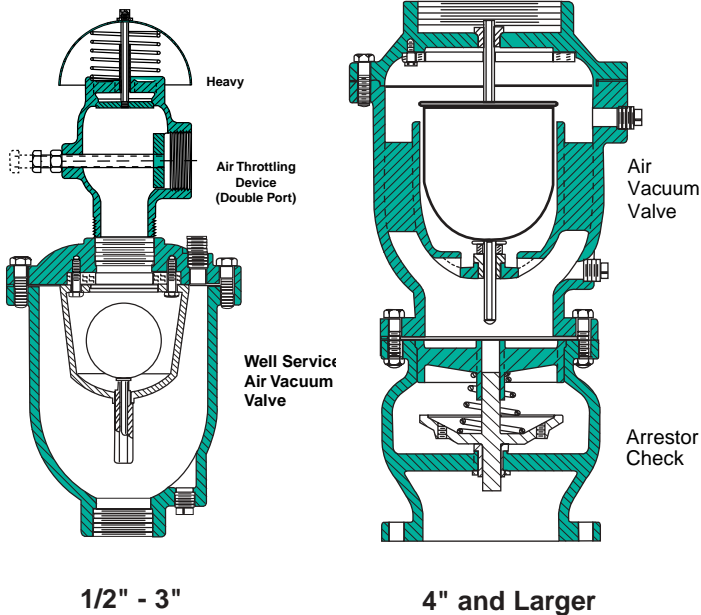




AIR AND VACUUM VALVES FOR (WELL SERVICE) PUMP



- **Stainless Steel Trim (Standard)**
- **Stainless Steel Floats Guaranteed**
- **Air Throttling Device (Double Port)**
- **Arrestor Check Device (Anti-Shock)**
- **100% Vacuum Protection - No Restrictions**
- **Engineered For Drip Tight Seal At Low Pressures**

Series 37 Well Service Air Valves regulates air discharge from the pump column to prevent shock and air entering the system with each start. Conversely with each pump stop, full flow unrestricted air, is allowed back into the column not only preventing vacuum forming which can damage pump steels but also to prevent the pump restarting against a full head in the column because vacuum will prevent the pump column to drain under this condition severe damage to the pump, controls and piping can occur.

All the preceding is accomplished by means of a unique air throttling device (double port) and an arrestor check with built in anti-shock feature.

Well service air vacuum valves, once closed and pressured do not open to release under pressure. unless they are combined with series 34 Air Release Valves page 2.

Installation

The Series 37 Well Service Valve is typically installed between the pump discharge and check valve. Mount the unit in the vertical position on top of the pipeline with an isolation valve installed below the valve in the event servicing is required. Provide adequate air venting inside the pump station and from air valve vaults on pipelines.

General Specifications

Sizes

1/2", 1", 2", 3" Threaded Inlet
with double port throttling device
4" through 16"
125 lb. flanged ANSI
250 lb. flanged ANSI
with arrestor check

Pressure Ratings

150 psi
300 psi
specify when operating pressure
below 25 PSI

Temperature Range

Water to 180°F

Materials

Body and Cover:
Cast Iron ASTM
A 126, Class B

Float:
Stainless Steel

Air Valve Internal Parts:
Stainless Steel

Arrestor Check
Stainless/Bronze

Seal
Buna-N® Rubber

Purchase Specification

The Well service air valves shall automatically exhaust large quantities of air in the pump column during pump start-up and allow air to re-enter the column during pump shut-down. The air valve shall be designed for installation between outlet of vertical turbine pumps and the inlet of the pump check valve.

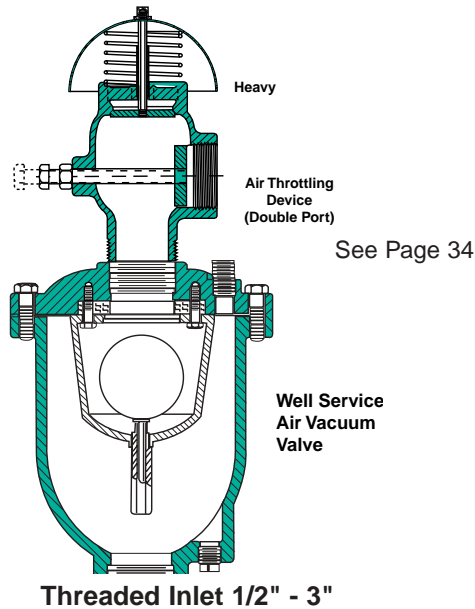
The inlet and outlet area of the air valve shall be equivalent to the valve pipe size same cross-section area. The valve shall have NPT Threaded or ANSI Flanged inlet and outlet. The float shall be guided by a hexagonal stainless steel guide shaft and seal drip-tight against a synthetic rubber seal. 4" and larger valves float shall be double guided and a protective steel discharge hood provided.

The float shall be of all stainless steel construction and capable of withstanding maximum system surge pressure without failure. The body and cover shall be concentrically located and of cast iron and the valve internal parts shall be of stainless steel with Buna-N® rubber seat.

1/2", 1", 2" and 3" Well Service Air Valves to be supplied with a double ported throttling device to regulate the discharge of air from the pump column to prevent shock to the pump with each start. 4" and larger well service valves to be supplied with an arrestor check to prevent shock to the pump with each pump start. All Well Service Air Valves shall allow full unrestricted air flow into the pump column, to prevent any vacuum forming, with each pump stop

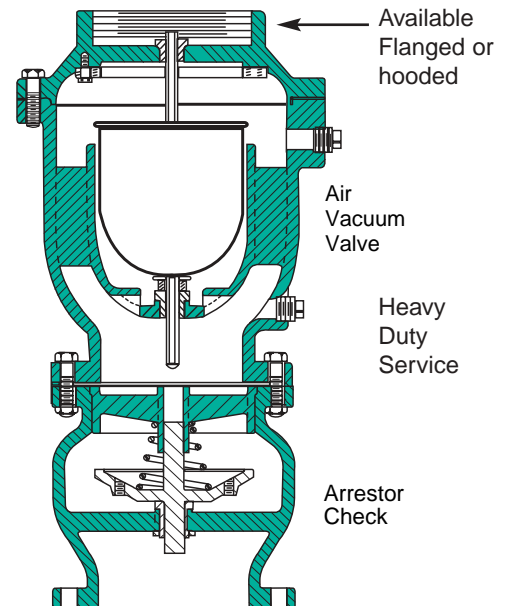
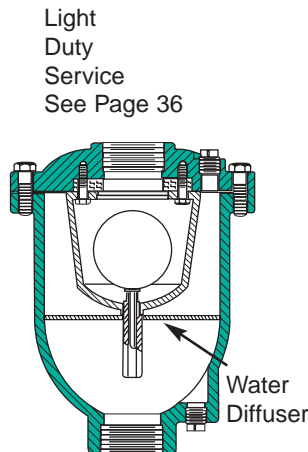


VERTICAL TURBINE STATIONS AND PIPELINE SERVICE



Series 37 Well Service Valves (Heavy Duty) are supplied with air throttling devices. These devices permit regulating the volume of air discharge from the vertical pump column thereby to cushion the shock from the rising water column, as it impacts against a closed pump, discharge check valve or control valve. By utilizing this type air valve damage to the vertical turbine pump. Piping and controls will be prevented. Field adjustment of this air throttling device is quite simple and requires no special tools.

Note: Light duty well service valves are supplied without air throttle device. Instead it is fitted with a water diffuser that function like a water faucet bubbler to break down a solid column of water into small streams thereby allowing the water to raise the air valve float slowly into the closed position. Recommended where operating pump pressure are below 40 PSI and GPM velocities less than 5' per/sec



Flanged Inlet 3" and Larger

Flanged Series 37 Well & Pipeline service air valves. Arrestor Check Valves function to shut the full flow of water, from a well pump or pipeline high point (For a fraction of a second) from entering the upper chamber of the air valve. The Arrestor Check then opens instantly, water enters the air valve, all air is exhausted and the air valve shuts. This Arrestor Check action allows for a slow non shock air valve shut-off. To prevent pump or pipeline damage the shut-off/open action of the arrestor check occurs practically instantaneously. It is self regulating and requires no adjustment in the field. Arrestor Check air valves are recommended at high points where velocities generated will exceed 10' / sec.

Model No.	Inlet Size	Outlet Size	Max. Pressure	Height	Width	Wt. Lbs	Little or no Head Pump Capacity GPM
370-WS	1/2" NPT	1/2" NPT	300 PSI	7"	6 1/2"	15	0 to 200
371-WS	1" NPT	1" NPT	300 PSI	9 1/2"	7"	24	200 to 500
372-WS	2" NPT	2" NPT	300 PSI	12"	9 1/2"	50	500 to 1200
373-WS	3" NPT	3" NPT	300 PSI	12"	9 1/2"	55	1200 to 2000
374-AC	4" NPT	4" NPT	300 PSI	24 1/2"	12"	158	2000 to 5000
376-AC	6" NPT	6" NPT	300 PSI	30"	14"	246	5000 to 8000

Select proper size Series 37 valve for vertical turbine pump applications.

1. Determine pump flow capacity (in GPM) at little or no head condition.
2. Read corresponding valve size from above chart. If flow capacity is near maximum of range, select next larger size as recommended.

Flanged outlet available is extra cost option. Consult factory for larger sizes

Note: It is sound engineering practice that valve outlets of airvalves inside the pump station be piped to a drain to eliminate high pitched noise of air exhausting.