

Standard Materials

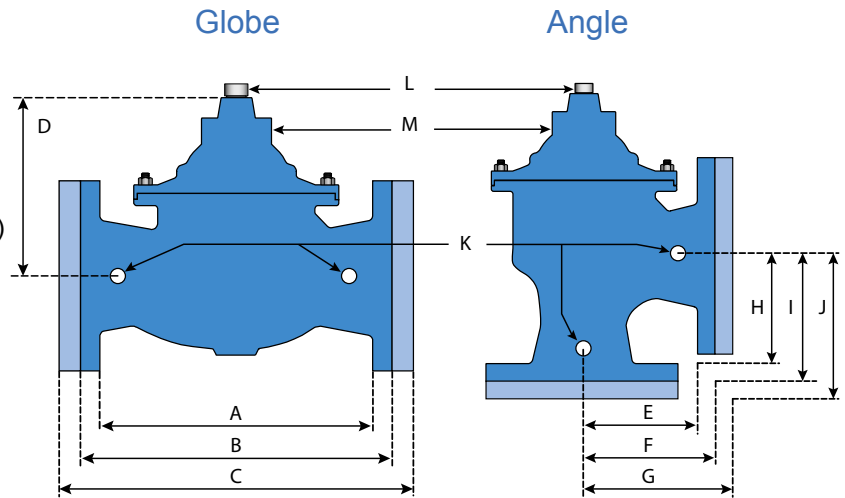
Body & Cover: Ductile Iron ASTM A536

Coating: NSF Listed Fusion Bonded Epoxy Lined and Coated

Trim: 316 Stainless Steel (1-1/4" – 8")
ASTM B62 Bronze (10" – 24")
(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	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*
1-1/4	7-1/4			3-1/2	3-1/4			1-7/8			1/4	1/2	1/8	15
1-1/2	7-1/4	8-1/2	9	3-1/2	3-1/4	4		1-7/8	4		1/4	1/2	1/8	15
2	9-3/8	9-3/8	10	4-15/16	4	4	4-1/4	4	4	4-1/4	1/2	1/2	1/4	35
2-1/2	11	11	11-5/8	7	5-1/2	5-1/2	5-13/16	4	4	4-5/16	1/2	1/2	3/8	65
3	10-1/2	12	13-1/4	7	5-1/4	5-3/4	6-1/8	5-1/4	5-3/4	6-1/8	1/2	1/2	3/8	95
4		15	15-5/8	8-5/8		6-3/4	7-1/8		6-3/4	7-1/8	1/2	1/2	3/8	190
6		20	21	11-3/4		8-1/2	8-7/8		8-1/2	8-7/8	1/2	1/2	1/2	320
8		25-3/8	26-3/8	15-3/4		11	11-1/2		11	11-1/2	1/2	1	1/2	650
10		29-3/4	31-1/8	18-3/4		14-7/8	15-5/8		14-7/8	15-5/8	1	1	1	940
12		34	35-1/2	20-5/8		17	17-3/4		17	17-3/4	1	1	1	1500
14		39	40-1/2	22-1/4							1	1	1	1675
16		41-3/8	43-1/2	26-1/4							1	1	1	3100

*Estimated in lbs.

Description

The Watts ACV Models F100 and F1100 are single chamber basic valves that incorporate a one-piece disc and diaphragm assembly. This assembly is the only moving part within the valve allowing it to open, close, or modulate as commanded by the pilot control system.

Model F100: Globe Pattern Single Chamber Basic Valve

Model F1100: Angle Pattern Single Chamber Basic Valve

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 F100 (Globe) / F1100 (Angle)

Valve Size - Inches	1-1/4	1-1/2	2	2-1/2	3	4	6	8	10	12	14	16
Maximum Continuous Flow Rate Gpm (Water)	93	125	208	300	460	800	1800	3100	4900	7000	8500	11000
Maximum Intermittent Flow Rate Gpm (Water)	115	158	260	370	570	1000	2300	3900	6000	8600	10500	14000
CV Factor GPM (Globe)	29	34	55	75	125	220	460	775	1200	1730	2100	2800
CV Factor GPM (Angle)	39	53	66	99	170	280	650	1100	1600	2500	3060	4210

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.

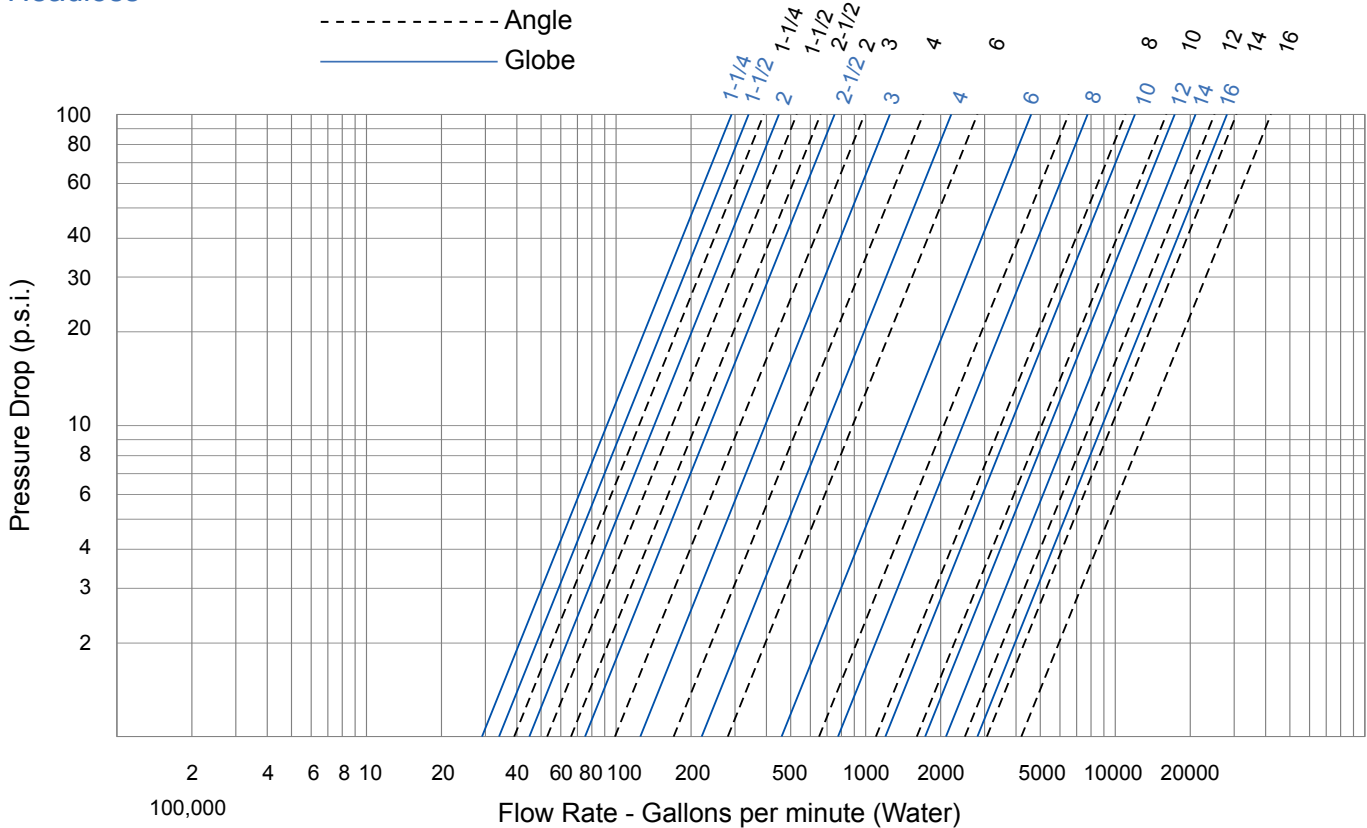
The factors stated are based upon a fully open valve.

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

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

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

Headloss



Valve Cover Chamber Capacity

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