



K-022



Air & Vacuum Valve for High Pressure Wastewater Systems

Description

The K-022 Air & Vacuum Valve discharges air during the filling or charging of the system, and admits air to the system during system drainage.

The valve is specially designed to operate with liquids carrying solid particles.

The valve's unique design guarantees complete separation of the liquid from the sealing mechanism and provides optimum work conditions.

Operation

The K-022 air & vacuum air valve discharges air at high flow rates during the filling of the system and admits air into the system at high flow rates during its drainage.

High velocity air cannot blow the float shut. Water entry to the lower portion of the valve will cause the sealing of the valve.

At any time during system operation, should internal pressure of the system fall below atmospheric pressure, air will re-enter the system.

The smooth release of air prevents pressure surges and other destructive phenomena.

Admitting air in response to negative pressure protects the system from destructive vacuum conditions and prevents damage caused by water column separation. Air re-entry is essential to efficiently drain the system.

Without air valves pockets of accumulated air may cause the following destructive phenomena:

- Obstruction to effective flow and hydraulic conductivity of the system along with a throttling effect similar to a partially closed valve. In extreme cases this will cause complete flow stoppage.
- Accelerate cavitation damages.
- High-pressure surges.
- Accelerate corrosion.
- Danger of a high-energy burst of compressed air.

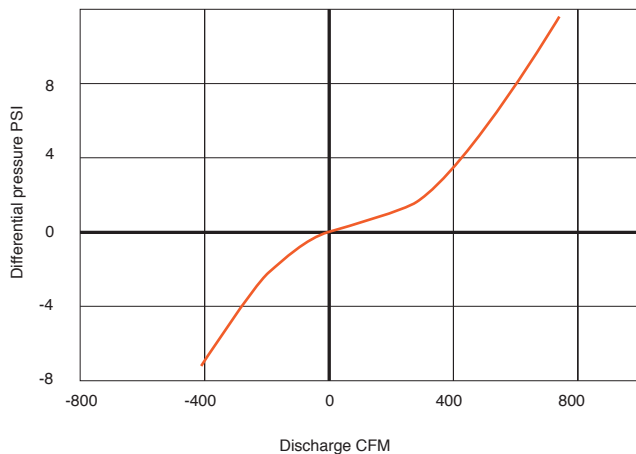
Main Features

- Working pressure range: 3- 360 psi. Testing Pressure : 580 psi.
- Working Temperature: 140^o f
- Maximum working temperature for short time period: 194^o f.
- The valve's unique design prevents any contact between liquids and the sealing mechanism by creating an air gap at the top of the valve. This air gap is guaranteed even under extreme conditions. Those features are achieved by:
 - The conical body shape designed to maintain the maximum distance between the liquid and the sealing mechanism; so as to obtain minimum body length.
 - The valve design and float mechanism are less sensitive to pressure differentials than a direct float seal. It has a comparably large orifice for a wide pressure range (up to 360 psi).
 - Funnel-shaped lower body is designed to ensure that residue solid matter will sink to the system and be carried away and will not remain in the valve.
 - Flushing is possible while the valve is under pressure, by opening the ball valve in the valve's lower part.
 - Body made of Stainless Steel or fabricated Steel DIN ST.37.

Valve Selection

- These valves are manufactures with flanged ends to meet ASA 150 standard or any requested standard.
- These valves are available with body of stainless steel or steel DIN ST.37 FBE coated.

AIR & VACUUM FLOWRATE



DIMENSIONS AND WEIGHT

Nominal Size	Dimension				Weight Lbs.	Orifice Area Sq.in
	A	B	internal C	external		
3"	18.3	28.7	2.5	2.9	92.6	2.89
4"	18.3	28.7	2.5	2.9	96.6	2.89

PARTS LIST AND SPECIFICATION

No.	Part	Material
1.	Plug	Stainless Steel SAE 316/Brass ASTM B-124
2.	Cover	Stainless Steel SAE 316/ Ductile Iron ASTM A-536-60-40-18
3.	Nozzle Seat	Stainless Steel SAE 316
4.	Nozzle Seal	EPDM
5.	O-Ring	BUNA-N
6.	Bolt & Nut	Stainless Steel SAE 316
7.	Float	Stainless Steel SAE 316
8.	Upper Body	Stainless Steel SAE 316/ Ductile Iron ASTM A-536-60-40-18
9.	O-Ring	BUNA-N
10.	Washer	Stainless Steel SAE 316
11.	Bolt & Nut	Stainless Steel SAE 316
12.	Float Assembly	Polycarbonate / Stainless Steel SAE 316
13.	Body	Stainless Steel SAE 316/Steel DIN St.37
14.	Ball Valve	Stainless Steel SAE 316

