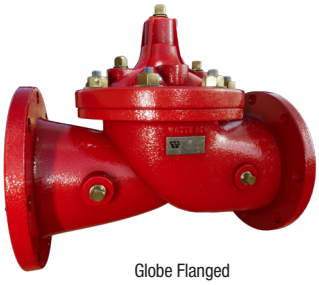
LEAD FREE*

Reduced Port Ductile Iron Single Chamber Basic Valve with Mechanical Check Feature

This Watts ACV is a reduced port, single chamber basic valves that incorporates a two-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 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. The reduced port design offers improved low-flow performance.

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.



Globe Flanged

Angle Flanged

Globe Pattern Single Chamber Basic Valve with Mechanical Check Feature (M6400)

Angle Pattern Single Chamber Basic Valve with Mechanical Check Feature (M61400)

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)
Nut, Spring & Stem:	Stainless Steel
Anti-Scale (Optional):	Xylan Coated Stem and Seat

NSF Certified to NSF/ANSI 61-G

***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.

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

Epoxy Coating**: 225°F (107°C) Maximum

*** Valves can be provided without internal epoxy coating consult factory*

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®

Reduced Port Ductile Iron Single Chamber Basic Valve with Mechanical Check Feature

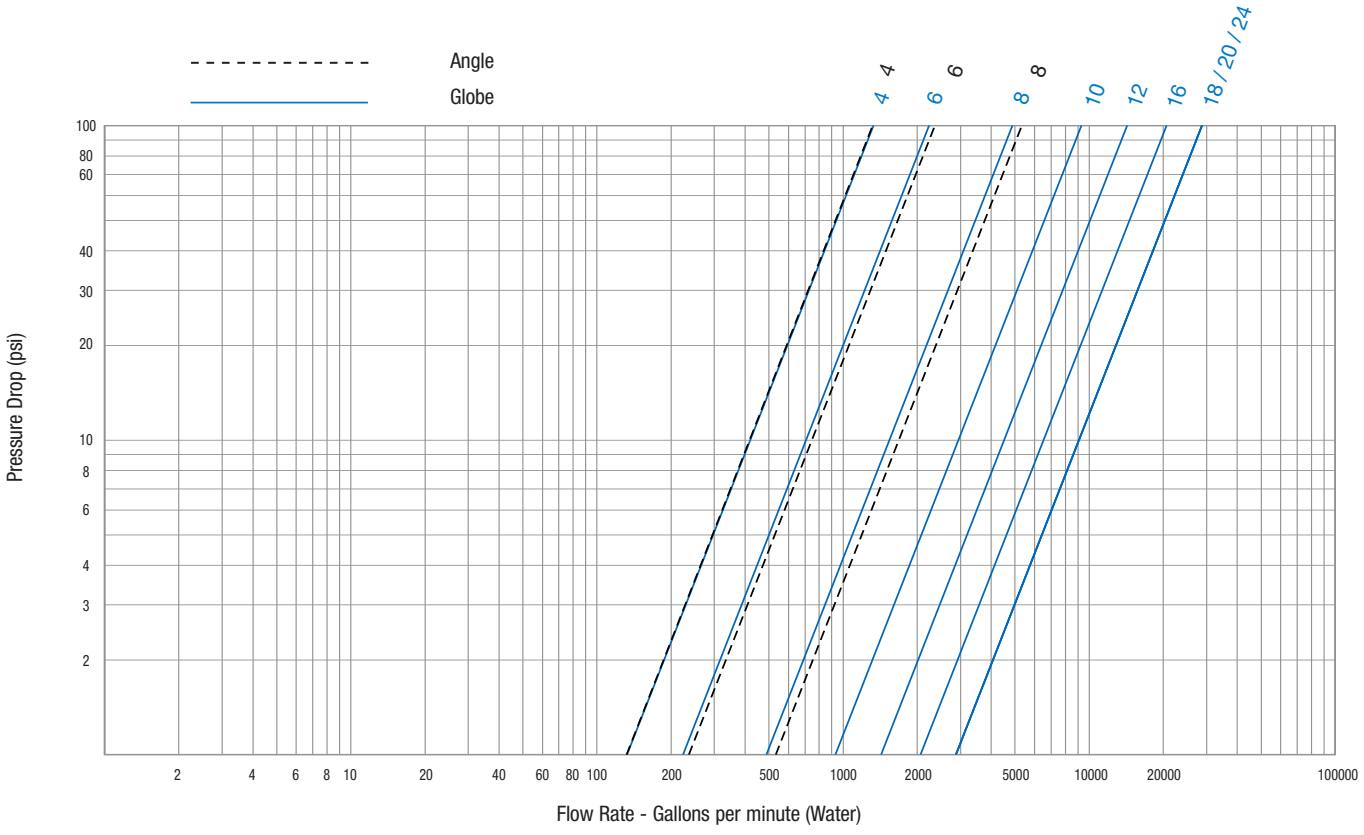
Flow Data

	Valve Size - Inches	4	6	8	10	12	16	18	20	24
Suggested	Maximum Continuous Flow Rate Gpm (Water)	485	800	1850	3100	5000	7000	11100	11100	11100
Suggested	Maximum Intermittent Flow Rate Gpm (Water)	590	1000	2300	4000	6250	8900	14100	14100	14100
Suggested	Minimum Flow Rate Gpm (Water)	15	16	17	25	55	70	400	400	400
Cv	Factor GPM (Globe)	120	224	402	932	1314	2067	2881	2881	2881
Cv	Factor GPM (Angle)	132	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_v Factor of a value is the flow rate in US GPM at 60°F that will cause a 1psi drop in pressure.
- C_v factor can be used in the following equations to determine Flow (Q) and Pressure Drop (ΔP):

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

- The C_v 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

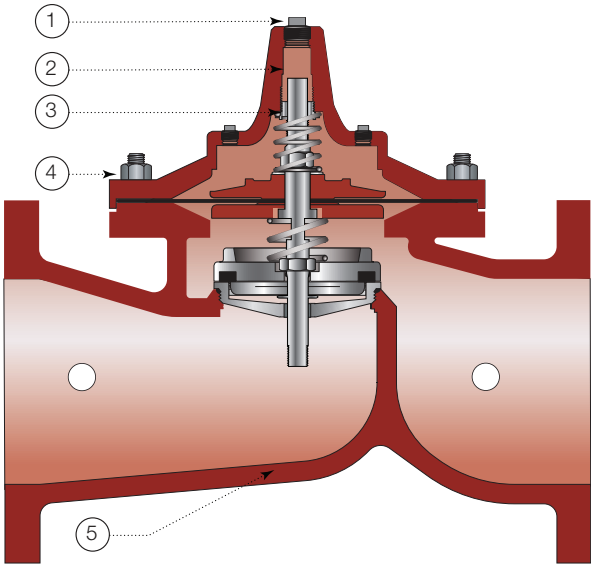
Valve Size (in)	4	6	8	10	12	16	18	20	24
fl.oz.	10	22	70						
U.S. Gal				1 ¼	2 ½	4	9 ½	9 ½	9 ½

Valve Travel

Valve Size (in)	4	6	8	10	12	16	18	20	24
(in)	¾	1	1 ½	2	2 ½	3	4	4	4

Reduced Port Ductile Iron Single Chamber Basic Valve with Mechanical Check Feature

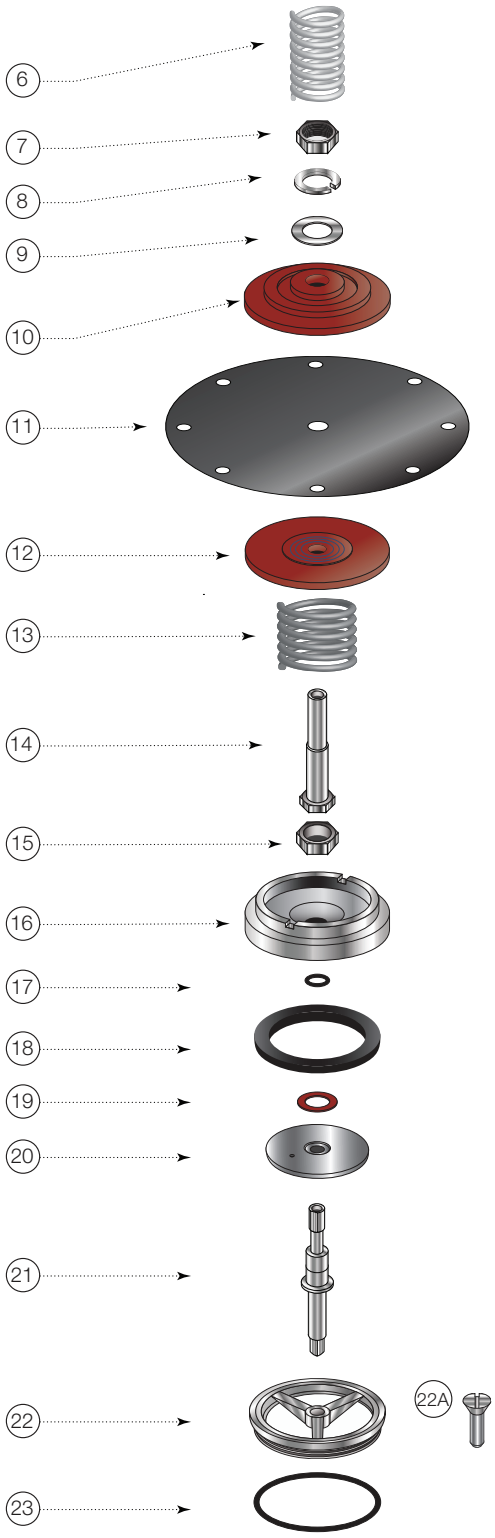
LEAD FREE*



ITEM	DESCRIPTION	MATERIAL
1	Pipe Plug	Lead Free Brass
2	Cover	ASTM A536 65-45-12 Epoxy Coated Ductile Iron
3	Cover Bearing	ASTM A276 304 Stainless Steel
4	Stud with Cover Nut and Washer	ASTM A570 Gr.33 Zinc Plated Steel
5	Body	ASTM A536 65-45-12 Epoxy Coated Ductile Iron
6	Spring	ASTM A313 S30200 Stainless Steel
7	Stem Nut	ASTM A276 304 Stainless Steel
8	Lock Washer	ASTM A276 304 Stainless Steel
9	Stem Washer	ASTM A276 304 Stainless Steel
10	Diaphragm Washer	ASTM A536 65-45-12 Epoxy Coated Ductile Iron
11	Diaphragm*	Buna-N (Nitrile)
12	Lower Diaphragm Washer	ASTM A536 65-45-12 Epoxy Coated Ductile Iron
13	Lower Spring	ASTM A313 302 Stainless Steel
14	Upper Stem	ASTM A276 304 Stainless Steel
15	Stem Nut	ASTM A276 304 Stainless Steel
16	Disc Retainer	ASTM A276 304 Stainless Steel
17	O-Ring*	Buna-N (Nitrile)
18	Seat Disc	Buna-N (Nitrile)
19	Spacer Washer* x5	NY300 Fiber*
20	Disc Guide	ASTM A276 304 Stainless Steel
21	Lower Stem	PH 17-4 Stainless Steel
22	Seat Ring**	ASTM A743 CF8M (316) Stainless Steel
22A	Seat Screw** (10" and Larger)	ASTM A276 304 Stainless Steel
23	Seat Gasket*	Buna-N (Nitrile)

** Contained in Main Valve Repair Kit*

***Note: 8 inch and smaller valves, Seat Ring is threaded*

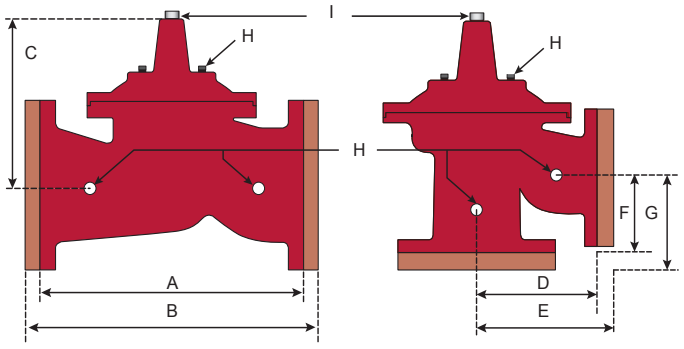


NOTICE

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 Ductile Iron Single 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	Shipping Weights*	
	A		B		C		D		E		F		G		H	I		
in.	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*in.*	*lbs.*	*kgs.*
4	13⅞	352	14½	368	8½	214	6 15/16	176	7¼	184	5½	140	5 13/16	148	½	½	39	18
6	17¾	451	18⅝	473	11½	288	8⅞	225	9⅜	238	6¾	171	7¼	184	¾	¾	89	40
8	21⅜	543	22⅜	568	14½	369	10 11/16	271	11 3/16	284	7¼	184	7¾	197	¾	¾	150	68
10	26	660	27⅜	695	17⅝	448									1	1	283	128
12	30	762	31½	800	20⅝	523									1	1	408	185
16	35	889			25¾	654									1	1¼	626	234
18	48	1219			31	787									1	2	1145	519
20	48	1219			31	787									1	2	1170	531
24	48	1219			31	787									1	2	1265	574

USA: T: (978) 689-6066 • F: (978) 794-1848 • Watts.com
Canada: T: (905) 332-4090 • F: (905) 332-7068 • Watts.ca
Latin America: T: (52) 81-1001-8600 • Watts.com