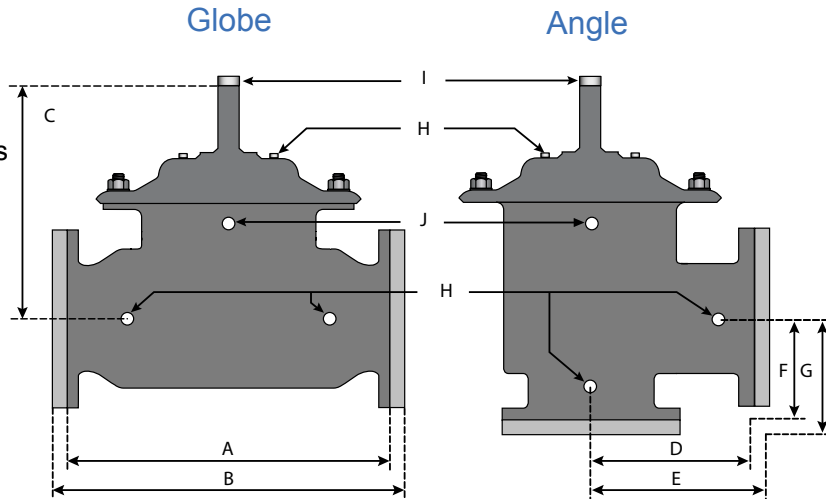


Standard Materials

- Body & Cover: 304L Stainless Steel
- Flanges: Class D Zinc Plated Steel with Stainless Steel Seal Welds
- Trim: Bronze ASTM B62 (standard)
316 Stainless Steel (optional)
- Elastomers: Buna-N (standard)
EPDM (optional)
Viton (optional)
- Stem, Nut & Spring: Stainless Steel



Dimensions

	A	B	C	D	E	F	G	H	I	J	
VALVE SIZE	GLOBE 150#	GLOBE 300#	COVER TO CENTER	ANGLE 150#	ANGLE 300#	ANGLE 150#	ANGLE 300#	PORT SIZE	PORT SIZE	PORT SIZE	SHIPPING WEIGHTS*
4	15	15-5/8	14-1/4	7-1/2	7-7/8	5	5-5/16	1/2	3/4	1/2	87
6	20	21	18-7/16	10	10-1/2	6	6-1/2	1/2	3/4	1/2	178
8	25-3/8	26-3/8	21-13/16	12-3/4	13-1/4	8	8-1/2	1	1	1/2	240
10	29-3/4	31-1/8	23-3/8	14-7/8	15-9/16	8-5/8	9-5/16	1	1-1/4	1/2	397
12	34	35-1/2	29-5/16	17	17-3/4	13-3/4	14-1/2	1	1-1/4	1/2	480
16	41-3/8	43-1/2	35	20-13/16	21-5/8	15-11/16	16-1/2	1	1-1/2	1/2	925

*Estimated in lbs.

Description

The Watts ACV Models S518 and S1518 are full port, dual chamber basic valves that incorporate 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 provides extended diaphragm life, and reduces the frequency and labor costs associated with traditional maintenance repairs.

Model S518: Globe Pattern Dual Chamber Basic Valve with Mechanical Check Feature

Model S1518: Angle Pattern Dual Chamber Basic Valve with Mechanical Check Feature

Operating Pressure

150 Flanged = 250 psi / 300 Flanged = 400 psi

Operating Temperature

Buna-N: 160°F Maximum

EPDM: 300°F Maximum

Viton: 250°F Maximum

Flow Data - ACV S518 (Globe) / S1518 (Angle)

Valve Size - Inches	4	6	8	10	12	16
Maximum Continuous Flow Rate Gpm (Water)	800	1850	3100	5000	7000	11100
Maximum Intermittent Flow Rate Gpm (Water)	1000	2300	4000	6250	8900	14100
C _v Factor GPM (Globe)	210	460	790	1260	1725	2940
C _v Factor GPM (Angle)	250	561	990	1590	2500	4200

Estimated

Maximum continuous flow based on velocity of 20 ft. per second.

Maximum intermittent flow based on velocity of 25 ft. per second.

The C_v factor of a valve is the flow rate in US GPM at 60° F that will cause a 1 psi drop in pressure.

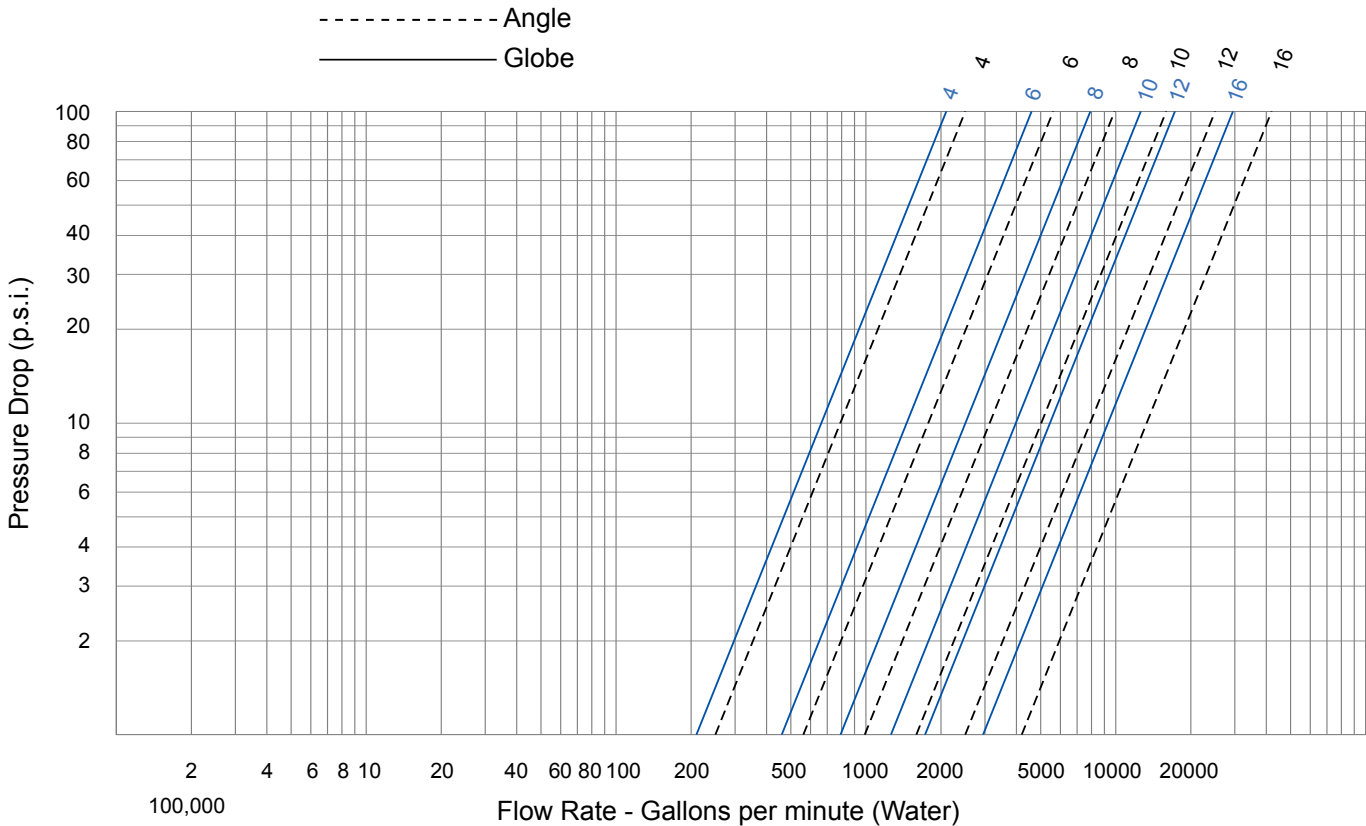
The factors stated are based upon a fully open valve.

C_v factor can be used in the following equations to determine Flow (Q) and Pressure Drop (Δ P):

$$Q (\text{Flow}) = C_v \sqrt{\Delta P}$$

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

Headloss



Valve Cover Chamber Capacity

Valve Size (in)	4	6	8	10	12	16
fl.oz.	22	70				
U.S. Gal			1-1/4	2-1/2	4	9-1/2

Valve Travel

Valve Size (in)	4	6	8	10	12	16
Travel (in)	1	1-1/2	2	2-1/2	3	4