

Engineering Specification

Job Name _____

Contractor _____

Job Location _____

Approval _____

Engineer _____

Contractor's P.O. No. _____

Approval _____

Representative _____

Series 223, 223-S

High Capacity Water Pressure Reducing Valves*

Sizes: 1/2" – 2 1/2"

Series 223 and 223-S High Capacity Water Pressure Reducing Valves are designed to reduce incoming water pressure to a sensible level to protect plumbing system components and reduce water consumption. This series is suitable for water supply pressures up to 300psi (20.7 bar) and may be adjusted from 25 – 75psi (172 – 517 kPa). The standard setting is 50psi (345 kPa). Series 223 features an enlarged diaphragm, spring cage and seat orifice for high capacity performance. Series 223-S has the same options as the 223, except it is furnished with a strainer. All parts are quickly and easily serviceable without removing the valve from the line. The optional bypass feature permits the flow of water back through the valve into the main when pressures, due to thermal expansion on the outlet side of the valve, exceed the pressure in the main supply.

Features

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

Models

223 NPT threaded female inlet x NPT threaded female outlet

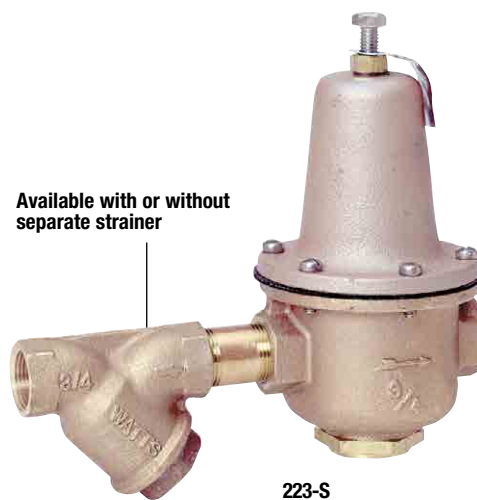
223-S NPT threaded female inlet with strainer x NPT threaded female outlet

For 2 1/2" – 3" bronze threaded valves, refer to literature ES-N223B.

For 3" flanged connections, refer to literature ES-N223F.

Specifications

A Water Pressure Reducing Valve shall be installed on the water service pipe near its entrance to the building where supply main pressure exceeds 60psi (413 kPa) to reduce it to 50psi (345 kPa) or lower. Sill cocks and outside wall hydrants may be left on full main pressure at the option of the owner. Pressure reducing valves with built-in bypass check valves and strainer will be acceptable. Approved valves shall comply with ASSE 1003. Valve shall be a Watts Series 223 or 223-S (with strainer).

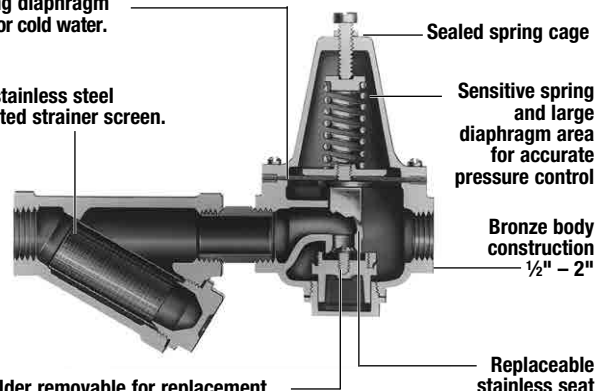


Available with or without separate strainer

223-S

High temperature resisting diaphragm for hot or cold water.

Large stainless steel perforated strainer screen.



Sealed spring cage

Sensitive spring and large diaphragm area for accurate pressure control

Bronze body construction 1/2" – 2"

Replaceable stainless seat

Disc holder removable for replacement of disc without dismantling the valve — no special tools required.

NOTICE

Inquire with governing authorities for local installation requirements.

NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

*A water saving test program concluded that reducing the supply pressure from 80-50psi (551-345 kPa) resulted in a water savings of 30%.

**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).

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

WATTS[®]

Materials

Body: 1/2" – 2" Bronze
2 1/2" Iron

Seat: Replaceable stainless steel

Strainer Screen: Stainless steel (model 223-S)

Diaphragm: Reinforced Buna-N

Valve Disc: EPDM

Pressure – Temperature

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)

Standards   

1/2" – 2" 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.

Options

B Built-in bypass feature

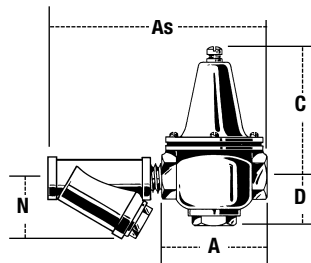
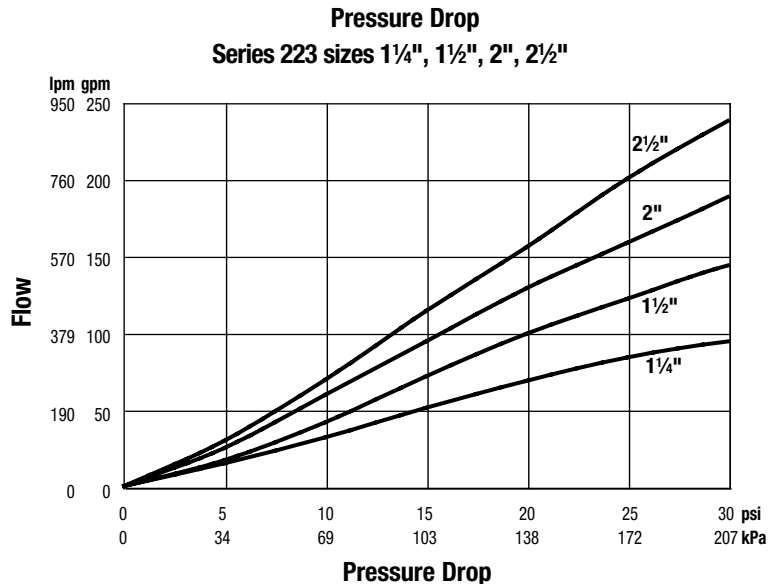
LP Low pressure range 10-35psi (69 – 241 kPa)

HP High pressure range, reduced range shown below:

Reduced Pressure Range - Suffix HP

SIZE		RANGE	
<i>in</i>	<i>psi</i>	<i>bar</i>	
1/2	50-145	3.4-10.0	
3/4	50-145	3.4-10.0	
1	50-145	3.4-10.0	
1 1/4	50-120	3.4-8.3	
1 1/2	50-95	3.4-6.6	
2	50-95	3.4-6.6	
2 1/2	50-95	3.4-6.6	

Capacity



Dimensions – Weights

MODEL		DIMENSIONS								WEIGHT				
<i>in.</i>	<i>in.</i>	<i>mm</i>	<i>As</i> (223-S)		<i>C</i>		<i>D</i>		<i>N</i> (223-S)		223		223-S	
<i>in.</i>	<i>in.</i>	<i>mm</i>	<i>in.</i>	<i>mm</i>	<i>in.</i>	<i>mm</i>	<i>in.</i>	<i>mm</i>	<i>in.</i>	<i>mm</i>	<i>lb</i>	<i>mm</i>	<i>lb</i>	<i>kg</i>
1/2	4 1/4	108	9	229	6 1/4	159	2	50	2 1/2	64	4.5	2.0	6	2.7
3/4	4 1/4	108	9	229	6 1/4	159	2	50	2 1/2	64	5	2.3	6.5	2.9
1	4 3/4	121	10 15/16	262	6 1/2	165	2 1/8	54	2 15/16	75	7	3.2	9.5	4.3
1 1/4	5	127	11 15/16	287	6 3/4	172	2 3/4	70	3	76	9	4.1	12	5.4
1 1/2	6 3/4	171	14 3/4	375	9 7/8	251	2 3/4	70	3 7/16	87	19.5	8.8	23.5	10.7
2	8	203	16 3/4	425	10 3/4	273	3 3/8	86	4	102	30	13.6	37.5	17.0
2 1/2	9	229	20 1/8	511	10 3/4	273	3 3/8	86	5	127	32.5	14.8	59	26.8



USA: T: (978) 689-6066 • Watts.com
Canada: T: (888) 208-8927 • Watts.ca
Latin America: T: (52) 55-4122-0138 • Watts.com