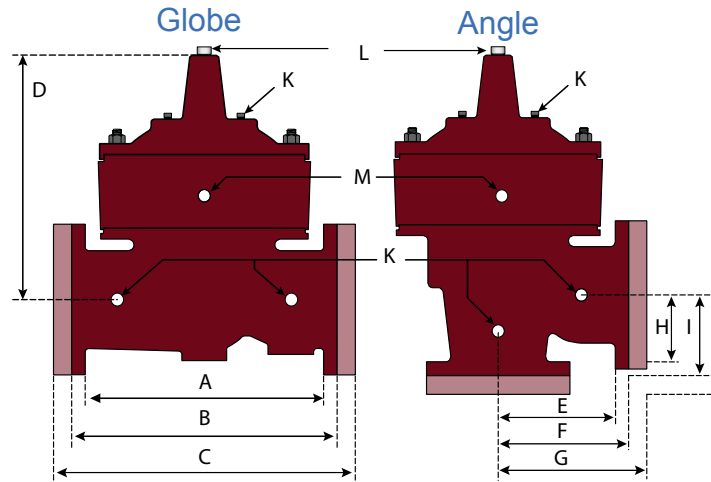


Standard Materials

- Body & Cover: Ductile Iron ASTM A536
- Coating: NSF Listed Fusion Bonded Epoxy Lined and Coated
- Trim: 316 Stainless Steel
- Elastomers: Buna-N (standard)
EPDM (optional)
Viton (optional)
- Stem, Nut & Spring: Stainless Steel



Dimensions

	A	B	C	D	E	F	G	H	I	J	K	L	M	
VALVE SIZE	GLOBE THRD.	GLOBE 150#	GLOBE 300#	COVER TO CENTER	ANGLE THRD.	ANGLE 150#	ANGLE 300#	ANGLE THRD.	ANGLE 150#	ANGLE 300#	PORT SIZE	PORT SIZE	PORT SIZE	SHIPPING WEIGHTS*
2	9-3/8	9-3/8	10	8-9/16	4-3/4	4-3/4	5	3-1/4	3-1/4	3-1/2	3/8	1/2	1/4	45
2-1/2	11	11	11-5/8	10-5/16	5-1/2	5-1/2	5-7/8	4	4	4-5/16	1/2	1/2	1/2	70
3	12-1/2	12	13-1/4	11-3/16	6-1/4	6	6-3/8	4-1/2	4	4-3/8	1/2	1/2	1/2	100
4		15	15-5/8	14-1/4		7-1/2	7-7/8		5	5-5/16	3/4	3/4	1/2	200
6		20	21	18-7/16		10	10-1/2		6	6-1/2	3/4	3/4	3/4	340
8		25-3/8	26-3/8	21-13/16		12-3/4	13-1/4		8	8-1/2	1	1	1	665
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	980
12		34	35-1/2	29-5/16		17	17-3/4		13-3/4	14-1/2	1	1-1/4	1	1720
14		39	40-1/2	32-1/8		19-1/2	20-1/4		14-7/8	15-5/8	1	1-1/2	1	2600
16		41-3/8	43-1/2	35		20-13/16	21-5/8		15-11/16	16-1/2	1	2	1	3300

*Estimated in lbs.

Description

The Watts ACV Models M518 and M1518 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.

Model M518: Globe Pattern Dual Chamber Basic Valve with Mechanical Check Feature

Model M1518: Angle Pattern Dual Chamber Basic Valve with Mechanical Check Feature

Operating Pressure

Threaded = 400 psi / 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 M518 (Globe) / M1518 (Angle)

Valve Size - Inches	2	2-1/2	3	4	6	8	10	12	14	16
Maximum Continuous Flow Rate Gpm (Water)	210	300	485	800	1850	3100	5000	7000	8500	11100
Maximum Intermittent Flow Rate Gpm (Water)	265	390	590	1000	2300	4000	6250	8900	10800	14100
C _v Factor GPM (Globe)	45	75	100	175	490	770	1200	1750	2125	2890
C _v Factor GPM (Angle)	57	91	125	215	571	990	1530	2525	2885	3575

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.

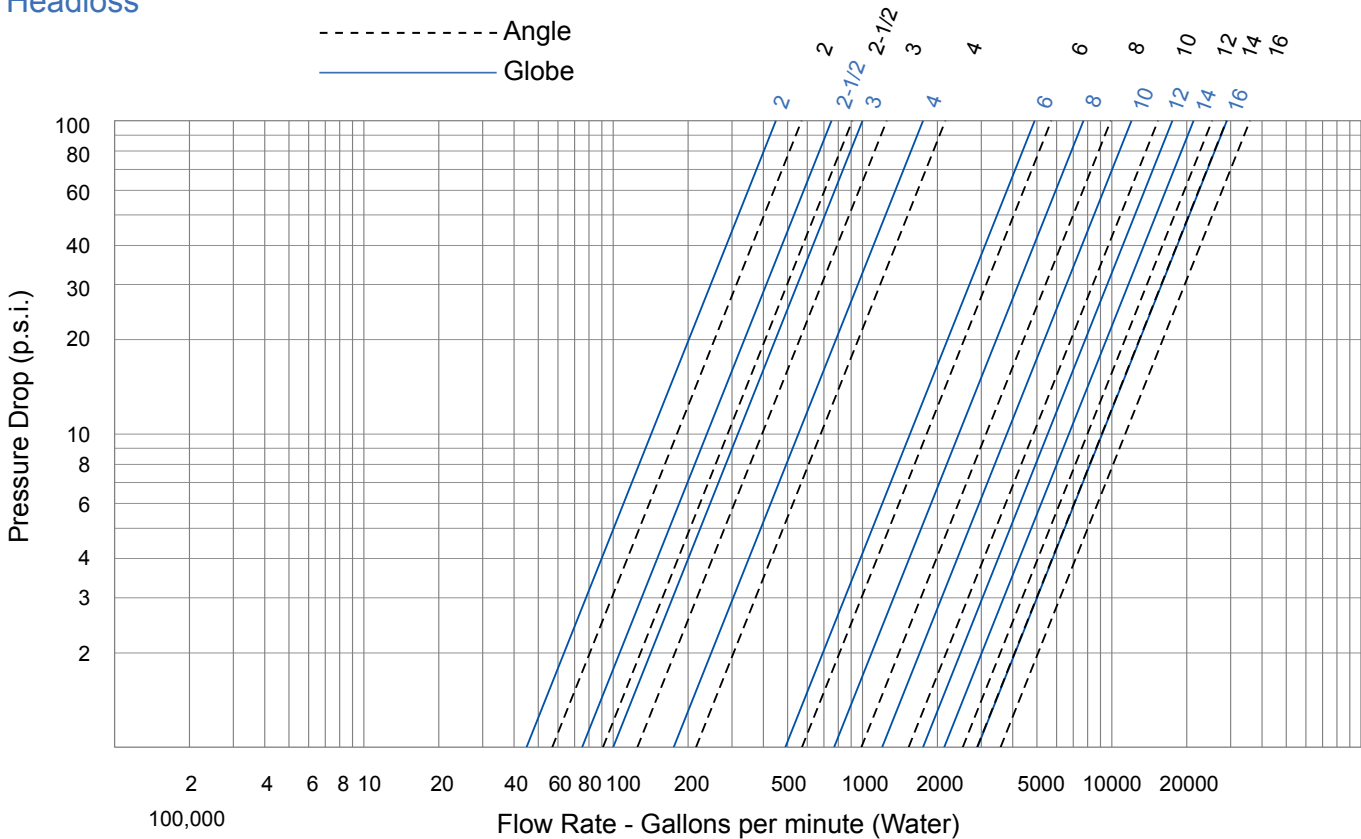
The factors stated are based upon a fully open valve.

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)	2	2-1/2	3	4	6	8	10	12	14	16
fl.oz.	4	10	10	22	70					
U.S. Gal						1-1/4	2-1/2	4	6-1/2	9-1/2

Valve Travel

Valve Size (in)	2	2-1/2	3	4	6	8	10	12	14	16
Travel (in)	1/2	5/8	3/4	1	1-1/2	2	2-1/2	3	3-1/2	4