

SECTION 224100 - RESIDENTIAL PLUMBING FIXTURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Kitchen sinks.
2. Supply fittings.
3. Waste fittings.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: Include diagrams for power, signal, and control wiring.

1.3 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: Counter cutout templates for mounting of counter-mounted plumbing fixtures.

1.4 CLOSEOUT SUBMITTALS

- A. Maintenance data.

PART 2 - PRODUCTS

2.1 KITCHEN SINKS

- A. Kitchen Sinks S-1: One bowl, counter mounted, stainless steel.

1. Stainless-Steel Kitchen Sinks:

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- 1) Elkay Manufacturing Co.
- 2) Just Manufacturing.
- 3) Kohler Co.

2. Fixture:

- a. Standard: ASME A112.19.3/CSA B45.4 for stainless-steel kitchen sinks.
 - b. Overall Dimensions: 25"x22"x9".
 - c. Metal Thickness: 0.050 inch (1.3 mm).
3. Faucet: Insert sink-faucet designation from "Sink Faucets" Article.
 4. Supply Fittings: Comply with requirements in "Supply Fittings" Article.
 5. Waste Fittings: Comply with requirements in "Waste Fittings" Article, except include continuous waste for multibowl sinks.
- a. Disposer: Not required.
 - b. Dishwasher Air-Gap Fitting: Not required.

2.2 SINK FAUCETS

- A. NSF Standard: Comply with NSF/ANSI 61 Annex G, "Drinking Water System Components - Health Effects," for faucet materials that will be in contact with potable water.

- B. Sink Faucets: Solid brass,.

1. General-Duty, Solid-Brass Faucets:

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- 1) American Standard.
- 2) Chicago Faucets; Geberit Company.
- 3) Delta Faucet Company.
- 4) Eljer, Inc.
- 5) Elkay Manufacturing Co.
- 6) Just Manufacturing.
- 7) Kohler Co.
- 8) Price Pfister, Inc.
- 9) Speakman Company.
- 10) T&S Brass and Bronze Works, Inc.
- 11) Zurn Industries, LLC.

2. Standard: ASME A112.18.1/CSA B125.1.
3. General: Include hot- and cold-water indicators; coordinate faucet inlets with supplies and fixture holes; coordinate outlet with spout and fixture receptor.
4. Kitchen Sink Option: Separate hand spray complying with ASSE 1025.
5. Finish: Polished chrome plate.
6. Maximum Flow Rate: 2.5 gpm (9.5 L/min.) unless otherwise indicated.
7. Mixing Valve: Single control.
8. Backflow-Prevention Device for Hand Spray: Required.
9. Centers: 4 inches (102 mm).
10. Mounting: Deck, exposed.
11. Handle(s): Lever.
12. Spout Type: Swivel gooseneck.
13. Spout Outlet: Aerator.

14. Drain: Lift and turn.

2.3 SUPPLY FITTINGS

- A. NSF Standard: Comply with NSF/ANSI 61 Annex G, "Drinking Water System Components - Health Effects," for faucet materials that will be in contact with potable water.
- B. Standard: ASME A112.18.1/CSA B125.1.
- C. Kitchen Sink Supply Fittings:
 1. Supply Piping: Chrome-plated-brass pipe or chrome-plated-copper tube matching water-supply piping size. Include chrome-plated wall flange.
 2. Stops: Chrome-plated-brass, one-quarter-turn, ball-type or compression stop with inlet connection matching water-supply piping type and size.
 - a. Operation: Loose key.
 3. Risers:
 - a. Size: **NPS 3/8 (DN 10)** for kitchen sinks.
 - b. Material: ASME A112.18.6, braided- or corrugated-stainless-steel flexible hose riser.

2.4 WASTE FITTINGS

- A. Standard: ASME A112.18.2/CSA B125.2.
- B. Drain: Grid type with **NPS 1-1/4 (DN 32)** offset tailpiece for accessible lavatories.
- C. Drain: Pop-up type with **NPS 1-1/4 (DN 32)** straight tailpiece as part of faucet for standard lavatories.
- D. Drain: Grid type with **NPS 1-1/2 (DN 40)** offset tailpiece for accessible kitchen sinks.
- E. Drain: Grid type with **NPS 1-1/2 (DN 40)** straight tailpiece for standard kitchen sinks.
- F. Trap:
 1. Size: **NPS 1-1/2 (DN 40)** for kitchen sinks.
 2. Material: Chrome-plated, two-piece, cast-brass trap and swivel elbow with **0.032-inch- (0.83-mm-)** thick brass tube to wall; and chrome-plated-brass or -steel wall flange.
 3. Material: Stainless-steel, two-piece trap and swivel elbow with **0.012-inch- (0.30-mm-)** thick stainless-steel tube to wall; and stainless-steel wall flange.
 4. Material: ASTM F 409 ABS or PVC two-piece trap and waste to wall and wall flange.

2.5 GROUT

- A. Standard: ASTM C 1107/C 1107M, Grade B, post-hardening and volume-adjusting, dry, hydraulic-cement grout.
- B. Characteristics: Nonshrink; recommended for interior and exterior applications.
- C. Design Mix: **5000-psi (34.5-MPa)**, 28-day compressive strength.
- D. Packaging: Premixed and factory packaged.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install plumbing fixtures level and plumb according to roughing-in drawings.
- B. Install floor-mounted water closets on closet flange attachments to drainage piping.
- C. Install water-supply piping with stop on each supply to each fixture to be connected to water distribution piping. Attach supplies to supports or substrate within pipe spaces behind fixtures. Install stops in locations where they can be easily reached for operation.
 - 1. Exception: Use ball or gate valves if supply stops are not specified with fixture. Comply with valve requirements specified in Section 220523.12 "Ball Valves for Plumbing Piping" and Section 220523.15 "Gate Valves for Plumbing Piping."
- D. Install tanks for accessible, tank-type water closets with lever handle mounted on wide side of compartment.
- E. Install toilet seats on water closets.
- F. Install faucet flow-control fittings with specified flow rates and patterns in faucet spouts if faucets are not available with required rates and patterns. Include adapters if required.
- G. Install traps on fixture outlets.
 - 1. Exception: Omit trap on fixtures with integral traps.
 - 2. Exception: Omit trap on indirect wastes unless otherwise indicated.
- H. Install protective shielding pipe covers and enclosures on exposed supplies and waste piping of accessible lavatories and sinks. Comply with requirements in Section 220719 "Plumbing Piping Insulation."
- I. Install wall flanges or escutcheons at piping wall penetrations in exposed, finished locations. Use deep-pattern escutcheons if required to conceal protruding fittings. Comply with escutcheon requirements specified in Section 220518 "Escutcheons for Plumbing Piping."

- J. Seal joints between plumbing fixtures, counters, floors, and walls using sanitary-type, one-part, mildew-resistant silicone sealant. Match sealant color to fixture color. Comply with sealant requirements specified in Section 079200 "Joint Sealants."

3.2 CONNECTIONS

- A. Connect fixtures with water supplies, stops, and risers, and with traps, soil, waste, and vent piping. Use size fittings required to match fixtures.
- B. Comply with water piping requirements specified in Section 221116 "Domestic Water Piping."
- C. Comply with soil and waste piping requirements specified in Section 221316 "Sanitary Waste and Vent Piping."
- D. Install protective shielding pipe covers and enclosures on exposed supplies and waste piping of accessible lavatories and sinks. Comply with requirements in Section 220719 "Plumbing Piping Insulation."

3.3 ADJUSTING

- A. Operate and adjust plumbing fixtures and controls. Replace damaged and malfunctioning fixtures, fittings, and controls.
- B. Adjust water pressure at faucets to produce proper flow.

3.4 CLEANING AND PROTECTION

- A. After completing installation of plumbing fixtures, inspect and repair damaged finishes.
- B. Clean plumbing fixtures, faucets, and other fittings with manufacturers' recommended cleaning methods and materials.
- C. Provide protective covering for installed plumbing fixtures and fittings.
- D. Do not allow use of plumbing fixtures for temporary facilities unless approved in writing by Owner.

END OF SECTION 224100