Figures 931-T
½” to 3” Slow Closing
Air & Vacuum Valve for Water

Data Sheet 931.02B

Description

GA Industries Figure 931-T consists of a Figure 930-T Air & Vacuum Valve and a Figure 284-T Surge Check, factory assembled and tested as a unit. This valve system vents air during filling and admits air during draining. The surge check’s regulated exhaust feature minimizes surges and protects the air valve from damage by controlling the rate at which air is vented.

GA Industries Figure 931-T Slow Closing Air & Vacuum Valves are typically installed between the discharge of a vertical turbine pump and the check valve. The valve purges the air ahead of the rising water in the column at pump start up. Should the water rise too fast the surge check will close to slow the rate at which air is discharged to minimize shock, surge and potential air valve damage. The valve opens to freely admit air allowing the water to fall back when the pump shuts down.

Figure 931-T has NPT and outlet. An optional flanged inlet is available on 2” and 3” size valves.

Product Features

- Full port large orifice for maximum air outflow and inflow
- Air vacuum valve utilizes “kinetic” operating principle, designed not to blow shut
- Surge check reduces air venting rate to minimize surge and protect air valve
- Rugged iron body air valve, bronze surge check
- Corrosion resistant Type 316 stainless steel float
- Tight sealing and easily replaceable rubber seat

Air Valve Standard Materials

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

Surge Check Standard Materials

- Body — Bronze
- Trim — Bronze

Air Valve Coating

- Standard: — Internal and external NSF-61 certified 2-part epoxy

Options/Accessories

- Option IV — Inlet Isolating Valve – Lead-free bronze lever operated ball valve (NPT inlet valves only)
- Option SE — 316 Stainless Steel external fasteners
- Option US — American Iron and Steel (AIS) Compliant

Approvals & Certifications

- Complies with AWWA Standard C512

Non-Shock Working Water Pressure at up to 150F (66C)			
Figure No.	**931-T**	**931-DT**	**931-UT**
Inlet Connection	NPT	CL 125	CL 250
Inlet Size Range*	½” to 3”	2” and 3”	
Outlet	NPT		
Outlet Size	Same as Inlet		
Working Pressure	10 - 250 PSI	10 - 200 PSI	10 - 250 PSI
Pressure Rating	200 PSI		
Hydro Test	375 PSI		

½” and ¾” are 1” supplied with reducing bushings

Ordering Data

- Figure Number (931-T, 931-DT, 931-UT)
- Size
- Options/Accessories

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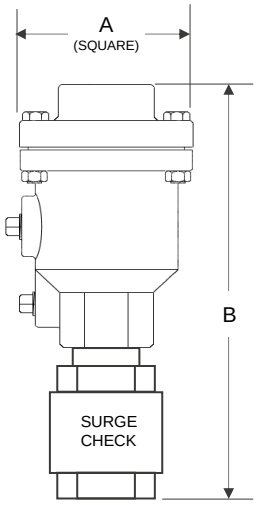
Pressure at Valve Inlet	Air Outflow Rate, Standard Cubic Feet/Min (SCFM)				
	½”	¾”	1”	2”	3”
1 PSI	19.6	44.2	78.5	314	707
2 PSI	27.8	62.5	111	444	1000
3 PSI	34.0	76.5	136	544	1220
4 PSI	39.3	88.4	157	628	1410
5 PSI	43.9	98.8	176	703	1580
7 PSI	52.0	117	208	831	1870
10 PSI	62.1	140	248	994	2240
15 PSI	75.2	169	304	1217	2740

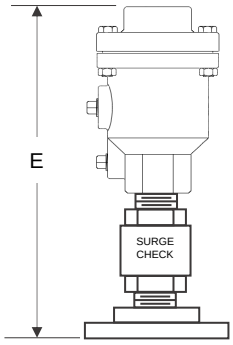
Value is rate at which air is vented from the pipeline/system during filling at valve inlet pressures shown. Inlet pressure during filling should not exceed 5 PSI. Multiply SCFM air venting rate x 7.48 to convert to equivalent pipeline/system liquid filling rate in USGPM.

Pressure at Valve Inlet	Air Inflow Rate, Standard Cubic Feet/Min (SCFM)				
	½”	¾”	1”	2”	3”
-1 PSIG	20.0	45.2	80	320	721
-2 PSIG	28.3	63.9	113	453	1020
-3 PSIG	34.7	78.3	138	555	1250
-4 PSIG	40.1	90.4	160	641	1440
-5 PSIG	44.9	101	179	716	1610

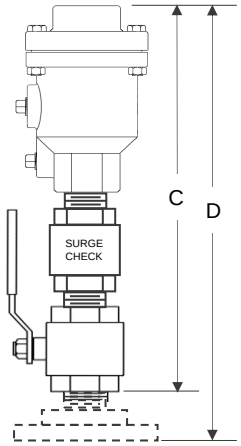
Value is rate at which air is drawn into the valve at negative pipeline/system pressure shown. Multiply SCFM air inflow rate x 7.48 to convert to equivalent pipeline/system liquid draining rate in USGPM.



OPTIONAL FLANGED INLET



OPTIONAL INLET BALL VALVE



Installation Dimensions

SIZE	½”, ¾”, 1”	2”	3”
A	3⅛	5⅜	6⅝
B	11	15	18
C	15	20	27
D	N/A	22	30
E	13	18	22
Valve Weight (NPT)	13	28	55
Add weight for Inlet Isolating Ball Valve	2	8	20
Add weight for Class 125 Flanged Inlet	N/A	4	8
Add weight for Class 250 Flanged Inlet	N/A	7	13

Dimensions in inches and weight in pounds and are approximate. If critical request certified drawings

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