

Figures F992-D

Combination Vacuum Breaking and Air Release Valve for Clean Water

Description

GA Industries Figure F992-D Vacuum Breaking and Air Release Valves are typically installed at locations along the pipeline where column separations are predicted to occur. They consist of a Figure F990-D Vacuum Breaking Valve and a Figure 920 Air Release Valve, factory assembled and tested as a unit.

The Figure F990-D's large orifice opens when the system pressure falls approximately 0.25 PSI below atmospheric. It rapidly admits air to limit the negative pressure. The large orifice closes when the pipeline pressure recovers above the opening pressure. Air that was drawn into the pipeline is then slowly released through the Figure 920's small orifice as the system repressurizes, minimizing the consequences of column separation.

Product Features

- Compact and light weight
- Full port orifice for maximum air inflow during negative pressure, small orifice controls air release rate
- Vacuum breaking valve internal and external fusion bond epoxy coated
- Tight sealing and easily replaceable rubber seat
- 2-Part Epoxy coated screened hood to minimize entry of foreign matter

Standard Materials – Figure 990-D

- Body Ductile Iron, ASTM A536 Gr 65-45-12
- Plug & Seat Lead-free Bronze, C87800 or C87600
- Replaceable Seat EPDM Rubber
- Bushing Lead-free Bronze, C95400
- Spring Type 302 Stainless Steel
- External Fasteners Steel, A307, Zinc Plated
- Coating NSF-61 Certified Fusion Bond Epoxy

Standard Materials – Figure 920

- Body Cast Iron, ASTM A126 Class B
- Float Type 316 Stainless Steel
- Internal Linkage Type 316 Stainless Steel
- Replaceable Seat Buna-N
- External Fasteners Steel, A307, Zinc Plated
- Coating Internal and External NSF-61 Certified Epoxy



Approvals & Certifications

- Complies with AWWA Standard C512

Options/Accessories

- Option IV Inlet Isolating Valve AWWA butterfly valve lever operated 3" to 6", worm gear with handwheel 8" and 10" (Not available 2½" and 12")
- Option SE 316 Stainless Steel external fasteners

Ordering Data

- Figure Number (F992-D)
- Size
- Options/Accessories

Non-Shock Working Water Pressure at up to 150F (66C)		
Figure No.	F992-D	F992H-D
Pipeline Connection	ANSI Class 125/150	
Size	2½" to 12"	
Air Inlet	Screened Cowl	
Air Release Orifice	0.188" Diameter	0.125" Diameter
Max Working Pressure	150 PSI	300 PSI
Pressure Rating	300 PSI	
Hydro Test	450 PSI	

Data Sheet F992.01A

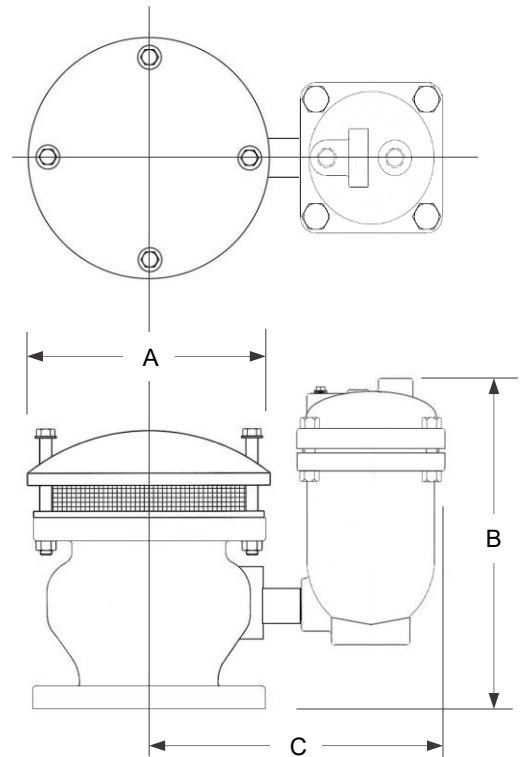
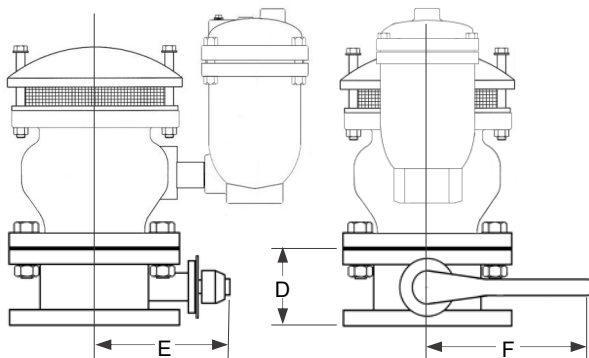
Pressure Inside Valve	Air Inflow Rate ($C_d = 0.7$) Standard Cubic Feet/Min (SCFM)						
	2½"	3"	4"	6"	8"	10"	12"
-1 PSIG	387	721	1280	2880	5130	8010	11600
-2 PSIG	548	1020	1810	4080	7250	11300	16400
-3 PSIG	672	1250	2220	5000	8880	13900	20000
-4 PSIG	774	1440	2560	5770	10300	16000	23100
-5 PSIG	865	1610	2870	6430	11500	17900	25900

Value is rate at which air is drawn into the valve at negative pipeline/system pressure shown. Multiply SCFM air inflow rate x 7.48 to convert to equivalent pipeline/system liquid draining rate in USGPM.

Pressure Inside Valve	Air Venting Rate, Standard Cubic Feet/Min (SCFM)		
	Figure 992-D	Figure 992H-D	Figure 992H-U
10 PSI	8.7	3.9	3.9
15 PSI	10.6	4.7	4.7
25 PSI	14.1	6.3	6.3
50 PSI	23.1	10.3	10.3
75 PSI	32.0	14.2	14.2
100 PSI	40.9	18.2	18.2
150 PSI	58.7	26.1	26.1
200 PSI		34.0	34.0
300 PSI			49.8

Value is rate at which air is released through small orifice at pressure indicated as system re-pressurizes.

OPTIONAL INLET ISOLATING AWWA BUTTERFLY VALVE



Installation Dimensions

SIZE	2½"	3"	4"	6"	8"	10"	12"
A	8	8	10	12	14"	18	20
B	14¾	15	15¾	17	18½	22¼	22
C	13	13	14	16	18	20	22
D	NA	5	5	5	6	8	8
E	NA	8	8½	10			
F	NA	10¼	10¼	17¾			
WEIGHT	62	68	86	115	175	245	380
Add for Inlet Isolating BFV	NA	33	53	66	132.	190	NA

NA = Inlet butterfly valve not available in 2½" or 12" Butterfly valve is lever operated 3" to 6", worm gear with handwheel in 8" and 10"
Dimensions in inches, weight in pounds and are approximate. Request certified drawings if critical.