

Draft High-Efficiency Flushing Urinal Specification

1.0 Scope and Objective

This specification establishes the criteria for a high-efficiency flushing urinal under the U.S. Environmental Protection Agency's (EPA's) WaterSense® program. It is applicable to:

- Urinal fixtures that receive liquid waste and use water to convey the waste through a trap seal into a gravity drainage system; and
- Pressurized flushing devices that deliver water to urinal fixtures.

The specification is designed to ensure both sustainable, efficient water use and a high level of user satisfaction with flushing performance.

2.0 Summary of Criteria

Urinal fixtures and pressurized flushing devices must meet criteria in the following areas, as applicable:

- The average water consumption must not exceed 0.5 gallons per flush (gpf) (1.9 liters per flush (Lpf)), as specified in Section 3.0.
- The urinal fixture must conform to the requirements specified in Section 4.0.
- The urinal pressurized flushing device must conform to the requirements specified in Section 5.0.

3.0 Water-Efficiency Criteria

The average water consumption must not exceed 0.5 gpf (1.9 Lpf) when tested in accordance with ASME A112.19.2 or IAPMO Z124.9,¹ as applicable.

4.0 Urinal Fixture Requirements

- 4.1 Vitreous china urinal fixtures must conform to ASME A112.19.2 requirements when tested with a pressurized flushing device with the same rated flush volume that meets the requirements of Sections 3.0 and 5.0 of this specification.
- 4.2 Plastic urinal fixtures must conform to IAPMO Z124.9 requirements when tested with a pressurized flushing device with the same rated flush volume that meets the requirements of Sections 3.0 and 5.0 of this specification.

5.0 Pressurized Flushing Device Requirements

- 5.1 The pressurized flushing device must conform to ASSE #1037.

¹ References to this and other ASME, IAPMO, and ASSE standards apply to the most current version of that standard.

- 5.2 The pressurized flushing device must not exceed the rated flush volume of water even if the actuator is maintained in the flush position (i.e., device must have a non-hold-open actuator).
- 5.3 The pressurized flushing device must not contain a flush volume adjustment.² The pressurized flushing device must not be packaged, marked, or provided with instructions directing the user to an alternative flush volume setting that would override the rated flush volume (not to exceed 0.5 gpf, as established by this specification).
- 5.4 The pressurized flushing device must not contain interchangeable parts, such as pistons or diaphragms, which if replaced with commonly available alternative components would allow the device to flush at a higher volume.

6.0 Marking

The product and/or the product packaging must be marked in accordance with 16 *CFR* 305.11(f) with the maximum flush volume in gpf and Lpf as determined through testing and compliance with this specification. Marking must be in gpf and Lpf in two digit resolutions (e.g., 0.5 gpf [1.9 Lpf]).

7.0 Effective Date

This specification is effective on [TBD].

8.0 Future Specification Revisions

EPA reserves the right to revise this specification should technological and/or market changes affect its usefulness to consumers, industry, or the environment. Revisions to the specification would be made following discussions with industry partners and other interested stakeholders.

9.0 Definitions

Definitions within ASME A112.19.2, IAPMO Z124.9, and ASSE #1037 are included by reference.

ASME – American Society of Mechanical Engineers

ASSE – American Society of Sanitary Engineering

IAPMO – The International Association of Plumbing and Mechanical Officials

Rated flush volume – The stated flush volume of the urinal fixture or pressurized flushing device, as certified.

² A control stop that supplies water to a flushometer valve is not considered a flush volume adjustment.

Appendix A: Informative Annex for WaterSense Labeling

The following requirements must be met for products to earn the WaterSense label.

1.0 WaterSense Partnership

The manufacturer³ of the product must have a signed partnership agreement in place with EPA. In accordance with this specification, the product can be considered as either the pressurized flushing device, urinal fixture, or the complete system.

2.0 Conformity Assessment

Conformance to this specification must be certified by a body either accredited in accordance with the WaterSense product certification system, or otherwise approved for that purpose by EPA in accordance with the WaterSense program guidelines.

3.0 Independent Labeling of Urinal Fixtures and Pressurized Flushing Devices

Certified urinal fixtures and pressurized flushing devices may be labeled as a complete system or separately as a urinal fixture or pressurized flushing device. If labeled separately, the manufacturer of each part must clearly indicate on product documentation that the part must be used with a WaterSense labeled counterpart that has the same rated flush volume in order to ensure that the entire system meets the requirements of this specification for water efficiency and performance.

³ Manufacturer, as defined in the WaterSense program guidelines, means “Any organization that produces a product for market that might be eligible to meet WaterSense criteria for efficiency and performance. Manufacturers may also produce ‘private label’ products that are sold under the brand name of a separate organization, which is treated as a separate partner/application from the original product manufacturer.” In the case of private labeling, the private labeling organization that ultimately brands the product for sale must have a signed partnership agreement in place with EPA.