

Table of Contents

Section I	1
1.0 General	1
1.1 Application	1
1.2 Scope	1
1.3 Limitations on Design	1
Table 1	2
Table 2	2
Table 3	3
1.4 Reference Standards	3
Section II	4
2.0 Test Specimens	4
2.1 Samples Submitted	4
2.2 Samples Tested	4
2.3 Drawings	4
2.4 Rejection	4
Section III	5
3.0 Performance Requirements and Compliance Testing	5
3.1 Hydrostatic Testing of Complete Device	5
Figure 1	5
3.2 Water Tightness Test of Float-Operated Checks	5
Figure 2	6
3.3 Allowable Pressure Loss at Rated Air Flow	6
Figure 3	7
3.4 Vacuum Flow Test	7
Figure 4	8
Section IV	9
4.0 Detailed Requirements	9
4.1 Materials	9
4.2 Documentation	9
4.3 Markings	10
Section V	11
5.0 Definitions	11
Appendix A	12
A1.0 Recommended Installation Guidelines	12
A1.1 General	12
A1.2 Orientation	12
A1.3 Clearances	12

Air Valve and Vent Inflow Preventer

Section I

1.0 General

1.1 Application

The purpose of Air Valve and Vent Inflow Preventer Assemblies (herein after referred to as the “assembly”) is to allow the release and admission of high volumes of air through air valves and air vents in water distribution systems but prevent the entry of contaminated water when the air valve outlet becomes submerged from flooding or is the target of malicious tampering.

1.2 Scope

1.2.1 Description

This assembly shall consist of a primary and a secondary chamber. Each chamber shall contain an independent float-operated closure member. The primary chamber is the lower chamber. The secondary or upper chamber is redundant and will close in the event the primary chamber fails to close. Other configurations achieving the performance requirements of this standard are acceptable.

1.2.2 Size Range and Connections

Sizes 1 to 4 NPS (25 to 100 mm) shall be furnished with an NPTF threaded connection. Sizes 6 to 16 NPS (150 to 400 mm) shall be furnished with a flanged connection.

1.2.3 Pressure Range

The assembly shall be designed and constructed for an operating pressure range of 9.7 psia (66.9 kPa_{absolute}) to 25.0 psi (172.4 kPa).

1.2.4 Temperature Range

The assembly shall function at temperatures from 32.0 °F to 150.0 °F (0 °C to 65.6 °C).

1.3 Limitations on Design

1.3.1 Flow Design

Flow ways through the entire assembly passage-way shall be as follows:

- a) The least cross-sectional area of the air flow ways, including the seat areas, shall not be less than the inside cross-sectional area of the same NPS.
- b) The manufacturer shall furnish a sectional print of the assembly with all of the dimensions needed to enable a verification of the passage-way areas.
- c) The assembly shall, at a minimum, pass the required volume of air according to Table 1.