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INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS

IAPMO GUIDE CRITERIA

FOR

SELF SEALING WATERLESS WASTE VALVES

IGC 203-2004

1. PURPOSE

- 1.1** The purpose of this standard is to establish a generally acceptable standard for Self Sealing Waterless Waste Valves (here after called “the valve”) for installation on tubing. Its purpose is to serve as a guide for producers, distributors, architects, engineers, contractors, installers, inspectors and users; to promote understanding regarding materials, manufacture and installation; and to provide for identifying fittings for installation on the valve complying with this standard.
- 1.2** The provisions of this standard are not intended to prevent the use of any alternate material or method of construction provided any such alternate meets the intent of this standard.

2. SCOPE

- 2.1** This standard covers minimum standards for materials in the construction of the valve, and to prescribe minimum test requirements for the performance of the valve, together with methods of marking and identification.

3. REFERENCED STANDARDS

- 3.1** All standards referenced herein shall be the current edition of that standard.
- | | |
|----------------|--|
| ASME A112.18.2 | Plumbing Fixture Waste Fittings |
| AMSE B1.20.1 | Pipe Threads, General Purpose (Inch) |
| ASTM D 2000 | Rubber Products for Automotive Applications |
| ASTM F 409 | Thermoplastic Accessible and Replaceable Plastic Tube and Tubular Fittings |

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4. GENERAL REQUIREMENTS

- 4.1** The valve covered under this standard shall meet the material requirements of ASTM F 409.
- 4.2** O-ring seals shall be made of a non-toxic synthetic rubber having a classification of M3BA507 A14 B13 C12 F17 or M2BG714 B14 EO14 EO34 that complies with the requirements of ASTM D 2000.
- 4.3** Bladder material shall be made of silicone rubber having a minimum classification M3FC607 EA14 E016 G11 complying with ASTM D 2000.
- 4.4** Valve Inlet (Appliance Connection)
 - 4.4.1** The valve connects to appliances using a 1 ¼" and 1 ½" free running nut with a Female Thread.
 - 4.4.2** The base of the thread may be sealed by a sealing washer (Inlet set) at the base of the thread. The useful thread length shall be between 3/8" and ½".
(All Threaded Appliance outlets shall have a minimum three thread engagement for fittings and plastic nuts (ASTM F 409 Clause 6.1) to correctly engage/energize the inlet seal.)
 - 4.4.3** If required, an 87½° knuckle adaptor shall be available to allow the valve to be connected in a horizontal position.
 - 4.4.4** If required, a straight running adaptor shall be available to allow the valve to be connected to pipe rather than an appliance.
- 4.5** Valve Outlet
 - 4.5.1** The valve outlet shall have a connection which is compatible with tubing manufactured to ASTM F 409 or threads connections complying with Section 2.5 entitled Threads of ASME A112.18.2.
- 4.6** All threads that connect to external appliances shall comply with ANSI B1.20.1.
 - 4.6.1** Threaded appliance outlets shall have a minimum three thread engagement for fittings and plastic nuts (ASTM F 409 Clause 6.1) to correctly engage/energize the inlet seal).

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5. TESTING REQUIREMENTS

5.1 Waterway Flow Rate

5.1.2 Connect the valve to the waste outlet hole of the tank in accordance with Figure 1 and the manufacture's installation instructions. Fill the test tank with water up to the test level. Stabilize the test level by adjusting the water inflow by means of the regulating valve. The flow rate of the valve is indicated by the flow meter, when the test water level is stabilized.

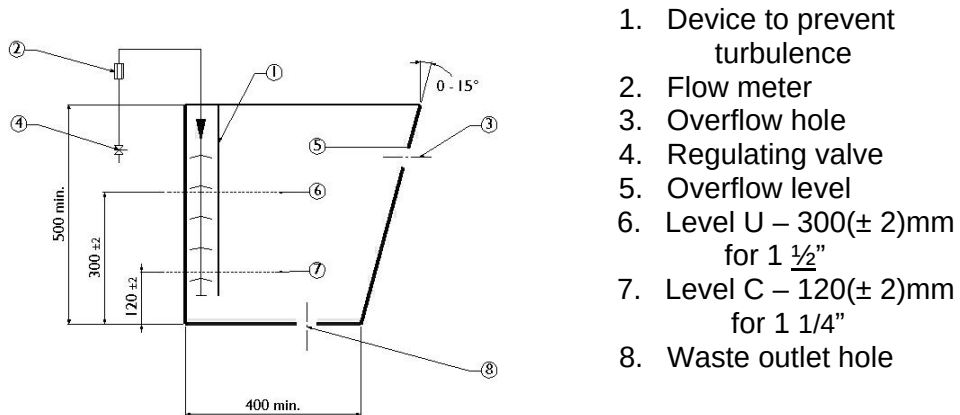


Figure 1

5.1.3 Performance Requirements. The valve shall demonstrate flow rates not less than:

- | | |
|------------|---|
| a) 1 1/4 " | 0.60 L/s (7.92 gal/min) Trap alone on Wash Basin, Bidet |
| b) 1 1/2 " | 0.85 L/s (11.22 gal/min) Trap alone on Bath |
| c) 1 3/4 " | 0.70 L/s (9.24 gal/min) Trap alone on kitchen Sink |

5.2 Airway Flow Rate

- 5.2.1 Apparatus:**
- a) 1 foot length of pipe
 - b) Static pressure tapping connected to manometer
 - c) Airflow meter capable of resolving 0.1 L/s
 - d) Airflow rate electric fan or equivalent means to induce airflow down pipe.
 - e) Means of detecting the instant the valve opens; for example either flow visualization by using ventilation smoke tubes or by detecting the pressure change

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