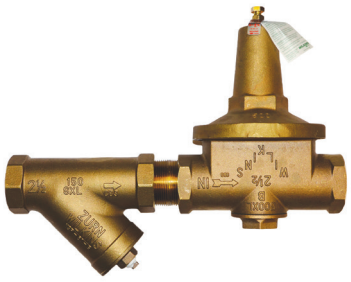
# Model 500XLHTSTSCYSBR

## Water Pressure Reducing Valve with Integral By-pass Check Valve

### Application

Designed for installation on potable water lines to reduce high inlet pressure to a lower outlet pressure.
The 500XLHTSTSCYSBR valves are ideal for continuous hot water recirculation systems



LEAD FREE

NSF/ANSI 61

### Standards Compliance

- ASSE® Listed 1003 (1/2" thru 2 1/2")
- IAPMO® Listed (1/2" thru 2")
- CSA® Certified (1/2" thru 2")
- City of Los Angeles Approved (1/2" thru 2")
- Meets the requirements of NSF/ANSI 61*

*(0.25% MAX. WEIGHTED AVERAGE LEAD CONTENT)

### Materials

| | |
|---|---|
| Main valve body | Low Lead Cast bronze ASTM B 584 |
| Access covers | Low Lead Cast bronze ASTM B 584<br>Low Lead Brass |
| Fasteners | Stainless steel, 300 series |
| Stem & plunger | Low Lead Cast bronze ASTM B 584<br>Low Lead Brass |
| Elastomers | Buna Nitrile & Teflon diaphragm<br>Viton Gaskets, o-rings |
| Cap gaskets | Natural vulcanized fibre<br>Acetal (Delrin™ 500) |
| Springs | SS ASTM A313 |
| Strainer screen | Stainless steel, 300 series<br>(20 mesh standard) |
| Seat | SS 300 Series |

### Features

Sizes: 1/2", 3/4", 1", 1 1/4", 1 1/2", 2", 2 1/2", 3"

| | |
|---|---|
| Maximum working water pressure | 300 psi |
| Maximum working water temperature | 180° F |
| Reduced pressure range | 25 psi to 75 psi |
| Factory preset | 50 psi |
| Threaded connections (FNPT) | ANSI B1.20.1 |
| Copper connections (FC) | ANSI B16.22 |

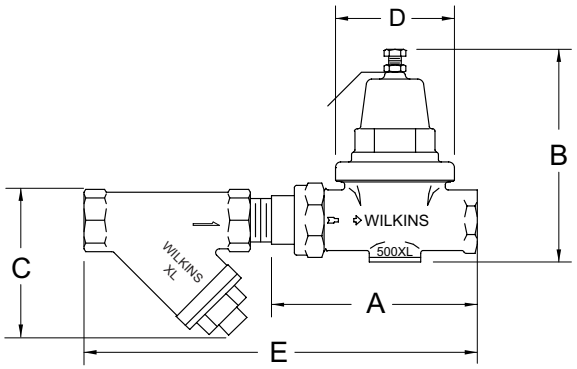
### Options

(Suffixes can be combined)

- ☐ - standard with single union FNPT inlet x FNPT outlet (1/2" thru 2") and less union (2 1/2" & 3") Includes in-line lead-free bronze "Y" type strainer with 20 mesh stainless steel screen
- ☐ - 180°F maximum temp
- ☐ C - copper sweat connection valve only 1/2" thru 2" copper sweat strainer 3/4" & 1" only All other strainers are FNPT
- ☐ HR - 75 psi to 125 psi spring range, factory set at 85 psi
- ☐ HLR - 10 psi to 125 psi springe range, factory set at 50 psi
- ☐ LPV - 180°F maximum temp with 10 psi to 35 psi spring range, factory set at 20 psi
- ☐ P - tapped and plugged for gauge
- ☐ G - tapped and plugged with gauge

### Accessories

- ☐ Repair kit (rubber only)




### Dimensions & Weights (do not include pkg.)

| SIZE | | CONNECTIONS | DIMENSIONS (approximate) | | | | | | | | | | WEIGHT | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | A | | B | | C | | D | | E | | | |
| in. | mm | | in. | mm | in. | mm | in. | mm | in. | mm | in. | mm | lbs. | kg. |
| 1/2 | 15 | SINGLE UNION | 4 1/2 | 108 | 6 | 152 | 3 | 76 | 2 3/4 | 70 | 8 1/4 | 210 | 5 | 2.3 |
| 3/4 | 20 | SINGLE UNION | 4 5/8 | 118 | 6 | 152 | 3 1/2 | 89 | 2 3/4 | 70 | 9 1/8 | 232 | 6 | 2.7 |
| 1 | 25 | SINGLE UNION | 5 1/8 | 130 | 6 7/8 | 175 | 4 | 102 | 3 5/16 | 84 | 10 | 254 | 7 | 3.2 |
| 1 1/4 | 32 | SINGLE UNION | 6 5/16 | 160 | 7 1/4 | 184 | 4 3/4 | 121 | 4 | 102 | 13 1/8 | 333 | 9 | 4.1 |
| 1 1/2 | 40 | SINGLE UNION | 8 5/16 | 211 | 10 | 254 | 5 | 127 | 5 | 127 | 17 5/8 | 448 | 16 | 7.3 |
| 2 | 50 | SINGLE UNION | 9 1/2 | 241 | 10 3/4 | 273 | 6 | 152 | 6 1/2 | 165 | 18 5/8 | 473 | 24 | 10.9 |
| 2 1/2 | 65 | LESS UNION | 10 | 254 | 14 1/2 | 368 | 7 1/2 | 191 | 8 | 203 | 19 3/8 | 492 | 43 | 19.5 |
| 3 | 80 | LESS UNION | 11 1/8 | 283 | 16 | 406 | 8 1/2 | 216 | 8 | 203 | 25 | 635 | 60 | 27.2 |

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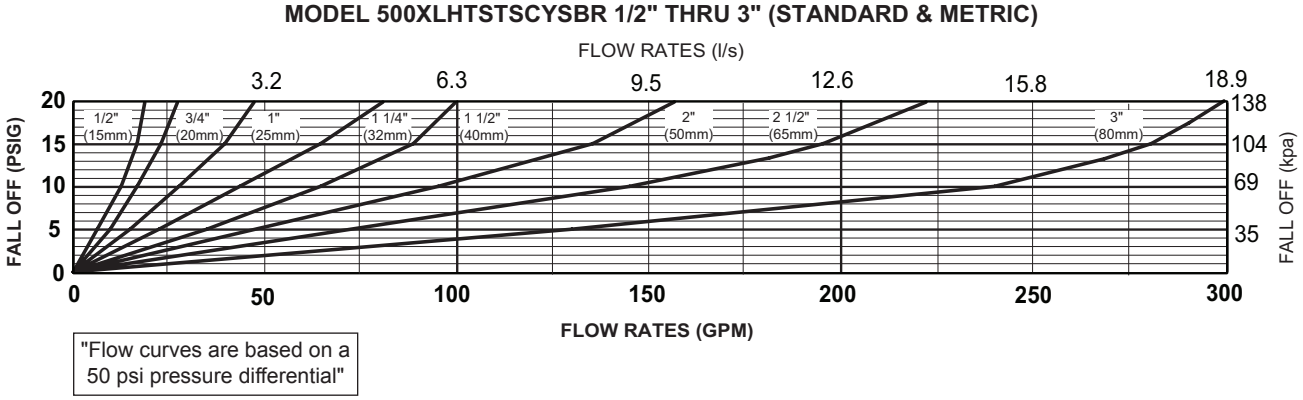
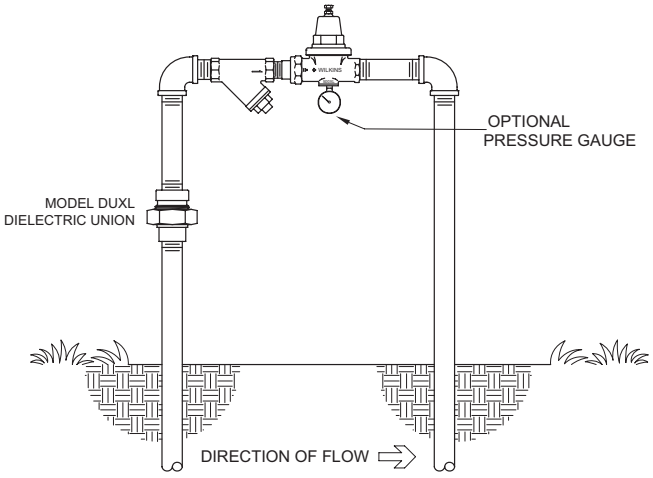
## Flow Characteristics



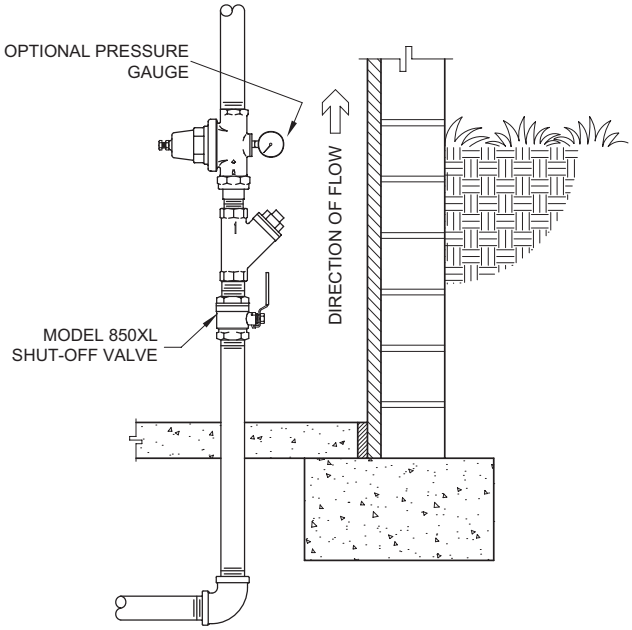

"Flow curves are based on a 50 psi pressure differential"

### Typical Installation

Local codes shall govern installation requirements. Unless otherwise specified, the assembly shall be mounted in accordance with the manufacturers' instructions and the latest edition of the Uniform Plumbing Code. The assembly shall be installed with sufficient side clearance for testing and maintenance. The Model 500XLHTSTSCYSBR may be installed in any position. Multiple installations are recommend for wide demand variations or where the desired pressure reduction is more than 4 to 1 (ie: 200 psi inlet reduced to 50 psi outlet). CAUTION: Anytime a reducing valve is adjusted, a pressure gauge must be used downstream to verify correct pressure setting. Do not bottom adjustment bolt on bell housing.




**HORIZONTAL INSTALLATION**




**VERTICAL INSTALLATION**

### Specifications

The Pressure Reducing Valve shall be certified to NSF/ANSI 61, consist of a low lead bronze body and bell housing, a separate access cover for the plunger and a bolt to adjust the downstream pressure. The bronze bell housing and access cap shall be threaded to the body and shall not require the use of ferrous screws. The assembly shall be of the balanced piston design and shall reduce pressure in both flow and no-flow conditions. The assembly shall be accessible for maintenance without having to remove the body from the line. The Pressure Reducing Valve shall be a ZURN WILKINS Model 500XLHTSTSCYSBR.

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