

M Series Basic Valves

LEAD FREE*

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

This Ames ACV is a full port, single chamber basic valve 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.

Ames ACV Main Valves are Lead Free. The Ames ACV piloting system contains Lead Free* components, ensuring all of our configurations are Lead Free compliant.

Globe Pattern Single Chamber Basic Valve with Mechanical Check Feature (905GD-16)

Angle Pattern Single Chamber Basic Valve with Mechanical Check Feature (905AD-16)



Globe Flanged



Angle Flanged



Globe Grooved End



Angle Grooved End



Globe Threaded



Angle Threaded

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



Operating Pressure

Threaded = 400psi (27.6 bar)

150# Flanged = 250psi (17.2 bar)

300# Flanged = 400psi (27.6 bar)

Grooved End = 400psi (27.6 bar)

*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.

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.

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

Ames Fire & Waterworks product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Ames Fire & Waterworks Technical Service. Ames Fire & Waterworks reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Ames Fire & Waterworks products previously or subsequently sold.



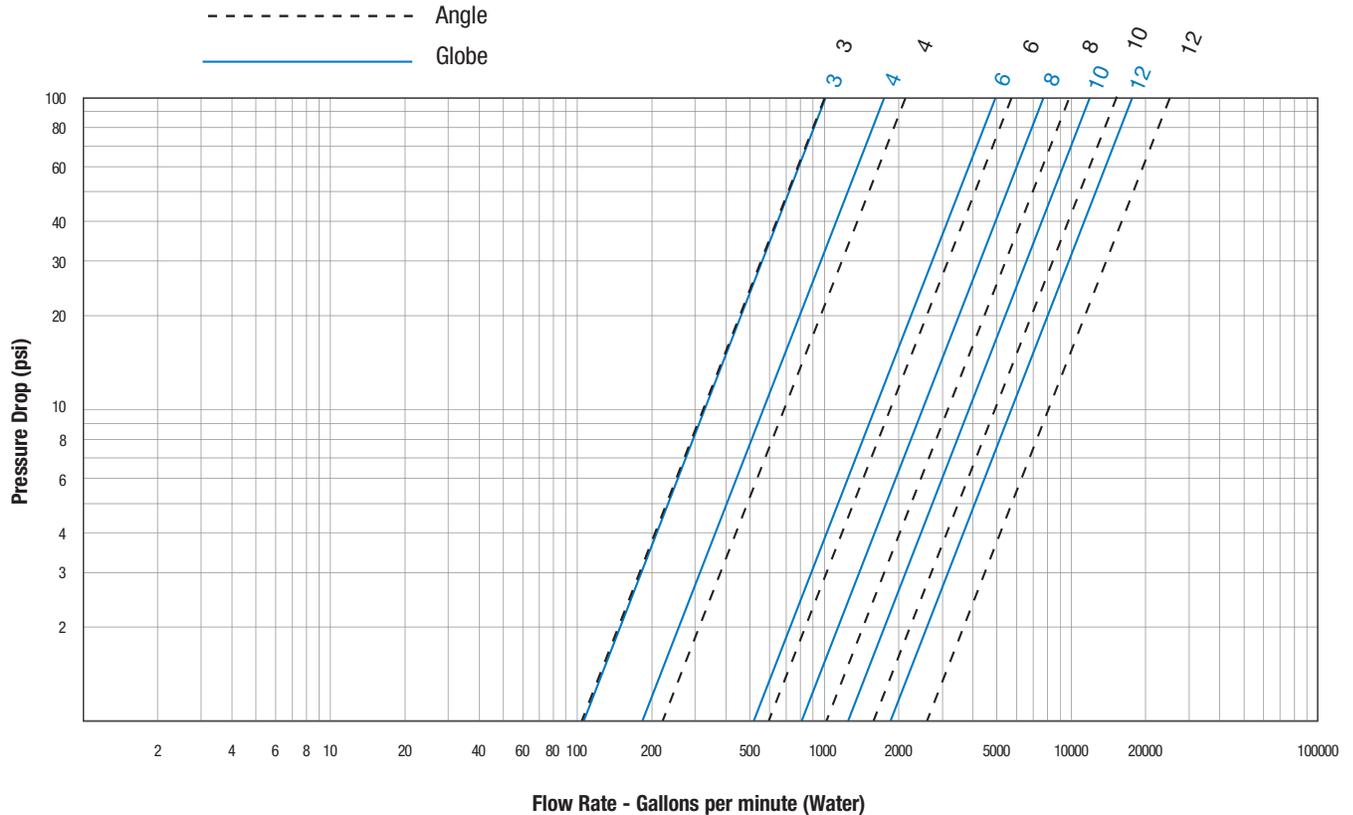
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Flow Data

Valve Size - Inches	3	4	6	8	10	12	
Suggested	Maximum Continuous Flow Rate Gpm (Water)	485	800	1850	3100	5000	7000
	Maximum Intermittent Flow Rate Gpm (Water)	590	1000	2300	4000	6250	8900
C_v	Minimum Flow Rate Gpm (Water)	15	16	17	25	55	70
	CV Factor GPM (Globe)	112	188	387	764	1215	1734
	CV Factor GPM (Angle)	125	207	571	889	1530	1945

- 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 valve 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):

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

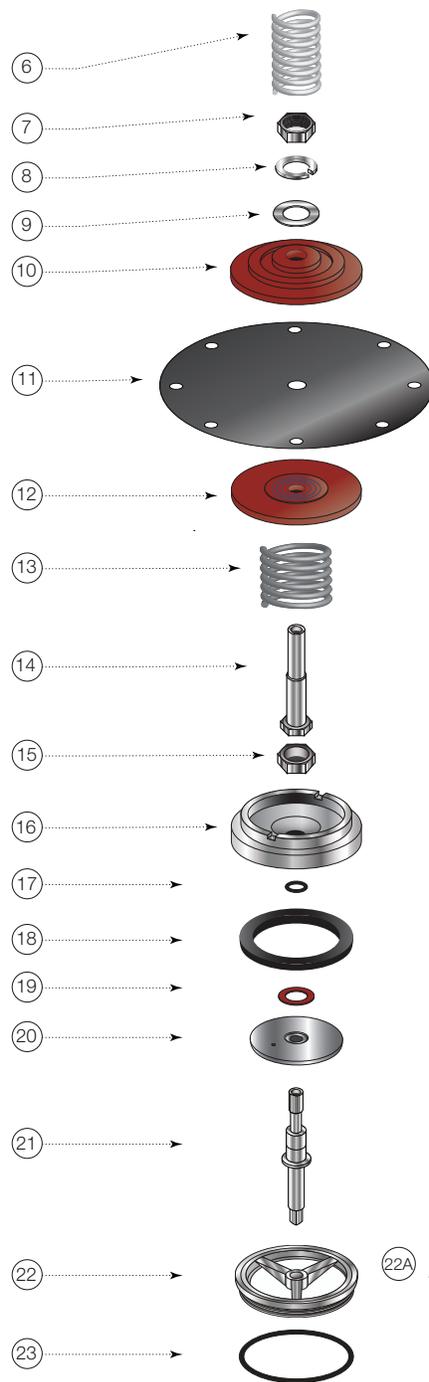
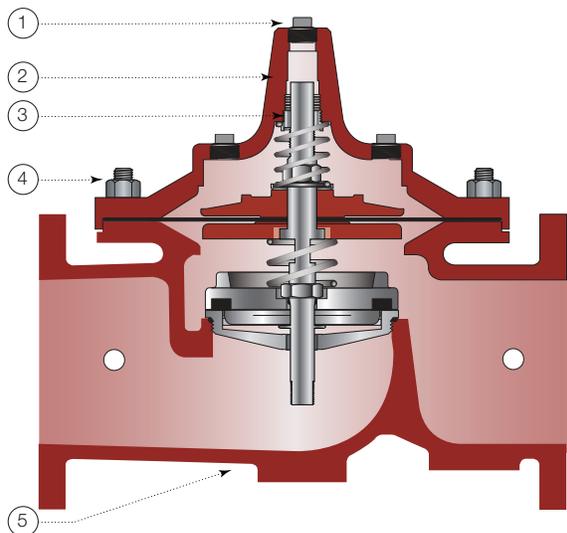
Valve Size (in)	3	4	6	8	10	12
fl.oz.	16	22	70			
U.S. Gal				1¼	2½	4

Valve Travel

Valve Size (in)	3	4	6	8	10	12
Travel (in)	¾	1	1½	2	2½	3

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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** (8" and Larger)	ASTM A276 304 Stainless Steel
23	Seat Gasket*	Buna-N (Nitrile)

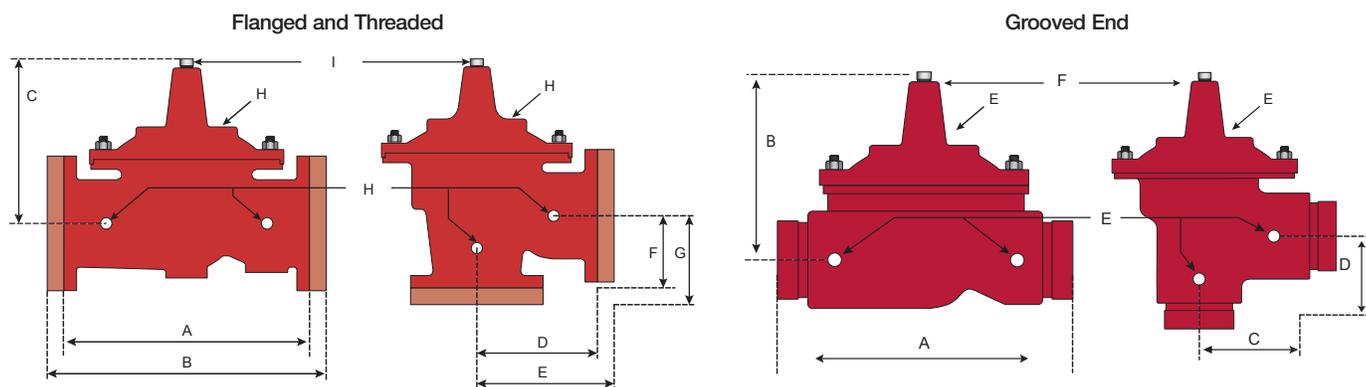
* Contained in Main Valve Repair Kit

**Note: 6 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.

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Flanged and Threaded 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.	mm	in.	mm	in.	mm	in.	in.	lbs.	kgs.	
3	12	305	13¼	337	8¼	210	6	152	6⅜	162	4	102	4⅜	111	½	½	95	43		
4	15	381	15⅝	397	10⅝	270	7½	191	7⅞	200	5	127	7⅞	181	¾	¾	190	86		
6	20	508	21	533	13	330	10	254	10½	267	6	152	8⅞	225	¾	¾	320	145		
8	25⅜	645	26⅜	670	16	406	12¾	324	13¼	337	8	203	11½	292	1	1	650	295		
10	29¾	756	31⅝	791	17⅞	435	14⅞	378	15⅞	395	8⅝	219	15⅝	397	1	1	940	426		
12	34	864	35½	902	20⅞	530	17	432	17¾	451	13¾	349	14½	368	1	1¼	1500	680		

Grooved End Dimensions

Valve Size	Globe Grooved		Cover To Center		Angle Grooved		Angle Grooved		Port Size (npt)		Port Size (npt)		Shipping Weights*	
	A	B	C	D	E	F	lbs.	kgs.						
3	12½	318	8¼	210	6	152	4¼	108	½	½	95	43		
4	15	381	10⅝	270	7½	191	5	127	¾	¾	190	86		
6	20	508	13⅜	340					¾	¾	320	145		
8	25⅝	645	16	406					1	1	650	295		



A WATTS Brand

USA: Backflow T: (978) 689-6066 • F: (978) 794-1848 • AmesFireWater.com
USA: Control Valves T: (713) 943-0688 • F: (713) 944-9445 • AmesFireWater.com
Canada: T: (905) 332-4090 • F: (905) 332-7068 • AmesFireWater.ca
Latin America: T: (52) 81-1001-8600 • AmesFireWater.com