STANDARDS UPDATE NOTICE (SUN)
ISSUED: January 3, 2019

STANDARD INFORMATION

Standard Number: ASME A112.18.1 / CSA B125.1
Standard Name: Plumbing Supply Fittings
Standard Edition and Issue Date: 4th Edition Dated July 1, 2018
Date of Revision: July 1, 2018
Date of Previous Revision of Standard: 3rd Edition Reaffirmed 2017

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **November 9, 2019**

IMPACT, OVERVIEW, AND ACTION REQUIRED

Impact Statement: A review of all Listing Reports is necessary to determine which products comply with new/revised requirements and which products will require re-evaluation. **NOTE:** Effective immediately, this revised standard will be exclusively used for evaluation of new products unless the Applicant requests in writing that current requirements be used along with their understanding that their listings will be withdrawn on Effective Date noted above, unless the product is found to comply with new/revised requirements.

Overview of Changes:

- Requirements for high-efficiency commercial pre-rinse spray valves was added
- Requirements for household hot water dispensers with storage electrical heating systems was added
- Pressure and temperature test requirements for low-pressure water dispensers were added
- Maximum flow testing procedure for low-pressure water dispensers was added
- The test procedure for high-efficiency commercial pre-rinse spray valves was added
- Spray force performance requirements for rain showers was added

Specific details of new/revised requirements are found in table below.

If the applicable requirements noted in the table are not described in your report(s), these requirements will need to be confirmed as met and added to your report(s) such as markings, instructions, test results, etc. (as required).

Client Action Required:

Information – To assist our Engineer with review of your Listing Reports, please submit technical information in response to the new/revised paragraphs noted in the attached or explain why these new/revised requirements do not apply to your product (s).

Current Listings Not Active? – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records. We will do this at no charge as long as Intertek is notified in writing prior to the review of your reports.

STANDARD INFORMATION

CLAUSE	VERDICT	COMMENT
		Additions to existing requirements are underlined and deletions are shown lined out below.
4	Info	**Design requirements**
4.1	Info	**Supply fittings**
4.1.2	Info	**Rated temperatures**
4.1.2.2		***New clause added;*** The hot water components of low-pressure water dispensers shall be designed for rated supply temperatures from 43 to 99 °C (110 to 210 °F).
4.13.1.2		Fittings incorporating electrical features other than low-voltage circuits shall comply with the applicable CSA or UL electrical Standards. Note: These standards include the following: a) For lighting products, CSA C22.2 No. 250.0 and CSA C22.2 No. 250.13 for Canada and UL 1598 or UL 8750 for the US. b) For audio or video products, CSA C22.2 No. 60065 for Canada and UL 60065 for the US. c) For controls, CSA C22.2 No. 24 or the applicable CSA E60730 series standard for Canada and UL 873 or the applicable UL 60730 series standard for the US. d) For electric plumbing products and accessories, CSA C22.2 No. 14 or CSA C22.2 No. 68 for Canada and UL 1951 for the US. e) For parts intended for installation in wet locations, CSA C22.2 No. 94.2 for Canada or UL 50 for the US, for the appropriate degree of protection from ingress of moisture if applicable.
4.18		***New section added;*** **High-efficiency commercial pre-rinse spray valves** Note: Commercial pre-rinse spray valves do not necessarily have to comply with the high-efficiency requirements specified in Clause 5.13 if they are not designated as high-efficiency pre-rinse spray valves.
4.18.1		If the high-efficiency commercial pre-rinse spray valve has more than one mode a) all modes shall comply with the maximum flow rate requirements specified in Clause 5.13.2; and b) at least one of the modes shall comply with the requirements specified in Clause 5.13.3 for high- efficiency commercial pre-rinse spray valves. The manufacturer shall indicate which mode is to be tested for high efficiency.

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4.18.2		See Clause 6.4 for additional marking requirements for high-efficiency commercial pre-rinse spray valves.
4.19		***New clause added;*** **Household hot water dispensers with storage electrical heating systems** Household hot water dispensers with storage electrical heating systems shall comply with ASSE 1023.
5	Info	**Performance requirements and test procedures**
5.3	Info	**Pressure and temperature**
5.3.8		***New section added;*** **Low-pressure water dispensers**
5.3.8.1		**Failure criteria** Seals of low-pressure water dispensers shall not leak or otherwise fail when tested in accordance with Clause 5.8.3.2. This test shall be conducted after the life cycle test in Clause 5.6.
5.3.8.2		The specimen shall be brought to equilibrium test temperatures by running water through it at the manufacturer's rated temperature and pressure. The valve shall be closed and subjected to 1.5 times the manufacturer's rated pressure for 5 min.
5.4	Info	**Flow rate**
5.4.1		**Supply fittings** Fittings and accessories shall meet the minimum and maximum flow rate requirements specified in Table 1, at the temperatures and flowing pressures specified in Clause 5.4.2.3, with the exception of high-efficiency commercial pre-rinse spray valves, which shall be tested in accordance with Clause 5.4.3. These requirements shall be met before and after the life cycle tests specified in Clause 5.6.
5.4.2	Info	**Test procedure**
5.4.2.3	Info	**Procedure**
5.4.2.3.1		Fittings shall be tested at the maximum flow setting, if adjustable, with both hot and cold water valves fully open on combination fittings. The flow rate test shall be conducted with water between 5 and 71 °C (40 and 160 °F) in accordance with the intended end use of the fitting and under the following conditions: a) for minimum flow: at 140 ± 7 kPa (20 ± 1 psi) at the inlet when water is flowing; and b) for maximum flow for faucets: at 410 ± 7 kPa (60 ± 1 psi) at the inlet when water is flowing; and

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		c) for maximum flow for low-pressure water dispensers: at 105 kPa ± 7 kPa (15 psi ± 1 psi) at the inlet when water is flowing.
5.4.3		***New section added;*** **Test procedure for high-efficiency commercial pre-rinse spray valves**
5.4.3.1		**Specimens** Three production models shall be selected for testing.
5.4.3.2		**Testing** The flow rate of pre-rinse spray valves shall be tested in accordance with the procedures in ASTM F2324 with the exception of Appendix XI.
5.5	Info	**Operating requirements**
5.5.3		***New clause added;*** Low-pressure water dispensers shall be tested at a flowing pressure of 140 ± 14 kPa (20 ± 2 psi), with water at 10 ± 6 °C (50 ± 10 °F) for cold water only applications or with water at 99 + 0, –6 °C (210 +0, –10 °F) for hot water only applications. Devices intended to dispense cold and hot water shall be tested at both water temperatures. Operating controls shall not require a moving force greater than 45 N (10 lbf) or 22 N (5 lbf) for accessible designs.
5.9	Info	**Backflow prevention**
5.9.3	Info	**Fittings with submersible outlets**
5.9.3.4		***New clause added;*** **Service sink faucets** Service sink faucets shall be designed to prevent re-installation of the spout directly onto the faucet body with the backflow prevention device removed, when the faucet has a backflow prevention device that a) is not cast in the body of the faucet; b) has an inlet in line with its outlet; and c) has a disassembly torque of less than 81 N·m (60 lbf·ft).
5.12	Info	**High-efficiency showerheads and hand-held showers**
5.12.3	Info	**Spray force**
5.12.3.1		When tested in accordance with Clause 5.12.3.2, the minimum spray force for a) high-efficiency showerheads and hand-held showers shall be not less than 0.56 N (2.0 ozf) at a flowing pressure of 140 ± 7 kPa (20 ± 1 psi) at the inlet. The specimen shall be deemed to exceed the minimum spray force requirement when the force-balance fixture rotates past 0.0 ± 0.1°; and

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5.12.3.5		b) high-efficiency rain showers shall be not less than 0.40 N (1.4 ozf) at a flowing pressure of 140 ± 7 kPa (20 ± 1 psi) at the inlet. The specimen shall be deemed to exceed the minimum spray force requirement when the force-balance fixture rotates past 0.0 ± 0.1°. **Test procedure** The test procedure shall be as follows: a) ensure the force balance fixture is dry prior to testing; b) for showerheads and hand-held showers, mount the specimen so the force target surface and showerhead faceplate are parallel, and the centre of the force target and the centre of the showerhead are aligned and 455 ± 6 mm (18 ± 0.25 in) apart, measured before the water flow is initiated; c) for rain showers, mount the specimen directly above the force target so that the centre of the rain shower aligns directly over the centre of the force target at 45° to the target and is parallel to the floor. The centre of the rain shower to the centre of the forced target should be 455 ± 6 mm (18 ± 0.25 in) apart (see Figure 7B), measured before the water flow is initiated; d) once the water flow has been initiated, adjust the specimen using only the standard components so that the centre of the spray pattern aligns with the centre of the target; e) maintain water flow for at least 1 min; and f) verify that the spray force meets the performance requirement specified in Clause 5.12.3.1. If the centre of the spray pattern cannot hit the centre of the target, the specimen shall be deemed to have not met the spray force performance requirement.
5.13		***New section added;*** **High-efficiency commercial pre-rinse spray valves**
5.13.1		**General** High-efficiency commercial pre-rinse spray valves shall comply with Clauses 5.13.2 to 5.13.3. In accordance with Clause 4.18.1, if the commercial pre-rinse spray valve has more than one mode, the manufacturer shall specify the mode or modes that are intended to comply with the high-efficiency requirements.
5.13.2		**Flow rate** The maximum flow rate for high-efficiency commercial pre-rinse spray valves shall be specified by the manufacturer, but in no case shall be more than 4.85 L/min (1.28 gpm), verified through testing in accordance with Clause 5.4.3.

CLAUSE	VERDICT	COMMENT
5.13.3		**Spray force**
5.13.3.1		**Performance requirement** When tested in accordance with Clauses 5.13.3.2 to 5.13.3.5, the minimum spray force for high- efficiency commercial pre-rinse spray valves shall be not less than 1.1 N (4.0 ozf).
5.13.3.2		Three representative production samples shall be selected for performance testing.
5.13.3.3		**Preparation of apparatus** The apparatus shall be prepared in accordance with Section 9 of ASTM F2324.
5.13.3.4		**Spray force test fixture** The spray force test fixture apparatus shall comply with the requirements in ASTM F2324.
5.13.3.5		**Test procedure** The spray force shall be tested in accordance with Section 10 of ASTM F2324.
6	Info	**Markings, packaging, and installation instructions**
6.1	Info	**General**
6.1.3		***New clause added;*** Kitchen, lavatory, and metering faucets shall be marked with the manufacturer's specified maximum flow rate, in L/min and gpm or L/cycle and gpc, verified in accordance with Clause 5.4.2.3.1 b).
6.3	Info	**Packaging**
6.3.3		***New clause added;*** Packaging for kitchen, lavatory, and metering faucets shall be marked with the manufacturer's specified maximum flow rate, in L/min and gpm or L/cycle and gpc, verified in accordance with Clause 5.4.2.3.1 b).
6.4	Info	**High-efficiency commercial pre-rinse spray valves**
6.4.2		***New clause added;*** Packaging or other included literature for high-efficiency commercial pre-rinse spray valves shall be marked with the a) manufacturer's maximum flow rate in accordance with Clause 5.13.2; and b) the minimum spray force determined in accordance with Clause 5.13.3.

CLAUSE	VERDICT	COMMENT

Minimum and maximum flow rates

Table 1

Fitting or accessory	Minimum, L/min (gpm)	Maximum, L/min (gpm)
Pre-rinse spray valve		
Commercial	-	6.0 (1.6)
Commercial high-efficiency	-	4.8 (1.28)
Laundry tub	3.0 (0.8)	15 (4.0)
Low-pressure water dispenser	-	5.7 (1.5)

Life cycle test

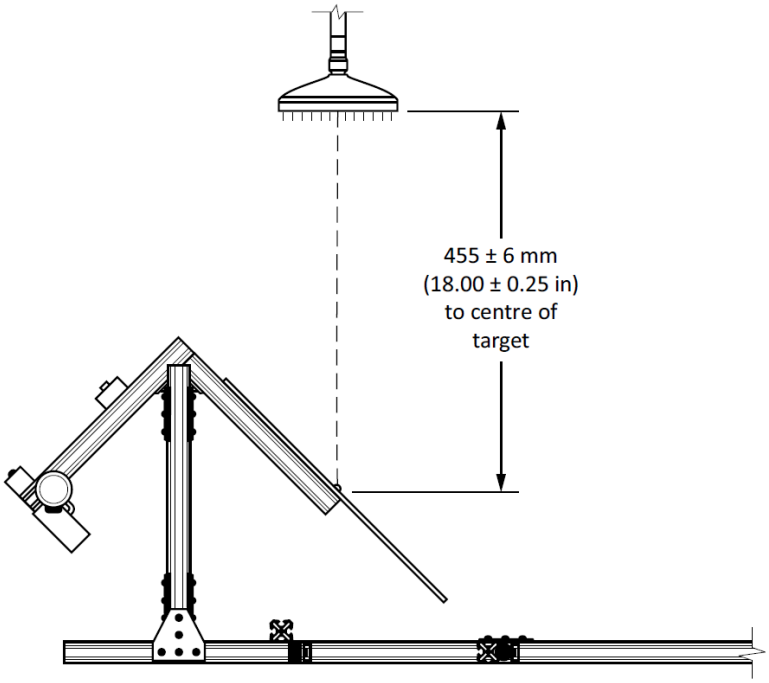
Table 3

Fitting	Cycles
Low-pressure water dispenser	22 000
Low-pressure water dispenser swing spout	10 000
Pre-rinse spray valve	
Commercial	250 000
Commercial high-efficiency	250 000

New figure added;

Rain shower spray force-balance test fixture

Figure 7B



CLAUSE	VERDICT	COMMENT
Table B.1		**Tests by fitting type** Test: Low-pressure water dispenser Clause(s): Backflow prevention 5.9; Coatings 5.2; Flow rate 5.4 Backflow prevention: X Coatings: X Flow rate: X
		CUSTOMERS PLEASE NOTE: This Table and column "Verdict" can be used in determining how your current or future production is or will be in compliance with new/revised requirements.