WATTS AUTOMATIC CONTROL VALVES

CAST STAINLESS STEEL
1-1/4" through 4" Globe

Engineering Bulletin
Model C100S (Globe)

STANDARD MATERIALS

Body & Cover: Cast 316 Stainless Steel

End Connections: 1-1/4" – 2" Threaded
2", 3" & 4" 150#Flanged

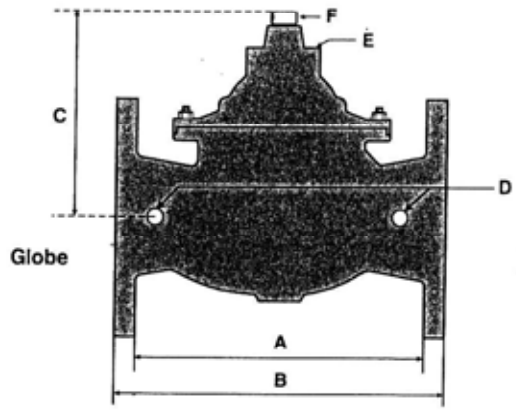
Internals main valve: Stainless Steel

Elastomers: Buna-N Standard
EPDM (optional)
Viton (optional)

Stem, Nut & Spring: Stainless Steel

Studs, Nuts, Washers: Stainless Steel

Dimensions



[redacted]	A	B	C	D	E	F	[redacted]
VALVE SIZE	GLOBE THRD.	GLOBE 150#	COVER TO CENTER	PORT SIZE	PORT SIZE	PORT SIZE	SHIPPING WEIGHTS*
1-1/4	7-1/4	[redacted]	3-1/2	1/4	1/8	1/2	20
1-1/2	7-1/4	[redacted]	3-1/2	1/4	1/8	1/2	20
2	9-3/8	9-3/8	4-15/16	1/2	1/4	1/2	30
2-1/2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
3	[redacted]	12	7	1/2	3/8	1/2	70
4	[redacted]	15	8-5/8	1/2	3/8	1/2	125

** Estimated in lbs.*

Description

full port, single chamber basic valve that incorporates 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.

The Stainless Steel design offers superior corrosion resistance to ductile iron valves where rust and corrosion can occur in the cover & body ports where epoxy coating cannot cover the thread areas. Stainless Steel construction provides extended diaphragm life and reduces the frequency and labor costs associated with traditional maintenance repairs.

: Globe Pattern Single Chamber Basic Valve

Operating Pressure: Threaded = 400 psi / 150 Flanged = 250 psi

Operating Temperature:
Buna-N: 160 degree Maximum
EPDM: 300 degree Maximum
Viton: 250 degree Maximum

WATTS AUTOMATIC CONTROL VALVES

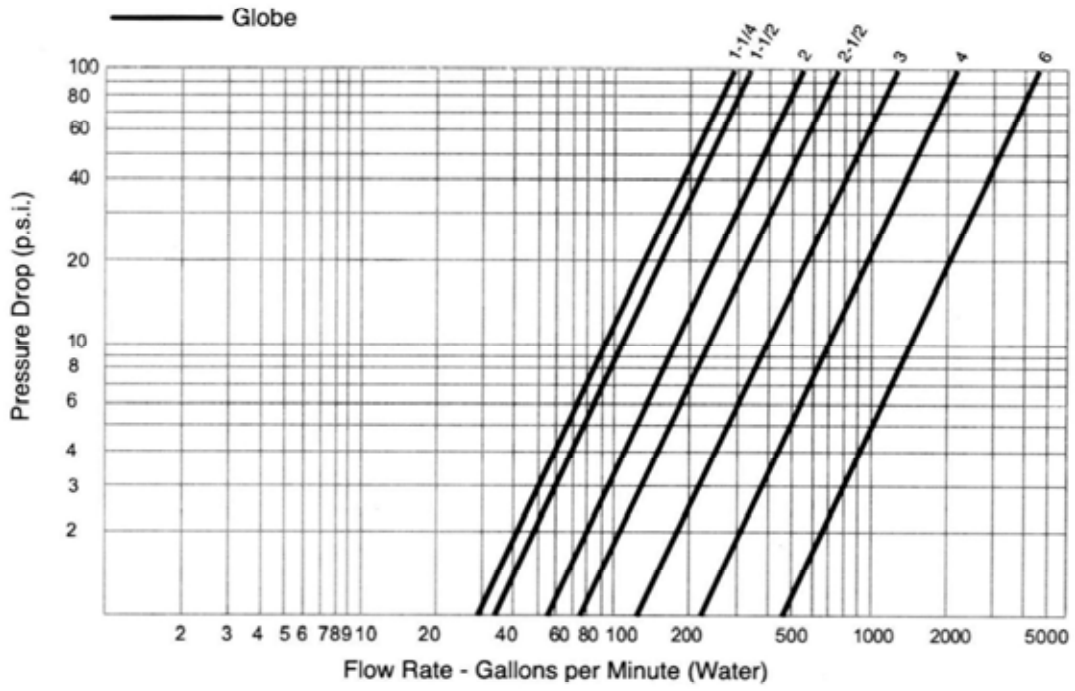
Flow Data

Valve Size - Inches	1-1/4	1-1/2	2	2-1/2	3	4	6
Maximum Continuous Flow Rate Gpm (Water)	93	125	208	300	460	800	1800
Maximum Intermittent Flow Rate Gpm (Water)	115	158	260	370	570	1000	2300
Cv Factor GPM (Globe)	29	34	55	75	125	220	460

Maximum continuous flow based on pipeline velocity of 20 ft. per second.
Maximum intermittent flow based on pipeline 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 ($\triangle P$):

$Q\ (\text{Flow}) = C_V\sqrt{\triangle P}$ $\qquad$ $\triangle P\ (\text{Pressure Drop}) = (Q/C_V)^2$

Headloss



Valve Cover Chamber Capacity

Valve Size (in)	1-1/4	1-1/2	2	2-1/2	3	4	6
fl. oz.	2.5	2.5	4	5	10	22	70

Valve Travel

Valve Size (in)	1-1/4	1-1/2	2	2-1/2	3	4	6
Travel Length (in)	3/8	3/8	1/2	5/8	3/4	1	1-1/2