

## S Series Basic Valves

# LEAD FREE\*

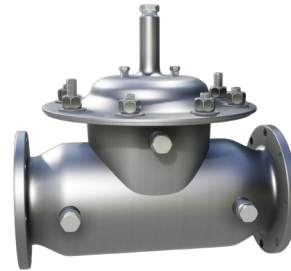
### Reduced Port Stainless Steel Dual Chamber Basic Valve with Mechanical Check Feature

This Watts ACV is a reduced port, dual chamber basic valve that incorporates a two-piece telescoping disc and diaphragm assembly. This assembly is the only moving part within the valve, allowing it to open or close as commanded by the pilot control system. The lower portion of this two-piece assembly is a mechanical check feature, which acts independent of diaphragm position or pilot control system, and provides immediate check action when flow ceases.

When pressure is applied to the upper diaphragm chamber and released from the lower diaphragm chamber, the valve travels to a closed position. When pressure is applied to the lower diaphragm chamber and released from the upper diaphragm chamber the valve travels to a full open position.

The Stainless Steel design offers superior corrosion resistance, as well as a lightweight alternative to conventional heavy iron valves. Stainless Steel construction reduces corrosion, reducing diaphragm wear and the frequency and labor costs associated with traditional maintenance repairs.

Watts ACV Main Valves are Lead Free. The Watts ACV piloting system contains Lead Free\* components, ensuring all of our configurations are Lead Free compliant.



Flanged Globe



Flanged Angle

Globe Pattern Dual Chamber Basic Valve with Mechanical Check Feature (S6518)

Angle Pattern Dual Chamber Basic Valve with Mechanical Check Feature (S61518)

### Standard Materials

Body, Cover & Flanges:	304L Stainless Steel (standard) 316L Stainless Steel (optional)
Trim:	316 Stainless Steel
Elastomers:	Buna-N (standard) EPDM (optional) Viton® (optional)
Nut & Spring, Stem:	Stainless Steel



Certified to NSF/ANSI 61-G

Anti-Scale (Optional): Xylan Coated Stem and Seat

### Operating Pressure

150# Flanged = 250psi (17.2 bar)  
300# Flanged = 400psi (27.6 bar)

### Operating Temperature

Buna-N: 160°F (71°C) Maximum  
EPDM: 300°F (140°C) Maximum  
Viton®: 250°F (121°C) Maximum

**\*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.**

Viton® is a registered trademark of DuPont Dow Elastomers.

### 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.

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.

# Reduced Port Stainless Steel Dual Chamber Basic Valve with Mechanical Check Feature

## Flow Data

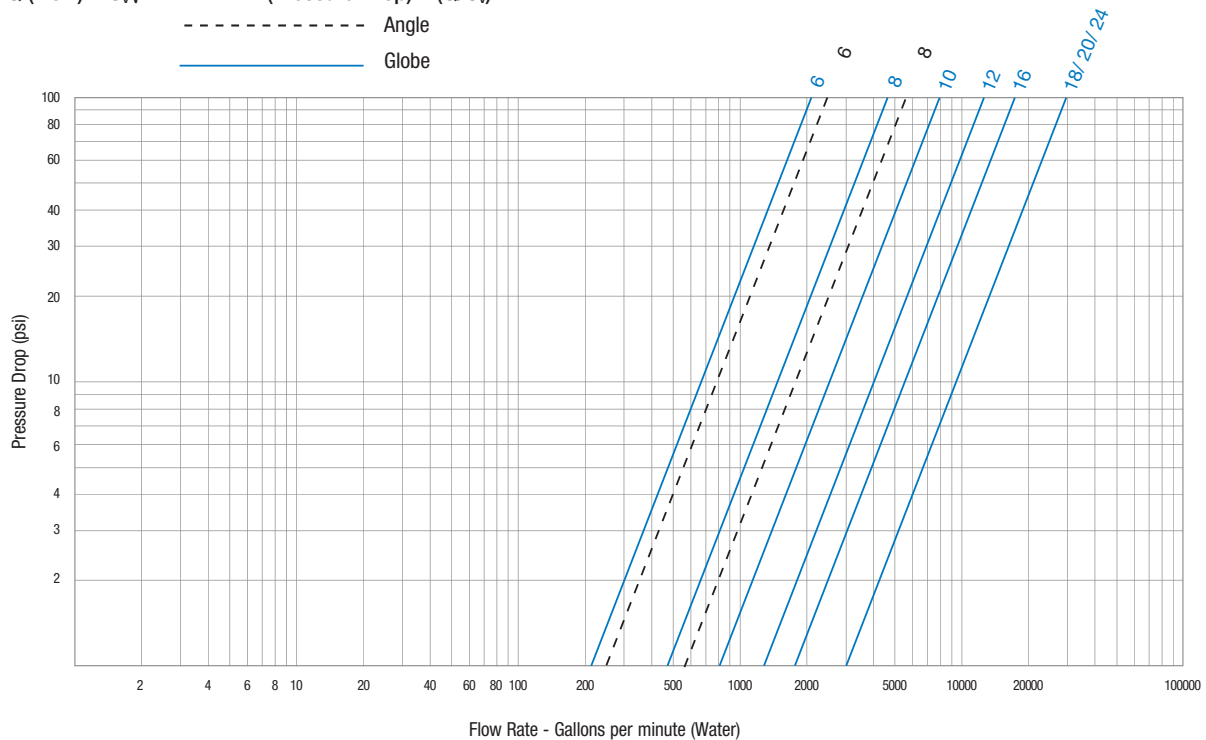
Valve Size - Inches		6	8	10	12	16	18	20	24
<b>Suggested</b>	Maximum Continuous Flow Rate Gpm (Water)	800	1850	3100	5000	7000	11100	11100	11100
	Maximum Intermittent Flow Rate Gpm (Water)	1000	2300	4000	6250	8900	14100	14100	14100
	Minimum Flow Rate Gpm (Water)	16	17	25	55	70	400	400	400
<b>C<sub>v</sub></b>	Factor GPM (Globe)	224	376	932	1043	2067	2881	2881	2881
	Factor GPM (Angle)	237	534						

- Maximum continuous flow based on velocity of 20 ft. per second.
- Maximum intermittent flow based on velocity of 25 ft. per second.
- Minimum flow rates based on a 20-40 psi pressure drop.
- The C<sub>v</sub> Factor of a valve is the flow rate in US GPM at 60°F that will cause a 1psi drop in pressure.
- C<sub>v</sub> factor can be used in the following equations to determine Flow (Q) and Pressure Drop (ΔP):

$$Q \text{ (Flow)} = C_v \sqrt{\Delta P} \quad \Delta P \text{ (Pressure Drop)} = (Q/C_v)^2$$

----- Angle  
 \_\_\_\_\_ Globe

- The C<sub>v</sub> factors stated are based upon a fully open valve.
- Many factors should be considered in sizing control valves including inlet pressure, outlet pressure and flow rates.
- For sizing questions including cavitation analysis consult Watts with system details.



## Valve Cover Chamber Capacity

Valve Size (in)	6	8	10	12	16	18	20	24
fl.oz.	22	70						
U.S. Gal			1¼	2½	4	9½	9½	9½

## Valve Travel

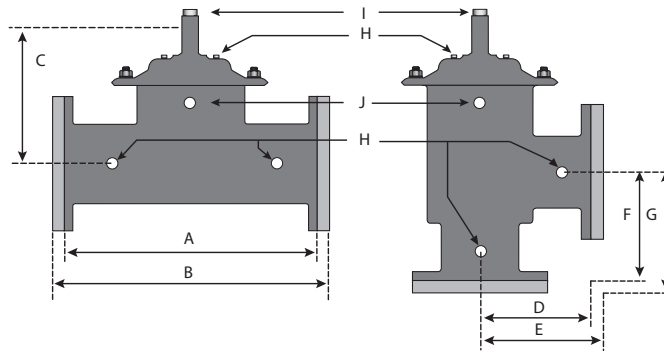
Valve Size (in)	6	8	10	12	16	18	20	24
(in)	1	1½	2	2½	3	4	4	4

### NOTICE

Installation: If unit is installed in any orientation other than horizontal (cover up) OR extreme space constraints exist, consult customer service prior to or at the time of order.

# Reduced Port Stainless Steel Dual Chamber Basic Valve with Mechanical Check Feature

## Dimensions



Valve Size	Globe 150#		Globe 300#		Cover To Center		Angle 150#		Angle 300#		Angle 150#		Angle 300#		Port Size NPT	Port Size NPT	Port Size NPT	Shipping Weights*	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	in.	in.	lbs.	kgs.
6	17¾	451	18¾	473	15¼	387	8⅞	225	9⅜	238	6¾	171	7¼	184	½	¾	½	130	59
8	21⅜	543	22⅝	568	20⅞	511	10⅞	271	11⅜	284	7¼	184	7¾	197	½	¾	½	210	95
10	26	660	27⅝	695	23⅞	602									1	1	½	363	165
12	30	762	31½	800	26¼	667									1	1¼	½	528	240
16	35	889	36⅝	930	34⅞	867									1	1½	1	826	375
18	48	1219	49⅝	1260	41	1041									1	1½	1	1365	619
20	48	1219	49⅝	1260	41	1041									1	1½	1	1390	630
24	48	1219	49¾	1264	41	1041									1	1½	1	1485	674



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