34 Series
AIR RELEASE VALVE

ENGINEERING DATA SHEET



- Ductile Iron Body & Cover
- Stainless Steel Trim and Float
- Serviceable without removal from pipeline
- Pressure Rating 400psi
- Drip tight seal at low pressures

The 34 Series Air Valve is designed to automatically vent entrained air that accumulates at high points in pipelines or pump casings. During system operation, the valve continuously releases small volumes of air, preventing the formation of large air pockets.

In pipelines without air valves, air can accumulate unnoticed, gradually reducing flow capacity and increasing power consumption. These effects may not be apparent initially but can eventually result in severe flow restriction or complete blockage due to air binding.

Excessive air accumulation can also lead to unexplained pipeline ruptures. Such failures are often attributed to ground settlement or defective pipe; however, large air pockets significantly amplify normal pressure surges that occur during system start-up and shutdown, increasing the likelihood of rupture.

Installation

Install the valve vertically at the highest point of the pipeline or pump casing with an isolation valve beneath each unit to allow for servicing. A vault with adequate ventilation, freeze protection, and drainage is recommended. During valve closure, some fluid discharge may occur, so vent lines should be routed to an open drain area.

Installation of 34 Series air valves within sprinkler systems shall comply with the applicable requirements of NFPA 13, NFPA 13D, or NFPA 13R.

Operation

The 34 Series Air Valve is fully automatic and designed to continuously remove air from high points in a pressurized piping system. The valve is a normally open valve that will intermittently vent air through the discharge orifice.

During normal operation, accumulated air displaces liquid inside the valve body, lowering the water level relative to the float. As the water level drops, the float loses buoyancy and descends, opening the discharge orifice and releasing air to the atmosphere. Once the air is expelled, liquid refills the valve, the float regains buoyancy, and the orifice closes. This cycle repeats automatically as air enters the valve, preventing the formation of damaging air pockets and maintaining optimal system performance.

Purchase Specifications

The 34 Series Air Valve shall be float-operated and capable of automatically releasing accumulated air from a fluid system while the system is pressurized and operating.

An adjustable designed orifice button shall be used to seal the valve discharge port with drip-tight shut-off. The orifice diameter must be sized for use within a given operating pressure range to ensure maximum air venting capacity.

The float shall be of all stainless steel construction and designed to withstand system surge pressures without failure. The body and cover shall be ductile iron, and internal valve components shall be stainless steel and Buna-N to ensure watertight shut-off.

The 34 Series Air Valve shall be manufactured in accordance with UL/FM requirements.

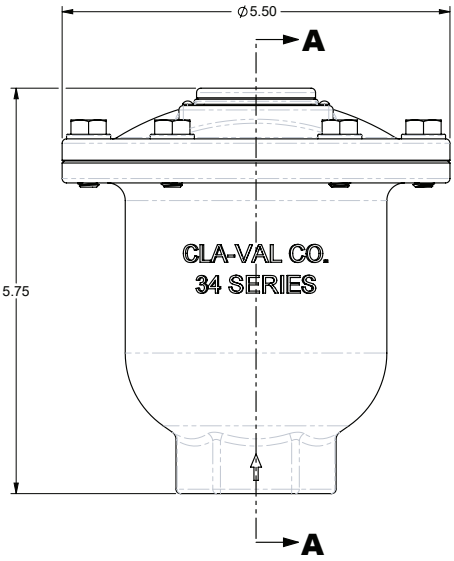
© Copyright CLA-VAL - Specifications subject to change without notice.

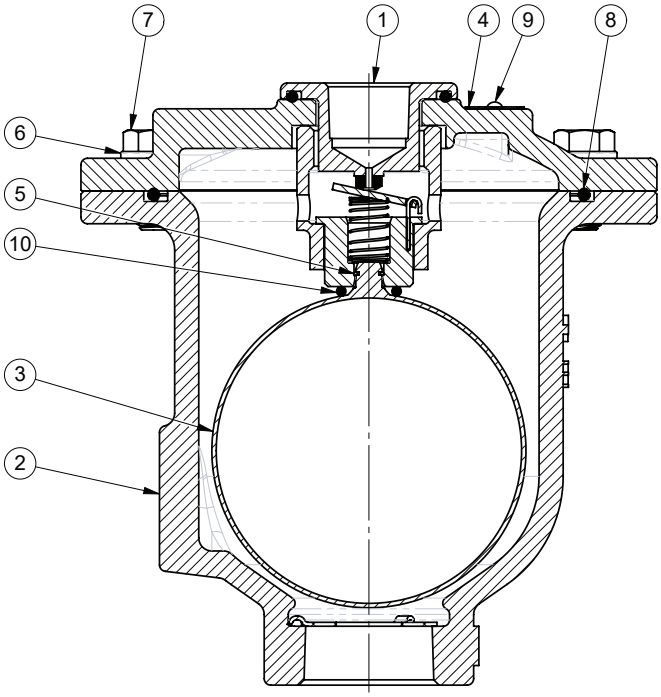
Specifications

Product Specifications
Approved Sizes: 1" (1/2" & 3/4" Bushings Provided)
Inlet: 1" NPT
Outlet: 1/2" NPT (1/16" Diameter Orifice)
Pressure Rating: 400 psi
Temperature Range: Water service to 180°F

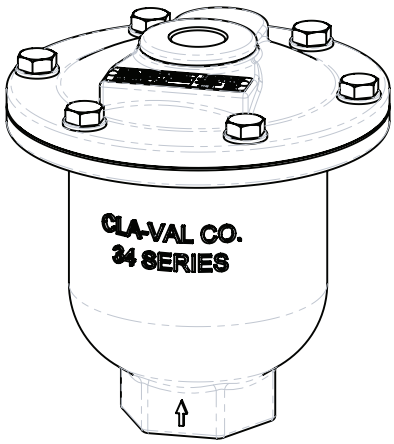
Materials
Body and Cover: Epoxy Coated Ductile Iron – ASTM A536 65-45-12
Float: 316 Stainless Steel
Internal Parts: Stainless Steel and Delrin
Rubber Parts: Buna-N® Synthetic Rubber

Optional Listed Materials for Seawater and Severe Service Applications:
Nickel Aluminum Bronze (NAB): ASTM B148 Alloy C95800
Monel - QQ-N-288 Comp B: ASTM A494 Grade M30H
Cast Steel: ASTM A216 Grade WCB
316L/316 Steel: ASTM A743 Grades CF3M and CF8M
Super Austenitic Stainless Steel: ASTM A351 Grade CK3MCuN (SMO 254)
Super Duplex Stainless Steel: ASTM A890 Grade 5A (CE3MN)





SECTION **A-A**



Item No.	Description	QTY
1	Cover Assembly, 3410-AR	1
2	Body Assembly, 3410-AR	1
3	Float Ball	1
4	Nameplate	1
5	Snap Ring	1
6	Washer, Flat, 5/16N	6
7	Screw, HEX HD., 5/16 - 18 x 0.75"	6
8	O-Ring (2-242)	1
9	Screw, Drive	2
10	O-Ring (2-110)	1

© Copyright CLA-VAL - Specifications subject to change without notice.