



TEST REPORT

CLIENT: ICCI
414 Jackson St. Suite 401
San Francisco, CA 94102
United States

Attention: Brent Cohn

Test Report No: 654:016157	Date: October 24, 2008
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SUBJECT: Evaluation of Eclipse Stainless Steel Plumbing Supply Fittings for compliance with ASME A112.18.1-2005 / CSA B125.1-05, ADA Standards for Accessible Design, 28 CFR Part 36 – 94 section 4.27, and ICC/ANSI A117.1-03 section 309.4.

REFERENCE: Letter

SAMPLE ID: One sample of Eclipse Stainless Steel Kitchen faucet model number KPS3030 (Single Lever Kitchen Faucet with Pull-Down Spout) was received from the client on 10/6/08 in good condition.

TEST REQUESTED: The fitting was evaluated in accordance with ASME A112.18.1-2005/CSA B125.1-05 except section 4.9.1 (NSF/ANSI 61) tests were not performed. No revisions to this report will be allowed after 90 days of the report date.

TEST DATE: 10/7/08 – 10/23/08

CONCLUSION: The Eclipse Stainless Steel Kitchen faucet model number KPS3030 does comply with the requirements of ASME A112.18.1-2005/CSA B125.1-05. This model also complies with the operating requirements of ADA Standards for Accessible Design, 28 CFR Part 36 - 94 section 4.27 and ICC/ANSI A117.1-03 section 309.4.

CERTIFICATION: The tests reported here were conducted under the continuous direct supervision of SGS U.S. Testing Company Inc., Tulsa, OK.

**SIGNED FOR AND ON BEHALF OF
SGS U.S. TESTING COMPANY INC.**

Pat Batterton
Materials Dept. Technician

Scott Parkhurst
Materials Dept. Manager

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Test Procedure and Results

Design Requirements

4.1	Supply fittings:	Pass
4.1.1	Rated pressure: Supply fitting are designed for a rated supply pressure of 100 psi. Supply fittings are designed to function at any supply pressure between 20 and 125 psi.	
4.1.2	Rated temperatures: Supply fitting are designed for rated supply temperatures from 40 to 160 ° F.	
4.1.3	Seating members: The submitted fittings do have replaceable seats. Seat disc arrangements are replaceable. Seat discs do not vibrate while in service. Threaded devices are used to secure the disc, and remains secure after the disc has been removed and replaced five times.	
4.2	Servicing:	Pass
	All fittings are designed so that replacement of wearing parts can be accomplished without removing the fitting from the supply system, piping from the body, disturbing the finished wall, and by using standard tools.	
4.3	Installation:	Pass
	A method of sealing the fitting to the fixture was provided.	
4.4	Threaded connections:	Pass
	<ul style="list-style-type: none">All hose threads complied with ASME B1.20.7Threaded connections for flexible hoses and flexible components met the performance requirements of this standard.	
4.5	Connections other than threaded connections:	NA
4.6	Accessible design:	Pass
	The operating controls intended for use in accessible designs are operable with one hand, and do not require tight grasping, pinching, or twisting of the wrist. Operating force was not greater than required in this standard.	
	Operating force: <u>1 lbf</u> (5 lbf, Max.)	

4.7	Backflow prevention:	Pass
	Fittings are designed to protect the potable water supply from backflow contamination by a means that meets the applicable requirements of Clause 5.9. Diverting and anti-siphoning devices incorporate a way of removal for cleaning, repair, and replacement.	
4.8	Cover plates and escutcheons:	NA
4.9	Toxicity	Not Evaluated
4.10	Frost-proof faucets and hydrants:	NA
4.11	Shower heads, body sprays, and hand-held showers:	NA
4.12	Cross-flow:	NA
4.13	Fittings incorporating electrical features:	NA
4.14	Materials:	Pass
	Stainless Steel Alloys – <u>304 Stainless Steel</u> (300 or 400 Series)	
4.15	Automatic compensating valve temperature control:	NA
4.16	Lawn and sediment faucets:	NA

Performance Requirements and Test Methods:

5.2	Coatings:	
5.2.1	General: The fittings selected for testing were free of surface defects, uncoated areas, and were not stained.	Pass
5.2.2	Corrosion (all substrates and coatings): Coatings did not show more than one surface defect in any 1 in ² area of the surface, or up to three surface defects on a 1 inch length of parting line. Also, surface defects were not larger than 0.03 inches in any dimension when subjected to corrosion testing with procedures from ASTM B 117.	Pass
5.2.3	Adhesion:	NA
5.2.4	Decorative organic coatings:	NA

5.3 Pressure and temperature:

5.3.1 Static and dynamic seals: **Pass**
 Procedure with the valve closed:
 Leakage after 5 minutes - None (none)

Procedure with the outlet blocked:
 Leakage after 5 minutes - None (none)

5.3.2 Burst pressure: **Pass**
 Terminal fittings:
 Leakage after 1 minute at 500 psi - None (none)

5.3.3 Cross-flow check valves: **NA**

5.3.4 Hose assemblies: **Pass**
 Torque:
 Hose assemblies and threaded connections were torqued 150% after sealing without leakage or thread failure.

Burst pressure:
 Leakage after hydrostatic pressure of 100 psi – None (none)
 Leakage after hydrostatic pressure of 290 psi – None (none)

5.3.5 Ball joints: **NA**

5.3.6 Diverters: **Pass**
 Kitchen and lavatory:
 Leakage out of the kitchen spout or lavatory side spray – 0 gpm (0.3 gpm Max).

5.4 Flow rate **Pass**

<u>Fitting</u>	<u>60 psi</u>	<u>Requirement (Table1)</u>
Kitchen Faucet	2.15 gpm	2.2 Max., gpm

*Flow rate remained unchanged after performing the life cycle testing.

5.5 Operating requirements

5.5.1 Torque or force: **Pass**
 Opening (axial) force – 1 lbf (10 lbf, Max.)
 Closing (axial) force - 1 lbf (10 lbf, Max.)

Meets the accessible design requirements of 5 lbf maximum.

5.5.2 Accessible designs: **Pass**
Accessible designs were tested at the high pressure of 80 psi instead of 125 psi.

5.5.3 Swing spouts: **Pass**
Force required to turn spout – 2 lbf (10 lbf max at the end of spout).

5.5.4 Ball joints: **NA**

5.6 Life cycle

5.6.1.2 Valves or controls: **Pass**

<u>Fitting type</u>	<u>Number of cycles</u>	<u>Force</u>	<u>Requirement</u>
Kitchen Faucet w/Spray	500,000	1 lbf (open)	12 lbf, Max.
		1 lbf (operate)	12 lbf, Max.
		1 lbf (close)	12 lbf, Max.

5.6.1.3 Swing spouts: **Pass**
Leakage - None (none).
Turning force – 2 lbf (10 lbf Max at the end of spout).

5.6.1.4 Shower heads, body sprays, and hand-held shower assemblies: **NA**

5.6.1.5 Diverters: **Pass**
Operating axial force - 1 lbf (11.2 lbf Max).
Leakage for kitchen or lavatory side spray diverters - 0 gpm (0.3 gpm Max).

5.6.5.1 Shower hoses, pullout spout hoses, and side spray hoses: **Pass**
Number of cycles at 15 lbf tension - 10,000
Any failures: None (none)

5.6.5.2 Axial force of hose end connection: **Pass**
No Pull Out (No pull out after 75 lbf applied.)

5.6.5.3 Mandrel test: **Pass**
No Leakage (No leakage after 15 lbf applied to both ends around the mandrel.)

5.7 Resistance to installation loading

5.7.1 Bending Strength: **NA**

5.7.2	Thread torque strength: Fitting size – <u>½ in. NPSM</u> Torque load – <u>45 lbf•ft (45 lbf•ft)</u> Any cracking or separation of threads - <u>None</u> (none)	Pass
5.8	Resistance to use loading	
5.8.1.1	Operating Controls: Force (axial) applied - <u>>30 lbf</u> (30 lbf) Any Fracture or handle or stem - <u>None</u> (none)	Pass
5.8.1.2	Wall-mounted bath or shower controls:	NA
5.8.1.3	All other operating controls:	NA
5.8.2	Maintenance of installed position:	NA
5.8.3	Swing spout strength: The swing spout withstood a 14 lb load for 3 minutes - <u>Yes</u> (yes) Deflection angle after 30 minutes - <u>1°</u> (15° max)	Pass
5.9	Backflow prevention	
5.9.2.1	Air gaps: Air Gap – <u>8-1/2 in.</u> (1-1/2 in., Min.)	Pass
5.9.3.1	Fittings with a submersible outlet: Backflow protection devices comply with ASME A112.18.3 - <u>Yes</u> (yes). <i>*See Appendix A</i>	Pass
5.9.4.1	Presence of hidden check valves: Was water drawn into sight tube from 0 to 25 in. of Hg - <u>Yes</u> (yes). Was water drawn into sight tube during surge from 0 to 25 to 0 in. of Hg - <u>Yes</u> (yes).	Pass
5.9.4.2	Check valve leakage (upstream check valves): Any drop in pressure after 5 minutes at 0.2 psi - <u>No</u> (No). Any drop in pressure after 5 minutes at 5 psi - <u>No</u> (No). Check valve leakage (downstream check valves): Any drop in pressure after 5 minutes at 0.2 psi – <u>No</u> (No). Any drop in pressure after 5 minutes at 5 psi - <u>No</u> (No).	Pass
5.9.4.3	Adequacy of the atmospheric vent:	NA
5.9.5	Back siphonage prevention in side spray diverters:	NA
5.10	Automatic compensating valves	NA

Markings

6.1	General:	Pass
	Plumbing fitting markings: <u>Eclipse Trademark</u> (Shall be marked with the manufacturer's recognized name, trademark, or other mark for private labeling). Was mark permanent on the plumbing fitting - <u>Yes</u> (yes) Was mark visible on the plumbing fitting after installation - <u>Yes</u> (yes)	
6.2	Temperature identification:	Pass
	Markings on temperature control settings – <u>Graphically Blue / Red</u> (cold, warm, hot, etc.).	
6.3	Packaging:	Pass
	Package markings – <u>Eclipse Stainless Steel</u> (Shall be marked with the manufacturer's Recognized name, trademark, or other mark for private labeling). Model number – <u>KPS 3030</u> (yes)	
6.4	Instruction for automatic compensating valves:	N/A

Appendix A

ASME A112.18.3 - 2002

8.1.1 The device did utilize two check valves in series proven by tests as in compliance with para. 7 that operate independently as integral parts of the device. **Pass**

8.1.2 When tested in accordance with para. 12, no contaminants entered the potable water System through backflow nor did any contaminants enter the fitting beyond the first barrier. **Pass**

8.2.1 Selection of Test Specimens

Two samples were randomly selected from a lot of five production samples. The installation Of the backflow prevention devices was verified as conforming to the manufacturer's drawings And specifications before testing.

Back Pressure:

(a) The device did not show any signs of leakage when tested in accordance with Para. 12.1

Pass

Back Siphonage:

(b) The device did not have a rise in the sight glass above the water level in the reservoir within 0.5 in. of the critical level when tested in accordance with para. 12.2.

Pass

Independence of devices per para. 13:

(c) The failure of one device in any mode did not affect the operation of the other device.

Pass

Leakage of Protection Systems with Atmospheric Vents per para. 14:

(d) A backflow protection system with an atmospheric vent was not utilized in the subject fittings.

NA

End of Report