa);
  - (B) 0 – 60psi (0 – 413 kPa);
  - (C) 0 – 125psi (0 – 861 kPa)

For additional information, request literature ES-P60.

Series 215 (¼”, ⅜”)
Precision Regulator for Low Pressures

- 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

Specifications
- NPT threaded female inlet and outlet connections
- Maximum Working Pressure: 300psi (20.7 bar)
- Temperature Range: 0°F – 120°F (17.8°C – 49°C)
- 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.

Model 276H300, IWTG (¼”)
Water Pressure Test Gauges

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

Specifications
- ¼” (8mm) hose thread connection; 0 – 300psi (0 – 20.7 bar)
- NPT threaded female inlet and outlet connections
- Maximum Working Pressure: 300psi (20.7 bar)
- Temperature Range: 0°F – 120°F (17.8°C – 49°C)
- Reduced Pressure Ranges: Std. psi set at:
  - Suffix A for 0 – 8psi
  - Suffix B for 0 – 20psi
  - Suffix C for 0 – 50psi

For additional information, request literature F-Gauges.

Series 152A, 252A (⅛” – 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

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SIZE (DN)</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>152A</td>
<td>3 – 15</td>
<td>1⁄4 15</td>
<td>6 150</td>
<td>8 219</td>
<td>6 175</td>
<td>1 44</td>
</tr>
<tr>
<td>152A</td>
<td>3 – 15</td>
<td>¼  20</td>
<td>6 150</td>
<td>8 219</td>
<td>6 175</td>
<td>1 44</td>
</tr>
<tr>
<td>152A</td>
<td>3 – 15</td>
<td>1  25</td>
<td>7½ 191</td>
<td>9¼ 235</td>
<td>7¼ 184</td>
<td>2 50</td>
</tr>
<tr>
<td>152A</td>
<td>3 – 15</td>
<td>1¼ 32</td>
<td>7½ 191</td>
<td>9¼ 235</td>
<td>7¼ 184</td>
<td>2 50</td>
</tr>
<tr>
<td>152A</td>
<td>5 – 40</td>
<td>1½ 40</td>
<td>9 229</td>
<td>14 362</td>
<td>11½ 292</td>
<td>2½ 70</td>
</tr>
<tr>
<td>152A</td>
<td>5 – 40</td>
<td>1½ 40</td>
<td>9 229</td>
<td>14 362</td>
<td>11½ 292</td>
<td>2½ 70</td>
</tr>
<tr>
<td>252A</td>
<td>10 – 50</td>
<td>1½ 15</td>
<td>6 150</td>
<td>8 219</td>
<td>6 175</td>
<td>1 44</td>
</tr>
<tr>
<td>252A</td>
<td>10 – 50</td>
<td>1½ 15</td>
<td>6 150</td>
<td>8 219</td>
<td>6 175</td>
<td>1 44</td>
</tr>
<tr>
<td>152SS</td>
<td>10 – 50</td>
<td>1½ 15</td>
<td>6 150</td>
<td>8 219</td>
<td>6 175</td>
<td>1 44</td>
</tr>
<tr>
<td>152SS</td>
<td>10 – 50</td>
<td>1½ 15</td>
<td>6 150</td>
<td>8 219</td>
<td>6 175</td>
<td>1 44</td>
</tr>
</tbody>
</table>

For additional information, request literature ES-152A, ES-152SS.
Series 127 (1/2" – 4")
Process Steam Pressure Regulators

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

Quick Reference Capacity Chart

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

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SIZE (DN)</th>
<th>MAXIMUM CAPACITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>127</td>
<td>1/2</td>
<td>15 lbs./hr. 708 kgs./hr.</td>
</tr>
<tr>
<td>127</td>
<td>3/4</td>
<td>20 lbs./hr. 997 kgs./hr.</td>
</tr>
<tr>
<td>127</td>
<td>1</td>
<td>25 lbs./hr. 1467 kgs./hr.</td>
</tr>
<tr>
<td>127</td>
<td>1 1/4</td>
<td>32 lbs./hr. 1618 kgs./hr.</td>
</tr>
<tr>
<td>127</td>
<td>1 1/2</td>
<td>40 lbs./hr. 2186 kgs./hr.</td>
</tr>
<tr>
<td>127</td>
<td>2</td>
<td>50 lbs./hr. 3485 kgs./hr.</td>
</tr>
</tbody>
</table>

Specifications

- Sizes: 1/2" – 3" (15 – 80mm), bronze body with NPT threaded inlet and outlet connections
- Sizes: 1/2" – 3" (15 – 80mm) feature stainless steel discs
- Adjustable Reduced Pressure Range: 5 – 150 psi (0.3 – 10.3 bar) depending on size of the valve and supply pressure

For additional information, request literature F-127.
Series 174A (¾" – 2")
Model 374A (¾")
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

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 bar)

Models
174A – Sizes ¾" – 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.

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SIZE (IN)</th>
<th>A (IN. MM)</th>
<th>B (IN. MM)</th>
<th>C (IN. MM)</th>
<th>D (IN. MM)</th>
<th>E (IN. MM)</th>
<th>WEIGHT</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>174A</td>
<td>¾ 20</td>
<td>2½ 64</td>
<td>4½ 124</td>
<td>3½ 95</td>
<td>1½ 29</td>
<td>1½ 41</td>
<td>1.5</td>
<td>0.7</td>
</tr>
<tr>
<td>174A</td>
<td>1 25</td>
<td>3 76</td>
<td>5½ 149</td>
<td>4½ 111</td>
<td>1½ 38</td>
<td>1½ 48</td>
<td>3.1</td>
<td>1.4</td>
</tr>
<tr>
<td>174A</td>
<td>1¼ 32</td>
<td>4½ 121</td>
<td>8½ 216</td>
<td>6½ 162</td>
<td>2½ 54</td>
<td>2½ 60</td>
<td>6.3</td>
<td>2.8</td>
</tr>
<tr>
<td>174A</td>
<td>1½ 40</td>
<td>4½ 124</td>
<td>9½ 235</td>
<td>6½ 171</td>
<td>2½ 64</td>
<td>2½ 67</td>
<td>7.3</td>
<td>3.3</td>
</tr>
<tr>
<td>174A</td>
<td>2 50</td>
<td>6½ 165</td>
<td>10½ 260</td>
<td>7½ 184</td>
<td>3 76</td>
<td>3½ 86</td>
<td>13.8</td>
<td>6.2</td>
</tr>
<tr>
<td>374A</td>
<td>¾ 20</td>
<td>2½ 64</td>
<td>3 72</td>
<td>2½ 60</td>
<td>1½ 32</td>
<td>1½ 38</td>
<td>1.1</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Safety Relief Valves Settings and Relieving Capacities
(National Board Certified Ratings) BTU Steam Discharge Capacities (lbs./hr.)

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SIZE (IN)</th>
<th>30PSI</th>
<th>100PSI</th>
<th>125PSI</th>
<th>150PSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>174A</td>
<td>¾ 20</td>
<td>650,000</td>
<td>1,695,000</td>
<td>2,070,000</td>
<td>2,445,000</td>
</tr>
<tr>
<td>174A</td>
<td>1 25</td>
<td>1,005,000</td>
<td>2,635,000</td>
<td>3,215,000</td>
<td>3,795,000</td>
</tr>
<tr>
<td>174A</td>
<td>1¼ 32</td>
<td>1,682,000</td>
<td>4,399,000</td>
<td>5,370,000</td>
<td>6,340,000</td>
</tr>
<tr>
<td>174A</td>
<td>1½ 40</td>
<td>2,020,000</td>
<td>5,290,000</td>
<td>6,460,000</td>
<td>7,630,000</td>
</tr>
<tr>
<td>174A</td>
<td>2 50</td>
<td>3,815,000</td>
<td>9,970,000</td>
<td>12,170,000</td>
<td>14,370,000</td>
</tr>
<tr>
<td>374A</td>
<td>¾ 20</td>
<td>550,000</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

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

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 – 5.2 bar)

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

### Safety Relief Valves Settings and Relieving Capacities
(National Board Certified Ratings) BTU Steam Discharge Capacities (lbs./hr.)

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SIZE (DN)</th>
<th>30PSI</th>
<th>45PSI</th>
<th>50PSI</th>
<th>75PSI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>in. mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>740</td>
<td>3/4 x 1</td>
<td>20 x 25</td>
<td>925,000</td>
<td>1,245,000</td>
<td>1,352,000</td>
</tr>
<tr>
<td>740</td>
<td>1 x 1 1/4</td>
<td>25 x 32</td>
<td>1,300,000</td>
<td>1,750,000</td>
<td>1,899,000</td>
</tr>
<tr>
<td>740</td>
<td>1 1/4 x 1</td>
<td>32 x 40</td>
<td>2,105,000</td>
<td>2,830,000</td>
<td>3,075,000</td>
</tr>
<tr>
<td>740</td>
<td>1 1/2 x 2</td>
<td>40 x 50</td>
<td>2,900,000</td>
<td>3,903,000</td>
<td>4,237,000</td>
</tr>
<tr>
<td>740</td>
<td>2 x 2 1/2</td>
<td>50 x 65</td>
<td>5,250,000</td>
<td>7,067,000</td>
<td>7,672,000</td>
</tr>
</tbody>
</table>

**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

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 1/4" (32 x 40mm), and 1 1/2" x 2" (40 x 50mm)

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SIZE</th>
<th>ASME STEAM</th>
<th>DIMENSIONS (APPROX.)</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>B D E</td>
<td>lbs. kgs.</td>
</tr>
<tr>
<td></td>
<td>in</td>
<td>in. mm</td>
<td>in. mm</td>
<td>in. mm</td>
</tr>
<tr>
<td>315-M1</td>
<td>3/4 x 3/4</td>
<td>375</td>
<td>2 3/4</td>
<td>68</td>
</tr>
<tr>
<td>315-M1</td>
<td>3/4 x 3/4</td>
<td>450</td>
<td>2 3/4</td>
<td>71</td>
</tr>
<tr>
<td>415-M1</td>
<td>1 x 1</td>
<td>643</td>
<td>3 1/4</td>
<td>78</td>
</tr>
<tr>
<td>415-M1</td>
<td>1 1/4 x 1</td>
<td>1230</td>
<td>4 1/4</td>
<td>121</td>
</tr>
<tr>
<td>415</td>
<td>1 1/2 x 2</td>
<td>1860</td>
<td>5 1/4</td>
<td>138</td>
</tr>
</tbody>
</table>

Discharge Capacity lbs./hr. @ 15psi

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 bar)
- Fig. 41 – For ASME Section VIII steam service handling saturated steam to 250psi (17.2 bar)
- Fig. 41A – For ASME Section VIII service on air, gas and vapors to 250psi (17.2 bar)
- Saturated Steam Capacities; see tables on page 23
- Next day service available

For additional information, request literature PG-SSRV.
### Fig. 31 ASME Section I Series Valves Saturated Steam Capacities

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

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SET PRESSURE</th>
<th>INLET X OUTLET (IN.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>psi</td>
<td>kPa</td>
</tr>
<tr>
<td>Fig. 31</td>
<td>5*</td>
<td>34</td>
</tr>
<tr>
<td>Fig. 31</td>
<td>10*</td>
<td>69</td>
</tr>
<tr>
<td>Fig. 31</td>
<td>15</td>
<td>103</td>
</tr>
<tr>
<td>Fig. 31</td>
<td>20</td>
<td>138</td>
</tr>
<tr>
<td>Fig. 31</td>
<td>25</td>
<td>172</td>
</tr>
<tr>
<td>Fig. 31</td>
<td>30</td>
<td>207</td>
</tr>
<tr>
<td>Fig. 31</td>
<td>35</td>
<td>345</td>
</tr>
<tr>
<td>Fig. 31</td>
<td>40</td>
<td>483</td>
</tr>
<tr>
<td>Fig. 31</td>
<td>45</td>
<td>621</td>
</tr>
<tr>
<td>Fig. 31</td>
<td>50</td>
<td>759</td>
</tr>
<tr>
<td>Fig. 31</td>
<td>55</td>
<td>907</td>
</tr>
<tr>
<td>Fig. 31</td>
<td>60</td>
<td>1012</td>
</tr>
<tr>
<td>Fig. 31</td>
<td>65</td>
<td>1256</td>
</tr>
<tr>
<td>Fig. 31</td>
<td>70</td>
<td>1622</td>
</tr>
</tbody>
</table>

* 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)

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SET PRESSURE</th>
<th>INLET X OUTLET (IN.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>psi</td>
<td>kPa</td>
</tr>
<tr>
<td>Fig. 41</td>
<td>5*</td>
<td>34</td>
</tr>
<tr>
<td>Fig. 41</td>
<td>10*</td>
<td>69</td>
</tr>
<tr>
<td>Fig. 41</td>
<td>15</td>
<td>103</td>
</tr>
<tr>
<td>Fig. 41</td>
<td>20</td>
<td>138</td>
</tr>
<tr>
<td>Fig. 41</td>
<td>25</td>
<td>172</td>
</tr>
<tr>
<td>Fig. 41</td>
<td>30</td>
<td>207</td>
</tr>
<tr>
<td>Fig. 41</td>
<td>35</td>
<td>345</td>
</tr>
<tr>
<td>Fig. 41</td>
<td>40</td>
<td>483</td>
</tr>
<tr>
<td>Fig. 41</td>
<td>45</td>
<td>621</td>
</tr>
<tr>
<td>Fig. 41</td>
<td>50</td>
<td>759</td>
</tr>
<tr>
<td>Fig. 41</td>
<td>55</td>
<td>907</td>
</tr>
<tr>
<td>Fig. 41</td>
<td>60</td>
<td>1012</td>
</tr>
<tr>
<td>Fig. 41</td>
<td>65</td>
<td>1256</td>
</tr>
<tr>
<td>Fig. 41</td>
<td>70</td>
<td>1622</td>
</tr>
</tbody>
</table>

* 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)

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SET PRESSURE</th>
<th>INLET X OUTLET (IN.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>psi</td>
<td>kPa</td>
</tr>
<tr>
<td>Fig. 41A</td>
<td>5*</td>
<td>34</td>
</tr>
<tr>
<td>Fig. 41A</td>
<td>10*</td>
<td>69</td>
</tr>
<tr>
<td>Fig. 41A</td>
<td>15</td>
<td>103</td>
</tr>
<tr>
<td>Fig. 41A</td>
<td>20</td>
<td>138</td>
</tr>
<tr>
<td>Fig. 41A</td>
<td>25</td>
<td>172</td>
</tr>
<tr>
<td>Fig. 41A</td>
<td>30</td>
<td>207</td>
</tr>
<tr>
<td>Fig. 41A</td>
<td>35</td>
<td>345</td>
</tr>
<tr>
<td>Fig. 41A</td>
<td>40</td>
<td>483</td>
</tr>
<tr>
<td>Fig. 41A</td>
<td>45</td>
<td>621</td>
</tr>
<tr>
<td>Fig. 41A</td>
<td>50</td>
<td>759</td>
</tr>
<tr>
<td>Fig. 41A</td>
<td>55</td>
<td>907</td>
</tr>
<tr>
<td>Fig. 41A</td>
<td>60</td>
<td>1012</td>
</tr>
<tr>
<td>Fig. 41A</td>
<td>65</td>
<td>1256</td>
</tr>
<tr>
<td>Fig. 41A</td>
<td>70</td>
<td>1622</td>
</tr>
<tr>
<td>Fig. 41A</td>
<td>75</td>
<td>1988</td>
</tr>
<tr>
<td>Fig. 41A</td>
<td>80</td>
<td>2354</td>
</tr>
<tr>
<td>Fig. 41A</td>
<td>90</td>
<td>3006</td>
</tr>
</tbody>
</table>

* Capacities for 5 and 10psi are not certified by ASME/National Board.
Series 1L, 1XL, 10L and 100XL (½”, ¾”)
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/L100XL/ LLL100XL.

### 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 bar).
- Standard Pressure Relief Settings: 75psi (5.2 bar), 100psi (6.9 bar), 125psi (8.6 bar) or 150psi (10.3 bar)

---

**Series 210-5 (¾”)**
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

- **Models L210-5 M2, LL210-5 M2, LLL210-5 feature extended shanks for use with heaters containing up to 3” of insulation**

### Specifications
- **Tank connection** ¾” (20mm) NPT male
- **Gas inlet and outlet connection** ½” (15mm) NPT female

- **Design certified by CSA**
- **CSA ratings:** natural gas 150,000 BTU/hr., liquefied petroleum gas 243,000 BTU/hr

For additional information, request literature ES-210-5.
ASME Rated Series 40, 140, 240, 340, 342 (¼” – 2”)

Automatic Reating 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 bar). Standard settings: 75psi (5.2 bar); 100psi (6.9 bar); 125psi (8.6 bar); and 150psi (10.3 bar). See Dimensions/Wgts. chart on next page for inlet and outlet connection type and sizes.

Series 40, 140 nominal size ¼” (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 ¼” (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 1½” 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 1½” (40mm) size only. Pressure setting is 175psi (12.1 bar). 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.

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
## Relief Valves

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SIZE (DN)</th>
<th>THERMOSTAT LENGTH</th>
<th>DIMENSIONS (APPROX.)</th>
<th>WEIGHT</th>
<th>RATINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>CSA TEMP.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ASME PRESSURE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>STEAM RATING</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>BTU/hr.**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>@75psi set pressure</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>@150psi set pressure</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ASME PRESSURE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>STEAM RATING</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>BTU/hr.**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>@150psi set pressure</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ASME PRESSURE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>STEAM RATING</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>BTU/hr.**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>@150psi set pressure</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ASME PRESSURE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>STEAM RATING</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>BTU/hr.**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>@150psi set pressure</td>
</tr>
</tbody>
</table>

- 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 bar). Set @ 150psi (10.3 bar).

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
Series 3L, 53L (½", ¾")

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: ⅜" (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 bar). Standard setting 75psi (5.2 bar). Optional settings 100, 125, 150psi (6.9, 8.6, 10.3 bar). Used in conjunction with Model 210 gas shut off valve, p.17.

53 – without test lever.
- Sizes: ¼", ⅜" (15, 20mm), NPT male inlet x NPT female (drain) outlet
- Pressure Range: 75 – 175psi (5.2 – 12.1 bar)
- Standard pressure relief setting is 75psi (5.2 bar). Optional settings 100, 125 or 150psi (6.9, 8.6, or 10.3 bar)

53L – same as Model 3L except ¼" (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: ⅜" (15mm). Pressure relief set at 175psi (12.1 bar). UL Listed.

For more products to protect against thermal expansion, see pages 25 and 27.
For additional information, request literature ES-3L/53L or ES-FP53L.

Series 30 (½"

Pressure Relief Valves

- Pressure relief only.

30L – with test lever; not diaphragm activated. Nominal size: ½" (15mm), NPT male inlet x female (drain) outlet. Standard Pressure Setting: 75psi (5.2 bar). Optional settings 100, 125 and 150psi (6.9, 8.6, 10.3 bar).

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-30.

Series 530C (½" – ¾")

Calibrated Pressure Relief Valves

- Adjustable pressure relief range 50-175psi (3.4 – 12.1 bar)
- 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: ¼" or ⅜" (15 – 20mm), NPT male inlet x ¼" (15mm) NPT female (drain) outlet
- Maximum Working Pressure: 300psi (20.7 bar)
- Maximum Working Temperature: 180°F (82°C)

For additional information, request literature ES-530C.

Series H32 (½" – ¾")

Hose Connection Pressure Relief Valve

- Has a ⅜" hose connection inlet for ease of installation

Specifications
- Set at 80psi or 100psi (5.5 bar or 6.9 bar)
Model 5300A (½”)
Poppet-Type, Compact Bypass Relief Valve

- Bronze body construction
- “T” handle facilitates pressure adjustment

Specifications
- Nominal size: ½" (15mm), NPT male inlet x female outlet
- Pressure Range: 0 – 250psi (0 – 17.2 bar)

Series BP30 (½”)
Bypass 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 ½" (15mm), NPT male inlet x female outlet
- Pressure Range: 10 – 175psi (.069 – 12.1 bar)
- 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 bar)

For additional information, request literature ES-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 – 50 gallon tank size, 24" Square x 72½" Tall
  
  WPE-24 (1) – for 20 – 50 gallon tank size, 24" Cabinet w/o Venting or Louvers
  
  R-26 – for 20 – 65 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

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.
Series FS — Free Standing

- Allows safe placement of the water heater anywhere on the 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 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 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

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
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 WDS (¾", 1")

FloodSafe® Water Detector Shutoff

• Series WDS Floodsafe® Water Detector Shutoff protects the home or business owner from catastrophic damage due to a water heater leak. The Series WDS detects the presence of water on the floor (or in a drain pan) beneath the water heater and automatically shuts off the water supply and power source to the water heater. Models available for gas, electric, and oil fired water heaters.

Specifications

• Testable and Resettable: The FloodSafe® Water Detector Shutoff can be easily reset by the contractor, home or business owner or plumbing inspector to assure proper operation.
• Easily installed on new or existing water heaters.
  – No special piping is required.
  – Supplied with a Water Dam for concrete, linoleum, tile or other hard surface flooring.
  – Sized for ¾” or 1” (20 or 25mm) water supply lines.
  – Secure interlocking connector cables are unique to each connecting device.
  – Powered by a safe low-voltage power supply that plugs into a standard 120 VAC wall outlet and is wired using standard thermostat cable (supplied by installer).
• Employs state-of-the-art water detection technology (no terminals to corrode or to impair operation).
• Provides contacts for monitored alarm detection systems.

Mechanical

Maximum Pressure: 150psi (10.3 bar)
Maximum Temperature: 210°F (99°C)

Electrical

120 VAC, 70mA, 60Hz
Current draw: 50mA
Maximum Electric Water Heater current rating: 30A

Models

WDS-SP-L – Standing Pilot - left-hand thread
WDS-SP-R – Standing Pilot - right-hand thread
WDS-E220 – Electric - 220 VAC
WDS-SI – Spark Ignition/Oil Fired
WDS-BB – Battery backup
WDS-PV – Power vented

For additional information, request literature ES-WDS-BB Battery Backup or WDS-PV Power Pented.
Series TWH (3/4" and 1"

Tankless Water Heater Valves

Series TWH tankless water heater valves are designed to simplify the installation, maintenance and operation of tankless water heaters. For fast and trouble-free installation use a Series TWH to replace for unions, three tees, seven nipples, two ball valves two boiler drains, and two hose bib covers that are used in a typical tankless water heater installation.

Specifications
• FPT unions for connection to water heater (all models)
• FPT unions for connection to water lines (UT models)
• Quick-Connect end connections to water lines (QT models)
• FPT and sweat connections to water lines (UTS models)
• Full-port, quarter-turn ball valve with color-coded tee handle and union
• Quarter-turn purge and drain valve with hose connection and tethered brass cap
• Optional 3/4” pressure relief valve 150psi (10.3 bar)
• Optional integral spring check valve in cold water valves
• Hot and cold valves certified to NSF/ANSI 61
• Staggered connection points for ease of installation and access
• Valves are suitable for most tankless installations
• No additional adapters required
• 600 WOG rated

Models

Valve Sets
(One Hot Water and One Cold Water valve per set)

TWH-UT-HC – hot and cold water valve set, union connections
TWH-UT-HC-RV – hot and cold water valve set, union connections with relief valve
TWH-QC-HC – hot and cold water valve set, quick-connect x union end connections
TWH-QC-HC-RV – hot and cold water valve set, quick-connect x union end connections, with relief valve
TWH-UT-HCN – hot and cold water valve set, union connections, no check valve, no relief valve
TWH-UT-HCN-RV – hot and cold water valve set, union connections, no check valve, with relief valve
TWH-QC-HCN – hot and cold water valve set, quick-connect x union end connections, no check valve, no relief valve
TWH-FT-HCN – hot and cold water valve set, 3/4” FPT x union end connections, no check valve
TWH-FT-HCN-RV – hot and cold water valve set, 3/4” FPT x union end connections, with relief valve

Single Valves
(Hot or Cold)

TWH-UT-H – hot water shutoff valve, dual union connections
TWH-UT-C – cold water shutoff valve, dual union connections
TWH-UT-CN – cold water shutoff valve, dual union connections, no check valve
TWH-QC-H – hot water shutoff valve, union x quick-connect end connections
TWH-QC-C – cold water shutoff valve, integral check valve, quick-connect x union end connections
TWH-QC-CN – cold water shutoff valve, quick-connect x union end connections, no check valve
TWH-FT-H – hot water shutoff valve, 3/4” FPT x union end connections
TWH-FT-CN – cold water shutoff valve, 3/4” FPT x union end connections, no check valve
TWH-UT-H 1 Inch – hot water shutoff valve, dual union connections
TWH-UT-CN 1 Inch – hot water shutoff valve, dual unions, no check valve

For additional information, request literature ES-TWH.
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

Specifications
- Maximum Working Pressure: 200psi (13.8 bar)
- 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
- 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.

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SIZE (DN)</th>
<th>DIMENSIONS</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>in.</td>
<td>mm</td>
<td>in.</td>
</tr>
<tr>
<td>N36</td>
<td>1/2</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>N360</td>
<td>3/4</td>
<td>20</td>
<td>2</td>
</tr>
</tbody>
</table>

Series N360, N360I (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
- Can be mounted in a vertical or horizontal position

Specifications
- Maximum Working Pressure: 200psi (13.8 bar)
- 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
- 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-N360/N360I.

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SIZE (DN)</th>
<th>DIMENSIONS</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>in.</td>
<td>mm</td>
<td>in.</td>
</tr>
<tr>
<td>N360</td>
<td>1/2</td>
<td>15</td>
<td>1 1/2</td>
</tr>
<tr>
<td>N360</td>
<td>3/4</td>
<td>20</td>
<td>1 1/2</td>
</tr>
<tr>
<td>N360I</td>
<td>3/4</td>
<td>20</td>
<td>1 1/2</td>
</tr>
</tbody>
</table>
Models 100DT, 100DT-A (¾")

Drain Lines for T&P Relief Valves

- Connects to ¾" (20mm) temperature and pressure relief valve drain connections
- For use on T&P relief valves with up to 105,000 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" (1219mm)
100DT-72 – same as above except drop length is 72" (1829mm)
100DT-A60 – for use with top mounted relief valves. Drop length is 60" (1524mm)
100DT-A60-12 – for use with center top mounted relief valve. Drop length is 60" (1524mm)

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 (¾", 1")

Combination Ball Valve and Relief Valve

Specifications

- Maximum Working Temperature: 210°F (99°C)
- Maximum Working Pressure: Valve body rated to 400psi (27.6 bar)

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 bar) pressure setting
- Available with threaded, solder or PEX end connections

For additional information, request literature ES-BRV.

Available Models

<table>
<thead>
<tr>
<th>INLET</th>
<th>OUTLET</th>
<th>RELIEF OUTLET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweat</td>
<td>Sweat</td>
<td>PEX</td>
</tr>
<tr>
<td>Sweat</td>
<td>Sweat</td>
<td>Compression</td>
</tr>
<tr>
<td>Thread</td>
<td>Thread</td>
<td>Compression</td>
</tr>
<tr>
<td>PEX</td>
<td>PEX</td>
<td>Compression</td>
</tr>
<tr>
<td>PEX</td>
<td>Thread</td>
<td>PEX</td>
</tr>
<tr>
<td>PEX</td>
<td>Sweat</td>
<td>Compression</td>
</tr>
<tr>
<td>PEX</td>
<td>Sweat</td>
<td>PEX</td>
</tr>
<tr>
<td>Thread</td>
<td>PEX</td>
<td>Compression</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INLET</th>
<th>OUTLET</th>
<th>RELIEF OUTLET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweat</td>
<td>PEX</td>
<td>Compression</td>
</tr>
<tr>
<td>PEX</td>
<td>PEX</td>
<td>Compression</td>
</tr>
<tr>
<td>Sweat</td>
<td>Sweat</td>
<td>Barb</td>
</tr>
<tr>
<td>Thread</td>
<td>Thread</td>
<td>Barb</td>
</tr>
<tr>
<td>PEX</td>
<td>Thread</td>
<td>Barb</td>
</tr>
<tr>
<td>PEX</td>
<td>Thread</td>
<td>Barb</td>
</tr>
<tr>
<td>PEX</td>
<td>Sweat</td>
<td>Barb</td>
</tr>
<tr>
<td>PEX</td>
<td>PEX</td>
<td>Barb</td>
</tr>
<tr>
<td>Thread</td>
<td>PEX</td>
<td>Barb</td>
</tr>
<tr>
<td>PEX</td>
<td>PEX</td>
<td>Barb</td>
</tr>
<tr>
<td>Thread</td>
<td>PEX</td>
<td>Barb</td>
</tr>
</tbody>
</table>

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
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-DETA.

<table>
<thead>
<tr>
<th>MODEL</th>
<th>DET-5-M1</th>
<th>DET-12-M1</th>
<th>DET-20-M1</th>
<th>DET-35-M1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Pressure – psi</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>Max. Temperature – °F</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Tank Volume – Gal.</td>
<td>2.1</td>
<td>4.5</td>
<td>8.5</td>
<td>14.00</td>
</tr>
<tr>
<td>Tank Acceptance – Gal.</td>
<td>.85</td>
<td>1.8</td>
<td>3.2</td>
<td>5.6</td>
</tr>
<tr>
<td>Air Precharge – psi</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Connection Size – inches†</td>
<td>¼ Male</td>
<td>¼ Male</td>
<td>¼ Male</td>
<td>1 Female</td>
</tr>
<tr>
<td>Diameter – inches</td>
<td>8.5</td>
<td>10.0</td>
<td>12.5</td>
<td>16.0</td>
</tr>
<tr>
<td>Length – inches</td>
<td>11.5</td>
<td>115.0</td>
<td>19.2</td>
<td>21.7</td>
</tr>
<tr>
<td>Weight – lbs.</td>
<td>7</td>
<td>10</td>
<td>15</td>
<td>32</td>
</tr>
</tbody>
</table>

† – 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

Specifications
- Maximum Working Pressure: 150psi (10.3 bar) 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

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
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

Specifications

- Maximum Working Pressure: 150psi (10.3 bar)
- Maximum Temperature: 200°F (93°C)

For additional information, request literature ES-PLT.

<table>
<thead>
<tr>
<th>MODEL</th>
<th>PLT-5</th>
<th>PLT-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Pressure – psi</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>Max. Temperature °F</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Tank Volume – Gal.</td>
<td>2.1</td>
<td>4.5</td>
</tr>
<tr>
<td>Tank Acceptance – Gal.</td>
<td>1.26</td>
<td>2.8</td>
</tr>
<tr>
<td>Air Precharge – psi</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Connection Size – in.†</td>
<td>¾ Male</td>
<td>¾ Male</td>
</tr>
<tr>
<td>Diameter – inches</td>
<td>8</td>
<td>10.5</td>
</tr>
<tr>
<td>Length – inches</td>
<td>11</td>
<td>13.5</td>
</tr>
<tr>
<td>Weight – lbs.</td>
<td>5.5</td>
<td>10</td>
</tr>
</tbody>
</table>

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

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

Series CWH-S (⅝" – ⅞")
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 stainless steel

Models

CWH-S-FF-L – Size ¾" x ¾" (20 x 20mm), brass female iron pipe (FIP) threaded ends
CWH-S-AF-L – Size ¼" (16mm) compression end fitting x ¾" (20mm) brass FIP threaded fitting
CWH-S-AF-L – Size ½" (22mm) compression end fitting x ¾" (20mm) brass FIP threaded fitting
CWH-S-AA-L – Size ¾" x ¾" (22 x 22mm) compression end fittings
CWH-S-FM-L – Size ¾" (20mm) brass FIP thread fitting x ¾" (20mm) brass male iron pipe threaded fitting
CWH-S-AM-L – Size ¾" (20mm) compression end fitting x ¾" (20mm) brass male iron pipe threaded fitting

Specifications

Maximum Pressure: 150psi (10.3 bar)
Maximum Temperature: 180°F (82°C)
All hoses are NSF61 approved for safer drinking water

For additional information, request literature F-Flxcon.
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.

Benefits
Watts pre-engineered valve stations provide the following benefits:

- Reduction of installation time from days to hours, minimizing installation 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
- Maximum flow performance with low pressure drops
- Wide flow control ranges meet standard and 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)
- 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.

Series BIC-1000
Backflow Irrigation Control Stations

Series BIC-1000 Backflow Irrigation Control Stations combine the master valve, regulator valve, backflow preventer, preload valve and high-pressure lockout switch all in one easily located component. Constructed using best practice design principles, these systems maximize operating performance and reduce pipe breaks and leakage within the irrigation system. Watts BIC-1000 station minimizes system operating pressure during both the system operation as well as when there is no flow to the system to reduce water line breaks, has a single warranty policy and is pre-tested to ensure reliable operation "out of the crate".

Features
- Preload Pilot. The entire irrigation pressure piping system is maintained with a preload stand-by, field adjustable, low pressure control valve. This in combination with a higher set point on the regulator and master valve creates a buffer when turned on.
- High-Pressure Lockout Switch. When high pressure is detected, the switch will lock out the 24V circuit; making the system inoperable until the problem is addressed. This prevents high pressure shock and water hammer when the system is allowed to turn on.
- All components are flanged type, nut and bolt modular design for easy replacement.
- 24-hour monitoring system of the outlet pressure for excessive buildup above set operating pressure.
- Water is conserved by reducing or eliminating potential line breaks caused by high pressure. The master valve/regulator is installed at the backflow assembly which provides a shut-off and pressure control of the entire system.

For additional information, request literature F-BIC-1000.

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
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 backspionage and backpressure backflow

Specifications
• Temperature Range: 33°F – 110°F (0.5°C – 43°C)
• Maximum Working Pressure: 175psi (12.1 bar)

Models add Suffix:
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
BFG – 2½” – 8” UL/FM grooved gear operated butterfly valves with tamper switch
QT – 2½” – 3” quarter-turn ball valves

Available with grooved NRS gate valves - consult factory
Post indicator plate and operating nut available – consult factory
* Consult factory for dimensions

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
• Sizes 2½” – 3” (65 – 80mm) available with quarter-turn ball valve shutoffs

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

757, 757N

<table>
<thead>
<tr>
<th>SIZE (IN)</th>
<th>DIMENSIONS (APPROX.)</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C (OSY)</td>
<td>C (NRS)</td>
</tr>
<tr>
<td>in. mm</td>
<td>in. mm</td>
<td>in. mm</td>
</tr>
<tr>
<td>2½ 65</td>
<td>31 787</td>
<td>16 416</td>
</tr>
<tr>
<td>3 80 31½ 805 18½ 479 10½ 260 3½ 94 30½ 768 22½ 578 17½ 435 9½ 233 10½ 267 131 69 145 66 144 65 158 72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 100 33½ 856 22½ 578 12½ 310 4 102 33 838 24 610 18½ 470 9½ 252 11½ 284 161 73 161 73 184 85 184 85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 150 43½ 1105 30½ 765 16 406 5½ 140 44½ 1137 33½ 857 23½ 589 13½ 332 15 381 273 124 295 134 314 142 336 152</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 200 50 1270 37½ 959 19½ 506 6½ 170 54½ 1375 40 1032 27½ 697 15½ 399 17½ 437 438 199 480 218 513 233 555 252</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 250 57½ 1460 45½ 1162 23½ 605 8½ 208 66 1678 50 1270 32½ 826 17½ 440 20 508 721 327 781 233 555 252</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

757BFG, 757N BFG

<table>
<thead>
<tr>
<th>SIZE (IN)</th>
<th>DIMENSIONS (APPROX.)</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>in. mm</td>
<td>in. mm</td>
<td>in. mm</td>
</tr>
<tr>
<td>2½ 65</td>
<td>28 711 8 203 3½ 89 29½ 759 22 559 14½ 379 8½ 223 9½ 229 56 25 64 29</td>
<td></td>
</tr>
<tr>
<td>3 80 28½ 724 8½ 211 3½ 94 30½ 779 22½ 578 15½ 392 9½ 233 9½ 241 54 24 67 30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 100 29½ 741 8½ 227 3½ 94 31½ 811 24 610 16½ 412 9½ 252 10 254 61 28 84 38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 150 36½ 927 10 254 5 127 43½ 1097 33½ 857 19½ 500 13½ 332 10½ 267 117 53 157 71</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 200 43 1092 12½ 311 6½ 165 51½ 1297 40½ 1032 23½ 592 15½ 399 14½ 361 261 118 337 153</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

757QT

<table>
<thead>
<tr>
<th>SIZE (IN)</th>
<th>DIMENSIONS (APPROX.)</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>in. mm</td>
<td>in. mm</td>
<td>in. mm</td>
</tr>
<tr>
<td>2½ 65</td>
<td>28½ 735 4½ 124 3½ 97 30½ 768 24½ 622 16½ 421 11½ 289 10½ 285 8½ 211 35 16</td>
<td></td>
</tr>
<tr>
<td>3 80 30½ 767 4½ 122 3½ 98 30½ 768 24½ 622 17½ 437 11½ 258 10½ 285 8½ 217 45 21</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
**Series 774** (2½” – 12”)

**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 (0.5°C – 43°C)
- Maximum Working Pressure: 175psi (12.1 bar)

**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

Available with grooved NRS gate valves - consult factory*

Post indicator plate and operating nut available – consult factory*

* Consult factory for dimensions

---

**Features**

- 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

For additional information, request literature ES-774.

For WattsBox Enclosures, request literature ES-WB.

---

**Dimensions (Approx.)**

<table>
<thead>
<tr>
<th>Size (OD)</th>
<th>A</th>
<th>C (OSY)</th>
<th>D</th>
<th>G</th>
<th>L</th>
<th>P</th>
<th>M</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>2½”</td>
<td>65</td>
<td>38</td>
<td>965</td>
<td>6</td>
<td>238</td>
<td>3½</td>
<td>9</td>
<td>254</td>
</tr>
<tr>
<td>3</td>
<td>80</td>
<td>38</td>
<td>965</td>
<td>6</td>
<td>479</td>
<td>3¼</td>
<td>9</td>
<td>254</td>
</tr>
<tr>
<td>4</td>
<td>100</td>
<td>40</td>
<td>1016</td>
<td>6</td>
<td>578</td>
<td>4 ½</td>
<td>10</td>
<td>254</td>
</tr>
<tr>
<td>6</td>
<td>150</td>
<td>48½</td>
<td>1232</td>
<td>6</td>
<td>765</td>
<td>5 ½</td>
<td>15</td>
<td>381</td>
</tr>
<tr>
<td>8</td>
<td>200</td>
<td>52½</td>
<td>1334</td>
<td>6</td>
<td>959</td>
<td>6 ¼</td>
<td>15</td>
<td>381</td>
</tr>
<tr>
<td>10</td>
<td>250</td>
<td>55½</td>
<td>1410</td>
<td>8</td>
<td>605</td>
<td>7 ½</td>
<td>15</td>
<td>381</td>
</tr>
<tr>
<td>12</td>
<td>300</td>
<td>57½</td>
<td>1461</td>
<td>8</td>
<td>679</td>
<td>9 ½</td>
<td>15</td>
<td>381</td>
</tr>
</tbody>
</table>

**strainer Dimensions**

<table>
<thead>
<tr>
<th>Size (OD)</th>
<th>W/G</th>
<th>w/o Gates</th>
</tr>
</thead>
<tbody>
<tr>
<td>2½”</td>
<td>65</td>
<td>65</td>
</tr>
<tr>
<td>3</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>6</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>8</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>10</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>12</td>
<td>300</td>
<td>300</td>
</tr>
</tbody>
</table>

**Weight**

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
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 (0.5°C – 43°C)
- Maximum Working Pressure: 175psi (12.1 bar)

For additional information, request literature ES-709L.
For WattsBox Enclosures, request literature ES-WB.

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

<table>
<thead>
<tr>
<th>SIZE (DN)</th>
<th>A</th>
<th>C(OSY)</th>
<th>C(NRS)</th>
<th>D</th>
<th>L</th>
<th>R</th>
<th>T</th>
<th>M</th>
<th>N</th>
<th>*N1</th>
</tr>
</thead>
<tbody>
<tr>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>mm</td>
<td>in.</td>
</tr>
<tr>
<td>2½</td>
<td>65</td>
<td>39</td>
<td>991</td>
<td>16⅞</td>
<td>416</td>
<td>9⅞</td>
<td>238</td>
<td>3⅞</td>
<td>89</td>
<td>24</td>
</tr>
<tr>
<td>3</td>
<td>80</td>
<td>40</td>
<td>1016</td>
<td>18⅞</td>
<td>479</td>
<td>10⅞</td>
<td>260</td>
<td>3⅞</td>
<td>95</td>
<td>24</td>
</tr>
<tr>
<td>4</td>
<td>100</td>
<td>52</td>
<td>1321</td>
<td>22⅞</td>
<td>578</td>
<td>12⅞</td>
<td>310</td>
<td>4⅞</td>
<td>114</td>
<td>34</td>
</tr>
<tr>
<td>6</td>
<td>150</td>
<td>63⅞</td>
<td>1607</td>
<td>30⅞</td>
<td>765</td>
<td>16</td>
<td>406</td>
<td>5½</td>
<td>140</td>
<td>42½</td>
</tr>
<tr>
<td>8</td>
<td>200</td>
<td>75</td>
<td>1905</td>
<td>37⅞</td>
<td>959</td>
<td>19⅞</td>
<td>506</td>
<td>6½</td>
<td>168</td>
<td>52</td>
</tr>
<tr>
<td>10</td>
<td>250</td>
<td>90</td>
<td>2286</td>
<td>45⅞</td>
<td>1162</td>
<td>23⅞</td>
<td>605</td>
<td>8</td>
<td>203</td>
<td>64</td>
</tr>
</tbody>
</table>

*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 (0.5°C – 82°C); 2 1/2" – 3": 33°F – 110°F (0.5°C – 43°C) continuous, 140°F (60°C) intermittent
- Maximum Working Pressure: 175psi (12.1 bar)

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.

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
GoldenEagle®
Series 719 (½” – 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 (0.5°C – 82°C)
Maximum Working Pressure: 175psi (12.1 bar)

Models
add Suffix:
S = bronze strainer
LF = without shutoff valves
LH = locking handle ball valves
SH = stainless steel ball valve handles
HC = 2 ½” inlet/outlet fire hydrant fittings (2” valve)
QT = quarter-turn ball valves
C&T = testcock caps and tethers
add 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

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
- ½” – 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

<table>
<thead>
<tr>
<th>SIZE</th>
<th>DIMENSIONS (APPROX.)</th>
<th>STRAINER DIMENSIONS</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>½</td>
<td>15</td>
<td>9¼</td>
<td>251</td>
</tr>
<tr>
<td>¾</td>
<td>20</td>
<td>12½</td>
<td>314</td>
</tr>
<tr>
<td>1</td>
<td>25</td>
<td>14½</td>
<td>376</td>
</tr>
<tr>
<td>1½</td>
<td>32</td>
<td>18½</td>
<td>480</td>
</tr>
<tr>
<td>2</td>
<td>40</td>
<td>18½</td>
<td>480</td>
</tr>
<tr>
<td>2½</td>
<td>50</td>
<td>21½</td>
<td>538</td>
</tr>
</tbody>
</table>

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
SilverEagle™
Series 757DCDA, 757NDCDA (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

Specifications
- Temperature Range: 33°F – 110°F (0.5°C – 43°C)
- Maximum Working Pressure: 175psi (12.1 bar)

Models
add Suffix:
OSY – UL/FM outside stem and yoke resilient seated gate valves
BFG – 2½” - 8” (65 – 200mm) UL/FM grooved gear operated butterfly valves with tamper switch
CFM – cubic feet per minute meter
GPM – gallons per minute meter
*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
Available with grooved NRS gate valves - consult factory*
Post indicator plate and operating nut available – consult factory*
* Consult factory for dimensions

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 shuttoffs
- May be used for horizontal, vertical or N pattern installations
- Replaceable check disc rubber
For additional information, request literature literature ES-757DCDA/757NDCDA.
For WattsBox Enclosures, request literature ES-WB.

### 757DCDA, 757NDCDA

<table>
<thead>
<tr>
<th>SIZE (DN)</th>
<th>DIMENSIONS (APPROX.)</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>in.</td>
<td>mm</td>
<td>in.</td>
</tr>
<tr>
<td>2½ 65</td>
<td>31 787</td>
<td>16 416</td>
</tr>
<tr>
<td>3 80</td>
<td>31 1/4 805</td>
<td>18 479</td>
</tr>
<tr>
<td>4 100</td>
<td>33 5/8 856</td>
<td>22 578</td>
</tr>
<tr>
<td>6 150</td>
<td>43 1/2 1105</td>
<td>30 765</td>
</tr>
<tr>
<td>8 200</td>
<td>50 1270</td>
<td>37 959</td>
</tr>
<tr>
<td>10 250</td>
<td>57 1460</td>
<td>45 1162</td>
</tr>
</tbody>
</table>

### 757DCDA BFG, 757NDCDA BFG

<table>
<thead>
<tr>
<th>SIZE (DN)</th>
<th>DIMENSIONS (APPROX.)</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>in.</td>
<td>mm</td>
<td>in.</td>
</tr>
<tr>
<td>2½ 65</td>
<td>28 711</td>
<td>8 203</td>
</tr>
<tr>
<td>3 80</td>
<td>28 1/2 724</td>
<td>8 1/4 211</td>
</tr>
<tr>
<td>4 100</td>
<td>30 1/2 741</td>
<td>8 1/4 227</td>
</tr>
<tr>
<td>6 150</td>
<td>36 1/2 927</td>
<td>10 254</td>
</tr>
<tr>
<td>8 200</td>
<td>43 1092</td>
<td>12 311</td>
</tr>
</tbody>
</table>

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
Series 774DCDA (2½" – 12"
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

Specifications
- Temperature Range: 33°F – 110°F (0.5°C – 43°C)
- Maximum Working Pressure: 175psi (12.1 bar)

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
Available with grooved NRS gate valves - consult factory*
Post indicator plate and operating nut available – consult factory*
* Consult factory for dimensions

Features
- 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 ½" x ¾" 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.
For WattsBox Enclosures, request literature ES-WB.

### 774DCDA

<table>
<thead>
<tr>
<th>SIZE (DN)</th>
<th>A (in)</th>
<th>C (OSY)</th>
<th>D (in)</th>
<th>G (in)</th>
<th>L (in)</th>
<th>P (in)</th>
<th>DIMENSIONS (APPROX.)</th>
<th>WEIGHTS w/ Gates</th>
<th>w/o Gates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>in.</td>
<td>in.</td>
<td>in.</td>
<td>in.</td>
<td>in.</td>
<td>in.</td>
<td>w Gates</td>
<td>lb.</td>
<td>kgs.</td>
</tr>
<tr>
<td>2½</td>
<td>65</td>
<td>38</td>
<td>965</td>
<td>16½</td>
<td>416</td>
<td>3½</td>
<td>89</td>
<td>10</td>
<td>254</td>
</tr>
<tr>
<td>3</td>
<td>80</td>
<td>38</td>
<td>965</td>
<td>22½</td>
<td>578</td>
<td>3½</td>
<td>95</td>
<td>10</td>
<td>254</td>
</tr>
<tr>
<td>4</td>
<td>100</td>
<td>40</td>
<td>1016</td>
<td>22½</td>
<td>578</td>
<td>3½</td>
<td>114</td>
<td>10</td>
<td>254</td>
</tr>
<tr>
<td>6</td>
<td>150</td>
<td>48½</td>
<td>1232</td>
<td>30½</td>
<td>765</td>
<td>5½</td>
<td>140</td>
<td>15</td>
<td>381</td>
</tr>
<tr>
<td>8</td>
<td>200</td>
<td>52½</td>
<td>1334</td>
<td>37½</td>
<td>959</td>
<td>6½</td>
<td>171</td>
<td>15</td>
<td>381</td>
</tr>
<tr>
<td>10</td>
<td>250</td>
<td>55½</td>
<td>1410</td>
<td>45½</td>
<td>1162</td>
<td>8</td>
<td>200</td>
<td>15</td>
<td>381</td>
</tr>
<tr>
<td>12</td>
<td>300</td>
<td>57½</td>
<td>1461</td>
<td>53½</td>
<td>1349</td>
<td>9½</td>
<td>241</td>
<td>15</td>
<td>381</td>
</tr>
</tbody>
</table>

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
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

Specifications
- Temperature Range: 33°F – 110°F (0.5°C – 43°C)
- Maximum Working Pressure: 175psi (12.1 bar)

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 ¾” x ¾” (16 x 19mm) meter Model 25, bronze
- No special tools required for servicing

### Specifications

<table>
<thead>
<tr>
<th>Size (DN)</th>
<th>A (in.)</th>
<th>C (in.)</th>
<th>D (in.)</th>
<th>L (in.)</th>
<th>R (in.)</th>
<th>T (in.)</th>
<th>Weight (lbs.)</th>
<th>Weight (kgs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>80</td>
<td>40</td>
<td>1016</td>
<td>18½</td>
<td>479</td>
<td>3½</td>
<td>95</td>
<td>24</td>
</tr>
<tr>
<td>4</td>
<td>100</td>
<td>52</td>
<td>1321</td>
<td>22½</td>
<td>578</td>
<td>4½</td>
<td>114</td>
<td>34</td>
</tr>
<tr>
<td>6</td>
<td>150</td>
<td>63¼</td>
<td>1607</td>
<td>30¼</td>
<td>765</td>
<td>5½</td>
<td>140</td>
<td>42¼</td>
</tr>
<tr>
<td>8</td>
<td>200</td>
<td>75</td>
<td>1905</td>
<td>37¾</td>
<td>959</td>
<td>6½</td>
<td>168</td>
<td>52</td>
</tr>
<tr>
<td>10</td>
<td>250</td>
<td>90</td>
<td>2286</td>
<td>45½</td>
<td>1162</td>
<td>8</td>
<td>203</td>
<td>64</td>
</tr>
</tbody>
</table>

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
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 backspitronage and backpressure backflow
- Detects system leaks or unauthorized use of the water supply

Specifications
- Temperature Range: 33°F – 110°F (0.5°C – 43°C) continuous; 140°F (60°C) intermittent
- Maximum Working Pressure: 175psi (12.1 bar)

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

Features
- Fused epoxy coated cast iron unibody (2½" & 3")
- Replaceable 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 ½" x ¾" (16 x 19mm) meter

007DCDA

<table>
<thead>
<tr>
<th>SIZE (DN)</th>
<th>A</th>
<th>C (OSY)</th>
<th>E</th>
<th>P</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>mm</td>
</tr>
<tr>
<td>2</td>
<td>50</td>
<td>35½</td>
<td>892</td>
<td>13½</td>
<td>343</td>
</tr>
<tr>
<td>2½</td>
<td>65</td>
<td>33¼</td>
<td>844</td>
<td>16½</td>
<td>416</td>
</tr>
<tr>
<td>3</td>
<td>80</td>
<td>34¼</td>
<td>870</td>
<td>18¾</td>
<td>479</td>
</tr>
</tbody>
</table>

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
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 – 110°F (0.5°C – 43°C)
- Maximum Working Pressure: 175psi (12.1 bar)

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" (65 – 150mm) UL/FM grooved gear operated butterfly valves with tamper switch
QT – 2½" – 3" (65 – 80mm) quarter-turn ball valves
*OSY FxG – flanged inlet gate connection and grooved outlet gate connection
*OSY GxF – grooved inlet gate connection and flanged outlet gate connection
*OSY GxG – grooved inlet gate connection and grooved outlet gate connection

Available with grooved NRS gate valves - consult factory*
Post indicator plate and operating nut available – consult factory*
* Consult factory for dimensions

Features
- Sizes 2 1⁄2" – 3" (65 - 80mm) 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, N pattern or Z pattern installations
- Bottom mounted cast stainless steel relief valve
- Replaceable check disc rubber

For additional information, request literature ES-957/957N/957Z. For information on Air Gaps, Vent Elbows and Test Cocks see page 58 or request literature ES-AG/EL/TC. For Wattsbox Enclosures, request literature ES-WB.
## Series 994 (2 1/2" – 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

### Specifications

- **Temperature Range:** 33°F – 110°F (0.5°C – 43°C) continuous; 140°F (60°C) intermittent
- **Maximum Working Pressure:** 175psi (12.1 bar)

### 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.

Available with grooved NRS gate valves - consult factory

Post indicator plate and operating nut available – consult factory

* Consult factory for dimensions

For additional information, request literature ES-994.

For information on Air Gaps, Vent Elbows and Test Cocks, see page 58 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
- 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

### Series 994 (2 1/2" – 10") Reduced Pressure Zone Assemblies

<table>
<thead>
<tr>
<th>SIZE (IN)</th>
<th>A</th>
<th>C (NRS)</th>
<th>C (OSY)</th>
<th>D</th>
<th>F</th>
<th>G</th>
<th>L</th>
<th>M</th>
<th>N</th>
<th>w/Gates</th>
<th>w/o Gates</th>
</tr>
</thead>
<tbody>
<tr>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>lbs.</td>
</tr>
<tr>
<td>2 1/2</td>
<td>65</td>
<td>37</td>
<td>940</td>
<td>9/4</td>
<td>238</td>
<td>16</td>
<td>416</td>
<td>10 1/4</td>
<td>267</td>
<td>7 1/4</td>
<td>178</td>
</tr>
<tr>
<td>3</td>
<td>80</td>
<td>38</td>
<td>965</td>
<td>10 1/2</td>
<td>260</td>
<td>18 1/4</td>
<td>479</td>
<td>10 1/4</td>
<td>267</td>
<td>7 1/4</td>
<td>191</td>
</tr>
<tr>
<td>4</td>
<td>100</td>
<td>40</td>
<td>1016</td>
<td>12 1/4</td>
<td>310</td>
<td>22 1/2</td>
<td>578</td>
<td>10 1/4</td>
<td>267</td>
<td>9</td>
<td>229</td>
</tr>
<tr>
<td>6</td>
<td>150</td>
<td>48 3/4</td>
<td>1232</td>
<td>11 1/4</td>
<td>292</td>
<td>11</td>
<td>279</td>
<td>15</td>
<td>381</td>
<td>27 1/2</td>
<td>699</td>
</tr>
<tr>
<td>8</td>
<td>200</td>
<td>52 3/4</td>
<td>1334</td>
<td>19 1/4</td>
<td>506</td>
<td>37 1/4</td>
<td>959</td>
<td>12 1/4</td>
<td>318</td>
<td>13 1/4</td>
<td>343</td>
</tr>
<tr>
<td>10</td>
<td>250</td>
<td>55 1/4</td>
<td>1410</td>
<td>23 1/4</td>
<td>605</td>
<td>45 1/4</td>
<td>1162</td>
<td>12 1/4</td>
<td>318</td>
<td>16</td>
<td>406</td>
</tr>
</tbody>
</table>

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
Series 994 BLT (2 1/2" FNPT x 3" MNPT)
Series 994 HMB (2 1/2"-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 (96.5 kPa) 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 (1710 lpm)
- Maximum Intermittent Flow: 660gpm (2510 lpm)
- Typical Low Flow (Min 95%): 4gpm (15 lpm)
- Pressure Loss at Max. Flow: 37psi @ 450gpm (255 kPa @ 1710 lpm)
- Continuous Operation: 23psi @ 350gpm (159 kPa @ 1330 lpm)

Options (BLT Series)

Inlet Modules
- 3" (80mm) female or male hydrant thread
- 2 1/2" (65mm) female or male hydrant thread
- 2 1/2" (65mm) male NPT thread
- Customer specified

Outlet Modules
- 3" (80mm) gate w/female or male hose thread
- 2 1/2" (65mm) gate w/ female or male hose thread
- 3" (80mm) gate valve only, w/3" (80mm) INPT thread
- 2 1/2" (65mm) gate valve only, w/2 1/2" (65mm) 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.

<table>
<thead>
<tr>
<th>MODEL</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>994BLT</td>
<td>62</td>
</tr>
<tr>
<td>994HMB-GPM</td>
<td>66</td>
</tr>
<tr>
<td>994HMB-CFM</td>
<td>66</td>
</tr>
</tbody>
</table>

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
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 “air-in/water-out” design provides high capacity relief valve discharge performance during emergency conditions of backspionage and backpressure with both checks fouled

Specifications
- Temperature Range: 33°F – 140°F (0.5°C – 60°C) continuous; 180°F (82°C) intermittent
- Maximum Working Pressure: 175psi (12.1 bar)

Models
add 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” (50mm) 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 58 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

<table>
<thead>
<tr>
<th>SIZE (DN)</th>
<th>DIMENSIONS (APPROX.)</th>
<th>STRAINER DIMENSIONS</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>3/4</td>
<td>20</td>
<td>14 1/4</td>
<td>365</td>
</tr>
<tr>
<td>1</td>
<td>25</td>
<td>15 1/4</td>
<td>391</td>
</tr>
<tr>
<td>1 1/4</td>
<td>32</td>
<td>18 1/4</td>
<td>470</td>
</tr>
<tr>
<td>1 1/2</td>
<td>40</td>
<td>19 3/4</td>
<td>483</td>
</tr>
<tr>
<td>2</td>
<td>50</td>
<td>19 1/2</td>
<td>495</td>
</tr>
</tbody>
</table>

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
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 “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 (0.5°C – 43°C) continuous; 140°F (60°C) intermittent
- Maximum Working Pressure: 175psi (12.1 bar)

For additional information, request literature ES-909L.

For information on Air Gaps, Vent Elbows and Test Cocks see page 58 or request literature ES-AG/EL/TC.

For WattsBox Enclosures, request literature ES-WB.

Strainer Dimensions

<table>
<thead>
<tr>
<th>SIZE (DN)</th>
<th>M</th>
<th>N</th>
<th>N1</th>
<th>Dimensions (Approx.)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>in. mm</td>
<td>in. mm</td>
<td>in. mm</td>
<td>in. mm</td>
<td>lbs. kgs.</td>
<td></td>
</tr>
<tr>
<td>2½ 65</td>
<td>10 254</td>
<td>10 254</td>
<td>6½ 165</td>
<td>28 12.7</td>
<td></td>
</tr>
<tr>
<td>4 100</td>
<td>12½ 308</td>
<td>12 305</td>
<td>8½ 210</td>
<td>60 27</td>
<td></td>
</tr>
<tr>
<td>6 150</td>
<td>18½ 470</td>
<td>20 508</td>
<td>13½ 343</td>
<td>133 60</td>
<td></td>
</tr>
<tr>
<td>8 200</td>
<td>21½ 549</td>
<td>22½ 578</td>
<td>15½ 394</td>
<td>247 112</td>
<td></td>
</tr>
<tr>
<td>10 250</td>
<td>26 660</td>
<td>28 711</td>
<td>18½ 470</td>
<td>370 168</td>
<td></td>
</tr>
</tbody>
</table>

† – Dimension required for screen removal

Strainer Dimensions

<table>
<thead>
<tr>
<th>SIZE (DN)</th>
<th>A</th>
<th>A1</th>
<th>(OSY)*</th>
<th>N</th>
<th>N1†</th>
<th>Dimensions (Approx.)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>in. mm</td>
<td>in. mm</td>
<td>in. mm</td>
<td>in. mm</td>
<td>lbs. kgs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2½ 65</td>
<td>4½ 1048</td>
<td>20½ 524</td>
<td>16½ 416</td>
<td>9½ 238 5¾ 133 26½ 663</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 80</td>
<td>42½ 1073</td>
<td>21¼ 540</td>
<td>18½ 479</td>
<td>10½ 260 5¾ 133 26½ 663</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 100</td>
<td>55½ 1400</td>
<td>27½ 702</td>
<td>22½ 578</td>
<td>12½ 319 6 152 37 940</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 150</td>
<td>65½ 1664</td>
<td>32½ 832</td>
<td>30½ 785</td>
<td>16 406 6 152 44½ 1130</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 200</td>
<td>78½ 2000</td>
<td>39½ 1000</td>
<td>37¾ 959</td>
<td>19½ 506 9½ 248 55½ 1403</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 250</td>
<td>93½ 2378</td>
<td>46½ 1190</td>
<td>45½ 1162</td>
<td>23¾ 605 9½ 248 67¼ 1711</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

† – Dimension required for screen removal

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

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com

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

Specifications

- Temperature Range: 33°F – 110°F (0.5°C – 43°C) continuous; 140°F (60°C) intermittent
- Maximum Working Pressure: 175psi (12.1 bar)
Series 009 (¼" – 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

Specifications
- Temperature Range: ¼" – 2" 33°F – 180°F (0.5°C – 82°C); 2¼" – 3" 33°F – 110°F (0.5°C – 43°C) continuous, 140°F (60°C)
- Maximum Working Pressure: 175psi (12.1 bar)

For additional information, request literature ES-009.
For information on Air Gaps, Vent Elbows and Test Cocks see page 58 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
- Fused epoxy coated cast iron body - 2½" and 3" (65 and 80mm)
- Ball valve test cocks - screwdriver slotted - ¼" – 2" (8 – 50mm)
- Large body passages provide low pressure drop
- Compact, space saving design
- No special tools required for servicing

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
GoldenEagle®
Series 919 (¼” – 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 (0.5°C – 82°C)
- Maximum Working Pressure: 175psi (12.1 bar)

Models ¼” – 2” (8 – 50mm)
add Suffix:
QT – quarter-turn ball valves
S – bronze strainer
LF – without shutoff valves
AQT – elbow fitting for 360º rotation
ZQT – inlet & outlet flow up
add Prefix:
U – union connections

For additional information, request literature ES-919.
For information on Air Gaps, Vent Elbows and Test Cocks see page 58 or request literature ES-AG/EL/TC.
For WattsBox Enclosures, request literature ES-WB.

---

### 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

---

### Dimensions (Approx.)

<table>
<thead>
<tr>
<th>SIZE (IN)</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E (LF)</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>M</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>mm</td>
<td>in.</td>
</tr>
<tr>
<td>¼”</td>
<td>8.0</td>
<td>9.5</td>
<td>211.4</td>
<td>175</td>
<td>2.0</td>
<td>73</td>
<td>12.7</td>
<td>314.2</td>
<td>5.0</td>
<td>146</td>
</tr>
<tr>
<td>½”</td>
<td>10.0</td>
<td>9.5</td>
<td>211.4</td>
<td>175</td>
<td>2.0</td>
<td>73</td>
<td>12.7</td>
<td>314.2</td>
<td>5.0</td>
<td>146</td>
</tr>
<tr>
<td>⅜”</td>
<td>12.5</td>
<td>9.5</td>
<td>211.4</td>
<td>175</td>
<td>2.0</td>
<td>73</td>
<td>12.7</td>
<td>324.5</td>
<td>5.0</td>
<td>146</td>
</tr>
<tr>
<td>⅝”</td>
<td>20.0</td>
<td>12.7</td>
<td>307.3</td>
<td>188.0</td>
<td>3.4</td>
<td>88</td>
<td>15.2</td>
<td>393.2</td>
<td>7.3</td>
<td>195.5</td>
</tr>
<tr>
<td>1”</td>
<td>25.0</td>
<td>14.1</td>
<td>368.3</td>
<td>202.0</td>
<td>3.3</td>
<td>96</td>
<td>19.1</td>
<td>487.3</td>
<td>9.2</td>
<td>233</td>
</tr>
<tr>
<td>1¼”</td>
<td>32.0</td>
<td>18.1</td>
<td>461.1</td>
<td>250.0</td>
<td>5.1</td>
<td>123</td>
<td>23.3</td>
<td>591.1</td>
<td>11.1</td>
<td>297</td>
</tr>
<tr>
<td>1½”</td>
<td>40.0</td>
<td>18.1</td>
<td>476.1</td>
<td>290.0</td>
<td>5.1</td>
<td>123</td>
<td>25.6</td>
<td>637.1</td>
<td>11.1</td>
<td>297</td>
</tr>
<tr>
<td>2”</td>
<td>50.0</td>
<td>2½”</td>
<td>535.1</td>
<td>307.0</td>
<td>5.1</td>
<td>123</td>
<td>28.3</td>
<td>732.1</td>
<td>13.1</td>
<td>340.1</td>
</tr>
</tbody>
</table>

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
SilverEagle™
Series 957RPDA, 957NRPDA, 957ZRPDA (2½" – 10")
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 – 110°F (0.5°C – 43°C)
- Maximum Working Pressure: 175psi (12.1 bar)

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 58 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

<table>
<thead>
<tr>
<th>SIZE (DN)</th>
<th>Dimensions (Approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>in.</td>
<td>in.</td>
</tr>
<tr>
<td>2½</td>
<td>65</td>
</tr>
<tr>
<td>3</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>100</td>
</tr>
<tr>
<td>6</td>
<td>150</td>
</tr>
<tr>
<td>8</td>
<td>200</td>
</tr>
<tr>
<td>10</td>
<td>250</td>
</tr>
</tbody>
</table>

957RPDA BFG

<table>
<thead>
<tr>
<th>SIZE (DN)</th>
<th>Dimensions (Approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>in.</td>
<td>in.</td>
</tr>
<tr>
<td>2½</td>
<td>65</td>
</tr>
<tr>
<td>3</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>100</td>
</tr>
<tr>
<td>6</td>
<td>150</td>
</tr>
</tbody>
</table>
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 backspinhonation and backpressure backflow
- Detects system leaks or unauthorized use of water supply

Specifications
- Temperature Range: 33°F – 110°F (0.5°C – 43°C)
- Maximum Working Pressure: 175psi (12.1 bar)

Models
add 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
- *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

Available with grooved NRS gate valves - consult factory
Post indicator plate and operating nut available – consult factory
* Consult factory for dimensions

For additional information, request literature ES-994RPDA
For information on Air Gaps, Vent Elbows and Test Cocks, see page 58 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
- 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

<table>
<thead>
<tr>
<th>SIZE (DN)</th>
<th>A (in.)</th>
<th>C (open)</th>
<th>D (in.)</th>
<th>F (in.)</th>
<th>G (in.)</th>
<th>L (in.)</th>
<th>w/Gates</th>
<th>w/o Gates</th>
</tr>
</thead>
<tbody>
<tr>
<td>2½</td>
<td>65</td>
<td>37</td>
<td>16½</td>
<td>416</td>
<td>10½</td>
<td>267</td>
<td>7</td>
<td>178</td>
</tr>
<tr>
<td>3</td>
<td>80</td>
<td>38</td>
<td>18½</td>
<td>479</td>
<td>10½</td>
<td>267</td>
<td>7½</td>
<td>191</td>
</tr>
<tr>
<td>4</td>
<td>100</td>
<td>40</td>
<td>22½</td>
<td>578</td>
<td>10½</td>
<td>267</td>
<td>9</td>
<td>229</td>
</tr>
<tr>
<td>6</td>
<td>150</td>
<td>48½</td>
<td>30½</td>
<td>765</td>
<td>11½</td>
<td>292</td>
<td>11</td>
<td>279</td>
</tr>
</tbody>
</table>

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
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

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

Models
add 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 58 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 ⅜” x ⅞” (16 x 19mm) recordall meter
- Air-in/water-out relief valve design provides maximum capacity during emergency conditions
- No special tools required for servicing

<table>
<thead>
<tr>
<th>SIZE (DN)</th>
<th>A</th>
<th>C (OSY)</th>
<th>D</th>
<th>G</th>
<th>L</th>
<th>R</th>
<th>T</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>mm</td>
<td>in. mm</td>
</tr>
<tr>
<td>2½</td>
<td>65</td>
<td>42⅜</td>
<td>1070</td>
<td>16⅜</td>
<td>416</td>
<td>5¼</td>
<td>133</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>80</td>
<td>42⅜</td>
<td>1070</td>
<td>18⅞</td>
<td>479</td>
<td>5¼</td>
<td>133</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>100</td>
<td>55⅛</td>
<td>1400</td>
<td>22⅞</td>
<td>578</td>
<td>6</td>
<td>152</td>
<td>9½</td>
</tr>
<tr>
<td>6</td>
<td>150</td>
<td>65⅝</td>
<td>1664</td>
<td>30⅝</td>
<td>765</td>
<td>6</td>
<td>152</td>
<td>14¾</td>
</tr>
<tr>
<td>8</td>
<td>200</td>
<td>78⅞</td>
<td>1988</td>
<td>37⅞</td>
<td>959</td>
<td>9¼</td>
<td>248</td>
<td>18⅛</td>
</tr>
<tr>
<td>10</td>
<td>250</td>
<td>93⅜</td>
<td>2378</td>
<td>45¼</td>
<td>1162</td>
<td>9¼</td>
<td>248</td>
<td>21⅞</td>
</tr>
</tbody>
</table>

909RPDAOSY

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
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.

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SERIES/SIZES</th>
<th>DIMENSIONS (APPROX.)</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A in. mm</td>
<td>B in. mm</td>
<td>C in. mm lbs.</td>
</tr>
<tr>
<td>909AG-A</td>
<td>¼&quot; – ½&quot; 009, ¼&quot; 009M2/M3</td>
<td>2½ 60 ¾ 79 ½ 13</td>
<td>.63 .28</td>
</tr>
<tr>
<td>909AG-C</td>
<td>¾&quot; - 1&quot; 009/909</td>
<td>¾ 83 4½ 124 1 25</td>
<td>1.50 .68</td>
</tr>
<tr>
<td>909AG-F</td>
<td>1½&quot; – 2&quot; 099/909</td>
<td>4½ 111 6½ 171 2 51</td>
<td>3.25 1.47</td>
</tr>
<tr>
<td>909AG-K</td>
<td>4&quot; – 6&quot; 909</td>
<td>6½ 162 9½ 244 3 76</td>
<td>6.25 2.83</td>
</tr>
<tr>
<td>909AG-M</td>
<td>8&quot; – 10&quot; 909M1</td>
<td>7½ 187 11½ 286 4 102</td>
<td>15.50 7.03</td>
</tr>
<tr>
<td>919AG</td>
<td>¾&quot; &amp; 1&quot; 019</td>
<td>2½ 60 3½ 79 ½ 13</td>
<td>.63 .28</td>
</tr>
<tr>
<td>957AG</td>
<td>2½&quot; – 10&quot; 957</td>
<td>7½ 190 10½ 258 2 51</td>
<td>1.5 .68</td>
</tr>
<tr>
<td>957AG (Splash Guard)</td>
<td>2½&quot; – 10&quot; 957</td>
<td>– – – –</td>
<td>– –</td>
</tr>
<tr>
<td>994AGK-P</td>
<td>2½&quot; – 10&quot; 994</td>
<td>8 203 11½ 286 2 51</td>
<td>1.50 .68</td>
</tr>
<tr>
<td>995AG</td>
<td>3&quot; – 6&quot; 995</td>
<td>5 127 8 203 2½ 60</td>
<td>– –</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SERIES/SIZES</th>
<th>DIMENSIONS (APPROX.)</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A in. mm</td>
<td>B in. mm</td>
<td></td>
</tr>
<tr>
<td>909EL-A</td>
<td>¼&quot; – ½&quot; 009, ¼&quot; 009M2/M3</td>
<td>– – – – – – – –</td>
<td>– –</td>
</tr>
<tr>
<td>909EL-C</td>
<td>¾&quot; – 1&quot; 009/909</td>
<td>¾ 80 2½ 60</td>
<td>– – .38 .17</td>
</tr>
<tr>
<td>909EL-F</td>
<td>1½&quot; – 2&quot; 009/909</td>
<td>3½ 92 3½ 92</td>
<td>– – 2 .91</td>
</tr>
<tr>
<td>909EL-H</td>
<td>2½&quot; – 3&quot; 009/909</td>
<td>– – – 2 51</td>
<td>– –</td>
</tr>
<tr>
<td>994ELF (vertical)</td>
<td>2½&quot; – 10&quot; 994</td>
<td>4½ 124 9 229</td>
<td>2 51 4 1.8</td>
</tr>
</tbody>
</table>

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 ¼" M x ½" F or ¼" M x ½" F

SAE-TC
- Full port ball valve design
- Screwdriver slot operation
- ¼" M x SAE

SAE-TC Adapter
- ¼" female SAE x ½" FPT
- Adapts to SAE-TC for use with pressure gauge and/or site tube

SAE-TC Brass Cap
for protection of ¼ SAE-TC (not shown) (four required per backflow preventer)

SilverEagle TC
- ½" TC for 2½" – 4" series 757 and 957
- ¾" TC for 6" – 10" series 757 and 957
- Full port ball valve design
- No. 3 TC with O-Ring
- for 2½" – 4" series 757 and 957
- for 6" – 10" series 757 and 957

Caps & Tethers (Plastic, Brass)
Plastic cap and tether (four required per backflow preventer)
- Fits ¼" female test cocks
- Plastic dust cap and rubber tether
- RK-TC ¼"

SAE Brass cap, O-ring and tether
- Fits ¼" M x SAE test cocks
- Brass dust cap with O-ring seal and rubber tether
- RK-SAE-TC

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
Series 9 (¼" – ¾")
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 ¼" (8mm) and ½" (10mm) NPT female inlet and outlet connections. Max. pressure 125psi (8.6 bar).

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

**NLF9** – Has a ¾" (10mm) NPT male inlet connection. Max. pressure 150psi (10.3 bar). For non-continuous pressure applications.

**N9-CD** – In-line field testable, dual check backflow preventer with atmospheric vent. Non-removable design. Size ⅝" (20mm) hose thread female inlet x ¾" (20mm) HT male outlet connection. Max. pressure 150psi (10.3 bar). Max. temperature 180°F (82°C).

**9D** – Dual check backflow preventer with atmospheric vent for continuous pressure. Sizes ½" (15mm) and ¾" (20mm) NPT female union inlet and outlet connections. Max. pressure 175psi (12.1 bar). 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: ¼" (10mm) flare copper tube (FCT) inlet and outlet. Max. pressure 150psi (10.3 bar). Max. temperature 140°F (60°C).

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

---

Series 912HP (¾", 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 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 (27.6 bar)
- 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.

---

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 (¾" – 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 ¾" – 1" (10 – 25mm). NPT female connections
- Temperature Range: 33°F – 140°F (0.5°C – 60°C)
- Maximum Working Pressure: 150psi (10.3 bar)

For additional information, request literature ES-008PCQT.

### Series 800M4QT, 800M4FR (½" – 2")
Pressure Vacuum Breakers

- With tee handle quarter-turn shutoffs on sizes ½" – 1" (15 – 25mm).
- Lever handles 1¼" – 2" (32 – 50mm)
- For health hazard cross-connections subject to continuous pressure
- Install 12" (305mm) above highest downstream point of water supply
- Designed to prevent backsiphonage of contaminated water into the potable water supply
- Sizes ½" – 2" (15 – 50mm). NPT female connections

**Specifications**
- Temperature Range: 33°F – 140°F (0.5°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.

### Models
- **800M4FR** – Model 800M4QT with relief valve for freeze protection. Patent #5551473. Sizes ½" – 2" (15 – 50mm)
- **800MQT** – compact model with self-contained ball valve shutoffs. Sizes ½" and ¾" (15 and 20mm)

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
**Series 188A, 288A, 289, N388 (¼" – 3")**

**Anti-Siphon Vacuum Breakers**

- Vacuum breakers are designed to protect against the back siphonage 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 bar) working pressure.

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

---

**Series 7 (⅝" – 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.

**Specifications**
- Temperature Range: 33°F – 140°F (0.5°C – 60°C) continuous; 180°F (82°C) intermittent
- Minimum Working Pressure: 10psi (69 kPa)
- Maximum Working Pressure: 150psi (10.3 bar)

![Series 7](image)

**Models**
- 188A – Sizes: ¼" – 2" (20 – 50mm) irrigation vacuum breaker, plain brass finish.
- 288A – Sizes: ¼" – 3" (8 – 80mm), plain brass finish.
- 288AC – Sizes: ¼" – 1" (8 – 25mm), polished chrome finish.
- 289 – Sizes: ⅝" – 1" (10 – 25mm) spill-resistant atmospheric vacuum breakers, NPT male connections.
- N388 – Sizes: ¼" and ⅝" (8 – 10mm) with NPT female bottom inlet and outlet connections. Bronze body.

**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.

---

**Series Cu7 (½" – 1")**

**Copper-Body Dual Check Valves**

- Straight line, poppet-type construction minimizing pressure drop

**Specifications**
- Temperature Range: 33°F – 180°F (0.5°C – 82°C) continuous
- Minimum Working Pressure: 10psi (69 kPa)
- Maximum Working Pressure: 150psi (10.3 bar)

For additional information, request literature, PG-7.
Series 8 (3/8" – 3/4")

Hose Connection Vacuum Breakers

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

Specifications

- Sizes 3/8" (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* – “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 “non-removable” feature and equipped to allow sill cock to be drained  
8B – Designed for tub and shower hand spray sets. Chrome finish  
8S – same as above with plain brass finish  
8FR – Freeze relief feature. Protects the valve from freeze damage  
*Note: Model 8, 8A, and 8B are not suitable for frost-free hydrants. See Model NF8. For additional information, request literature ES-8.

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SIZE (IN)</th>
<th>DIMENSIONS (APPROX.)</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>8</td>
<td>3/4 HT</td>
<td>20</td>
<td>1 1/2</td>
</tr>
<tr>
<td>8A</td>
<td>3/4 HT</td>
<td>20</td>
<td>1 1/2</td>
</tr>
<tr>
<td>8AC</td>
<td>3/4 HT</td>
<td>20</td>
<td>1 1/2</td>
</tr>
<tr>
<td>8B</td>
<td>3/4 HT</td>
<td>20</td>
<td>1 1/2</td>
</tr>
<tr>
<td>8BC</td>
<td>3/4 HT</td>
<td>20</td>
<td>1 1/2</td>
</tr>
<tr>
<td>8C</td>
<td>3/4 HT</td>
<td>20</td>
<td>1 1/2</td>
</tr>
<tr>
<td>NF8</td>
<td>3/4 HT</td>
<td>20</td>
<td>1 1/2</td>
</tr>
<tr>
<td>NF8C</td>
<td>3/4 HT</td>
<td>20</td>
<td>1 1/2</td>
</tr>
<tr>
<td>8P</td>
<td>3/4 HT</td>
<td>20</td>
<td>1 1/4</td>
</tr>
<tr>
<td>8S</td>
<td>1/2 F**</td>
<td>15</td>
<td>1 1/4</td>
</tr>
<tr>
<td>8SC</td>
<td>1/2 F**</td>
<td>15</td>
<td>1 1/4</td>
</tr>
<tr>
<td>8SC</td>
<td>1/4 F**</td>
<td>10</td>
<td>1 1/4</td>
</tr>
<tr>
<td>8FR</td>
<td>3/4 HT</td>
<td>20</td>
<td>1 1/4</td>
</tr>
</tbody>
</table>

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 33-34.

Standards

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

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
Series SD2 (¼” – ⅜”)

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

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SIZE (DN)</th>
<th>DIMENSIONS (APPROX.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>in. mm</td>
<td>in. mm</td>
</tr>
<tr>
<td>SD2-MN</td>
<td>¼” 8</td>
<td>3 76 1⅞ 27</td>
</tr>
<tr>
<td>SD2-MF</td>
<td>⅜” 10</td>
<td>3 76 1⅞ 27</td>
</tr>
<tr>
<td>SD2-MN</td>
<td>¼” 8</td>
<td>2⅞ 71 1⅞ 27</td>
</tr>
<tr>
<td>SD2-MF</td>
<td>⅜” 10</td>
<td>3 76 1⅞ 27</td>
</tr>
<tr>
<td>SD2-FN</td>
<td>⅜” 10</td>
<td>3 76 1⅞ 27</td>
</tr>
<tr>
<td>SD2-FF</td>
<td>⅜” 10</td>
<td>3 76 1⅞ 27</td>
</tr>
</tbody>
</table>

Series SD3 (¼” – ⅜”)

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

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SIZE (DN)</th>
<th>DIMENSIONS (APPROX.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>in. mm</td>
<td>in. mm</td>
</tr>
<tr>
<td>SD3-MN</td>
<td>¼” 8</td>
<td>4⅝ 114 1⅞ 27 1⅞ 48 1⅞ 43</td>
</tr>
<tr>
<td>SD3-MF</td>
<td>⅜” 10</td>
<td>4⅝ 114 1⅞ 27 1⅞ 48 1⅞ 43</td>
</tr>
<tr>
<td>SD3-MN</td>
<td>⅜” 10</td>
<td>4⅝ 114 1⅞ 27 1⅞ 48 1⅞ 43</td>
</tr>
<tr>
<td>SD3-FN</td>
<td>⅜” 10</td>
<td>4⅝ 114 1⅞ 27 1⅞ 48 1⅞ 43</td>
</tr>
<tr>
<td>SD3-FF</td>
<td>⅜” 10</td>
<td>4⅝ 114 1⅞ 27 1⅞ 48 1⅞ 43</td>
</tr>
</tbody>
</table>

Series TWS (⅜”, 1”)

Key Operated Wall Hydrants for Irrigation System Winterization

- 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 ⅜”, 1” (20, 25mm), NPT male outlet connection
- 8”, 10”, 12” (200, 250, 300mm) shaft lengths
- Temperature Range: 33°F – 140°F (0.5°C – 60°C) continuous; 180°F (82°C) intermittent
- Maximum Working Pressure: 175psi (12.1 bar)

For additional information, request literature ES-TWS.
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)

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 bar)
Maximum Temperature: 210°F (98.9°C)
Wgt. 8 lbs. (3.6 kg)

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 kgs.)

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)

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 assistance, contact your local authorized Watts agent or visit our website at www.watts.com
**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 (0.5°C – 43°C)
- Rated Working Pressure: 175psi (12.1 bar)
- Size 125# flanged connections

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

**Specifications**

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

For additional information, request literature ES-TR.

---

**Series FR 500 (1/8” – 3/4”)**

Thermostatic Freeze Relief Kits

- Designed to keep water from freezing in the backflow preventer
- Compact
- Easy to install
- Low maintenance
- Controlled by water temperature vs. air temperature
- IAPMO approved

**Specifications**

- Working Temperature: 35°F (1.6°C)
- Maximum Pressure: 175psi (12.1 bar)

For additional information, request literature ES-FR500.

---

**Series RK-W-STD**

- Valve and meter support stands for quick & easy installation
- All-welded steel construction
- Corrosion resistant coating
- Interior drain hole
- Available in 10” to 38” heights

For additional information, request literature ES-RK-W-STD.

---

**Series WVS**

Valve Setters for Quick Backflow Installation

- Available Sizes: 3”, 4”, 6”, 8” and 10” (80, 100, 150, 200 and 250mm)
- Compact
- Corrosion resistant epoxy coating
- Eliminates thrust blocks at the backflow
- Fits 757N/757NDCDA, 957N, 957NRPDA

For additional information, request literature PF-WVS.
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

Specifications

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

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

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 preventer 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 assistance, contact your local authorized Watts agent or visit our website at www.watts.com
**Series B6000** (¼" – 4")

**B6001** (½" – 3")

2-Piece, Standard Port, Bronze Ball Valves

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

**Specifications**

- **Pressure Rating:**
  - ¼" – 3" (8 – 80mm): 600psi (41.3 bar) WOG (non-shock), 150psi (10.3 bar) WSP
  - 4" (100mm): 400psi (27.5 bar) WOG (non-shock), 125psi (8.6 bar) saturated steam, over 150psi (10.3 bar) requiring SS trim
- **Temperature Range:** 0°F to 450°F (-18°C – 232°C) at 50psi (3.4 bar) for reinforced/enhanced PTFE seats. 0°F – 350°F (-18°C – 177°C) at 50psi (3.4 bar) for Virgin PTFE seats.

**Features**

- Sizes: ¼" – 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 75.

**Models**

- **B6000** – Sizes ¼" – 4" (8 – 100mm), NPT female connections
- **B6001** – Sizes ½" – 3" (10 – 80mm), solder connections
- **B6000 – UL**
  - UL approved for:
    - Flammable liquids (YRBX)
    - Compressed gas (YQNZ)
    - Fire protection (HNFX), sizes ¼" – 2" (8 – 50mm)
    - LP Gas (YSDT), sizes ¼" – 3" (8 – 80mm)
    - Natural/Manufactured gas (YPBV), sizes ¼" – 3" (8 – 80mm)
    - For #1 and #2 Fuel Oil (MHKZ), sizes ¼" – 3" (8 – 80mm)

**Standards**


### Models and Specifications

**Series B6000 and B6001**

<table>
<thead>
<tr>
<th>Model</th>
<th>Size (DN)</th>
<th>BALL</th>
<th>Orifice A</th>
<th>Dimensions (Approx.)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>in. mm</td>
<td>in. mm</td>
<td>in.</td>
<td>in. mm</td>
<td>in. mm</td>
</tr>
<tr>
<td>B6000</td>
<td>¼ 8</td>
<td>9.5</td>
<td>5</td>
<td>127</td>
<td>1½ 45</td>
</tr>
<tr>
<td>B6000</td>
<td>½ 10</td>
<td>9.5</td>
<td>5</td>
<td>127</td>
<td>1½ 45</td>
</tr>
<tr>
<td>B6000</td>
<td>½ 15</td>
<td>13.0</td>
<td>5</td>
<td>127</td>
<td>1½ 45</td>
</tr>
<tr>
<td>B6000</td>
<td>¾ 20</td>
<td>17.0</td>
<td>5½ 135</td>
<td>2 51</td>
<td>¾ 19</td>
</tr>
<tr>
<td>B6000</td>
<td>1 25</td>
<td>22.0</td>
<td>5½ 140</td>
<td>2½ 57</td>
<td>¾ 22</td>
</tr>
<tr>
<td>B6000</td>
<td>1¼ 32</td>
<td>25.0</td>
<td>7 178</td>
<td>2½ 64</td>
<td>1½ 29</td>
</tr>
<tr>
<td>B6000</td>
<td>1½ 40</td>
<td>32.0</td>
<td>7 178</td>
<td>3 76</td>
<td>1½ 33</td>
</tr>
<tr>
<td>B6000</td>
<td>2 50</td>
<td>38.0</td>
<td>11 279</td>
<td>3½ 84</td>
<td>1½ 38</td>
</tr>
<tr>
<td>B6000</td>
<td>2½ 65</td>
<td>51.0</td>
<td>11¼ 294</td>
<td>4 102</td>
<td>2½ 56</td>
</tr>
<tr>
<td>B6000</td>
<td>3 80</td>
<td>64.0</td>
<td>11¾ 295</td>
<td>4½ 108</td>
<td>2½ 60</td>
</tr>
<tr>
<td>B6000</td>
<td>4 100</td>
<td>76.0</td>
<td>16½ 384</td>
<td>4½ 122</td>
<td>2½ 75</td>
</tr>
<tr>
<td>B6001</td>
<td>¼ 10</td>
<td>9.5</td>
<td>5½ 129</td>
<td>1½ 38</td>
<td>½ 16</td>
</tr>
<tr>
<td>B6001</td>
<td>½ 15</td>
<td>13.0</td>
<td>5½ 132</td>
<td>1½ 44</td>
<td>½ 16</td>
</tr>
<tr>
<td>B6001</td>
<td>¾ 20</td>
<td>17.0</td>
<td>5½ 146</td>
<td>2 51</td>
<td>¾ 19</td>
</tr>
<tr>
<td>B6001</td>
<td>1 25</td>
<td>22.0</td>
<td>6 150</td>
<td>2½ 57</td>
<td>¾ 22</td>
</tr>
<tr>
<td>B6001</td>
<td>1¼ 32</td>
<td>30.0</td>
<td>8 203</td>
<td>2½ 64</td>
<td>1½ 29</td>
</tr>
<tr>
<td>B6001</td>
<td>1½ 40</td>
<td>32.0</td>
<td>8½ 206</td>
<td>3 76</td>
<td>1½ 33</td>
</tr>
<tr>
<td>B6001</td>
<td>2 50</td>
<td>38.0</td>
<td>11¾ 290</td>
<td>3½ 84</td>
<td>1½ 38</td>
</tr>
<tr>
<td>B6001</td>
<td>2½ 65</td>
<td>51.0</td>
<td>12½ 307</td>
<td>4 102</td>
<td>2½ 56</td>
</tr>
<tr>
<td>B6001</td>
<td>3 80</td>
<td>64.0</td>
<td>12¾ 312</td>
<td>4½ 108</td>
<td>2½ 60</td>
</tr>
</tbody>
</table>
Series B6080, B6081 (1/2" – 2")
2-Piece, Full Port, Bronze Ball Valves

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

Specifications
- Pressure Rating: 600psi (41.3 bar) WOG (non-shock) and 150psi (10.3 bar) WSP
- Temperature Range: 0°F – 350°F (-18°C – 177°C) at 50psi (3.4 bar)
- Complies with MSS-SP-110

Models
B6080 – Sizes: 1/4" – 2" (15 – 50mm), NPT female connections
B6081 – Sizes: 1/4" – 2" (15 – 50mm), solder connections

For ball valve options, refer to page 75.
For additional information, request literature ES-B6080.

<table>
<thead>
<tr>
<th>SIZE (DN)</th>
<th>BALL ORIFICE</th>
<th>DIMENSIONS (APPROX.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>in.</td>
<td>mm</td>
<td>BALL ORIFICE</td>
</tr>
<tr>
<td>1/2</td>
<td>15</td>
<td>1/2</td>
</tr>
<tr>
<td>3/4</td>
<td>20</td>
<td>3/4</td>
</tr>
<tr>
<td>1</td>
<td>25</td>
<td>1</td>
</tr>
<tr>
<td>1 1/4</td>
<td>32</td>
<td>1 1/4</td>
</tr>
<tr>
<td>1 1/2</td>
<td>40</td>
<td>1 1/2</td>
</tr>
<tr>
<td>2</td>
<td>50</td>
<td>2</td>
</tr>
</tbody>
</table>

B6080
Series EMVII-6400SS (¼” – 3”)  
2-Piece, Standard Port, Bronze Electric Motor Valves

- Combination quarter-turn shutoff ball valve and electric actuator
- Compact and completely assembled

**Specifications**

- Steam Working Pressure: 100psi (7bar)
- Sizes: ¼” – 2” (8 – 50mm) are 600psi (41.3 bar) WOG (non-shock); sizes 2¼” – 3” (65 – 80mm), 400psi (27.6 bar) WOG (nonshock)
- Maximum Operating Temperature: 250°F (121°C)
- 24VAC and 115VAC models
- Maximum Ambient Room Temperature: 150°F (66°C)

For additional information, request literature ES-EMVII-6400SS.

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SIZE (DN)</th>
<th>DIMENSIONS (APPROX.)</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>C (in.</td>
<td>D (in.</td>
</tr>
<tr>
<td></td>
<td>in.</td>
<td>mm</td>
<td>mm</td>
</tr>
<tr>
<td>† EMVII-6400SS-115-8</td>
<td>¼</td>
<td>8</td>
<td>7⅞</td>
</tr>
<tr>
<td>† EMVII-6400SS-115-8</td>
<td>⅜</td>
<td>10</td>
<td>7⅞</td>
</tr>
<tr>
<td>† EMVII-6400SS-115-8</td>
<td>½</td>
<td>15</td>
<td>7⅞</td>
</tr>
<tr>
<td>† EMVII-6400SS-115-35</td>
<td>¾</td>
<td>20</td>
<td>8</td>
</tr>
<tr>
<td>† EMVII-6400SS-24-40</td>
<td>1</td>
<td>25</td>
<td>8⅞</td>
</tr>
<tr>
<td>† EMVII-6400SS-115-35</td>
<td>1¼</td>
<td>32</td>
<td>8⅞</td>
</tr>
<tr>
<td>† EMVII-6400SS-24-40</td>
<td>1½</td>
<td>40</td>
<td>9⅛</td>
</tr>
<tr>
<td>† EMVII-6400SS-24-40</td>
<td>2</td>
<td>50</td>
<td>12½</td>
</tr>
<tr>
<td>†† EMVII-6400SS-115-25</td>
<td>2½</td>
<td>65</td>
<td>14½</td>
</tr>
<tr>
<td>†† EMVII-6400SS-115-25</td>
<td>3</td>
<td>80</td>
<td>14½</td>
</tr>
</tbody>
</table>

† Sizes ¼” – 2” (8 – 50mm) are available 115-8, 115-35 and 24-40. †† Sizes 2¼” & 3” (65 and 80mm) also available 24-25.
Series B6300, B6301 (½” – 1”)
2-Piece, Full Port, Ball and Waste Bronze Ball Valves

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

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

Models
B6300 – Sizes ¼” – 1” (15 – 25mm), NPT threaded connections.
B6301 – Sizes ¼” – 1” (15 – 25mm), solder connections.

For additional information, request literature ES-B6300.

Series B6780 (¼” – 2”), B6781 (½” – 1”)
2-Piece, Full Port, Bronze Diverter Ball Valves

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

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

Models
B6780-M1 – Sizes ¼” – 2” (8 – 50mm), NPT female connections
B6781 – Sizes ½” – 1” (15 – 25mm), solder connections

For additional information, request literature ES-B6780.

Series B6002 (¼” – 1”)
2-Piece, Standard Port, Bronze Ball Valves

- Male NPT connection x NPT female connection

Specifications
- Sizes: ¼” – 1” (8 – 25mm), have male NPT connection x female NPT connection
- Pressure Rating: 600psi (41.3 bar) WOG (non-shock), 150psi (10.3 bar) saturated steam
- Temperature Range: -20°F – 450°F (-29°C – 232°C) at 50psi (3.4 bar)
- 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 B6010, B6011, B6013 (½" – 2")
2-Piece, Standard Port, Bronze Ball Valves

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

Specifications
- Sizes ¼" – 2" (15 – 50mm)
- Pressure Rating: 400psi (27.6 bar) WOG (non-shock) threaded and solder ends; not steam rated due to union gasket
- Temperature Range: 0°F – 225°F (-18°C – 107°C) at 200psi (13.8 bar)

Models
B6010 – union NPT female connection x NPT female connection,
¼" – 2" (15-50mm)
B6011 – Solder union connection x solder connection, ¼" – 2"
(15 – 50mm)
B6013 – Solder connection x NPT male connections, ½" – 1" (15 – 25mm)

For additional information, request literature ES-B6010.

For ball valve options, refer to page 75.

Series B6400 (¼" – 4")
2-Piece, Standard Port, Bronze Ball Valves with Mounting Pad

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

Specifications
- Sizes ¼" – 4" (8 – 100mm), NPT female connections
- Pressure Rating: ¼" – 2" (8 – 50mm) 600psi (41.3 bar) WOG (non-shock); 150psi (10.3 bar) WSP
  2½" – 4" (65 – 100mm) 400psi (27.6 bar) WOG (non-shock);
  125psi (8.6 bar) WSP
- Temperature Range: -55°F – 425°F (-48° – 218°C) at 50psi (3.4 bar)

For additional information, request literature ES-B6400.

Series B6400-SE (¼" – 2")
2-Piece, Standard Port, Bronze Ball Valves with Safety Exhaust

- 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

Specifications
- Sizes: ¼" – 2" (8 – 50mm), NPT female connections.
- Pressure Rating: 175 CWP (12.1 bar).
- Temperature Range: 50°F – 120°F (10°C – 49°C).

For additional information, request literature ES-B6400-SE.
Series B6800 (¼" – 2")
B6801 (½" – 2")
3-Piece, Full Port, Brass Ball Valves

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

Specifications

- Pressure Ratings: ¼" – 1" (8 – 25mm) 600psi (41.3 bar) WOG (non-shock);
  1¼" – 2" (32 – 50mm) rated at 400psi (27.6 bar) WOG
  (non-shock); 150psi (10.3 bar) WSP all sizes. Over 150psi
  (10.3 bar) WSP requires SS trim
- Temperature Range: 0°F – 450°F (-18ºC – 232°C) at 50psi (3.4 bar)

Models

B6800 – Sizes: ¼" – 2" (8 – 50mm) NPT female connections
B6800SE (safety exhaust) — for downstream exhaust ¼" – 2" (8 – 50mm), Virgin PTFE
  seats and seals, rated at 145psi (10.0 bar) WOG, maximum
  50°F – 120°F (10°C – 49°C)

B6801 – Sizes: ¼" – 2" (15 – 50mm) solder connections

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SIZE (DN)</th>
<th>BALL ORIFICE</th>
<th>DIMENSIONS (APPROX.)</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>in. mm</td>
<td>in. mm</td>
<td>C in. mm</td>
<td>D in. mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>L (L)</td>
</tr>
<tr>
<td>B6800</td>
<td>¼ 8</td>
<td>½ 10</td>
<td>½ 10</td>
<td>½ 44</td>
</tr>
<tr>
<td>B6801</td>
<td>¾ 10</td>
<td>¾ 10</td>
<td>¾ 10</td>
<td>¾ 44</td>
</tr>
<tr>
<td>B6800, B6801‡</td>
<td>½ 15</td>
<td>½ 13</td>
<td>½ 13</td>
<td>½ 44</td>
</tr>
<tr>
<td>B6800, B6801‡</td>
<td>¾ 20</td>
<td>¾ 19</td>
<td>¾ 19</td>
<td>¾ 57</td>
</tr>
<tr>
<td>B6800, B6801‡</td>
<td>1 25</td>
<td>1 25</td>
<td>1 25</td>
<td>1¼ 70</td>
</tr>
<tr>
<td>B6800, B6801‡</td>
<td>1¼ 32</td>
<td>1¼ 32</td>
<td>1¼ 32</td>
<td>1¼ 76</td>
</tr>
<tr>
<td>B6800, B6801‡</td>
<td>1½ 40</td>
<td>1½ 38</td>
<td>1½ 38</td>
<td>1½ 89</td>
</tr>
<tr>
<td>B6800, B6801‡</td>
<td>2 50</td>
<td>2 50</td>
<td>2 50</td>
<td>2 98</td>
</tr>
</tbody>
</table>

‡= Solder connections

For additional information, request literature ES-B6800.

Series B6000-CC (½" – ¾")
B6001-CC (½" – ¾”)
2-Piece, Standard Port, Bronze Ball Valves

Models

- B6000-CC has female NPT x ¾" hose end with end cap and chain
- B6001-CC has solder end x ¾" hose end with end cap and chain

Specifications

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

For additional information, request literature ES-B6000.
### Ball Valve Options and Repair Kits

<table>
<thead>
<tr>
<th>SUFFIX</th>
<th>DESCRIPTION</th>
<th>MODELS</th>
<th>SIZES</th>
<th>KIT DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD</td>
<td>Assembled Dry</td>
<td>All</td>
<td>in.</td>
<td>*</td>
</tr>
<tr>
<td>BS</td>
<td>Balance Stop Plate</td>
<td>B6000/B6001</td>
<td>¼ – 3</td>
<td>8 – 80</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B6800/B6801</td>
<td>¼ – 2</td>
<td>8 – 50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B6400</td>
<td>¼ – 3</td>
<td>8 – 60</td>
</tr>
<tr>
<td>G</td>
<td>Grounded Ball &amp; Stem</td>
<td>All SS Models</td>
<td>¼ – 3</td>
<td>8 – 80</td>
</tr>
<tr>
<td>GS</td>
<td>Grounded Stem</td>
<td>All</td>
<td>All</td>
<td>*</td>
</tr>
<tr>
<td>SC</td>
<td>Satin Chrome</td>
<td>B6000/B6001</td>
<td>All</td>
<td>*</td>
</tr>
<tr>
<td>SE</td>
<td>Safety Exhaust</td>
<td>B6400/B6800/B6801</td>
<td>All</td>
<td>*</td>
</tr>
<tr>
<td>SS</td>
<td>Stainless Steel Ball &amp; Stem</td>
<td>All</td>
<td>All</td>
<td>BSK-SS</td>
</tr>
<tr>
<td>UL</td>
<td>UL Approved</td>
<td>B6000/B6001</td>
<td>¼ – 2</td>
<td>8 – 50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B6800/B6801</td>
<td>¼ – 2</td>
<td>8 – 50</td>
</tr>
<tr>
<td>VT</td>
<td>Virgin Teflon® Seat &amp; Seal PTFE</td>
<td>All</td>
<td>All</td>
<td>SSK-01</td>
</tr>
<tr>
<td>Z15</td>
<td>Without Lever &amp; Nut</td>
<td>B6000/B6001</td>
<td>All</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B6800/B6801</td>
<td>All</td>
<td>*</td>
</tr>
<tr>
<td>04</td>
<td>Mineral Filled PTFE</td>
<td>B6000/B6001</td>
<td>All</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B6800/B6801</td>
<td>All</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B6400</td>
<td>All</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B6800/B6801</td>
<td>All</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B6800/B6801</td>
<td>All</td>
<td>*</td>
</tr>
</tbody>
</table>

### HANDLE OPTIONS

| LC     | Latch Lock Lever Handle     | B6800/B6800SE/B6400SE | ¼ – 2   | 8 – 50          | LL-HK |
|        | Closed Position (without lock) | B6800/B6800SE/B6400SE | ¼ – 2   | 8 – 50          | LL-HK |
| LH     | Locking Lever Handle        | B6000/B6001           | ¼ – 2   | 8 – 50          | LH-HK |
|        | (without lock)              | B6400/B6400SE/B6800SE | ¼ – 2   | 8 – 50          | LH-HK |
|        |                              | B6800/B6801           | ¼ – 2   | 8 – 50          | LH-HK |
| LL     | Latch Lock Lever Handle     | B6000/B6001           | ¼ – 2   | 8 – 50          | LL-HK |
|        | (without lock)              | B6400/B6400SE/B6800SE | ¼ – 2   | 8 – 50          | LL-HK |
|        |                              | B6800/B6801           | ¼ – 2   | 8 – 50          | LL-HK |

### For additional information, request literature PL-RP-GP.

## Series IT6300, IS6301 (½” – 1”)

### 2-Piece, Full Port, Ball and Waste Brass Ball Valves

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

### Specifications

- Pressure Rating: 600 psi (41.3 bar) WOG (non-shock)

### Models

**IT6300** – Sizes ½” – 1” (15 – 25mm), NPT threaded connections

**IS6301** – Sizes ¾” – 1” (15 – 25mm), solder connections

For additional information, request literature ES-IT6300.
Series FBV (½” – 2”)
2-Piece, Full Port, Bronze Ball Valves

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

Specifications
- PTFE seats.
- Pressure Rating: ½” – 2” (15 – 50mm), 600psi (41.3 bar) WOG (non-shock), and 125psi (8.6 bar) WSP
  2½” & 3” (non-shock) (65 – 80mm) 400psi (27.6 bar)
  WOG and 125psi (8.6 bar) saturated steam
- Temperature Range: 0°F – 350°F (-18°C – 177°C) at 50psi (3.4 bar)

Series FBV-3C, FBVS-3C (¼” – 3”)
2-Piece, Full Port, Brass Ball Valves

- Suitable for a full range liquids and gases
- Complies with MSS-SP-110
- Certified to NSF/ANSI Standard 61
- CSA approved (¼” – 3” threaded only), UL/FM approved (½” – 2” threaded only), UL Listed (½” – 2” solder)

Specifications
- Temperature Range: -40°F to 400°F (-40°C to 204°C)
- Pressure Ratings:
  FBV-3C: ¼” – 2” (8 – 50mm)
  • 600psi (41.3 bar) WOG, non-shock
  • 150psi (10.3 bar) WSP
  2½” – 3” (65 – 80mm)
  • 600psi (41.3 bar) WOG, non-shock
  • 125psi (8.6 bar) WSP
  FBVS-3C: ½” – 2” (15 – 50mm)
  • 600psi (41.3 bar) WOG, non-shock
  • 150psi (10.3 bar) WSP
  2½” – 3” (65 – 80mm)
  • 400psi (27.5 bar) WOG, non-shock
  • 125psi (8.6 bar) WSP
  FBV-3C-SS/ FBVS-3C-SS: ½” – 2” (15 – 50mm)
  • 600psi (41.3 bar) WOG, non-shock
  • 150psi (10.3 bar) WSP

Models
FBV-3C – ¼” – 3” (8 – 80mm) threaded end connections
FBVS-3C – ¼” – 3” (15 – 80mm) solder end connections
FBV-3C-SS – ½” – 2” (15 – 50mm) threaded end connections
FBVS-3C-SS – ½” – 2” (15 – 50mm) solder end connections

Handle Options
Available with 2” stem extension, memory stop, and tee handles.

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

Series FBV-3C-QC (½” – 1”)
2-Piece, Full Port, Brass Ball Valves with Quick-Connect Technology

- Watts integral Quick-Connect inlet and outlet connections
- Can be used with Copper, CPVC, PEX and PB pipe
- Approved to ASSE 1061
- Can be rotated under pressure
- Can be removed and reused without the use of tools

Specifications
- Temperature Range: -40°F to 180°F (-40°C to 82°C)
- Pressure Ratings: 200psi @180°F (13.8 bar @ 82°C)

Models
FBVS-3C-QC – ½” – 3” (15 – 80mm) Quick-Connect end connections

For additional information, request literature ES-FBV-3C-QC.
Series FBV-3-Press (½" – 4")
2-Piece, Full Port, Brass Ball Valves with Integral Press Fitting End Connection

- Designed for use in ProPress® Piping Systems

Specifications
- Dezincification-resistant brass body
- NSF/ANSI 61 Certified ½" – 2" (15 – 100mm)
- UL Listed
- Designed for types K, L, and M hard copper tubing ½" - 4" (15 - 100mm) and soft copper tubing ½" – 1⅛" (15 - 32mm)
- Press end connections comply to ASTM-B88
- Press connection rated to 200psi CWP up to 210°F (13.4 bar to 99°C)
- Adjustable packing gland
- Bottom loaded, blowout proof stem with stem O-ring seal
- Press Fitting rated to 200psi CWP up to 212°F (13.4 bar to 98°C)

Series FBV-4, FBVS-4 (¼" – 3")
2-Piece, Full Port, Brass Ball Valves

- Suitable for a full range of liquids or gases
- Complies with MSS-SP-110

Specifications
Temperature Range: -40°F to 400°F (-40°C to 204°C)
Pressure Rating: ½" – 2" 600psi (41.3 bar) WOG non-shock
2⅛" – 3" 400psi (27.6 bar) WOG non-shock

Models
FBV-4  ¼" – 3" (8 – 80mm) threaded end connections
FBVS-4  ½" – 3" (15 – 80mm) solder end connections

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

Series FBV-PEX (½" – 1")
2-Piece, Full Port, Brass Ball Valves with PEX Ends

- Series FBV-PEX 2-Piece, Full Port, Brass Ball Valve with PEX Ends are designed for use in PEX piping systems

Specifications
- Ball Valve Rating: 400 WOG
- Crimp Connection Rating: 160psi at 73°F (23°C) (refer to PEX piping manufacturers guidelines)
- 2-pieces, full port design
- UNS C37700 Forged brass body
- PEX end designed to ASTM-F-1807
- Valve rated to 400 WOG
- Crimp connection rated to 160psi at 73°F (23°C)
- Designed specifically for use in PEX piping systems

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

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
Series FBV-PEX-DE (½" – 1")
2-Piece, Full Port, Brass Ball Valves with PEX Ends and Dog-Ears

- Series FBV-PEX-DE ball valves feature Brass PEX end tailpieces for easy crimping into PEX piping systems
- Dog-ears provide rigid support for the ball valve when attached to a suitable mounting surface.

Specifications
- Ball Valve Rating: 400 WOG (27 bar) with NBR stem O-rings
- PEX end complying to ASTM F-1807 standard
- Crimp joint Rating: 160psi at 73°F (23°C) (refer to PEX piping manufacturers guidelines)

For additional information, request literature ES-FBV-PEX-DE.

Series WBV-3, WBVS-3 (¼" – 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
- ¼-turn open or close operation
- Low operating torque

Specifications
- Pressure Rating: 400psi (27.6 bar) WOG (non-shock)

Models
- WBV-3 – Sizes ¼" – 4" (3 – 100mm), NPT threaded connections
- WBVS-3 – Sizes ½" – 3" (10 – 80mm), solder connections

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

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

Series WBVC (½" – 1")
2-Piece, Standard Port, Brass Ball Valves

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

Models
- WBVC – Sizes ¼" – 1" (15 – 25mm), male NPT compression connections

For additional information, request literature ES-WBVC.

Series S-FBV-1, C-FBV-1 (¼" – 3")
2-Piece, Full Port, Carbon and Stainless Steel Ball Valves

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

Specifications
- Pressure Rating: 1000psi (69.0) WOG (non-shock), 125psi (8.6 bar) WSP

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

Models
- C-FBV-1 – Sizes: ¼" – 3" (8 – 80mm) carbon steel, NPT female connections
- S-FBV-1 – Sizes: ¼" – 3" (8 – 80mm) stainless steel, NPT female connections

For additional information, request literature ES-S-FBV-1 or ES-C-FBV-1
Series G4000M1 (2" – 6")
Series G4000M (8" – 10")

2-Piece, Full Port, Cast Iron Flanged 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

Models

G4000M1 Predator™ Series – Sizes 2" – 6" (50 – 150mm), flanged ball valves with 125psi (8.6 bar) steam rating, 200psi (13.8 bar) CWP (non-shock) at 140°F (60°C).
G4000-FDA – Sizes: 2" – 6" (50 – 150mm) interior and exterior fused epoxy coating, FDA approved, with lever handle. 200psi (13.8 bar) CWP (non-shock) at 140°F (60°C).
G4000M – Sizes 8", 10" (200, 250mm), with manual gear operator. 200psi (13.8 bar) 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 bar) CWP (non-shock) at 140°F (60°C).

For additional information, request literature ES-G4000, ES-G4000-FDA or ES-G4000M1.

Series GBV (¼" – 1")

2-Piece, Brass Gas Ball Valves

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

Models

GBV – Sizes ¼" – 1" (10 – 25mm), NPT female connections and tee handle.
GBV-FL – Sizes ⅜" x ⅜", ⅝" x ⅜", ⅜" x ⅜" (15 x 10, 15 x 15, 20 x 24mm). Female NPT x Flare connections and tee handle.
GBV and GBV-FL – rated 32°F to 125°F (0°C – 52°C). CSA approved @ ½, 2 and 5psi (3.4, 13.8, 34.5 kPa). UL listed @ 5psi (34.4 kPa).

For additional information, request literature ES-GBV.

Series GBV-1 (¼" – ⅜")

1-Piece, Brass Gas Ball Valves

- Sizes ¼" and ⅜" (15 – 20mm) NPT female connections
- New Blowout Proof Stem Design

Features

- Blowout Proof Stem Design
- One-piece Body
- UL approved @ 5psi (34.4 kPa)
- Approved by CSA @ ½, 2 and 5psi (3.4, 13.8, 34.5 kPa). UL listed @ 5psi (34.4 kPa)
- Capacity: ¼" @ 295 ft.3/hr., ⅜" @ 760 ft.3/hr
- Tested under Standards Z21.15 IAS Requirement

For additional information, request literature ES-GBV-1.
Series 6 (¼" – 1")
Brass Midi Check Valves
- Install in a horizontal or vertical position
- Positive back stop
- Silent operation

Specifications
- Maximum Working Pressure: 200psi (13.8 bar)
- Maximum Temperature: 180°F (82°C)

Models
Series 6 – Sizes ¼" – 1" (8 – 25mm), NPT threaded female connections

For additional information, request literature ES-ICV-125.

Series 600, 601S (¼" – 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 ¼" – 2" (8 – 50mm), NPT threaded female connections; 15psi (1 bar) WSP @ 250°F (121°C), and 400psi (27.6 bar) WOG non-shock @ -20°F to 100°F (-29° to 38°C)

601, 601S
- Similar to Model 600 but especially designed for well pump service and other applications requiring tight seating
- Bronze seat with Viton® disc

Sizes ¼"-1" (8 – 15mm) threaded connections, ½" – 1" (15 – 25mm), solder connections; 400psi (27.6 bar) WOG @ 100°F (38°C)

600-Z3 – Sizes ¾", 1½" (20, 40mm), NPT female connection; 400psi (27.6 bar) WOG non-shock @ -20°F to 100°F; 150psi (10.3 bar) WSP @ 360°F. Heavy duty construction; stainless steel disc, spring and guide rod

For additional information, request literature ES-600, ES-601 or ES-600-Z3.

Series ICV-125-2-2-T (2" – 12")
Cast Iron Wafer Check Valves

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"-12" (50-300mm); 200psi (13.8 bar) CWP @ 150°F (66°C).
- Silent check valve eliminates water hammer effect

For additional information, request literature ES-ICV-125-2-2-T.

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
Series ICVF-125 (2" – 6")
Flanged Cast Iron Silent Check Valves

Specifications
- Designed for HVAC and general applications
- Can be installed either horizontally or vertically to provide shutoff to 200psi @ 150°F (13.8 @ 66°C). 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

For additional information, request literature ES-ICVF-125.
**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 (12.1 bar) CWP
- Maximum Temperature: 140°F (60°C)
- Epoxy coated
- Resilient wedge (Buna-N)

**Models**
408-OSY-RW – Sizes 2½" – 12" (65 – 300mm), flanged connections.

For additional information, request literature ES-408-OSY-RW.

---

**Series 403RT-RW (2" – 6'')**

**Ring-tite Gate Valve**
- Irrigation and water shutoff distribution service
- Resilient wedge gate

**Specifications**
- Pressure Rating: 200psi (13.8 bar) CWP
- Maximum Temperature: 140°F (60°C)

**Models**
403RT-RW – Sizes 2" – 6" (50 – 150mm), ring tite connections
ASTM A126 Class B cast iron. Epoxy coated internally and externally

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 bar) 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 2½" – 12" (65 – 300mm), (no 8" available) flanged connections. MSS-SP70. IBBM style, non-rising stem.

For additional information, request literature ES-405RW, ES-406-NRS-RW or ES-406E.

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
Series 411 (2” – 10”)
Class 125, Iron Swing Check Valves
- For water service on fire protection systems
- UL/FM Listed, 2½” – 10”

Specifications
- Pressure Rating: 175psi (13.8 bar) CWP
- Maximum Temperature: 180°F (82°C)
- ASTM A-126 Class B cast iron body
- Complies with MSS-SP-71

Models
411 – Sizes 2” – 10” (50 – 250mm), cast iron body and disc, with Buna-N disc seat, ANSI B16.1 flange connections, epoxy painted external surfaces

Series GV, GVS, GLV (¼” – 4”)
Bronze Shutoff Valves
- For general service on water, steam, oil or compressed gas

Specifications
- Pressure Rating: 125psi (8.6 bar) WSP/200psi (13.8 bar) WOG
- Maximum Temperature: 353°F (178°C)

Models
GV gate valves – Sizes ¼” – 4” (8 – 100mm), NPT female threaded connections, non-rising stem
GVS gate valves – Sizes ⅜” – 3” (10 – 80mm), solder connections, non-rising stem.
GLV globe valves – Sizes ¼” – 2” (8 – 50mm), NPT female threaded connections, rising stem, bronze disc.

Series WGV (½” – 4”)
Brass Gate Valves
- For shutoff service
- Non-rising stem (NRS)

Specifications
- Pressure Rating: 200psi (13.8 bar) WOG
- Maximum Temperature: 180°F (82°C)

Models
- WGV (round handle) – Sizes ½” – 4” (15 – 100mm), NPT female threaded connections
- WGVs (round handle) – Sizes ⅜” – 2” (15 – 50mm), solder connections
- WGV-X (cross handle) – Sizes ⅜” – 3” (10 – 80mm), NPT female threaded connections

For additional information, request literature ES-GV, ES-GVS or ES-GLV.

For additional information, request literature ES-WGV.

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
Series WCV (½” – 4")
Brass Swing Check Valves
• For one-way flow of water and steam applications

Models
WCV – Sizes ½” – 4” (15 – 100mm), NPT threaded female connections. Pressure rating 125psi (8.6 bar) WSP/200psi (13.8 bar) WOG.
WCVS – Sizes ½” – 2” (15 – 50mm), solder connections. Pressure rating 125psi (8.6 bar) WSP/200psi (13.8 bar) WOG.
WCV-2 – Sizes ½” – 2” (15 – 50mm), NPT threaded female connections. Rubber seat material is NBR. Pressure rating 200psi (13.8 bar) WOG. Maximum temperature 140°F (60°C).

Series WGVC (½” – ¾“)
Brass Gate Valves
• For general shut off applications
• Non-rising stem (NRS)

Specifications
WGVC
• Pressure Rating: 125psi (8.6 bar) WOG
• Maximum Temperature: 140°F (60°C)

Models
WGVC – Sizes ½”, ¾” (15 – 20mm), compression ends
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 bar) WSP and 200psi (13.8 bar) 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

For additional information, request literature ES-CV, ES-CVY, ES-CVS or ES-CVYS.
Series 77S-M1 (¼" – 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 bar) @ 406°F (208°C), 400psi WOG (27.6 bar) @ 150°F (66°C)

For additional information, request literature F-C77.

Models
77S-M1 – Sizes: ¼" – 3" (8 – 80mm), NPT threaded female inlet/outlet connections. Sizes ¼" – 2½" (8 – 65mm) have 20 mesh strainer screen; 3" size has ¾" perforated screen. Working pressures same as 77SI.

77S – Sizes: ¼" – 3" (8 – 80mm), NPT threaded female connections. Sizes ¼" – 2" (8 – 50mm) have 20 mesh strainer screen. Size 2¼" (65mm) and 3" (80mm) have ¾" (1mm) perforated screens.

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.
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-125, ES-77F-DI-250 or F-C77.

Series 77F-DI-125, 77F-DI-250, 77F-DI-FDA-125 (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 bar) WSP @ 353°F (178°C), 200psi (13.8 bar) WOG @ 210°F (99°C) comply with MIL-S 16293 Type II.

77F-DI-250 – ductile iron body, ANSI Class 250 flanged connections. Pressure ratings of (non-shock) 250psi (17.2 bar) WSP @ 406°F (208°C), 500psi WOG (34.4 bar) @ 150°F (66°C).

77F-DI-FDA-125 – 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 bar) @ 140°F (60°C). Not for use on steam or gas.

Specifications
Maximum Working Pressure: 400psi WOG (27.6 bar), 4" S777 & S777S 300psi (20.7 bar) WOG and 125psi WSP (8.6 bar)
Sizes ¼" – 2½" (8 – 65mm) have a 20 mesh strainer screen. Size 3" (80mm) has ¾" (1mm) perforated screen, and 4" (100mm) has ¾" (3mm) perforated screen

Models
777 – solid retainer cap for strainer screen.

S77S – retainer cap tapped for closure plug (plug not furnished) – Sizes ¼" – 4" (15-100mm), NPT female threaded connections
S77T – solid retainer cap – Sizes ⅝" – 2" (15 – 50mm), solder end connections
S77TS – retainer cap tapped for closure plug (plug not included) – Sizes ¼" – 2" (15 – 50mm), solder end connections
S77SI – wye type, threaded connections, with tapped retainer cap and closure plug. Sizes ¾" – 3" (10 – 80mm)

For additional information, request literature ES-777, ES-777SI or ES-S777.
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 ⅜” (1mm) for 2” – 3” and ⅛” (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 bar) @ 406°F (208°C), 225psi WOG (15.5 bar) @ 150°F (66°C).

Series 27 (⅛” – ½”)
Bronze Compact Vee-pattern Water Strainers
• For beverage dispensers, ice cube machines, dental equipment, instrument control systems and similar applications

Models
27 – Sizes ⅛” – ⅜” (3 – 15mm), NPT female threaded connections. Standard screen is 40 mesh, other mesh types available, consult factory. Maximum pressure 250psi CWP (17.2 bar).

Model 745 (¾”)
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 ¾” (20mm), NPT female connections, 80 mesh strainer screen. 250psi CWP (17.2 bar) @ 210°F (99°C), and 50psi WSP (345 kPa) @ 280°F (138°C).

Series 17 (⅛” – 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 ¼”, 1” (20, 25mm), union end, NPT threaded female connections, #40 mesh strainer screen standard

Specifications
• Pressure Rating: 250psi (17.2 bar) WOG @ 180°F (82°C)

For additional information, request literature ES-77F-BI.

For additional information, request literature ES-27.

For additional information, request literature ES-745.

For additional information, request literature ES-17.
Series 88CSI (½” – 2”)
Cast Steel, Wye-Pattern Strainers
- For liquid or steam service
- Threaded NPT or socket weld

Specifications
Sizes ½” – 2” (15 – 50mm), ASTM A-216 WCB body, ASTM A-105 retainer cap and plug (furnished), non-asbestos cap gasket, and 304SS screens of ½₈” (.8mm) for ½”-1½”, ¾₈” (1mm) for 2”, Working pressures of 600psi WSP (41.3 bar) @ 489°F (254°C), 1480psi WOG (102 bar) @ 100°F (38°C).

For additional information, request literature ES-88CSI.

Series 77F-CSI (½” – 6”)
Cast Steel, Flanged, Wye-pattern Strainers
- For liquid or steam service

Specifications
Sizes ½” – 6” (15 – 150mm), ASTM A-216 WCB body and screen cover, ASTM A-105 plug (furnished), PTFE gasket, and 304SS screens of ½₈” (.8mm) for ½”-1½”, ¾₈” (1mm) for 2” – 3” (50 – 80mm) and ½” (3mm) for 4” – 6” (100 – 150mm). Flanges in accordance with ANSI B16.1, Class 150. Working pressures of 150psi WSP (10.3 bar) @ 400°F (204°C), 285psi WOG (19.6 bar) @ 100°F (38°C).

For additional information, request literature ES-77F-CSI.

Series 87SI (½” – 3”)
Stainless Steel, Wye-pattern Strainers
- For liquid or steam service
- Threaded NPT or socket weld

Specifications
Sizes ½” – 2” (15 – 50mm), ASTM A-351 316SS body and retainer cap, PTFE cap gasket, and 304SS screens of ½₈” (.8mm) for ½” – 2” (15 – 50mm) and ¾₈” (1mm) for 2” – 3” (65 – 80mm). Working pressures of 300psi WSP (20.7 bar) @ 400°F (204°C), 720psi WOG (49.6 bar) @ 100°F (38°C).

For additional information, request literature ES-87SI.

Series P777-100 (¼”, ⅜”)
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 ¼”, ⅜” (8, 10mm) has 100 mesh screen, NPT female connections

For additional information, request literature ES-P777.

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
Series 88S (¼" – 2")
Stainless Steel Wye-pattern Strainers

- For liquid and steam service to protect mechanical equipment from debris
- ANSI Class 600: Liquids 1440psi (99 bar) @ 100°F (38°C), Steam 600psi (41.3 bar) @ 489°F (254°C)

Specifications
Sizes ¼" - 2" (8-50mm), NPT threaded female connections, perforated strainer screen ⅛" (2mm). All 316SS construction.

Series 77F-CSSI (½" – 6")
Stainless Steel, Wye-pattern Strainers

- For liquid or steam service

Specifications
Sizes ½" - 6" (15 – 150mm), ASTM A-351 316SS body and screen cover, ASTM A-182 316SS plug (furnished), PTFE gasket, and 304SS screens of ⅛" (.8mm) for ½" – 1½", ⅜" (1mm) for 2" – 3" (50 – 80mm), and ⅛" (3mm) for 4" – 6" (100 – 150mm).
Flanges in accordance with ANSI B16.1 Class 150. Working pressures of 150psi WSP (10.3 bar) @ 400°F (204°C), 275psi WOG (18.9 bar) @ 100°F (38°C).

Series 77F-SS, 77G-SS (2½" – 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 2½" - 12" (65-300mm)
- Pressure Rating: 200psi (13.8 bar) WOG (nonshock) at 150°F (66°C)
- ANSI B16.1 Class 125 flange dimensions and drilling

For additional information, request literature ES-88S.

For additional information, request literature ES-77F-CSSI.

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 $\frac{3}{16}$” (1mm) for 2” – 3” (50 – 80mm), $\frac{1}{4}$” (3mm) for 4” – 12” (100 – 300mm). Flanges in accordance with ANSI B16.1 Class 125.

Models
97FB-CIB – Bolted cover
Working Pressures:
97FB-CIB – 125psi (8.6 bar) WSP/ 200psi (13.8 bar) WOG

For additional information, request literature ES-97FB-CI.

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
Working Pressures:
97FD-CSSIB – 275psi (13.8 bar) WOG

For additional information, request literature F-C77.

Series 97FD-CIB (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
Working Pressures:
97FD-CIB – 200psi (13.8 bar) WOG

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 $\frac{3}{16}$” 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, 200 and 250mm)
• Maximum Working Pressure: 175psi (12.1 bar)
• 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 ES-97FB/GB.

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
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 1/4", 1/2", 3/4" (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
- Reheat coils
- Unit heaters
- Small domestic hot water lines
- Convectors
- Small residential boilers/circuits

For additional information, request literature ES-CSM-61.

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

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 shutoff for servicing equipment
- Incorporates a micrometer type handwheel adjustment
- Tamper-proof memory stop

Models

* 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

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 bar). 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 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./m²)
PG-3 – 0 – 35 ft. of water (0–10,668 kgs./m²)
PG-4 – 0 – 100 in. of water (0 – 2,540 kgs./m²)
PG-5 – 0 – 200 in. of water (0 – 5,080 kgs./m²)
PG-6 – 0 – 50 in. of water (0 – 1,270 kgs./m²)
PG-8 – 0 – 135 in. of water (0 – 3,429 kgs./m²)

For additional information, request literature ES-PG-2-6, ES-PG-8.
### Series GBF-H, GBF-G (2½” – 10”)

**Grooved End Butterfly Valves**

- For positive shutoff service on commercial, irrigation, HVAC and industrial applications
- Ductile iron body
- Grooved end designed to ANSI/AWWA C-606 Rigid Grooved Specification

### Specifications

- **Maximum Operating Temperature:** 275°F (135°C)
- **Maximum Operating Pressure:** 175psi (12.1 bar) CWP

### Models

- **GBF-H** with lever handle
- **GBF-G** with gear operator

For additional information, request literature ES-GBF.

### Bare Stem

<table>
<thead>
<tr>
<th>SIZE (DN)</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>lbs.</th>
<th>kgs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2½ 65</td>
<td>3¼ 98</td>
<td>2¾ 73</td>
<td>2½ 65</td>
<td>4 102</td>
<td>1¼ 41</td>
<td>8.51</td>
<td>3.87</td>
</tr>
<tr>
<td>3 80</td>
<td>3¼ 98</td>
<td>3¾ 90</td>
<td>2½ 75</td>
<td>4½ 109</td>
<td>1¼ 41</td>
<td>10.08</td>
<td>4.58</td>
</tr>
<tr>
<td>4 100</td>
<td>4½ 116</td>
<td>4½ 115</td>
<td>3½ 92</td>
<td>5 128</td>
<td>1½ 41</td>
<td>15.93</td>
<td>7.24</td>
</tr>
<tr>
<td>6 150</td>
<td>5½ 149</td>
<td>6½ 169</td>
<td>5¼ 133</td>
<td>5½ 151</td>
<td>2½ 54</td>
<td>30.34</td>
<td>13.79</td>
</tr>
<tr>
<td>8 200</td>
<td>5½ 134</td>
<td>8½ 223</td>
<td>6½ 166</td>
<td>7¼ 194</td>
<td>2½ 58</td>
<td>46.18</td>
<td>20.99</td>
</tr>
<tr>
<td>10 250</td>
<td>6½ 160</td>
<td>10½ 274</td>
<td>8½ 216</td>
<td>7¼ 194</td>
<td>2½ 56</td>
<td>75.22</td>
<td>34.19</td>
</tr>
</tbody>
</table>

### Gear Operator

<table>
<thead>
<tr>
<th>SIZE (DN)</th>
<th>GEAR RATIO</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>H</th>
<th>L</th>
<th>lbs.</th>
<th>kgs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2½ 65</td>
<td>24:1 5¼ 146</td>
<td>4 102</td>
<td>2½ 64</td>
<td>7½ 191</td>
<td>11.06</td>
<td>24.38</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 80</td>
<td>24:1 5¼ 146</td>
<td>4 102</td>
<td>2½ 64</td>
<td>7½ 191</td>
<td>11.06</td>
<td>24.38</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 100</td>
<td>24:1 5¼ 146</td>
<td>4 102</td>
<td>2½ 64</td>
<td>7½ 191</td>
<td>11.06</td>
<td>24.38</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 150</td>
<td>30:1 12 305</td>
<td>6 152</td>
<td>3 76</td>
<td>10½ 267</td>
<td>23.90</td>
<td>52.69</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 200</td>
<td>30:1 12 305</td>
<td>6 152</td>
<td>3 76</td>
<td>10½ 267</td>
<td>23.90</td>
<td>52.69</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 250</td>
<td>30:1 12 305</td>
<td>6 152</td>
<td>3 76</td>
<td>10½ 267</td>
<td>23.90</td>
<td>52.69</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Handle Length

<table>
<thead>
<tr>
<th>SIZE (DN)</th>
<th>F</th>
<th>lbs.</th>
<th>kgs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2½ 65</td>
<td>10½ 268</td>
<td>1.58</td>
<td>3.48</td>
</tr>
<tr>
<td>3 80</td>
<td>10½ 268</td>
<td>1.58</td>
<td>3.48</td>
</tr>
<tr>
<td>4 100</td>
<td>10½ 268</td>
<td>1.58</td>
<td>3.48</td>
</tr>
<tr>
<td>6 150</td>
<td>14½ 360</td>
<td>1.58</td>
<td>3.48</td>
</tr>
<tr>
<td>8 200</td>
<td>15½ 394</td>
<td>3.64</td>
<td>8.02</td>
</tr>
<tr>
<td>10 250</td>
<td>15½ 394</td>
<td>3.64</td>
<td>8.02</td>
</tr>
</tbody>
</table>

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com.
Series DBF (2" – 12"), BF (2" – 24")

Butterfly Valves

- For positive shutoff service on commercial, irrigation, HVAC and industrial applications

Specifications

**DBF** – Sizes 2" – 12" (50 – 300mm), pressure 200psi (13.8 bar) WOG

**BF** – Sizes 2" – 24" (50 – 600mm), pressure 200psi (13.8 bar) WOG for 2" – 12" (50 – 300mm) and 150psi (10.3 bar) for 14" – 24" (350 – 600mm)

Sample Ordering Number: 10-DBF-03-121-1G

10 = 10-inch (250mm) size; **DBF** = full lug style butterfly valve; 1 = ductile iron; 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" – 24" (50 – 600mm)

**Style**

<table>
<thead>
<tr>
<th>Style</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>03</td>
<td>Full lug</td>
</tr>
<tr>
<td>04</td>
<td>Wafer</td>
</tr>
</tbody>
</table>

**Body**

<table>
<thead>
<tr>
<th>1</th>
<th>Ductile Iron (ASTM-A-536)</th>
</tr>
</thead>
</table>

**Disc**

<table>
<thead>
<tr>
<th>1</th>
<th>Ductile Iron (ASTM-A126)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Aluminum Bronze (ASTM-A296)</td>
</tr>
<tr>
<td>3</td>
<td>316 Stainless Steel (ASTM-A351)</td>
</tr>
</tbody>
</table>

**Shaft**

| 1     | 416 Stainless Steel *(316SS shaft on 316SS disc models) |

**Seat**

<table>
<thead>
<tr>
<th>1</th>
<th>EPDM§ Temperature 5°F – 248°F (-15°C – 120°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Buna-N Temperature -14°F – 176°F (-10°C – 80°C)</td>
</tr>
<tr>
<td>3</td>
<td>Viton -4°F – 302°F (-20°C – 150°C)</td>
</tr>
</tbody>
</table>

§Note: Do not use EPDM when hydrocarbons are present.

**Operator**

<table>
<thead>
<tr>
<th>0</th>
<th>Bare shaft (no handle)</th>
</tr>
</thead>
<tbody>
<tr>
<td>G**</td>
<td>Gear operator</td>
</tr>
<tr>
<td>5</td>
<td>Lever handle (10-position), Sizes: 2&quot; – 12&quot; (50 – 300mm) only</td>
</tr>
</tbody>
</table>

P** – Positioning/locking kit with handle, Sizes: 2" – 12" (50 – 300mm) only

**Features**

- Full lug and with lifting lug design
- Wafer style with lifting lug design
- Ductile iron body, 416 stainless steel shaft
- 5211 ISO mounting pad for 10-position lever gear operator, or actuator
- Extended neck for 2" (50mm) of insulation
- Pinned disc
- Dead-end service rated lug style

For additional information, request literature ES-DBF or ES-BF.

**Standards**

For use with ANSI Class 125 or 150 flanges. Complies with API 609 and MSS-SP-67

**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 ± 5° adjustment at end of 90° travel.

For additional information, request literature F-P/E-AC.

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
## Butterfly Valves

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com

### Chain Wheel Kits attach to gear actuator handwheel.

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.

### Positioning/Locking Kit

<table>
<thead>
<tr>
<th>SIZE (DN)</th>
<th>GEAR OPERATOR</th>
<th>POSITIONING/Locking</th>
<th>CHAINWHEELS</th>
</tr>
</thead>
<tbody>
<tr>
<td>in. mm</td>
<td>Kit No.</td>
<td>Kit No.</td>
<td>Kit No.</td>
</tr>
<tr>
<td>2 50</td>
<td>GA-1-M3</td>
<td>#1 POS-LOCK-M2</td>
<td>#2 BCWK</td>
</tr>
<tr>
<td>2½ 65</td>
<td>GA-1-M3</td>
<td>#1 POS-LOCK-M2</td>
<td>#2 BCWK</td>
</tr>
<tr>
<td>3 80</td>
<td>GA-1-M3</td>
<td>#1 POS-LOCK-M2</td>
<td>#2 BCWK</td>
</tr>
<tr>
<td>4 100</td>
<td>GA-2-M3</td>
<td>#2 POS-LOCK-M2</td>
<td>#2 BCWK</td>
</tr>
<tr>
<td>5 125</td>
<td>GA-3-M3</td>
<td>#3 POS-LOCK-M2</td>
<td>#2 BCWK</td>
</tr>
<tr>
<td>6 150</td>
<td>GA-3-M3</td>
<td>#3 POS-LOCK-M2</td>
<td>#2 BCWK</td>
</tr>
<tr>
<td>8 200</td>
<td>GA-4-M3</td>
<td>#4 POS-LOCK-M2</td>
<td>#3 BCWK</td>
</tr>
<tr>
<td>10 250</td>
<td>GA-5-M3</td>
<td>#5 POS-LOCK-M2</td>
<td>#3 BCWK</td>
</tr>
<tr>
<td>12 300</td>
<td>GA-6-M3</td>
<td>#6 POS-LOCK-M2</td>
<td>#3 BCWK</td>
</tr>
<tr>
<td>14 350</td>
<td>GA-6-M3</td>
<td>N/A</td>
<td>#3 BCWK</td>
</tr>
<tr>
<td>16 400</td>
<td>GA-7-M3</td>
<td>N/A</td>
<td>#3 BCWK</td>
</tr>
<tr>
<td>18 450</td>
<td>GA-8-M3</td>
<td>N/A</td>
<td>#4 BCWK</td>
</tr>
<tr>
<td>20 500</td>
<td>GA-9-M3</td>
<td>N/A</td>
<td>#4 BCWK</td>
</tr>
<tr>
<td>24 600</td>
<td>GA-10-M3</td>
<td>N/A</td>
<td>#5 BCWK</td>
</tr>
</tbody>
</table>

Chain Wheel Kits attach to gear actuator handwheel.

2" (50mm) nuts are installed on gear operator shafts.

Weights for 2" – 12" have 10- position lever handles; 14" – 24" with bare stem.

For additional dimensional data, request literature F-CDBF.

### Tapped Lug Data

<table>
<thead>
<tr>
<th>SIZE (DN)</th>
<th>DIMENSIONS (APPROX.)</th>
<th>TAPPED LUG DATA</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>in. mm</td>
<td>A</td>
<td>G</td>
<td>N (Bolt)</td>
</tr>
<tr>
<td>2 50</td>
<td>10⁷⁄₈ 273 3⁷⁄₈ 77</td>
<td>3⁷⁄₈ 1¹/₈ UNcx1¹/₁₂</td>
<td>16 32 8 4 5 3</td>
</tr>
<tr>
<td>2½ 65</td>
<td>11⁷⁄₈ 295 3³⁄₄ 77</td>
<td>3⁷⁄₈ 1¹/₂ UNcx1¹/₁₂</td>
<td>16 35 10 5 7 4</td>
</tr>
<tr>
<td>3 80</td>
<td>12¹/₂ 308 3⁷⁄₈ 77</td>
<td>3⁷⁄₈ 1¹/₂ UNcx1¹/₁₂</td>
<td>16 35 10 5 7 4</td>
</tr>
<tr>
<td>4 100</td>
<td>13³⁄₄ 346 3 ⁹⁄₁₆ 92</td>
<td>3⁷⁄₈ 1¹/₂ UNcx1¹/₁₂</td>
<td>16 38 17 8 11 5</td>
</tr>
<tr>
<td>5 125</td>
<td>14¼ 371 3 ⁹⁄₁₆ 92</td>
<td>3⁷⁄₈ 1¹/₂ UNcx1¹/₁₂</td>
<td>19 44 23 11 16 8</td>
</tr>
<tr>
<td>6 150</td>
<td>15¼ 397 3 ⁹⁄₁₆ 92</td>
<td>3⁷⁄₈ 1¹/₂ UNcx1¹/₁₂</td>
<td>19 44 29 14 19 9</td>
</tr>
<tr>
<td>8 200</td>
<td>18³⁄₄ 479 4 ¹/₈ 115</td>
<td>3⁷⁄₈ 1¹/₂ UNcx2¹/₂</td>
<td>19 54 39 18 30 14</td>
</tr>
<tr>
<td>10 250</td>
<td>21¼ 540 4 ¹/₂ 115</td>
<td>3⁷⁄₈ 1¹/₂ UNcx2¹/₂</td>
<td>22 57 61 28 45 21</td>
</tr>
<tr>
<td>12 300</td>
<td>24³⁄₄ 625 5 ¹/₂ 140</td>
<td>3⁷⁄₈ 1¹/₂ UNcx2¹/₂</td>
<td>22 57 113 52 73 34</td>
</tr>
<tr>
<td>14 350</td>
<td>26³⁄₄ 679 5 ¹/₂ 140</td>
<td>1-8UNcx2¹/₂</td>
<td>25 57 154 70 97 44</td>
</tr>
<tr>
<td>16 400</td>
<td>30 762 7 ¹/₄ 197</td>
<td>1-8UNcx3³⁄₈</td>
<td>25 86 200 91 138 63</td>
</tr>
<tr>
<td>18 450</td>
<td>31¼ 800 7 ¹/₄ 197</td>
<td>1¹/₄ UNcx4</td>
<td>29 102 272 124 182 83</td>
</tr>
<tr>
<td>20 500</td>
<td>35⁷⁄₈ 905 7 ¹/₄ 197</td>
<td>1¹/₄ UNcx5</td>
<td>29 127 396 180 260 118</td>
</tr>
<tr>
<td>24 600</td>
<td>43 1092 10³⁄₈ 276</td>
<td>1¹/₄ UNcx5¹/₂</td>
<td>32 146 610 277 465 211</td>
</tr>
</tbody>
</table>

†Weights are for valves with stainless steel discs.

Weights for 2" – 12" have 10- position lever handles; 14" – 24" with bare stem.

For additional dimensional data, request literature F-CDBF.
### Series 1156F, 1450F (½"

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)

**Dual controls – regulator and relief valve**

- Regulator set at 15psi (103.4 kPa), adjustment range 10-25psi (68.9-172.4 kPa)

#### Models

- **1156F/1156F** – A NPT threaded inlet and outlet
- **1156F** – A ½" female bottom connection for installation of expansion tank
- **S1156F** – union solder inlet
- **T1156F** – union threaded inlet
- **B1156** – bronze body with NPT threaded inlet and outlet
- **SB1156F** – bronze body with union solder inlet
- **TB1156F** – bronze body with union threaded inlet

#### Series 1450F

- **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 (½"

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

- **911T** – NPT x NPT connections
- **911S** – solder x NPT connections
- **B911 (T) (S)** – all bronze construction

#### Features

- Pre-assembled for ease of installation
- Easy service accessibility
- High capacity fill valve for quick system filling and purging
- Size ½" x ⅛" (15 x 15mm)

### Specifications

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SIZE (DN)</th>
<th>DIMENSIONS (APPROX.)</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>A (in.) mm</td>
<td>B (in.) mm</td>
</tr>
<tr>
<td>1156F</td>
<td>½</td>
<td>15 3½ 89</td>
<td>5½ 137</td>
</tr>
<tr>
<td>1156F-A</td>
<td>½</td>
<td>15 3½ 89</td>
<td>5½ 146</td>
</tr>
<tr>
<td>S1156F</td>
<td>½</td>
<td>15 4½ 100</td>
<td>5½ 137</td>
</tr>
<tr>
<td>B1156F*</td>
<td>½</td>
<td>15 4½ 100</td>
<td>5½ 137</td>
</tr>
<tr>
<td>SB1156F*</td>
<td>½</td>
<td>15 4½ 100</td>
<td>5½ 137</td>
</tr>
<tr>
<td>TB1156F*</td>
<td>½</td>
<td>15 4½ 100</td>
<td>5½ 137</td>
</tr>
<tr>
<td>N256*</td>
<td>⅛</td>
<td>20 4 100</td>
<td>6½ 162</td>
</tr>
</tbody>
</table>

**HIGH CAPACITY FEED WATER REGULATORS**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SIZE (DN)</th>
<th>DIMENSIONS (APPROX.)</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>A (in.) mm</td>
<td>B (in.) mm</td>
</tr>
<tr>
<td>1156F</td>
<td>½</td>
<td>15 6½ 165</td>
<td>5½ 137</td>
</tr>
<tr>
<td>1156F-A</td>
<td>½</td>
<td>15 7½ 184</td>
<td>5½ 137</td>
</tr>
<tr>
<td>S1156F</td>
<td>⅛</td>
<td>15 7 178</td>
<td>5½ 137</td>
</tr>
</tbody>
</table>

**DUAL CONTROLS – REGULATOR AND RELIEF VALVE**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SIZE (DN)</th>
<th>DIMENSIONS (APPROX.)</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>A (in.) mm</td>
<td>B (in.) mm</td>
</tr>
<tr>
<td>911T</td>
<td>½</td>
<td>15 8½ 216</td>
<td>5½ 137</td>
</tr>
<tr>
<td>911S</td>
<td>½</td>
<td>15 8½ 216</td>
<td>5½ 137</td>
</tr>
<tr>
<td>B911T</td>
<td>½</td>
<td>15 8½ 216</td>
<td>5½ 137</td>
</tr>
<tr>
<td>B911S</td>
<td>½</td>
<td>15 8½ 216</td>
<td>5½ 137</td>
</tr>
</tbody>
</table>

**STRAINER, REGULATOR AND RELIEF VALVE**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SIZE (DN)</th>
<th>DIMENSIONS (APPROX.)</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>A (in.) mm</td>
<td>B (in.) mm</td>
</tr>
<tr>
<td>T145B*</td>
<td>½</td>
<td>15 8½ 216</td>
<td>5½ 137</td>
</tr>
</tbody>
</table>

**REGULATOR AND STRAINER**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SIZE (DN)</th>
<th>DIMENSIONS (APPROX.)</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>A (in.) mm</td>
<td>B (in.) mm</td>
</tr>
<tr>
<td>T1156B*</td>
<td>½</td>
<td>15 8½ 216</td>
<td>5½ 137</td>
</tr>
</tbody>
</table>
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 bar). ETA 80 through ETA 240: 125psi (8.5 bar)
- 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.

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

**Specifications**
- Maximum Design Pressure: 125psig* (8.5 bar)
- 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.
Series ETX, ETSX (½” – 1¼”)
Pressurized Expansion Tanks for Heating and Cooling Systems*

- Designed to absorb the thermal expansion of hot water in closed loop heating systems.

Features
- Precharged at 12psi (82.7 kPa)
- Rugged flexible butyl diaphragm
- In-line and free standing models
- Compatible with glycol in systems
- Steel construction

Models
ETX Mounts to supply piping
ETSX Free standing

Ratings
Maximum Working Temperature: 240°F (115°C)
Maximum Working Pressure:
ETX-15, ETX-30, ETX-60: 75psi (517 kPa)
ETX-90 and ETSX Series: 100psi (6.9 bar)
Precharge (field adjustable): 12psi (82.7 kPa)

Dimensions – Weights

<table>
<thead>
<tr>
<th>MODEL</th>
<th>TANK VOL.</th>
<th>ACCEPT. VOL.</th>
<th>CONNECTION</th>
<th>DIAMETER</th>
<th>HEIGHT</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>gal.</td>
<td>gal@12 psi</td>
<td>in</td>
<td>mm</td>
<td>in</td>
<td>mm</td>
</tr>
<tr>
<td>ETX-15</td>
<td>2.1</td>
<td>1.0</td>
<td>½” MNPT</td>
<td>8</td>
<td>203</td>
<td>12⅛</td>
</tr>
<tr>
<td>ETX-30</td>
<td>4.5</td>
<td>2.5</td>
<td>¾” MNPT</td>
<td>11</td>
<td>279</td>
<td>14</td>
</tr>
<tr>
<td>ETX-60</td>
<td>6.0</td>
<td>3.0</td>
<td>¼” MNPT</td>
<td>11⅝</td>
<td>290</td>
<td>17⅞</td>
</tr>
<tr>
<td>ETX-90</td>
<td>15.0</td>
<td>6.0</td>
<td>¾” MNPT</td>
<td>16</td>
<td>406</td>
<td>20⅞</td>
</tr>
<tr>
<td>ETSX-30</td>
<td>15.0</td>
<td>6.0</td>
<td>1” FNPT</td>
<td>16</td>
<td>406</td>
<td>21⅞</td>
</tr>
<tr>
<td>ETSX-40</td>
<td>20.0</td>
<td>8.0</td>
<td>1” FNPT</td>
<td>16</td>
<td>406</td>
<td>28⅞</td>
</tr>
<tr>
<td>ETSX-60</td>
<td>33.0</td>
<td>13.3</td>
<td>1” FNPT</td>
<td>16</td>
<td>406</td>
<td>42⅞</td>
</tr>
<tr>
<td>ETSX-90</td>
<td>44.0</td>
<td>17.7</td>
<td>1¼” FNPT</td>
<td>21</td>
<td>533</td>
<td>36⅞</td>
</tr>
<tr>
<td>ETSX-110</td>
<td>62.0</td>
<td>24.9</td>
<td>1¼” FNPT</td>
<td>21</td>
<td>533</td>
<td>47⅞</td>
</tr>
<tr>
<td>ETSX-160</td>
<td>81.0</td>
<td>32.6</td>
<td>1¼” FNPT</td>
<td>21</td>
<td>533</td>
<td>62</td>
</tr>
</tbody>
</table>

*Not for use on potable water systems
## Combination Packages

### Series HP
- Includes air separator, 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 separator, (2) 1/2" (15mm) service check valves, 1/2" (15mm) 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 separator, float vent, and expansion tank.

For additional information request literature PG-HHS.

---

### Series HPX — Expansion Tank Trim-Out Packages

<table>
<thead>
<tr>
<th>MODEL</th>
<th>AIR SEPARATOR</th>
<th>SERVICE CHECK VALVE</th>
<th>FLOAT VENT</th>
<th>FILL VALVE</th>
<th>FILL VALVE / BACKFLOW PREVENTER</th>
<th>FLOW CHECK</th>
<th>EXPANSION TANK</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1&quot; (25mm)</td>
<td>1/8&quot; (6mm)</td>
<td>1/4&quot; (8mm)</td>
<td>1/2&quot; (15mm)</td>
<td>3*</td>
<td>3*</td>
<td>B115S</td>
</tr>
<tr>
<td>HPX-C</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>HPX-D</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>HPX-15C</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>HPX-15D</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>HPX-30 BC</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>HPX-30 BD</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>HPX-15 BC</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>HPX-15 BD</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

### Series ETX-ASF — Combination Packages

<table>
<thead>
<tr>
<th>MODEL</th>
<th>AIR SEPARATOR</th>
<th>SERVICE CHECK VALVE</th>
<th>FLOAT VENT</th>
<th>FILL VALVE / BACKFLOW PREVENTER</th>
<th>EXPANSION TANK</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1&quot; (25mm)</td>
<td>1/8&quot; (6mm)</td>
<td>1/4&quot; (8mm)</td>
<td>1/2&quot; (15mm)</td>
<td>3*</td>
</tr>
<tr>
<td>ETX-15-ASF</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

### Series HPX Bronze — Boiler Trim Out Packages

<table>
<thead>
<tr>
<th>MODEL*</th>
<th>AIR SEPARATORS</th>
<th>SERVICE CHECK VALVE</th>
<th>FLOAT VENT</th>
<th>FILL VALVE / BACKFLOW PREVENTER</th>
<th>EXPANSION TANK</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AS-B-S</td>
<td>AS-B-T</td>
<td>FV-4M1</td>
<td>B115S</td>
<td>B911S</td>
</tr>
<tr>
<td>HPX-15C-AB-S</td>
<td>X</td>
<td>2</td>
<td>2</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>HPX-15D-AB-S</td>
<td>X</td>
<td>2</td>
<td>2</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>HPX-15C-AB-T</td>
<td>X</td>
<td>2</td>
<td>2</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>HPX-15D-AB-T</td>
<td>X</td>
<td>2</td>
<td>2</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>HPX-30C-AB-S</td>
<td>X</td>
<td>2</td>
<td>2</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>HPX-30C-AB-T</td>
<td>X</td>
<td>2</td>
<td>2</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

* = Solder air separator, T = threaded air separator end connections.

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com.
Series RPV (3⁄4", 1", 1 1⁄4")
Residential Purge and Balancing Valves

- 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

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 ES-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

<table>
<thead>
<tr>
<th>MODEL</th>
<th>INLET x OUTLET</th>
<th>SIZE (IN)</th>
<th>DIMENSIONS (APPROX.)</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPV-S</td>
<td>Solder x Solder</td>
<td>3⁄4 20</td>
<td>23⁄16 75 23⁄16 60</td>
<td>1⁄16 17</td>
</tr>
<tr>
<td>RPV-T</td>
<td>FNPT x FNPT</td>
<td>3⁄4 20</td>
<td>23⁄16 75 23⁄16 60</td>
<td>1⁄16 17</td>
</tr>
<tr>
<td>RPV-TS</td>
<td>FNPT x Solder</td>
<td>3⁄4 20</td>
<td>23⁄16 75 23⁄16 60</td>
<td>1⁄16 17</td>
</tr>
<tr>
<td>RPV-ST</td>
<td>Solder x FNPT</td>
<td>3⁄4 20</td>
<td>23⁄16 75 23⁄16 60</td>
<td>1⁄16 17</td>
</tr>
<tr>
<td>RPV-S</td>
<td>Solder x Solder</td>
<td>1 25</td>
<td>37⁄8 95 27⁄8 60</td>
<td>1⁄16 22</td>
</tr>
<tr>
<td>RPV-S</td>
<td>Solder x Solder</td>
<td>1 3⁄4 32</td>
<td>49⁄16 114 29⁄16 73</td>
<td>1⁄16 27</td>
</tr>
</tbody>
</table>

Series RBFF (1⁄2“)
Residential Boiler Fill Fitting

- Provides a convenient solution to comply with boiler manufacturers’ piping requirements and provide ease of service for expansion tanks and water pressure regulator valves in closed-loop hot water heating systems.

Specifications
- Maximum Working Pressure: 125psi (860 kPa)
- Maximum Inlet Temperature: 250°F (121°C)

Features
- One-piece construction, eliminating up to 11 threaded joints
- Unique 3-way ball valve for isolation of water pressure regulator and expansion tank from system pressure
- Drain port with integral ball valve for unloading pressure from waterside of expansion tank diaphragm for air charge servicing and maintenance. Drain port can also be used for a variety of system draining and filling operations.
- 0 to 30psi (207 kPa) pressure gauge for convenient system pressure reference

For additional information, request literature ES-RBFF.

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
Series AS, AS-T (1" – 3")
Air Separators for Removing 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 ½" tapping for fill valve piping

Specifications
- Maximum Working Pressure: 125psi (8.6 bar)
- Maximum Temperature: 275°F (135°C)

For additional information, request literature S-AS/AST.

Series AS-B
Bronze Air Separator

- Bronze construction
- Sizes ¼", ½" (20, 25, 32mm) NPT, sweat or threaded inlet/outlet connections
- Standardly furnished with tappings for boiler fill, expansion tank and air vent
- Comes standard with ¼" (15mm) 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 ES-AS-B.

Series DuoVent (¼" – ½")
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.

Specifications
- Sizes: ½", ¾" (20, 32mm) NPT
- Maximum Working Temperature: 240°F (116°C)
- Minimum Working Pressure: 1.45psi (10 kPa)
- Maximum Working Pressure: 150psi (10.3 bar)

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

Series AS-B
Bronze Air Separator

- Sizes 1", 1¼", 1½", 2", 2½", 3" (25 – 80mm), NPT female inlet/outlet connections. With ⅛" (3mm) female threaded connection for float vent and ⅜" (15mm) female threaded connection for expansion tank.

AS – Sizes 1", 1¼", 1½", 2", 2½", 3" (25 – 80mm), NPT female inlet/outlet connections. With ⅛" (3mm) female threaded connection for float vent and ⅜" (15mm) female threaded connection for expansion tank.

For additional information, request literature S-AS/AST.
**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 (10.3 bar)
- 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 bar)
- 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 bar)
- 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.

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
**Series IPF-M1** (½” – 2")
Isolation Pump Flanges for Circulator Pumps

- Ball valve isolation for circulator pumps
- Adjustable packing gland
- Brass body & flange
- Optional T handle included
- Available with threaded or solder connections
- Sizes ½” – 2” (15 – 50mm) Sweat (IPF-S-M1), ½” – 2” (15 – 50mm) Threaded (IPF-T-M1)

**Specifications**
- Maximum working Pressure: 600psi (41.3 bar) WOG

**Models**
- IPF-T – ½” (15mm) NPT threaded end connection
- IPF-S – ½” (15mm) Solder end connection
- IPF-T-M1 – ¼” – 2” (20-50mm) NPT threaded end connection
- IPF-S-M1 – ¼” – 2” (20-50mm) Solder end connection

---

**Series PIPF** (¾” – 1¼”)
Isolation Pump Flanges with Purge Port & Swivel Flange

- Ball valve isolation for circulator pumps
- Integral purge port saves time and money compared to purge stations made with ball valves, boiler drains and copper tees
- Swivel flange allows purge port to be positioned for optimal purging convenience
- Brass body & flange
- Double O-ring stem sealing technology eliminates packing leaks
- Available with threaded or solder end connections

**Specifications**
- Maximum Working Pressure: 400psi (27.6 bar) WOG

---

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 bar) 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 1/4” (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.

For additional information, request literature ES-2000.

---

**Series G, GH, MG, MGH** (1/2” – 1”)

**Thermostatic Steam Traps**

- Removes condensate, air and non-condensable gases from heating systems to conserve 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 65psi)

For additional information, request literature ES-G/GH/MG/MGH.

---

**Series QF**

**Quik-Fix™ Radiator Steam Trap Replacement Kits**

- Quick, easy and economical radiator trap repair kit
- Simplifies and standardizes inventory
- Upgrades old radiator traps instantly
- Adapts to most existing radiator traps
- Uses existing cover

**Specifications**

- Quick, easy installation
- Integral Seats
- Replaceable Seats

For additional information, request literature ES-QF.

---

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
Series G, MG (¼" – 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, 103 kPa)
- 7MG-30 through 111MG-30 – for steam main drip and process equipment (25" Hg to 30psi, 207 kPa)
- 6MG-50 through 111MG-50 – for steam main drip and process equipment applications (25" Hg to 50psi 345 kPa)

Series WIB (½" – 1")
Inverted Bucket Steam Traps
- Designed for reliable condensate removal on virtually all types of steam equipment

Specifications
- Maximum Working Pressure: 250psi (17.2 bar)
- ½"-1" (15-25mm) pipe sizes
- Working parts removable without disturbing piping

Models
- WIB 80 – ½"-¾" (15-20mm) for operating pressures up to 150psi (10.3 bar)
- WIB 81 – ½"-1" (15-25mm) for operating pressures up to 250psi (17.2 bar)

Series WFT (¾" – 2")
Float & Thermostatic Steam Traps
- Designed to provide continuous air venting and separate condensate draining with maximum efficiency
- "H" pattern body on all ¾", 1", 1¼" (20, 25, 32mm), has been designed to offer maximum installation flexibility
- Larger sized traps, 1½", 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 bar) differential pressures
- Maximum Working Pressure: 250psi (17.2 bar) @ 406°F (673°C)
- All stainless steel internal components
- All stainless steel balanced pressure thermostatic air vent
- Wide selection ¾" – 2" (20 – 50mm)

For additional information, request literature ES-G/MG.

For additional information, request literature ES-WIB.

For additional information, request literature ES-WFT.

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
Series WFTC (3⁄4” – 1¼”), WFTK (1½” – 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” -1¼”
(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: 1½” – 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.

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 (41.3 bar)

For additional information, request literature ES-WTD.

Series RA (1⁄2” – 2”)
Steam Radiator 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 – ¼” – 1¼” (20 – 32mm), angle valve, brass body, FIP x male union connections
RA-CV – 1”, 1¼” (25, 32mm), angle convector valve, bronze body, female union x FIP connections
RA-1-SW – ½” – 1½” (15 – 40mm), gate valve with FIP x male union connections

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: ¼” (3mm), non-adjustable straight connection
SVS-2 – Size: ¼” (8mm), non-adjustable straight connection
SVS-3 – Size: ¼” male inlet or ½” female inlet connection (20 or 15mm), non-adjustable straight connection

For additional information, request literature ES-SV.

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
**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

For additional information, request literature IS-N89.

---

**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 bar)
- 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 bar). Maximum temperature 300°F (149°C).

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 bar)
- 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 142, 144 (⅛"

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 bar)

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 ¼" (15mm) NPT female. Float chamber connection 1" (25mm) NPT female.
144S – With strainer.

For additional information, request literature IS-142.

Series SAN89, SAN50 (⅛", 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.

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) 600psi (41.3 bar) WOG

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 bar) non-shock for hot water

Models
- HWA – Sizes 1/4" – 1 1/4" (15 – 32mm), FIP female x threaded male union. Sizes 1/2" & 3/4" (15 & 20mm), bronze body, solder x threaded male union connections

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 bar)

Models
- OTV-FL – Sizes 1/2" (15mm) male connection x 3/8" (10mm) female connection
- OTV-M – Sizes 1/2" (15mm) male connection x 3/4" (10mm) male connection

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

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 1016-96, ASSE 1070 listed and CSA B-125 Certified
- 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 when limit stop is properly set
- Built-in check valves prevent cross-flow and integral strainers filter out debris
- Includes locking cap

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: 40°F – 85°F (4°C – 29°C)
- Minimum Inlet Temperature Differential: 5°F (2.8°C)
- Temperature Adjustment Outlet: Range 80°F – 120°F (27°C – 49°C)
- Maximum Inlet Temperature: 180°F (82°C)
- Maximum Working Pressure: 150psi (10.3 bar)

*Now includes integral strainers.

<table>
<thead>
<tr>
<th>MODEL</th>
<th>FINISH</th>
<th>CONNECTION SIZE</th>
<th>HEIGHT</th>
<th>WIDTH</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>USG-B-M1</td>
<td>Bronze</td>
<td>3/8” Compression</td>
<td>5 3/16</td>
<td>3 1/8</td>
<td>1.5</td>
</tr>
<tr>
<td>USG-B-SC-M1</td>
<td>Satin Chrome</td>
<td>3/8” Compression</td>
<td>5 3/16</td>
<td>3 1/8</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Series USG-P

Under Sink Guardian™

- ASSE 1016-96 listed, CSA B-125 Certified
- 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 when limit stop is properly set
- Built-in check valves prevent cross-flow and integral strainers filter out debris
- Includes tamper resistant locking cap

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: 5°F (2.8°C)
- Temperature Out: 80°F – 120°F (27°C – 49°C)
- Maximum Working Pressure: 150psi (10.3 bar)

<table>
<thead>
<tr>
<th>MODEL</th>
<th>FINISH</th>
<th>CONNECTION SIZE</th>
<th>HEIGHT</th>
<th>WIDTH</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>USG-P-M1</td>
<td>Thermoplastic</td>
<td>3/8” Compression</td>
<td>5 3/16</td>
<td>3 1/8</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Also Available:

USG-DP-M1 – 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
- 3/8” x 1/2” adapters
- Ferrule for use with pex or polybutylene supply tubing

For additional information, request literature ES-USG-B.

For additional information, request literature ES-USG-P.

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
Series MMV (½” – 1”)
Thermostatic Mixing Valves

- For use in domestic water systems at the point of use to provide accurate outlet temperature control
- ASSE 1016-96 listed, ASSE 1017, ASSE 1069 listed and ASSE 1070 listed, CSA B-125 Certified

Specifications
- Bronze body
- Maximum Temperature: 200°F (93°C)
- Maximum Working Pressure: 150 psi (10.3 bar)
- Outlet Temperature: Ranges from 80°F – 120°F (27°C – 49°C) adjustable

<table>
<thead>
<tr>
<th>SIZE (IN)</th>
<th>MODEL</th>
<th>DIMENSIONS</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>A</td>
</tr>
<tr>
<td>½”</td>
<td>15</td>
<td>4 1/4</td>
<td>124</td>
</tr>
<tr>
<td>¾”</td>
<td>20</td>
<td>5 1/8</td>
<td>130</td>
</tr>
<tr>
<td>1”</td>
<td>25</td>
<td>6 1/2</td>
<td>140</td>
</tr>
</tbody>
</table>

For additional information, request literature ES-MMV.

Model L111 (½”)
Thermostatic Mixing Valve

- Maintains desired mixed water temperature at point of use for single showers or lavatories
- ASSE 1016-96 listed, ASSE 1069 listed and ASSE 1070 listed
- Brass body construction with polyetherimide control cartridge and polypropylene tamper-resistant cover to ensure long life

Specifications
- ½” (15mm) threaded female inlet and outlet
- Minimum Working Pressure: 15 psi (103 kPa)
- Maximum Working Pressure: 125 psi (8.6 bar)
- Temperatures for inlets: hot, 120°F to 180°F (49°C – 82°C); cold, 33°F to 85°F (0.5°C – 29°C)
- Minimum Differential Temperature: 10°F (-12°C)
- Outlet Temperature: ranges from 80°F to 120°F (27°C – 49°C); adjustable by contractor; accurate within ±3°F (±1.7°C)

For additional information, request literature ES-L111.

Options
add Suffix:
CS-U – integral check, strainer, and stop valves. Sizes: ½”, ¾”, 1” (15 – 25mm)
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, CSA B-125 Certified

Specifications

- Bronze body
- Maximum Temperature: 200°F (93°C)
- Maximum Working Pressure: 150psi (10.3 bar)

End Connection Options

add Suffix:
- UT – union thread connections
- US – union solder connections
- PEX – union PEX connections
- CPVC – union CPVC connections
- QC – Quick-Connect connections

Models

1170 - Can be set to any temperature between 90°F and 160°F (32°C and 71°C)
L1170 - Low temperature range, can be set to any temperature between 60°F and 120°F (16°C and 49°C)

For additional information, request literature ES-1170/L1170.

<table>
<thead>
<tr>
<th>SIZE (DN)</th>
<th>MODEL</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>mm</td>
</tr>
<tr>
<td>1/2</td>
<td>15</td>
<td>4 1/4</td>
<td>124</td>
<td>5/8</td>
<td>137</td>
</tr>
<tr>
<td>3/4</td>
<td>20</td>
<td>4 1/4</td>
<td>124</td>
<td>5/8</td>
<td>137</td>
</tr>
<tr>
<td>1</td>
<td>25</td>
<td>5</td>
<td>136</td>
<td>5/8</td>
<td>143</td>
</tr>
<tr>
<td>1/2</td>
<td>15</td>
<td>4 1/4</td>
<td>120</td>
<td>5/8</td>
<td>137</td>
</tr>
<tr>
<td>3/4</td>
<td>20</td>
<td>5</td>
<td>136</td>
<td>5/8</td>
<td>143</td>
</tr>
<tr>
<td>1</td>
<td>25</td>
<td>5 5/16</td>
<td>148</td>
<td>5/8</td>
<td>149</td>
</tr>
<tr>
<td>1/2</td>
<td>15</td>
<td>5</td>
<td>140</td>
<td>5/8</td>
<td>145</td>
</tr>
<tr>
<td>3/4</td>
<td>20</td>
<td>5 1/8</td>
<td>140</td>
<td>5/8</td>
<td>145</td>
</tr>
<tr>
<td>1</td>
<td>25</td>
<td>5 1/4</td>
<td>149</td>
<td>5/8</td>
<td>150</td>
</tr>
<tr>
<td>1/2</td>
<td>15</td>
<td>4</td>
<td>121</td>
<td>5/8</td>
<td>136</td>
</tr>
<tr>
<td>3/4</td>
<td>20</td>
<td>5</td>
<td>133</td>
<td>5/8</td>
<td>142</td>
</tr>
<tr>
<td>1</td>
<td>25</td>
<td>5 5/16</td>
<td>144</td>
<td>5/8</td>
<td>147</td>
</tr>
<tr>
<td>1/2</td>
<td>15</td>
<td>6</td>
<td>166</td>
<td>6 1/4</td>
<td>159</td>
</tr>
<tr>
<td>3/4</td>
<td>20</td>
<td>6 15/16</td>
<td>177</td>
<td>6 3/4</td>
<td>163</td>
</tr>
<tr>
<td>1</td>
<td>25</td>
<td>7 3/4</td>
<td>181</td>
<td>6 1/2</td>
<td>165</td>
</tr>
</tbody>
</table>

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
Series 70A (½"

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

Models

70A-F – Sizes ½" (15mm), solder connections, temperature range 120° – 160°F (49° – 71°C)
70A-T – Sizes ½" (15mm), NPT female connections, temperature range 120° – 160°F (49° – 71°C)
70A – Sizes ¾" (20mm), solder connections, temperature range 120° – 160°F (49° – 71°C)
70A-T – Sizes ¾" (20mm), NPT female connections, temperature range 120° – 160°F (49° – 71°C)

L70A-F – Sizes ½" (15mm), solder connections, temperature range 120° – 160°F (49° – 71°C)
L70A-T – Sizes ½" (15mm), NPT female connections, temperature range 120° – 160°F (49° – 71°C)
L70A – Sizes ¾" (20mm), solder connections, temperature range 120° – 160°F (49° – 71°C)
L70A-T – Sizes ¾" (20mm), NPT female connections, temperature range 120° – 160°F (49° – 71°C)

Series N170 (¾" – 2"

Hot water master tempering valves

- For use on larger hot water supply systems for mixing hot and cold water for a variety of applications to extend the hot water supply

Specifications

- Maximum Operating Pressure: 125psig (861 kPa)
- Maximum Hot Water Temperature: 200°F (93°C)
- Minimum Hot Water Supply Temperature: 5°F (3°C) Above Set Point
- Temperature Adjustment Range: 90°F - 180°F (32°C - 82°C)

Features

- ASSE 1017 and IAPMO cUPC Listed
- N170-M3 uses paraffin-based thermostat to sense and adjust outlet temperature
- Dirt and lime resistant poppet and seat design
- Vandal-resistant locking mechanism to secure temperature setting.

For additional information, request literature ES-N170-M3.

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
Series 05 (⅜” – ⅝”)
Mini Water Hammer Arrestors
• Controls water hammer
• Residential and light commercial applications

Specifications
Sizes ⅜” – ⅝” (10 – 20mm).
Maximum Working Pressure: 150psi (10.3 bar).
Temperature Range: 33° – 180°F (0.5° – 82°C)

Standards
ASSE 1010 and IAPMO listed

Series 15 (⅛” – 2”)
Water Hammer Arrestors
• Controls water hammer
• Commercial and industrial applications

Features
• 150psi (10.3 bar) 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

For additional information, request literature ES-15.

Standards
ASSE 1010 and ANSI 112.26.1M approved, PDI WH201 approved and certified, Listed by IAPMO

Series 150A (⅛” – ⅝”)
Water Hammer Arrestors
• Controls water hammer

Specifications
• Maximum Working Pressure: 150psi (10.3 bar)
• Maximum Velocity: 10 fps. Maximum
• Shock Pressure: 200psi (13.8 bar)

Models
150A – Size ⅛” (15mm)
150A-HA – Size ⅝” (20mm), with hose threaded connection for washing machines

Features
• Pre-charged air chamber
• Sealed-in diaphragm
• Rechargeable

For additional information, request literature ES-150A.
Series DWB
DuoClozure™ Wall Box (½“)
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 bar)
Maximum Working Temperature: 180°F (82°C)

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

Models
2M2 DWB – Size ½“ (15mm) ell solder connections for concealed piping
2M2 DWB Rough-In Kit – Contains components to rough-in and test piping and drain system
2M2 DWB-Finish Kit Contains the Series 2-M2 Duo-Cloz washing machine water shutoff valve and finish trim

For additional information, request literature PG-LR.

Series A2C-M1, IntelliFlow™ (½“)
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 bar)
- 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)

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 bar)
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

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

For additional information, request literature ES-SpringFit.

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
Series A200 (½”)
“Flow Through” Trap Primers
- Assures delivery of water to floor drain traps to prevent evaporation of the water seal

Models
A200T – Size: ½” (15mm), threaded ends
A200S – Size: ½” (15mm), solder ends

Features
- Complete flow cycle operates valve twice
- Built-in air gap
- Bronze body
- Celcon® seat and disc

For additional information, request literature ES-A200.

Series BD (½” x ¾”, ¾” x ¾”)
Brass Boiler Drain Shutoffs for Water Service
- ¾” (20mm) Hose thread connection on outlet
- Dual solder or IP connection models
- Angle and straight pattern models

Specifications
- Maximum Working Pressure: 200psi (13.8 bar) WOG
- Maximum Working Temperature: 180°F (82°C)

Models
BD1C – Size ½” (15mm) dual connection, solder or male IPS x ¾” (20mm) hose thread connection, angle pattern
BD2 – Size ¾” (20mm) male IPS x ¾” (20mm) hose thread connection, angle pattern
BD2C – Size: ¾” (20mm) male IPS x ¾” (20mm) hose thread connection, angle pattern
BD3F – Size: ½” (15mm) female IPS x ¾” (20mm) hose thread connection, angle pattern
BD4F – Size: ¾” (20mm) female IPS x ¾” (20mm) hose thread connection, angle pattern
BD5 – Size: ½” (15mm) straight pattern, solder or male IPS x ¾” (20mm) hose thread connection
BD6 – Size: ¾” (20mm) straight pattern, male IPS x ¾” (20mm) hose thread connection

For additional information, request literature ES-BD.
Series BD-QT (½" x ¾"
(¾" x ¾")
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 bar) CWP
- Maximum Temperature: 250°F (121°C)

**Features**

- ¾" (20mm) Hose thread connection on outlet
- Available ¾" x ¾" (20 x 20mm) MIP or Solder
- Positive shutoff
- Quarter-turn ball valve design
- Rugged aluminum Tee-handle design
- Adjustable Teflon® stem packing

For additional information, request literature ES-BD-QT.

---

Series FH, FHB (½" x ½", ¾" x ⅜", ⅝" x ⅜")
Frost-proof Automatic Draining Wall Hydrants

- Designed to provide freeze protection for external water supply
- ¾" (20mm) 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), ½" (15mm) copper or ½" (15mm) male IPS inlet

**FH-1-M1-PEX** – Sizes: 4" – 14" (100 – 350mm), ½" (15mm) PEX inlet

**FH-2-M1** – Sizes: 4" – 14" (100 – 350mm), ¾" (20mm) male IPS or ½" (15mm) female IPS inlet

**FH-1** – For wall sizes: 4" – 14" (100 – 350mm), ½" (15mm) copper or ½" (15mm) male IPS inlet

**FH-1-PEX** – Sizes: 4" – 14" (100 – 350mm), ½" (15mm) PEX inlet

**FHB-1** – For wall sizes: 4" – 14" (100 – 350mm), ½" (15mm) copper or ½" (15mm) male IPS inlet

**FHB-1-PEX** – Sizes: 4" – 14" (100 – 350mm), ½" (15mm) PEX inlet

**FHB-2** – For wall sizes: 4" – 14" (100 – 350mm), ¾" (20mm) male IPS or ¼" (15mm) female IPS inlet

**FHB-2-3⁄4** – For wall sizes: 12" (300mm), ¾" (20mm) copper inlet or ¾" (20mm) male IPS inlet

**Features**

- Self-drains automatically
- Positive seat water shutoff
- ASSE 1019 approved FHB models only

For additional information, request literature ES-FH or ES-FHB.

---

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: 2½" – 18" (65 – 450mm), 1" (25mm) male IPS or ¾" (20mm) female IPS inlet connections

**Features**

- Brass valve body
- Replaceable EPDM seat surface
- One piece valve plunger that controls flow and drainage
- Tamper-resistant tee key operates hydrant
- Brass pipe casing
- Chrome on brass exterior finish

**HY42 Box** – mounting box available

For additional information, request literature ES-HY42.

---

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
Series SC, SC8 *(1⁄2", 3⁄4")*

Sill Cock Faucets

- Hose bibb type faucets with tee handle or handwheel

Specifications

- Maximum Working Pressure: 125psi (8.6 bar) CWP.

Models

**Tee Handle Sillcock**

SC-1 – Size: 1⁄2" (15mm) no kink hose faucet dual inlet connection (male IPS or solder)

SC8-1 – Same as SC-1, except with vacuum breaker

SC-2 – Size: 3⁄4" (20mm) no kink hose solder connection x 3⁄4" (20mm) hose connection

SC8-2 – Same as SC-2, except with vacuum breaker

**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

SC8-3 – Same as SC-3, except with vacuum breaker

SC-4 – Size: 1⁄2" or 3⁄4" (15 or 20mm), female IPS inlet connection x 3⁄4" (20mm) hose

SC8-4 – Same as SC-4, except with vacuum breaker

**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

SC8-5 – Same as SC-5, except with vacuum breaker

SC-6 – Size: 3⁄4" (20mm) male IPS 3⁄4" (20mm) hose connections

SC8-6 – Same as SC-6, except with vacuum breaker

For additional information, request literature ES-SC or ES-SC8.
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 bar) WOG
- Maximum Temperature: 80°F (27°C)

Stop and waste valves

Models
SWS – Sizes: 3/8", 1/4", 1/2" (10, 15, 20mm) solder connections
WVC – Sizes: 3/8", 1/4" (15, 20mm) compression ends
SWT – Sizes: 1/2", 3/4" (15, 20mm) NPT female connections
Stop only valves
SS – Sizes: 3/8", 1/4" (15, 20mm) solder connections
SSC – Sizes: 1/2", 3/4" (15, 20mm) compression ends
ST – Sizes: 3/8", 1/2" (15, 20mm) NPT female connections
ST-C – Sizes: 3/8", 1/2" (15, 20mm) NPT female connections with cross style handle

For additional information, request literature ES-SW 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 (9 bar)

Features
- Cast brass
- With or without waste feature

For additional information, request literature ES-WAMV.

Series WAS (1/4")
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 1/4" (15mm), compression ends or IPS male connections

For additional information, request literature ES-WAS.

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
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 (11.4 bar)
- Maximum Temperature: 180°F (82°C)

For additional information, request literature F-FV.

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 (93°C)

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 (60°C)

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 (8.6 bar)
- Maximum Temperature: 180°F (82°C)
- 3/8" – 1" (10 – 25) – Bronze body with MNPT threaded inlet and outlet
- 1¼" – 2" (32 – 50mm) – Bronze body with female NPT inlet-open outlet

For additional information, request literature F-FV.
Heavy Duty Cooler Valves
Bronze Body

Specifications
- Machined in-seat
- Buna N seals
- Adjustable brass arms
- Polyethylene float
- Maximum Working Pressure: 100psi (6.7 bar)
- Maximum Temperature: 140°F (60°C)

Model
STD-CA – 3⁄4" (10mm) MIP OD x ½" (3mm) FIP ID pipe connection
C%TF – 3⁄8" (10mm) copper tube compression inlet connection
C%TF-1 – ¼" (8mm) copper tube compression inlet connection
C%TFAEA – ¼" (8mm) copper tube compression inlet connection

For additional information, request literature F-FV.

Tube Fitting Mini Cooler Valves
Brass Body

Models
M1⁄4FSS – ¼" (8mm) copper tube compression inlet connection

For additional information, request literature F-FV.

RL600
Automatic Livestock Watering Kits

Features
- High capacity
- Easy installations
- Animal proof
- Resist freezing
- Durable

For additional information, request literature F-FV.

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
Series 3000 (½” – 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 alkalies. For other applications, consult factory.
- Dielectric Unions are rated to 180°F (82°C) at 250psi (17.2 bar) conforming to ANSI B16.39. Pipe threads are in accordance with ANSI B2.1.
- Dielectric Flange Fittings are rated at 175psi (12.1 bar) 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 ½” – 2” (15 – 50mm), female iron pipe thread to solder connection
3002 – Sizes ½” x ¾”, ¾” x 1”, 1” x 1¼” (15 x 10, 20 x 15, 25 x 20mm), female iron pipe thread to reduced solder connection.
3003 – Sizes ½” – 2” (15 – 50mm), female iron pipe thread to female brass pipe
3004 – Sizes ½” – 2” (15 – 50mm), female iron pipe thread to female iron pipe thread (galvanized)
3005A – Sizes ½” – ¾” (15 – 20mm), male iron pipe thread to solder connection
3006 – Sizes ½” – 2” (15 – 50mm), female iron pipe thread to female iron pipe thread (black)
3007 – Sizes ½” x ¾” – ¾” x 1¼” (15 x 10mm – 20 x 15mm), male iron pipe thread to female solder connection
3008 – Sizes ½” – 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 2¼” – 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.

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 bar)

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.

<table>
<thead>
<tr>
<th>BOLT SIZE</th>
<th>QTY./CARTON</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>in.</td>
<td>mm</td>
<td>lbs.</td>
</tr>
<tr>
<td>½</td>
<td>15</td>
<td>100</td>
</tr>
<tr>
<td>¾</td>
<td>16</td>
<td>100</td>
</tr>
<tr>
<td>¾</td>
<td>20</td>
<td>100</td>
</tr>
<tr>
<td>¾</td>
<td>22</td>
<td>100</td>
</tr>
</tbody>
</table>

Bolt Insulators – for insulating flange bolts – Installation Kit
### MODEL SIZE (DN) DIMENSIONS (APPROX.) WEIGHT

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SIZE (DN)</th>
<th>DIMENSIONS (APPROX.)</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>3001A</td>
<td>½ 15 1½ 32</td>
<td>1½ 48</td>
<td>6.0 170</td>
</tr>
<tr>
<td>3001A</td>
<td>¼ 20 1½ 41</td>
<td>2½ 54</td>
<td>6.7 190</td>
</tr>
<tr>
<td>3001A</td>
<td>1 25 1½ 48</td>
<td>2½ 64</td>
<td>9.3 264</td>
</tr>
<tr>
<td>3001A</td>
<td>1¼ 32 2½ 57</td>
<td>3 76</td>
<td>13.3 377</td>
</tr>
<tr>
<td>3001A</td>
<td>1½ 40 2½ 70</td>
<td>3 76</td>
<td>13.3 377</td>
</tr>
<tr>
<td>3001A</td>
<td>2 50 3½ 89</td>
<td>3 76</td>
<td>34.7 984</td>
</tr>
<tr>
<td>3002</td>
<td>¾ x ¾ 15 x 10 1½ 38</td>
<td>1½ 48</td>
<td>6.7 190</td>
</tr>
<tr>
<td>3002</td>
<td>¼ x ¼ 20 x 15 1½ 41</td>
<td>1½ 48</td>
<td>6.7 190</td>
</tr>
<tr>
<td>3002</td>
<td>1 x ¾ 25 x 20 1½ 48</td>
<td>2½ 64</td>
<td>10.7 303</td>
</tr>
<tr>
<td>3003</td>
<td>½ 15 1½ 41</td>
<td>2½ 57</td>
<td>6.7 190</td>
</tr>
<tr>
<td>3003</td>
<td>¾ 20 1½ 48</td>
<td>2½ 57</td>
<td>14.7 417</td>
</tr>
<tr>
<td>3003</td>
<td>1 25 2½ 57</td>
<td>2½ 64</td>
<td>20.0 567</td>
</tr>
<tr>
<td>3003</td>
<td>1¼ 32 2½ 70</td>
<td>2½ 70</td>
<td>26.7 757</td>
</tr>
<tr>
<td>3003</td>
<td>1½ 40 3½ 89</td>
<td>2½ 70</td>
<td>48.0 1366</td>
</tr>
<tr>
<td>3003</td>
<td>2 50 4½ 105</td>
<td>3½ 79</td>
<td>69.3 1965</td>
</tr>
<tr>
<td>3004</td>
<td>½ 15 1½ 41</td>
<td>2½ 57</td>
<td>6.7 190</td>
</tr>
<tr>
<td>3004</td>
<td>¾ 20 1½ 48</td>
<td>2½ 57</td>
<td>14.7 417</td>
</tr>
<tr>
<td>3004</td>
<td>1 25 2½ 57</td>
<td>2½ 64</td>
<td>20.0 567</td>
</tr>
<tr>
<td>3004</td>
<td>1½ 32 2½ 70</td>
<td>2½ 70</td>
<td>26.7 757</td>
</tr>
<tr>
<td>3004</td>
<td>1¼ 40 3½ 89</td>
<td>2½ 70</td>
<td>45.3 1284</td>
</tr>
<tr>
<td>3004</td>
<td>2 50 4½ 105</td>
<td>3½ 79</td>
<td>64.0 1814</td>
</tr>
<tr>
<td>3005A</td>
<td>½ 15 1½ 41</td>
<td>3 76</td>
<td>12.6 377</td>
</tr>
<tr>
<td>3005A</td>
<td>¾ 20 1½ 48</td>
<td>2½ 57</td>
<td>6.7 190</td>
</tr>
<tr>
<td>3006</td>
<td>½ 15 1½ 41</td>
<td>2½ 57</td>
<td>6.7 190</td>
</tr>
<tr>
<td>3006</td>
<td>¾ 20 1½ 48</td>
<td>2½ 57</td>
<td>14.7 417</td>
</tr>
<tr>
<td>3006</td>
<td>1 25 2½ 57</td>
<td>2½ 64</td>
<td>20.0 567</td>
</tr>
<tr>
<td>3006</td>
<td>1¼ 32 2½ 70</td>
<td>2½ 70</td>
<td>26.7 757</td>
</tr>
<tr>
<td>3006</td>
<td>1½ 40 3½ 89</td>
<td>2½ 70</td>
<td>45.3 1284</td>
</tr>
<tr>
<td>3006</td>
<td>2 50 4½ 105</td>
<td>3½ 79</td>
<td>64.0 1814</td>
</tr>
<tr>
<td>3007</td>
<td>½ x ¾ 15 x 10 1½ 38</td>
<td>2½ 67</td>
<td>6.7 190</td>
</tr>
<tr>
<td>3007</td>
<td>¼ x ¼ 20 x 15 1½ 41</td>
<td>3 76</td>
<td>6.7 190</td>
</tr>
<tr>
<td>3008</td>
<td>½ 15 1½ 38</td>
<td>1½ 48</td>
<td>6.7 190</td>
</tr>
<tr>
<td>3008</td>
<td>¾ 20 1½ 41</td>
<td>2½ 54</td>
<td>10.7 303</td>
</tr>
<tr>
<td>3008</td>
<td>1 25 1½ 48</td>
<td>2½ 64</td>
<td>14.7 417</td>
</tr>
</tbody>
</table>

### FLANGED FITTINGS

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SIZE (DN)</th>
<th>DIMENSIONS (APPROX.)</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100</td>
<td>2 50 5½ 130</td>
<td>3½ 83</td>
<td>128 3629</td>
</tr>
<tr>
<td>3100</td>
<td>2½ 65 5½ 149</td>
<td>3½ 89</td>
<td>192 5443</td>
</tr>
<tr>
<td>3100</td>
<td>3 80 6½ 171</td>
<td>3½ 95</td>
<td>224 6350</td>
</tr>
<tr>
<td>3100</td>
<td>4 100 9½ 232</td>
<td>4½ 111</td>
<td>480 13608</td>
</tr>
<tr>
<td>3110</td>
<td>2½ 65 5½ 149</td>
<td>3½ 89</td>
<td>192 5443</td>
</tr>
<tr>
<td>3110</td>
<td>3 80 6½ 171</td>
<td>3½ 95</td>
<td>240 6804</td>
</tr>
<tr>
<td>3110</td>
<td>4 100 9½ 232</td>
<td>4½ 111</td>
<td>288 8165</td>
</tr>
<tr>
<td>3110</td>
<td>3 80 6½ 171</td>
<td>3½ 95</td>
<td>240 6804</td>
</tr>
<tr>
<td>3110</td>
<td>4 100 9½ 232</td>
<td>4½ 111</td>
<td>288 8165</td>
</tr>
<tr>
<td>3110</td>
<td>3 80 6½ 171</td>
<td>3½ 95</td>
<td>240 6804</td>
</tr>
<tr>
<td>3110</td>
<td>4 100 9½ 232</td>
<td>4½ 111</td>
<td>288 8165</td>
</tr>
<tr>
<td>3110</td>
<td>3 80 6½ 171</td>
<td>3½ 95</td>
<td>240 6804</td>
</tr>
<tr>
<td>3110</td>
<td>4 100 9½ 232</td>
<td>4½ 111</td>
<td>288 8165</td>
</tr>
</tbody>
</table>

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
**Series FS-CDC-S (3/8" – 1/2")**

**FloodSafe® Braided Stainless Steel Dishwasher Connectors**

- FloodSafe® shutoff device protects against catastrophic water damage
- Patented design
- Requires no power source
- Supplied with elbow fittings
- PVC tubing jacketed with braided stainless steel
- Superior resistance to chlorinated water
- Available lengths: 48", 60", 72"

**Models**

FS-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

FS-CDC-S-FE – Size: 1/2" (15mm) brass nut female iron pipe (FIP) thread connector x 1/2" (10mm) compression end fitting with a brass male iron pipe thread elbow attached to the compression end fitting

**Specifications**

- Maximum Working Pressure: 125psi (8.6 bar)
- Maximum Working Temperature: 140°F (60°C)

**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 bar). For other applications requiring higher operating temperatures or pressures, please contact Watts Regulator Technical Service at (978) 689-6130.

For additional information, request literature ES-FS-CDC-S.

---

**Series FS-CFC-S (3/8" – 1/2")**

**FloodSafe® Braided Stainless Steel Faucet Connectors**

- FloodSafe® shutoff device protects against catastrophic water damage
- Patented design
- Requires no power source
- PVC tubing jacketed with braided stainless steel
- Superior resistance to vibration and bursting
- Available lengths: 12", 16", 20"

**Models**

FS-CFC-S-CC – Size: 3/8" x 3/8" (10 x 10mm) brass nut compression end fittings

FS-CFC-S-CF – Size: 1/2" (15mm) brass compression end fitting x 1/2" (15mm) brass compression end fitting

FS-CFC-S-CF – Size: 3/8" (10mm) brass compression end fitting x 1/2" (15mm) brass FIP thread fitting

FS-CFC-S-CF – Size: 7/16" (11mm) brass compression end fitting x 1/2" (15mm) brass FIP thread fitting

FS-CFC-S-FF – Size: 1/2" x 1/2" (15 x 15mm) brass FIP thread fittings

FS-CFC-S-TF – Size: 3/8" (10mm) brass fine thread female end x 1/2" (15mm) brass FIP thread fitting

**Specifications**

- Maximum Working Pressure: 125psi (8.6 bar)
- Maximum Working Temperature: 180°F (82°C)

**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 bar). For other applications requiring higher operating temperatures or pressures, please contact Watts Regulator Technical Service at (978) 689-6130.

For additional information, request literature ES-FS-CFC-S.

---

**Series FS-CIC-S (1/4")**

**FloodSafe® Braided Stainless Steel Ice Maker Connectors**

- FloodSafe® shutoff device protects against catastrophic water damage
- Patented design
- Requires no power source
- PVC tubing jacketed with braided stainless steel
- Available lengths: 6', 10', 20'

**Models**

FS-CIC-S – Size: 1/4" x 1/4" (8 x 8mm) brass compression end fittings

**Specifications**

- Maximum Working Pressure: 125psi (8.6 bar)
- Maximum Working Temperature: 140°F (60°C)

**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 bar). For other applications requiring higher operating temperatures or pressures, please contact Watts Regulator Technical Service at (978) 689-6130.

For additional information, request literature ES-FS-CIC-S.
Series FS-CTC-S (⅜” – ½”)
FloodSafe® Braided Stainless Steel Toilet Connectors
- FloodSafe® shutoff device protects against catastrophic water damage
- Patented design
- Requires no power source
- 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”

Specifications
- Maximum Working Pressure: 125psi (8.6 bar)
- Maximum Working Temperature: 180°F (82°C)

Models
FS-CTC-S-CB – Size: ⅜” (10mm) brass compression end fitting x ⅜” (22mm) ballcock end fitting
FS-CTC-S-CB – Size: ⅝” (15mm) brass compression end fitting x ⅜” (22mm) ballcock end fitting
FS-CTC-S-TB – Size: ⅜” (10mm) brass fine thread FIP end x ⅜” (22mm) ballcock end fitting
FS-CTC-S-TB – Size: ½” (15mm) brass fine thread FIP end x ⅜” (22mm) ballcock end fitting

FS-CTC-S-FB

Note: A minimum flow rate of 2.5 gallons per minute at the supply connection is required for proper shutoff operation. (Typically 30psi (206.9 kPa) supply pressure meets this requirement.) Performance is accurate to the 80psi (551.6 kPa) Maximum system pressure as required by national plumbing codes.

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 bar). For other applications requiring higher operating temperatures or pressures, please contact Watts Regulator Technical Service at (978) 689-6130.

For additional information, request literature ES-FS-CTC-S.

Series FS-CWM-S (¾” x ¾”)
FloodSafe® Braided Stainless Steel Washing Machine Connectors
- FloodSafe® shutoff device protects against catastrophic water damage
- Patented design
- Requires no power source
- 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: 125psi (8.6 bar)
- Maximum Working Temperature: 180°F (82°C)

Models
FS-CWM-S-HH – Size: ¾” x ¾” (20 x 20mm) female hose bibb connections

FS-CWM-S-HH

Note: A minimum flow rate of 2.5 gallons per minute at the supply connection is required for proper shutoff operation. (Typically 30psi (206.9 kPa) supply pressure meets this requirement.) Performance is accurate to the 80psi (551.6 kPa) Maximum system pressure as required by national plumbing codes.

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 bar). For other applications requiring higher operating temperatures or pressures, please contact Watts Regulator Technical Service at (978) 689-6130.

For additional information, request literature ES-FS-CWM-S.
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

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDC-S-CE</td>
<td>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</td>
</tr>
<tr>
<td>CDC-S-FE</td>
<td>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</td>
</tr>
</tbody>
</table>

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

Models

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDC-S-CE</td>
<td>Size: 3/8” (10mm) brass nut compression end fittings</td>
</tr>
<tr>
<td>CDC-S-CF</td>
<td>Size: 3/8” (10mm) brass compression end fitting x 1/2” (15mm) brass female iron pipe (FIP) thread fitting</td>
</tr>
<tr>
<td>CDC-S-CF</td>
<td>Size: 1/2” (15mm) brass compression end fitting x 1/2” (15mm) brass FIP thread fitting</td>
</tr>
<tr>
<td>CDC-S-CF</td>
<td>Size: 7/16” (11mm) brass compression end fitting x 1/2” (15mm) brass FIP thread fitting</td>
</tr>
<tr>
<td>CDC-S-CF</td>
<td>Size: 1/2” x 1/2” (15 x 15mm) brass FIP thread fittings</td>
</tr>
</tbody>
</table>

Specifications

- Maximum Working Pressure: 125psi (8.6 bar)
- Maximum Temperature: 140°F (60°C)

For additional information, request literature ES-CDC-S.

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

Models

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFC-P-CC</td>
<td>Size: 3/8” x 3/8” (10 x 10mm) brass nut compression end fittings</td>
</tr>
<tr>
<td>CFC-P-CF</td>
<td>Size: 3/8” (10mm) brass compression end fitting x 1/2” (15mm) brass compression end fitting</td>
</tr>
<tr>
<td>CFC-P-CF</td>
<td>Size: 3/8” (10mm) brass compression end fitting x 1/2” (15mm) brass FIP thread fitting</td>
</tr>
<tr>
<td>CFC-P-CF</td>
<td>Size: 7/16” (11mm) brass compression end fitting x 1/2” (15mm) brass FIP thread fitting</td>
</tr>
<tr>
<td>CFC-P-CC</td>
<td>Size: 1/2” x 1/2” (15 x 15mm) brass FIP thread fittings</td>
</tr>
<tr>
<td>CFC-P-TF</td>
<td>Size: 1/2” (15mm) brass fine thread FIP fitting x 1/2” (15mm) brass FIP thread fitting</td>
</tr>
<tr>
<td>CFC-P-TF</td>
<td>Size: 3/8” (10mm) brass fine thread FIP fitting x 1/2” (15mm) brass FIP thread fitting</td>
</tr>
</tbody>
</table>

Specifications

- Maximum Working Pressure: 125psi (8.6 bar)
- Maximum Temperature: 180°F (82°C)

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 bar). For other applications requiring higher operating temperatures or pressures, please contact Watts Regulator Technical Service at (978) 689-6130.

For additional information, request literature ES-CFC-P.
**Model CIC-P (¼")**
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 bar)
- Maximum Working Temperature: 140°F (60°C)

**Models**
- CIC-P – Size: ¼" x ¼" (8 x 8mm) brass compression end fittings

**Series CTC-S (¾" – ½")**
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: 125psi (8.6 bar)
- Maximum Working Temperature: 180°F (82°C)

**Models**
- CTC-S-CB – Size: ¾" (10mm) brass compression end fitting x ¾" (22mm) ballcock end fitting
- CTC-S-CB – Size: ⅜" (11mm) brass compression end fitting x ⅜" (22mm) ballcock end fitting
- CTC-S-CB – Size: ½" (15mm) brass compression end fitting x ⅜" (22mm) ballcock end fitting
- CTC-S-FB – Size: ½" (15mm) brass female iron pipe (FIP) thread fitting x ⅜" (22mm) ballcock end fitting
- CTC-S-TB – Size: ¾" (10mm) brass fine thread FIP end x ⅜" (22mm) ballcock end fitting
- CTC-S-TB – Size: ½" (15mm) brass fine thread FIP end x ⅜" (22mm) ballcock end 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 bar). For other applications requiring higher operating temperatures or pressures, please contact Watts Regulator Technical Service at (978) 689-6130.

For additional information, request literature ES-CTC-S.

**Series CTC-P (½" – ¾")**
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 bar)
- Maximum Working Temperature: 140°F (60°C)

**Models**
- CTC-P-CB – Size: ½" (15mm) brass compression end fitting x ¾" (22mm) ballcock end fitting
- CTC-P-TB – Size: ⅝" (15mm) brass fine thread FIP end x ¾" (22mm) ballcock end fitting
- CTC-P-TB – Size: ½" (15mm) brass fine thread FIP end x ¾" (22mm) ballcock end fitting
- CTC-P-FB – Size: ½" (15mm) brass FIP thread fitting x ¾" (22mm) ballcock end 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 bar). For other applications requiring higher operating temperatures or pressures, please contact Watts Regulator Technical Service at (978) 689-6130.

For additional information, request literature ES-CTC-P.

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
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 stainless steel

Specifications
- Maximum Working Pressure: 150psi (10.3 bar)
- 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" 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
- CWHS-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 bar). For other applications requiring higher operating temperatures or pressures, please contact Watts Regulator Technical Service at (978) 689-6130.

For additional information, request literature ES-CWH-S.

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: 125psi (8.6 bar)
- 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 bar). For other applications requiring higher operating temperatures or pressures, please contact Watts Regulator Technical Service at (978) 689-6130.

For additional information, request literature ES-CWM-S.
Series DPG1 (2" – 4")
Bottom Entry Pressure Gauges
- Available in dial sizes 2", 2½", 3", 4"
- ¼" (8mm) NPT connection
- Working temperature: -4°F to 176°F (-20°C to 80°C)

For additional information, request literature ES-DPG-1.

<table>
<thead>
<tr>
<th>MODEL</th>
<th>DIAL SIZE</th>
<th>SCALE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPG1-2</td>
<td>2&quot;</td>
<td>0 – 15psi</td>
</tr>
<tr>
<td>DPG1-2</td>
<td>2&quot;</td>
<td>0 – 30psi</td>
</tr>
<tr>
<td>DPG1-2</td>
<td>2&quot;</td>
<td>0 – 60psi</td>
</tr>
<tr>
<td>DPG1-2</td>
<td>2&quot;</td>
<td>0 – 100psi</td>
</tr>
<tr>
<td>DPG1-2</td>
<td>2&quot;</td>
<td>0 – 160psi</td>
</tr>
<tr>
<td>DPG1-2</td>
<td>2&quot;</td>
<td>0 – 200psi</td>
</tr>
<tr>
<td>DPG1-2</td>
<td>2&quot;</td>
<td>0 – 300psi</td>
</tr>
<tr>
<td>DPG1-2½</td>
<td>2½&quot;</td>
<td>0 – 15psi</td>
</tr>
<tr>
<td>DPG1-2½</td>
<td>2½&quot;</td>
<td>0 – 30psi</td>
</tr>
<tr>
<td>DPG1-2½</td>
<td>2½&quot;</td>
<td>0 – 60psi</td>
</tr>
<tr>
<td>DPG1-2½</td>
<td>2½&quot;</td>
<td>0 – 100psi</td>
</tr>
<tr>
<td>DPG1-2½</td>
<td>2½&quot;</td>
<td>0 – 160psi</td>
</tr>
<tr>
<td>DPG1-2½</td>
<td>2½&quot;</td>
<td>0 – 200psi</td>
</tr>
<tr>
<td>DPG1-2½</td>
<td>2½&quot;</td>
<td>0 – 300psi</td>
</tr>
<tr>
<td>DPG1-3</td>
<td>3&quot;</td>
<td>0 – 15psi</td>
</tr>
<tr>
<td>DPG1-3</td>
<td>3&quot;</td>
<td>0 – 30psi</td>
</tr>
<tr>
<td>DPG1-3</td>
<td>3&quot;</td>
<td>0 – 60psi</td>
</tr>
<tr>
<td>DPG1-3</td>
<td>3&quot;</td>
<td>0 – 100psi</td>
</tr>
<tr>
<td>DPG1-3</td>
<td>3&quot;</td>
<td>0 – 160psi</td>
</tr>
<tr>
<td>DPG1-3</td>
<td>3&quot;</td>
<td>0 – 200psi</td>
</tr>
<tr>
<td>DPG1-3</td>
<td>3&quot;</td>
<td>0 – 300psi</td>
</tr>
<tr>
<td>DPG1-3</td>
<td>3&quot;</td>
<td>0 – 600psi</td>
</tr>
<tr>
<td>DPG1-3</td>
<td>3&quot;</td>
<td>0 – 1000psi</td>
</tr>
<tr>
<td>DPG1-4</td>
<td>4&quot;</td>
<td>0 – 15psi</td>
</tr>
<tr>
<td>DPG1-4</td>
<td>4&quot;</td>
<td>0 – 30psi</td>
</tr>
<tr>
<td>DPG1-4</td>
<td>4&quot;</td>
<td>0 – 60psi</td>
</tr>
<tr>
<td>DPG1-4</td>
<td>4&quot;</td>
<td>0 – 100psi</td>
</tr>
<tr>
<td>DPG1-4</td>
<td>4&quot;</td>
<td>0 – 160psi</td>
</tr>
<tr>
<td>DPG1-4</td>
<td>4&quot;</td>
<td>0 – 200psi</td>
</tr>
<tr>
<td>DPG1-4</td>
<td>4&quot;</td>
<td>0 – 300psi</td>
</tr>
<tr>
<td>DPG1-4</td>
<td>4&quot;</td>
<td>0 – 600psi</td>
</tr>
<tr>
<td>DPG1-4</td>
<td>4&quot;</td>
<td>0 – 1000psi</td>
</tr>
</tbody>
</table>

Series DPG3 (1½" – 3")
Center Back Entry Pressure Gauges
- Available in dial sizes 1½", 2", 2½", 3"
- ⅛", ¼" (3, 8mm) NPT connection
- Working temperature -4°F to 176°F (-20°C to 80°C)

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

<table>
<thead>
<tr>
<th>MODEL</th>
<th>DIAL SIZE</th>
<th>SCALE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPG3-1½</td>
<td>1½&quot;</td>
<td>0 – 60psi</td>
</tr>
<tr>
<td>DPG3-1½</td>
<td>1½&quot;</td>
<td>0 – 160psi</td>
</tr>
<tr>
<td>DPG3-2</td>
<td>2&quot;</td>
<td>0 – 15psi</td>
</tr>
<tr>
<td>DPG3-2</td>
<td>2&quot;</td>
<td>0 – 30psi</td>
</tr>
<tr>
<td>DPG3-2</td>
<td>2&quot;</td>
<td>0 – 60psi</td>
</tr>
<tr>
<td>DPG3-2</td>
<td>2&quot;</td>
<td>0 – 100psi</td>
</tr>
<tr>
<td>DPG3-2</td>
<td>2&quot;</td>
<td>0 – 160psi</td>
</tr>
<tr>
<td>DPG3-2</td>
<td>2&quot;</td>
<td>0 – 200psi</td>
</tr>
<tr>
<td>DPG3-2</td>
<td>2&quot;</td>
<td>0 – 300psi</td>
</tr>
<tr>
<td>DPG3-2½</td>
<td>2½&quot;</td>
<td>0 – 15psi</td>
</tr>
<tr>
<td>DPG3-2½</td>
<td>2½&quot;</td>
<td>0 – 30psi</td>
</tr>
<tr>
<td>DPG3-2½</td>
<td>2½&quot;</td>
<td>0 – 60psi</td>
</tr>
<tr>
<td>DPG3-2½</td>
<td>2½&quot;</td>
<td>0 – 100psi</td>
</tr>
<tr>
<td>DPG3-2½</td>
<td>2½&quot;</td>
<td>0 – 160psi</td>
</tr>
<tr>
<td>DPG3-2½</td>
<td>2½&quot;</td>
<td>0 – 200psi</td>
</tr>
<tr>
<td>DPG3-2½</td>
<td>2½&quot;</td>
<td>0 – 300psi</td>
</tr>
<tr>
<td>DPG3-3</td>
<td>3&quot;</td>
<td>0 – 15psi</td>
</tr>
<tr>
<td>DPG3-3</td>
<td>3&quot;</td>
<td>0 – 30psi</td>
</tr>
<tr>
<td>DPG3-3</td>
<td>3&quot;</td>
<td>0 – 60psi</td>
</tr>
<tr>
<td>DPG3-3</td>
<td>3&quot;</td>
<td>0 – 100psi</td>
</tr>
<tr>
<td>DPG3-3</td>
<td>3&quot;</td>
<td>0 – 160psi</td>
</tr>
<tr>
<td>DPG3-3</td>
<td>3&quot;</td>
<td>0 – 200psi</td>
</tr>
<tr>
<td>DPG3-3</td>
<td>3&quot;</td>
<td>0 – 300psi</td>
</tr>
</tbody>
</table>

For assistance, contact your local authorized Watts agent or visit our website at www.watts.com
Series DPG5 (2" – 3")
Top Entry Pressure Gauges

- Available in dial sizes 2", 2 1/2", 3"
- 1/8", 1/4" (3, 8mm) NPT connection
- Working temperature -4°F to 176°F (-20°C to 80°C)

<table>
<thead>
<tr>
<th>MODEL</th>
<th>DIAL SIZE</th>
<th>SCALE</th>
<th>TEMPERATURE RANGE</th>
<th>INCLUDES VR</th>
<th>RETAINING VALVE</th>
<th>DIMENSIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPG5-2 1/4&quot; connection</td>
<td>2&quot;</td>
<td>0 – 160psi</td>
<td>0 – 11 bar</td>
<td>N</td>
<td>4 101</td>
<td>1 25</td>
</tr>
<tr>
<td>DPG5-2</td>
<td>2&quot;</td>
<td>0 – 15psi</td>
<td>0 – 103 kPa</td>
<td>N</td>
<td>4 101</td>
<td>1 25</td>
</tr>
<tr>
<td>DPG5-2</td>
<td>2&quot;</td>
<td>0 – 30psi</td>
<td>0 – 207 kPa</td>
<td>N</td>
<td>4 101</td>
<td>1 25</td>
</tr>
<tr>
<td>DPG5-2</td>
<td>2&quot;</td>
<td>0 – 60psi</td>
<td>0 – 413 kPa</td>
<td>N</td>
<td>4 101</td>
<td>1 25</td>
</tr>
<tr>
<td>DPG5-2</td>
<td>2&quot;</td>
<td>0 – 100psi</td>
<td>0 – 689 kPa</td>
<td>N</td>
<td>4 101</td>
<td>1 25</td>
</tr>
<tr>
<td>DPG5-2</td>
<td>2&quot;</td>
<td>0 – 160psi</td>
<td>0 – 1103 kPa</td>
<td>N</td>
<td>4 101</td>
<td>1 25</td>
</tr>
<tr>
<td>DPG5-2</td>
<td>2&quot;</td>
<td>0 – 200psi</td>
<td>0 – 1379 kPa</td>
<td>N</td>
<td>4 101</td>
<td>1 25</td>
</tr>
<tr>
<td>DPG5-2</td>
<td>2&quot;</td>
<td>0 – 300psi</td>
<td>0 – 2069 kPa</td>
<td>N</td>
<td>4 101</td>
<td>1 25</td>
</tr>
<tr>
<td>DPG5-2 1/2&quot;</td>
<td>2 1/2&quot;</td>
<td>0 – 15psi</td>
<td>0 – 103 kPa</td>
<td>Y</td>
<td>1 25</td>
<td>1 1/8 49</td>
</tr>
<tr>
<td>DPG5-2 1/2&quot;</td>
<td>2 1/2&quot;</td>
<td>0 – 30psi</td>
<td>0 – 207 kPa</td>
<td>Y</td>
<td>1 25</td>
<td>1 1/8 49</td>
</tr>
<tr>
<td>DPG5-2 1/2&quot;</td>
<td>2 1/2&quot;</td>
<td>0 – 60psi</td>
<td>0 – 413 kPa</td>
<td>Y</td>
<td>1 25</td>
<td>1 1/8 49</td>
</tr>
<tr>
<td>DPG5-2 1/2&quot;</td>
<td>2 1/2&quot;</td>
<td>0 – 100psi</td>
<td>0 – 689 kPa</td>
<td>Y</td>
<td>1 25</td>
<td>1 1/8 49</td>
</tr>
<tr>
<td>DPG5-2 1/2&quot;</td>
<td>2 1/2&quot;</td>
<td>0 – 160psi</td>
<td>0 – 1103 kPa</td>
<td>Y</td>
<td>1 25</td>
<td>1 1/8 49</td>
</tr>
<tr>
<td>DPG5-2 1/2&quot;</td>
<td>2 1/2&quot;</td>
<td>0 – 200psi</td>
<td>0 – 1379 kPa</td>
<td>Y</td>
<td>1 25</td>
<td>1 1/8 49</td>
</tr>
<tr>
<td>DPG5-2 1/2&quot;</td>
<td>2 1/2&quot;</td>
<td>0 – 300psi</td>
<td>0 – 2069 kPa</td>
<td>Y</td>
<td>1 25</td>
<td>1 1/8 49</td>
</tr>
<tr>
<td>DPG5-3</td>
<td>3&quot;</td>
<td>0 – 15psi</td>
<td>0 – 103 kPa</td>
<td>N</td>
<td>4 101</td>
<td>1 25</td>
</tr>
<tr>
<td>DPG5-3</td>
<td>3&quot;</td>
<td>0 – 30psi</td>
<td>0 – 207 kPa</td>
<td>N</td>
<td>4 101</td>
<td>1 25</td>
</tr>
<tr>
<td>DPG5-3</td>
<td>3&quot;</td>
<td>0 – 60psi</td>
<td>0 – 413 kPa</td>
<td>N</td>
<td>4 101</td>
<td>1 25</td>
</tr>
<tr>
<td>DPG5-3</td>
<td>3&quot;</td>
<td>0 – 100psi</td>
<td>0 – 689 kPa</td>
<td>N</td>
<td>4 101</td>
<td>1 25</td>
</tr>
<tr>
<td>DPG5-3</td>
<td>3&quot;</td>
<td>0 – 160psi</td>
<td>0 – 1103 kPa</td>
<td>N</td>
<td>4 101</td>
<td>1 25</td>
</tr>
<tr>
<td>DPG5-3</td>
<td>3&quot;</td>
<td>0 – 200psi</td>
<td>0 – 1379 kPa</td>
<td>N</td>
<td>4 101</td>
<td>1 25</td>
</tr>
<tr>
<td>DPG5-3</td>
<td>3&quot;</td>
<td>0 – 300psi</td>
<td>0 – 2069 kPa</td>
<td>N</td>
<td>4 101</td>
<td>1 25</td>
</tr>
</tbody>
</table>

For additional information, request literature ES-DPG-5.

Series DPTG1 and DPTG3 (2 1/2" – 3")
Combined Temperature and Pressure Gauges

Models
- DPTG1 bottom entry 3" dial size
- DPTG3 center back entry, 2 1/2" or 3" dial size
- DPTG3A center back entry with extended temperature element
- DPTG3L center back entry with extended mounting nut
- 1/8" (15mm) NPT connection
- Working temperature 40°F to 250°F (4.4°C to 121°C)

<table>
<thead>
<tr>
<th>MODEL</th>
<th>DIAL SIZE</th>
<th>SIZE</th>
<th>SCALE</th>
<th>TEMPERATURE RANGE</th>
<th>INCLUDES VR</th>
<th>RETAINING VALVE</th>
<th>DIMENSIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPTG1-3</td>
<td>3&quot;</td>
<td>1/2&quot;</td>
<td>15</td>
<td>0 – 50psi</td>
<td>0 – 345kPa</td>
<td>32 – 248</td>
<td>0 – 120</td>
</tr>
<tr>
<td>DPTG1-3</td>
<td>3&quot;</td>
<td>1/2&quot;</td>
<td>15</td>
<td>0 – 75psi</td>
<td>0 – 517kPa</td>
<td>32 – 248</td>
<td>0 – 120</td>
</tr>
<tr>
<td>DPTG1-3</td>
<td>3&quot;</td>
<td>1/2&quot;</td>
<td>15</td>
<td>0 – 150psi</td>
<td>0 – 846kPa</td>
<td>32 – 248</td>
<td>0 – 120</td>
</tr>
<tr>
<td>DPTG3-2 1/2&quot;</td>
<td>2 1/2&quot;</td>
<td>1/2&quot;</td>
<td>15</td>
<td>0 – 50psi</td>
<td>0 – 340kPa</td>
<td>32 – 248</td>
<td>0 – 120</td>
</tr>
<tr>
<td>DPTG3-2 1/2&quot;</td>
<td>2 1/2&quot;</td>
<td>1/2&quot;</td>
<td>15</td>
<td>0 – 75psi</td>
<td>0 – 517kPa</td>
<td>32 – 248</td>
<td>0 – 120</td>
</tr>
<tr>
<td>DPTG3-2 1/2&quot;</td>
<td>2 1/2&quot;</td>
<td>1/2&quot;</td>
<td>15</td>
<td>0 – 150psi</td>
<td>0 – 846kPa</td>
<td>32 – 248</td>
<td>0 – 120</td>
</tr>
<tr>
<td>DPTG3-2 1/2&quot;</td>
<td>2 1/2&quot;</td>
<td>1/2&quot;</td>
<td>15</td>
<td>0 – 200psi</td>
<td>0 – 1379kPa</td>
<td>32 – 248</td>
<td>0 – 120</td>
</tr>
<tr>
<td>DPTG3-3</td>
<td>3&quot;</td>
<td>1/2&quot;</td>
<td>15</td>
<td>0 – 50psi</td>
<td>0 – 340kPa</td>
<td>32 – 248</td>
<td>0 – 120</td>
</tr>
<tr>
<td>DPTG3-3</td>
<td>3&quot;</td>
<td>1/2&quot;</td>
<td>15</td>
<td>0 – 75psi</td>
<td>0 – 517kPa</td>
<td>32 – 248</td>
<td>0 – 120</td>
</tr>
<tr>
<td>DPTG3-3</td>
<td>3&quot;</td>
<td>1/2&quot;</td>
<td>15</td>
<td>0 – 150psi</td>
<td>0 – 846kPa</td>
<td>32 – 248</td>
<td>0 – 120</td>
</tr>
<tr>
<td>DPTG3-3</td>
<td>3&quot;</td>
<td>1/2&quot;</td>
<td>15</td>
<td>0 – 200psi</td>
<td>0 – 1379kPa</td>
<td>32 – 248</td>
<td>0 – 120</td>
</tr>
</tbody>
</table>

For additional information, request literature ES-DPTG-1 or ES-DPTG-3.
Series IWTG-Gas (2")
Air Test Assembly Gauges

- Available in 2" dial size
- Includes ¾" (20mm) FPT x Schrader type air valve w/cap connection

<table>
<thead>
<tr>
<th>MODEL</th>
<th>DIAL SIZE</th>
<th>SCALE</th>
</tr>
</thead>
<tbody>
<tr>
<td>IWTG-Gas 2</td>
<td>2&quot;</td>
<td>0 – 15psi 0 – 103 kPa</td>
</tr>
<tr>
<td>IWTG-Gas 2</td>
<td>2&quot;</td>
<td>0 – 30psi 0 – 207 kPa</td>
</tr>
<tr>
<td>IWTG-Gas 2</td>
<td>2&quot;</td>
<td>0 – 60psi 0 – 413 kPa</td>
</tr>
<tr>
<td>IWTG-Gas 2</td>
<td>2&quot;</td>
<td>0 – 100psi 0 – 689 kPa</td>
</tr>
</tbody>
</table>

For additional information, request literature ES-IWTG-Gas.

Series IWTG-NYC (2½")
Air Test Assembly Gauges

- 2% Accuracy, full range
- Includes ¾" (20mm) FPT x Schrader type air valve w/cap connection
- Includes shutoff valve

<table>
<thead>
<tr>
<th>MODEL</th>
<th>DIAL SIZE</th>
<th>SCALE</th>
</tr>
</thead>
<tbody>
<tr>
<td>IWTG-NYC</td>
<td>2½&quot;</td>
<td>0 – 5psi 0 – 34 kPa</td>
</tr>
<tr>
<td>IWTG-NYC</td>
<td>2½&quot;</td>
<td>0 – 10psi 0 – 69 kPa</td>
</tr>
</tbody>
</table>

For additional information, request literature ES-IWTG-NYC-HTX.

Series IWTG-HTX (4")
Air Test Assembly Gauges

- 1% Accuracy, full range
- Includes ¾" (20mm) FPT x Schrader type air valve w/cap connection
- Includes shutoff valve
- Includes set hand

<table>
<thead>
<tr>
<th>MODEL</th>
<th>DIAL SIZE</th>
<th>SCALE</th>
</tr>
</thead>
<tbody>
<tr>
<td>IWTG-HTX</td>
<td>4&quot;</td>
<td>0 – 5psi 0 – 34 kPa</td>
</tr>
<tr>
<td>IWTG-HTX</td>
<td>4&quot;</td>
<td>0 – 10psi 0 – 69 kPa</td>
</tr>
</tbody>
</table>

For additional information, request literature ES-IWTG-NYC-HTX.
Series TB (1½" – 4")
Center Back Entry Bimetal Thermometers

- Available in dial sizes: 1½", 2½", 3", 4"
- Includes ½" (15mm) NPT brass thermowell with set screw

<table>
<thead>
<tr>
<th>MODEL</th>
<th>DIAL SIZE</th>
<th>SCALE °F</th>
<th>SCALE °C</th>
<th>PROBE SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1¼&quot;</td>
<td>32 – 176</td>
<td>0 – 80</td>
<td>1</td>
</tr>
<tr>
<td>TB-1⅝-1</td>
<td>2½&quot;</td>
<td>32 – 140</td>
<td>0 – 60</td>
<td>2</td>
</tr>
<tr>
<td>TB-1⅜-3</td>
<td>2½&quot;</td>
<td>32 – 248</td>
<td>0 – 120</td>
<td>3</td>
</tr>
<tr>
<td>TB-2½-4</td>
<td>2½&quot;</td>
<td>32 – 248</td>
<td>0 – 120</td>
<td>4</td>
</tr>
<tr>
<td>TB-3-2</td>
<td>3&quot;</td>
<td>-22 – 122</td>
<td>-30 – 50</td>
<td>2</td>
</tr>
<tr>
<td>TB-3-2</td>
<td>3&quot;</td>
<td>32 – 140</td>
<td>0 – 60</td>
<td>2</td>
</tr>
<tr>
<td>TB-3-2</td>
<td>3&quot;</td>
<td>32 – 248</td>
<td>0 – 120</td>
<td>2</td>
</tr>
<tr>
<td>TB-3-4</td>
<td>3&quot;</td>
<td>-22 – 122</td>
<td>-30 – 50</td>
<td>4</td>
</tr>
<tr>
<td>TB-3-4</td>
<td>3&quot;</td>
<td>32 – 140</td>
<td>0 – 60</td>
<td>4</td>
</tr>
<tr>
<td>TB-3-4</td>
<td>3&quot;</td>
<td>32 – 248</td>
<td>0 – 120</td>
<td>4</td>
</tr>
<tr>
<td>TB-4-2</td>
<td>4&quot;</td>
<td>-22 – 122</td>
<td>-30 – 50</td>
<td>2</td>
</tr>
<tr>
<td>TB-4-2</td>
<td>4&quot;</td>
<td>32 – 140</td>
<td>0 – 60</td>
<td>2</td>
</tr>
<tr>
<td>TB-4-2</td>
<td>4&quot;</td>
<td>32 – 248</td>
<td>0 – 120</td>
<td>2</td>
</tr>
<tr>
<td>TB-4-4</td>
<td>4&quot;</td>
<td>-22 – 122</td>
<td>-30 – 50</td>
<td>4</td>
</tr>
<tr>
<td>TB-4-4</td>
<td>4&quot;</td>
<td>32 – 140</td>
<td>0 – 60</td>
<td>4</td>
</tr>
<tr>
<td>TB-4-4</td>
<td>4&quot;</td>
<td>32 – 248</td>
<td>0 – 120</td>
<td>4</td>
</tr>
</tbody>
</table>

For additional information, request literature ES-TB.

Series TBR (3")
Bottom Entry Bimetal Thermometers

- Available in 3" dial size
- Includes ½" (15mm) NPT brass snap-in thermowell

<table>
<thead>
<tr>
<th>MODEL</th>
<th>DIAL SIZE</th>
<th>SCALE °F</th>
<th>SCALE °C</th>
<th>PROBE SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TBR-3-2</td>
<td>3&quot;</td>
<td>-22 – 122</td>
<td>-30 – 50</td>
<td>2</td>
</tr>
<tr>
<td>TBR-3-2</td>
<td>3&quot;</td>
<td>32 – 248</td>
<td>0 – 120</td>
<td>2</td>
</tr>
<tr>
<td>TBR-3-3</td>
<td>3&quot;</td>
<td>-22 – 122</td>
<td>-30 – 50</td>
<td>3</td>
</tr>
<tr>
<td>TBR-3-3</td>
<td>3&quot;</td>
<td>32 – 140</td>
<td>0 – 60</td>
<td>3</td>
</tr>
<tr>
<td>TBR-3-4</td>
<td>3&quot;</td>
<td>-22 – 122</td>
<td>-30 – 50</td>
<td>4</td>
</tr>
<tr>
<td>TBR-3-4</td>
<td>3&quot;</td>
<td>32 – 140</td>
<td>0 – 60</td>
<td>4</td>
</tr>
<tr>
<td>TBR-3-4</td>
<td>3&quot;</td>
<td>32 – 248</td>
<td>0 – 120</td>
<td>4</td>
</tr>
</tbody>
</table>

For additional information, request literature ES-TBR.
Series TBP (2½“)
Pipe Mount Bimetal Thermometers

- Available in 2½“ dial size
- Pipe mount – choice of spring mount (M) or strap mount (F)

<table>
<thead>
<tr>
<th>MODEL</th>
<th>DIAL SIZE</th>
<th>SCALE</th>
<th>°F</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>TBP-M-2½</td>
<td>2½“</td>
<td>32 – 248</td>
<td>0 – 120</td>
<td></td>
</tr>
<tr>
<td>TBP-F-2½</td>
<td>2½“</td>
<td>32 – 248</td>
<td>0 – 120</td>
<td></td>
</tr>
</tbody>
</table>

For additional information, request literature ES-TBP.

Series TBC (2½“)
Center Back Entry Bimetal Thermometers

- Available in 2½“ dial size
- Chimney mount-center back entry

<table>
<thead>
<tr>
<th>MODEL</th>
<th>DIAL SIZE</th>
<th>SCALE</th>
<th>°F</th>
<th>°C</th>
<th>PROBE SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TBC-2½-4</td>
<td>2½“</td>
<td>32 – 932</td>
<td>0 – 500</td>
<td>4</td>
<td>102</td>
</tr>
<tr>
<td>TBC-2½-6</td>
<td>2½“</td>
<td>32 – 932</td>
<td>0 – 500</td>
<td>6</td>
<td>152</td>
</tr>
<tr>
<td>TBC-2½-8</td>
<td>2½“</td>
<td>32 – 932</td>
<td>0 – 500</td>
<td>8</td>
<td>203</td>
</tr>
<tr>
<td>TBC-2½-12</td>
<td>2½“</td>
<td>32 – 932</td>
<td>0 – 500</td>
<td>12</td>
<td>305</td>
</tr>
</tbody>
</table>

For additional information, request literature ES-TBC.

Series TA (9“)
Adjustable Angle Thermometers

- Available in 9“ scale size

<table>
<thead>
<tr>
<th>MODEL</th>
<th>TEMPERATURE RANGE</th>
<th>STEM SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TA-9-3½</td>
<td>-40 – 110</td>
<td>3½</td>
</tr>
<tr>
<td>TA-9-3½</td>
<td>0 – 120</td>
<td>3½</td>
</tr>
<tr>
<td>TA-9-3½</td>
<td>0 – 160</td>
<td>3½</td>
</tr>
<tr>
<td>TA-9-3½</td>
<td>30 – 240</td>
<td>3½</td>
</tr>
<tr>
<td>TA-9-3½</td>
<td>30 – 300</td>
<td>3½</td>
</tr>
<tr>
<td>TA-9-6</td>
<td>-40 – 110</td>
<td>6</td>
</tr>
<tr>
<td>TA-9-6</td>
<td>0 – 120</td>
<td>6</td>
</tr>
<tr>
<td>TA-9-6</td>
<td>0 – 160</td>
<td>6</td>
</tr>
<tr>
<td>TA-9-6</td>
<td>30 – 240</td>
<td>6</td>
</tr>
<tr>
<td>TA-9-6</td>
<td>30 – 300</td>
<td>6</td>
</tr>
</tbody>
</table>

For additional information, request literature ES-TA.
Series TL (5")
Angle Thermometers
• Available in 5" scale size

<table>
<thead>
<tr>
<th>MODEL</th>
<th>TEMPERATURE RANGE</th>
<th>STEM SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>°F</td>
<td>°C</td>
</tr>
<tr>
<td>TL-5-2</td>
<td>-40 – 110</td>
<td>-40 – 43</td>
</tr>
<tr>
<td>TL-5-2</td>
<td>20 – 180</td>
<td>-6 – 82</td>
</tr>
<tr>
<td>TL-5-2</td>
<td>30 – 240</td>
<td>28 – 115</td>
</tr>
<tr>
<td>TL-5-2</td>
<td>30 – 300</td>
<td>28 – 148</td>
</tr>
</tbody>
</table>

For additional information, request literature ES-TL.

Series G-TB, G-TBR (½")
Brass Thermowells
• G-TB with set screw for thermometer models TB and TBC
• G-TBR for thermometer model TBR

For additional information, request literature ES-G-TB or ES-B-TBR.

Series TP (¼", ½")
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 bar). 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 ¼" or ½" (8 or 15mm) NPT test plugs. Plug extensions are also available in ¼" and ½" (8 and 15mm) NPT sizes to accommodate insulated pipe situations.

Models
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).

Features
• Economical means of balancing heating and air conditioning systems
• Eliminates shutting down system for temperature and pressure checks

For additional information, request literature ES-TP.
OneFlow® Anti-Scale System

Connection Sizes: ¾", 1", 1¼", and 2"

The OneFlow® Anti-Scale System provides protection from scale formation on internal and external plumbing surfaces. OneFlow® systems require very little maintenance, no backwashing, no salt and no electricity. Typical hardness problems, especially build-up of scale in pipes, water heaters, boilers and on fixtures are no longer a concern.

Features

- Chemical free scale prevention and protection
- Virtually maintenance free
- No control valve, electricity and no wastewater
- Improves efficiency of water using appliances
- Simple sizing and installation
- Cartridge, tank, and hot water applications

Models

Cartridge Style
OF110-1 1 gpm
OF120-2 2 gpm
OF140-4 4 gpm
OF210-1 1 gpm
OF220-2 2 gpm
OF240-4 4 gpm

Tank Style
OF744-10 10 gpm
OF948-16 16 gpm
OF1054-20 20 gpm
OF1252-30 30 gpm
OF1465-50 50 gpm
OF1665-75 75 gpm

Hot Water
OF-817-8H 8 gpm
OF817-12H 12 gpm
OF1019-20H 20 gpm
OF1465-75H 75 gpm

Replacement Cartridges and Replacement Media available.

Notes
Notes
Trademarks

Celcon® is a registered trademark of Celanese, Limited.
Noryl® is a registered trademark of SABIC Innovative Plastics™.
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.

<table>
<thead>
<tr>
<th>Headquarters: Watts Regulator Company</th>
<th>Telephone #</th>
<th>Fax #</th>
</tr>
</thead>
<tbody>
<tr>
<td>815 Chestnut St., North Andover, MA 01845-6098 U.S.A.</td>
<td>978 688-1811</td>
<td>978 794-1848</td>
</tr>
</tbody>
</table>

### North East

- **Edwards, Platt & Deely, Inc.**
  - 271 Royal Ave., Newha arist, NJ 07966
  - 973 427-2959
- **Vernon Bitzer Associates, Inc.**
  - 980 Thomas Drive, Warmminster, PA 18974
  - 215 443-7500
- **W. P. Haney Co., Inc.**
  - 51 Norfolk St., South Easton, MA 02375
  - 508 238-2030

### Mid Atlantic

- **Disney McLane & Associates**
  - 428 McGregor Ave., Cincinnati, OH 45206
  - 800 542-1682
- **J. B. O'Connor Company, Inc.**
  - Glenfield Bus. Ctr., 2535 Mechanicville Tpk., Richmond, VA 22223
  - 804 443-7355
- **The Joyce Agency, Inc.**
  - 8442 Alban Rd., Springfield, VA 22150
  - 703 866-3111
- **WMS Sales, Inc. (Main office)**
  - 9560 County Rd., Clarence Center, NY 14032
  - 716 741-9575

### South East

- **Billingisley & Associates, Inc.**
  - 2728 Crestview Ave., Kenner, LA 70062-4829
  - 504 602-8100
- **Billingisley & Associates, Inc.**
  - 478 Cheyenne Lane, Madison, MS 39110
  - 601 836-7564
- **Billingsley & Associates, Inc.**
  - 203 Industrial Drive, Birming ham, AL 35212
  - 205 879-3469

### South Central

- **Hugh M. Cunningham, Inc.**
  - 13735 Benchmark, Dallas, TX 75234
  - 972 888-3088
- **HMC Sandia Group**
  - 13755 Benchmark, Dallas, TX 75234
  - 972 888-3382
- **Mack McElroy & Associates**
  - 4407 Mesa Monica Bottom, Suite G, St. Louis, MO 63129
  - 314 894-8798

### South Western

- **Delco Sales, Inc.**
  - 1930 Raymer Ave., Fullerton, CA 92833
  - 714 888-2444
- **Fanning & Associates, Inc.**
  - 6765 Franklin St., Denver, CO 80229-7111
  - 303 289-4191
- **Hollabaugh Brothers & Associates**
  - 6915 South 194th St., Kent, WA 98032
  - 253 867-5040

### Canada

- **Watts Industries (Canada) Inc.**
  - 5435 North Service Road, Burlington, Ontario L7L 5H7
  - 905 332-4090
- **Con-Cur West Marketing, Inc.**
  - 718 Clipper Street, Coquitlam, British Columbia V3K 6X2
  - 604 542-5088
- **D.C. Sales Ltd.**
  - #13-6130 4th St. S.E., Calgary, Alberta T2H 2B6
  - 403 253-6808
- **GTA Sales Team**
  - 1275 Lakeside Drive, Rosemont, IL 60046
  - 630 983-1211

### EXPORT Hqtr.: Watts Regulator Co.

- 815 Chestnut St., North Andover, MA 01845-6098 U.S.A.
  - 978 688-1811
  - 978 794-1848