

Ductile Iron Series Basic Valves

LEAD FREE*

600GD-16 / 600AD-16

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

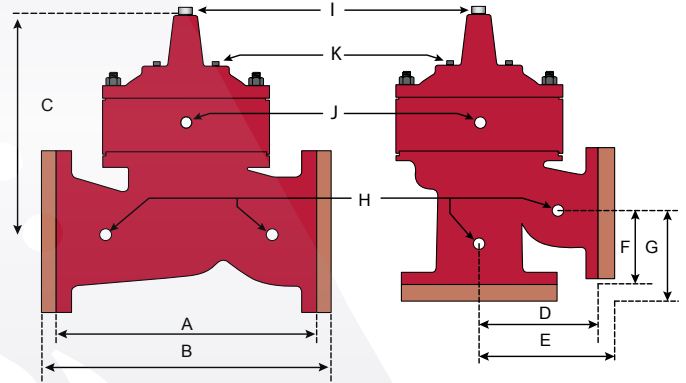
The Ames ACV Models 600GD-16 and 600AD-16 are reduced port, dual chamber basic valves that incorporate a two-piece telescoping disc and diaphragm assembly. This assembly is the only moving part within the valve, allowing it to open or close as commanded by the pilot control system. The lower portion 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.

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.

600GD-16 (Globe)

600AD-16 (Angle)



Model 600GD-16: Globe Pattern Dual Chamber Basic Valve with Mechanical Check Feature

Model 600AD-16: Angle Pattern Dual 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	Port Size NPT	Shipping Weights*	
	in.	A in. mm	B in. mm	C in. mm	D in. mm	E in. mm	F in. mm	G in. mm	H in.	I in.	J in.	lbs.	kgs.						
3	10¼	260	11	279	9¼	230									¾	½	½	31	14
4	13¾	352	14½	368	11¾	302	6½	176	7¼	184	5½	140	5½	148	½	½	½	50	23
6	17¾	451	18¾	473	15¼	387	8¾	225	9¾	238	6¾	171	7¼	184	¾	¾	¾	130	59
8	21¾	543	22¾	568	20¾	511	10½	271	11¾	289	7¼	184	7¾	197	¾	¾	¾	210	95
10	26	660	27¾	695	23¼	598									1	1	1	363	165
12	30	762	31½	800	27	684									1	1	1	528	240
16	35	889			34¼	870									1	1¼	1	826	375
18	48	1219			40	1016									1	2	1	1365	620
20	48	1219			40	1016									1	2	1	1390	630
24	48	1219			40	1016									1	2	1	1485	674

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

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.

*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.

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.



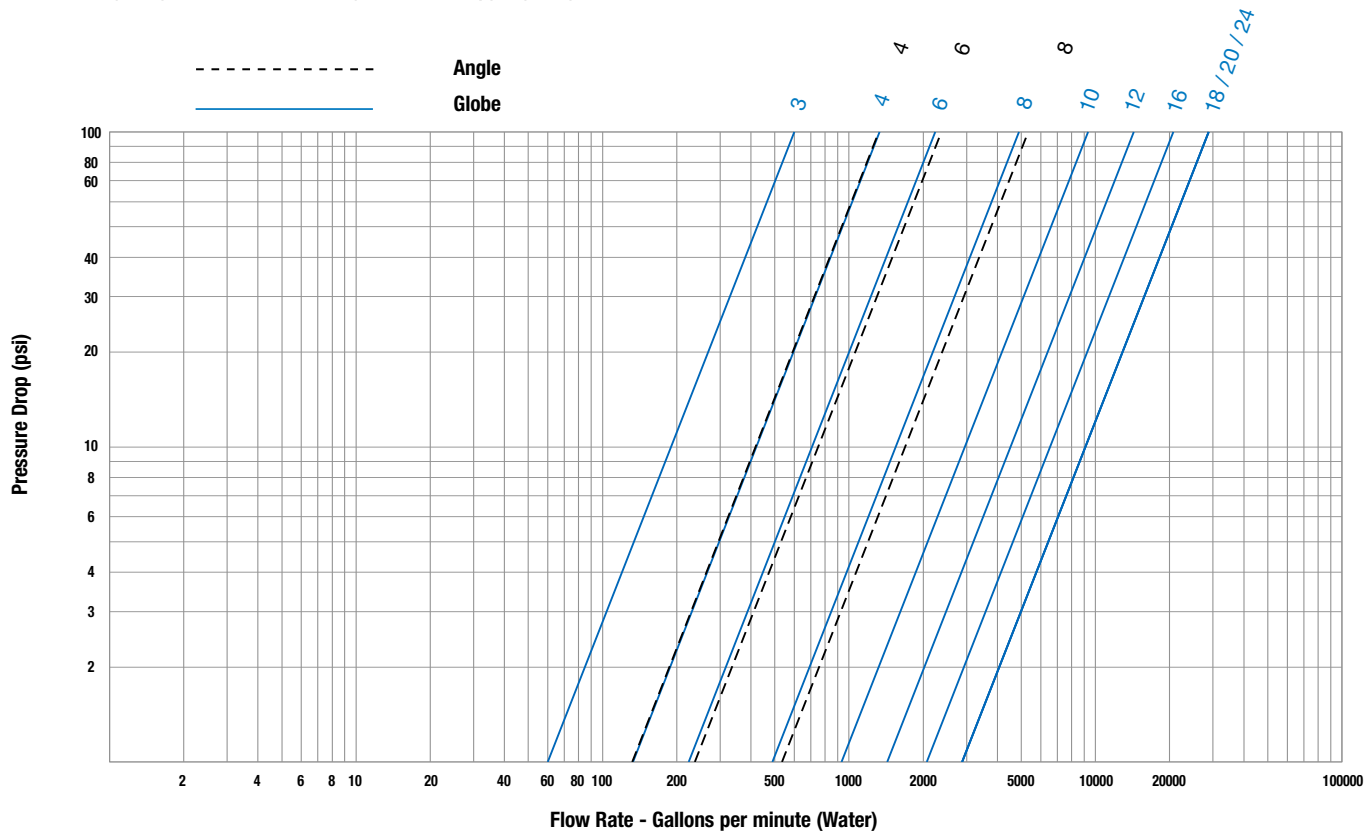
600GD-16 / 600AD-16 — Reduced Port Ductile Iron Dual Chamber Basic Valve with Mechanical Check Feature

Flow Data - ACV 600GD-16 (Globe) / 600AD-16 (Angle)

Valve Size - Inches	3	4	6	8	10	12	16	18	20	24	
Suggested	Maximum Continuous Flow Rate Gpm (Water)	210	485	800	1850	3100	5000	7000	11100	11100	11100
	Maximum Intermittent Flow Rate Gpm (Water)	265	590	1000	2300	4000	6250	8900	14100	14100	14100
C_v	Minimum Flow Rate Gpm (Water)	6	15	16	17	25	55	70	400	400	400
	Factor GPM (Globe)	60	133	224	489	932	1428	2067	2881	2881	2881
	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 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):

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



Valve Cover Chamber Capacity

Valve Size (in)	3	4	6	8	10	12	16	18	20	24
fl.oz.	4	10	22	70						
U.S. Gal					1¼	2½	4	9½	9½	9½

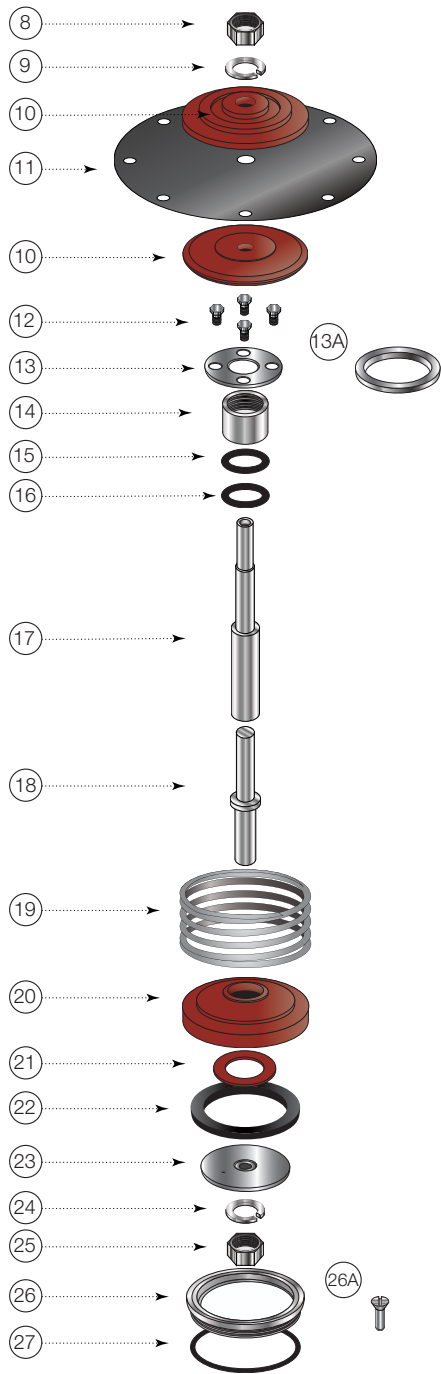
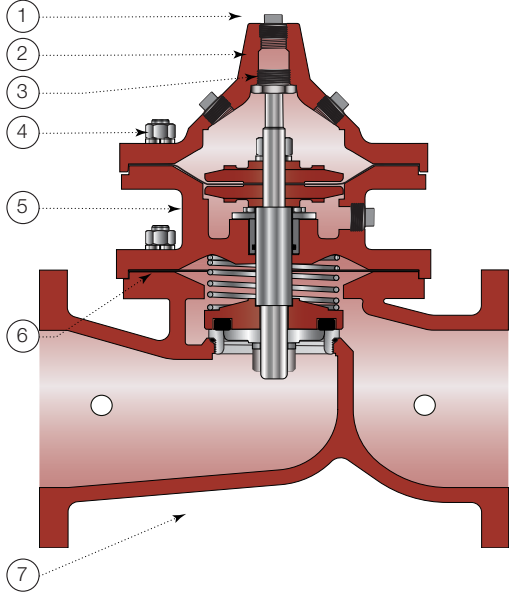
Valve Travel

Valve Size (in)	3	4	6	8	10	12	16	18	20	24
(in)	½	¾	1	1½	2	2½	3	4	4	4

LEAD FREE*

600GD-16

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



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 & Washer	ASTM A570 Gr.33 Zinc Plated Steel
5	Upper Body	ASTM A536 65-45-12 Epoxy Coated Ductile Iron
6	Gasket Seal	Buna-N (Nitrile)
7	Body	ASTM A536 65-45-12 Epoxy Coated Ductile Iron
8	Stem Nut	ASTM A276 304 Stainless Steel
9	Lock Washer	ASTM A276 302 Stainless Steel
10	Diaphragm Washer	ASTM A536 65-45-12 Epoxy Coated Ductile Iron
11	Diaphragm*	Buna-N (Nitrile)
12	Inner Bearing Bolts** (4" and Smaller)	ASTM A276 304 Stainless Steel
13	Inner Bearing Retainer** (4" and Smaller)	ASTM A276 302 Stainless Steel
13A	Bearing Retaining Ring** (6" and Larger)	ASTM A276 302 Stainless Steel
14	Inner Bearing	ASTM A276 304 Stainless Steel
15	O-ring*	Buna-N (Nitrile)
16	O-ring*	Buna-N (Nitrile)
17	Upper Stem	ASTM A276 304 Stainless Steel
18	Lower Stem	ASTM A276 304 Stainless Steel
19	Spring	ASTM A276 302 Stainless Steel
20	Disc Retainer	ASTM A536 65-45-12 Epoxy Coated Ductile Iron
21	Spacer Washer*	NY300 Fiber
22	Disc*	Buna-N (Nitrile)
23	Disc Guide	ASTM A743 CF8M (316) Stainless Steel
24	Lock Washer	ASTM A276 304 Stainless Steel
25	Stem Nut	ASTM A276 304 Stainless Steel
26	Seat Ring***	ASTM A743 CF8M (316) Stainless Steel
26A	Seat Screw*** (10" and Larger)	ASTM A276 304 Stainless Steel
27	Seat Gasket *	Buna-N (Nitrile)

* Contained in Main Valve Repair Kit

**6 inch and larger valves do not require Bearing Bolts

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



A Watts Water Technologies Company

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