

WASTEWATER AIR RELEASE VALVE SPECIFICATION

Scope

1.1 This specification is intended to cover the design, manufacture, and testing of 2 in. (50 mm) through 4 in. (100 mm) Wastewater Air Release Valves suitable for pressures up to 150 psig (1000 kPa).

1.2 Wastewater Air Release Valves shall be automatic float operated valves designed to release accumulated air from a piping system while the system is in operation and under pressure. The capacity and pressure rating of the valve is dependent on the diameter of the precision orifice in the cover. A large inlet connection is required for proper air and water exchange. *[NOTE: See Wastewater Air/Vacuum Valves for exhausting and admitting large volumes of air and Wastewater Combination Air Valves for both air release and air/vacuum functions.]*

Design

2.1 The valves shall have full size NPT inlets and outlets equal to the nominal valve size. The body inlet connection shall be hexagonal for a wrench connection. The body shall have 2" NPT cleanout and 1" NPT drain connections on the sides of the casting. The cover shall be bolted to the valve body and sealed with a flat gasket. A threaded adjustable orifice button shall provide drop tight shut off to the full valve pressure rating.

2.2 Floats shall be unconditionally guaranteed against failure including pressure surges. Extended mechanical linkage shall provide suitable mechanical advantage so that the valve will open under full operating pressure.

Materials

3.1 The valve body and cover shall be constructed of ASTM A126 Class B cast iron.

3.2 The orifice, float and linkage mechanism shall be constructed of Type 304 stainless steel. Non-metallic floats or linkage mechanisms are not acceptable. The orifice button shall be Buna-N.

Options

4.1 Backwash accessories shall be furnished when specified and shall consist of an inlet shut-off valve, a blow-off valve, a clean water inlet valve, rubber supply hose, and quick disconnect couplings. Accessory valves shall be quarter-turn, full ported bronze ball valves.

4.2 An optional vacuum check on the outlet shall be provided when specified to prevent air from re-entering the system during negative pressure conditions.

4.3 Optional body materials include ASTM A536 Grade 65-45-12 ductile iron, ASTM A351 Grade CF8M stainless steel, and ASTM B584 Alloy C83600 cast bronze.

4.4 Optional float and trim material includes 316 stainless steel.

Manufacture

5.1 The manufacturer shall demonstrate a minimum of five (5) years experience in the manufacture of wastewater air valves. The valves shall be manufactured and tested in accordance with American Water Works Association Standard (AWWA) C512. When requested, the manufacturer shall provide test certificates, dimensional drawings, parts list drawings, and operation and maintenance manuals.

5.2 The exterior of the valve shall be coated with a universal alkyd primer.

5.3 Wastewater Air Release Valves shall be Series 48ABW as manufactured by Val-Matic® Valve & Mfg. Corporation, Elmhurst, IL, USA, or approved equal.

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VAL-MATIC® VALVE AND MANUFACTURING CORP.

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