



Member of Aveng Manufacturing DFC

## COMBINATION AIR RELEASE AND VACUUM VALVES

### A. Description and Service

1. Valve shall have four functions of uninterrupted discharge of air/gas during filling, continuous discharge of dis-entrained pressurized air/gas, unrestricted vacuum break, and pipeline surge protection in a single chamber. Valves shall be anti-surge and anti-shock air release and vacuum break valves.
  - a. The large orifice shall allow air to escape during pipeline filling and allow air intake during pipeline draining.
  - b. The small orifice shall release air accumulations after the pipeline is filled, under pressure and in operation.
  - c. The valve shall be equipped with an integral surge alleviation mechanism that automatically dampens surge pressures due to rapid air discharge or the subsequent rejoining of separated water columns.

### B. Construction and Design

1. The intake/discharge orifice area is equal to the nominal size of the valve, i.e., an 8" valve shall have 8" full flow inlet and 8" outlet. Area around the floats must equal equivalent area of inlet/outlet.
2. Valve shall utilize solid unbreakable HDPE floats with EPDM O-Ring seals. Floats must not deform, leak or experience damage of any kind at twice the design pressure, with floats providing continuous discharge of pressurized air release without levers, pins, springs that can break.
3. Manufacturer shall have ISO 9001, and third party testing of vacuum and air release flow coefficient to certify sizing and performance of all functions. CFD, FEA or other types of theoretical modeling are not acceptable.
4. Valve shall have a 10 year in-service warranty for all internal components.
5. The valves furnished shall be standard products in regular production by the manufacturer and shall have been in satisfactory and successful operation for a period of at least five (5) years.
6. Materials of Construction:

**RF VALVE®**

**aiRFlex®**

**VENT-O-MAT®**

**RF-SKG®**



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- a. 304 Stainless Steel Barrel, Tie Rods, and Fasteners. 316 Stainless Steel Nozzle. Fusion bonded, epoxy coated ductile iron top and bottom Flanges with ABS Polylac Top Cover.
  - a2. 304 Stainless Steel Barrel, Flanges, Tie Rods and Fasteners. 316 Stainless Steel Nozzle and ABS Polylac Top Cover.
  - a3. 316 Stainless Steel Barrel, Flanges, Tie Rods, Nozzle and Fasteners. ABS Polylac Top Cover.
  - b. Floats: High Density Polyethylene
- C. Manufacturer & Model
- 1. Vent-O-Mat Series RBX by RF Valves, Inc. Hanover, Maryland U.S.A.

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