

Figures 931-D

Slow Closing Air & Vacuum Valve

Description

GA Industries Figure 931-D consists of a Figure 930 Air & Vacuum Valve and a Figure F284-D Surge Check valve factory assembled and tested as a unit. This valve system vents air during filling and admits air during draining. Plus, the surge check's "slow closing" adjustable regulated exhaust feature minimizes surges, shock and valve damage caused by sudden air valve closure due to excessive air discharge rate or column separation/rejoining. .

Figures 931-D is standard with NPT outlet. The Figure 931-DC is standard with an outlet cowl while the Figure 931-DJ has a Class 125 flanged outlet.

Product Features

- Compact and light weight
- Full port orifice for maximum air outflow and inflow
- Air valve utilizes "kinetic" operating principle, designed not to blow shut
- Rugged iron body and cover
- Corrosion resistant Type 316 stainless steel float
- Tight sealing and easily replaceable rubber seat

Standard Materials – Air & Vacuum Valve

- Body & Cover Cast Iron, ASTM A126 Class B
- Float Stainless Steel, Type 316
- Replaceable Seat Buna-N
- External Fasteners Steel, A307, Zinc Plated

Standard Materials – Surge Check Valve

- Body Ductile Iron, ASTM A536 Gr 65-45-12
- Disc & Seat Lead Free Bronze

Coating

- Standard: Uncoated internal, external enamel primer, 2 mil DFT
- Optional See Option P2

Non-Shock Working Water Pressure at up to 150F (66C)			
Figure No.	931-DT	931-DC	931-DJ
Inlet Connection	ANSI Class 125		
Inlet Size Range	3" & 4"	6" to 12"	
Outlet	NPT	Cowl	CL125 Flange
Outlet Size	Same as Inlet		
Working Pressure	10-200 PSI		
Pressure Rating	200 PSI		
Hydro Test	300 PSI		

Data Sheet 931.01F



Approvals & Certifications

- Complies with AWWA Standard C512

Options/Accessories

- Option IV Inlet Isolating Valve – lever (3" to 6") or worm gear operated (8" to 10")
- Option OC Class 125 flanged AWWA butterfly valve
- Option P2 Outlet Cowl (standard 6" and larger)
- Option P2 316 Stainless Steel external fasteners and internal/external Carboline 891 NSF-61 certified 2-part epoxy, 6 mil DFT
- Option TD Double-acting Throttle Device factory installed in valve outlet (3" to 6" size)

Ordering Data

- Figure Number (Figure 931-DT, 931-DC, 931-DJ)
- Size
- Options/Accessories

Figures 931-DT, 931-DC, 931-DJ Slow Closing Air & Vacuum Valve

Data Sheet 931.01F

Pressure at Valve Inlet	Air Outflow Rate ($C_d = 0.7$) Standard Cubic Feet/Min (SCFM)					
	3"	4"	6"	8"	10"	12"
1 PSI	707	1260	2830	5030	7850	11300
2 PSI	1000	1780	4000	7110	11100	16000
3 PSI	1220	2180	4900	8710	13600	19600
4 PSI	1410	2510	5660	10100	15700	22600
5 PSI	1580	2810	6320	11200	17600	25300
7 PSI	1870	3320	7480	13300	20800	29900
10 PSI	2240	3970	8940	15900	24800	35800
15 PSI	2740	4870	11000	19500	30400	43800

Value is rate at which air is vented from pipeline/system during filling at valve inlet pressures shown. Inlet pressure during filling should not exceed 5 PSI. Multiply SCFM air venting rate x 7.48 to convert to equivalent pipeline/system liquid filling rate in USGPM.

Pressure at Valve Inlet	Air Inflow Rate ($C_d = 0.7$) Standard Cubic Feet/Min (SCFM)					
	3"	4"	6"	8"	10"	12"
-1 PSIG	721	1280	2880	5130	8010	11600
-2 PSIG	1020	1810	4080	7250	11300	16400
-3 PSIG	1250	2220	5000	8880	13900	20000
-4 PSIG	1440	2560	5770	10300	16000	23100
-5 PSIG	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.

Installation Dimensions

SIZE	A	B Square	C Diameter	D	E	F	G	H	J	Weight	
										Valve	Add for BFV*
3"	16 $\frac{5}{8}$	6 $\frac{5}{8}$			5	10 $\frac{1}{4}$	8			85	33
4"	20	8 $\frac{1}{4}$			5	10 $\frac{1}{4}$	8 $\frac{1}{2}$			145	53
6"	30 $\frac{1}{2}$		15 $\frac{1}{4}$	27 $\frac{1}{2}$	6	17 $\frac{3}{4}$	10			255	66
8"	37 $\frac{3}{4}$		19	33 $\frac{3}{4}$	8			8 $\frac{3}{4}$	12	465	132
10"	47 $\frac{1}{4}$		23 $\frac{1}{2}$	41 $\frac{1}{4}$	8			8 $\frac{3}{4}$	12	680	190
12"	51 $\frac{3}{4}$		27 $\frac{1}{2}$	45 $\frac{3}{4}$	8			NA	NA	930	NA

- Dimensions in inches, weight in pounds. All dimensions and weights are approximate. If critical request certified drawings
- Weights shown are Class 125
- Optional inlet isolating valve is lever-operated butterfly 3" to 6", worm gear 8" and 10". Inlet isolating BFV not available on 12" Class 125 flanged inlet.

