# Figures 931-D

# Slow Closing Air & Vacuum Valve



Data Sheet 931.01G



## 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: Internal and External NSF-61 Certified

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Non-Shock Working Water Pressure at up to 150F (66C)								
Figure No.	gure No. 931-DT 931-DC 931-D							
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							

#### **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")
	Class 125 flanged AWWA butterfly valve
<ul> <li>Option OC</li> </ul>	Outlet Cowl (standard 6" and larger)
<ul> <li>Option SE</li> </ul>	316 Stainless Steel external fasteners
<ul> <li>Option TD</li> </ul>	Double-acting Throttle Device factory
	installed in valve outlet (3" and 4" size)
Option US	American Iron and Steel (AIS) Compliant
	Compliant

## **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

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Pressure at Valve	Air Outflow Rate (C <sub>d</sub> = 0.7) Standard Cubic Feet/Min (SCFM)							
Inlet	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	5660 10100		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	Air Inflow Rate (C <sub>d</sub> = 0.7) Standard Cubic Feet/Min (SCFM)							
Inlet	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		

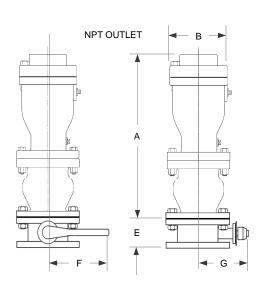
Value is rate at which air is drawn into the valve at negative pipeline/system pressure shown. Multiply SCFM air inflow rate x 7.48 to convert to equivalent pipeline/system liquid draining rate in USGPM.

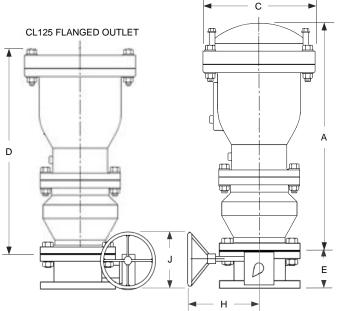
#### **Installation Dimensions**

SIZE A	В	С	D	ш	F	G	н	J	Weight		
	A	Square	Diameter	ם			G	, i	, ,	Valve	Add for BFV*
3"	16%	6⁵⁄8			5	10¼	8			85	33
4"	20	81⁄4			5	10¼	8½			145	53
6"	30½		15¼	27½	6	17¾	10			255	66
8"	37¾		19	33¾	8			81/8	12	465	132
10"	47¼		23½	411/4	8			81/8	12	680	190
12"	51¾		27½	45¾	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.





**OUTLET COWL**