

**SECTION 22 42 13.13**  
**COMMERCIAL WATER CLOSETS**

**PART 1 - GENERAL**

**1.1 SUMMARY**

**A. Section Includes:**

1. Wall-mounted water closets.
2. Flushometer valves.
3. Toilet seats.
4. Supports.

**1.2 DEFINITIONS**

- A. High-Efficiency Flush Volume:** 1.28 gal. or less per flush.
- B. WaterSense Fixture:** Water closet and/or flushometer valve/tank certified by the EPA to meet the WaterSense performance criteria.

**1.3 ACTION SUBMITTALS**

**A. Product Data:**

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for water closets.
2. Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.

**PART 2 - PRODUCTS**

**2.1 PERFORMANCE REQUIREMENTS**

**A. Standards:**

1. Comply with ASME A112.19.2/CSA B45.1 for water closets.
2. Comply with ASME A112.19.5/CSA B45.15 for flush valves and spuds for water closets and tanks.
3. Comply with ASSE 1037/ASME A112.1037/CSA B125.37 for flush valves.
4. Comply with IAMPO/ANSI Z124.5 for water-closet (toilet) seats.
5. Comply with ASME A112.6.1M for water-closet supports.
6. Comply with ICC A117.1 for ADA-compliant water closets.

7. Comply with ASTM A1045 for flexible PVC gaskets used in connection of vitreous china water closets to sanitary drainage systems.
8. Comply with ASME A112.4.3 for plastic fittings used in connection of vitreous china water closets to sanitary drainage systems.

## 2.2 WALL-MOUNTED WATER CLOSETS

### A. Water Closets - Wall Mounted, Top Spud: .

1. Source Limitations: Obtain water closets from single source from single manufacturer.
2. Bowl:
  - a. Material: Vitreous china.
  - b. Type: Siphon jet.
  - c. Style: Flushometer valve.
  - d. Mounting Height: Standard ADA compliant.
  - e. Rim Contour: Elongated.
  - f. Water Consumption: 1.28 gal. per flush.
  - g. Spud Size and Location: NPS 1"; top.
  - h. Color: White .
3. Flushometer Valve: Per below. .
4. Toilet Seat: Per below. .
5. Support: Water-closet carrier .

## 2.3 FLUSHOMETER VALVES

### A. Flushometer Valves - Piston, Sensor Operated, Hard Wired: .

1. Source Limitations: Obtain flushometer valve from single source from single manufacturer.
2. Minimum Pressure Rating: 125 psig.
3. Features: Include integral check stop and backflow-prevention device.
4. Material: Brass body with corrosion-resistant components.
5. Style: Exposed .
6. Exposed Flushometer-Valve Finish: Chrome-plated.
7. Panel Finish: Chrome-plated or stainless steel.
8. Trip Mechanism: Hard-wired, control-voltage, electronic sensor; listed and labeled as defined in NFPA 70, by qualified testing agency, and marked for intended location and application.
9. Consumption: 1.28 gal. per flush.
10. Minimum Inlet: NPS 1-1/2.

## 2.4 TOILET SEATS

### A. Toilet Seats: .

1. Source Limitations: Obtain toilet seat from single source from single manufacturer.
2. Material: Plastic.
3. Type: Commercial (Heavy duty).

4. Shape: Elongated rim, open front .
5. Hinge: Self-sustaining, check.
6. Hinge Material: Noncorroding metal.
7. Seat Cover: Not required.
8. Color: White .
9. Surface Treatment: Antimicrobial .

## 2.5 SUPPORTS

### A. Water-Closet Carrier:

1. Source Limitations: Obtain water-closet carrier from single source from single manufacturer.
2. Description: Waste-fitting assembly, as required to match drainage piping material and arrangement with faceplates, couplings gaskets, and feet; bolts and hardware matching fixture. Include additional extension coupling, faceplate, and feet for installation in wide pipe space.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine roughing-in for water-supply piping and sanitary drainage and vent piping systems to verify actual locations of piping connections before water-closet installation.
- B. Examine walls and floors for suitable conditions where water closets will be installed.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION, GENERAL

#### A. Water-Closet Installation:

1. Install level and plumb.
2. Install floor-mounted water closets on bowl-to-drain connecting fitting attachments to piping or building substrate.
3. Install accessible, wall-mounted water closets at mounting height in accordance with ICC A117.1.

#### B. Support Installation:

1. Use carrier supports with waste-fitting assembly and seal.
2. Install wall-mounted, back-outlet water-closet supports with waste-fitting assembly and waste-fitting seals; and affix to building substrate.
3. Measure support height installation from finished floor, not structural floor.

#### C. Flushometer-Valve Installation:

1. Install flushometer-valve, water-supply fitting on each supply to each water closet.
2. Attach supply piping to supports or substrate within pipe spaces behind fixtures.
3. Install actuators in locations easily reachable for people with disabilities.

D. Install toilet seats on water closets.

E. Wall Flange and Escutcheon Installation:

1. Install wall flanges or escutcheons at piping wall penetrations in exposed, finished locations and within cabinets and millwork.
2. Comply with escutcheon requirements specified in Section 22 05 00 "Common Work Results for Plumbing."

F. Joint Sealing:

1. Seal joints between water closets and walls and floors using sanitary-type, one-part, mildew-resistant silicone sealant.
2. Match sealant color to water-closet color.

### 3.3 PIPING CONNECTIONS

- A. Connect water closets with water supplies and soil, waste, and vent piping. Use size fittings required to match water closets.
- B. Comply with water piping requirements specified in Section 22 11 16 "Domestic Water Piping."
- C. Comply with soil and waste piping requirements specified in Section 22 13 16 "Sanitary Waste and Vent Piping."
- D. Where installing piping adjacent to water closets, allow space for service and maintenance.

### 3.4 CONTROL CONNECTIONS

- A. Install control and electrical power wiring to field-mounted control devices.

### 3.5 ADJUSTING

- A. Operate and adjust water closets and controls. Replace damaged and malfunctioning water closets, fittings, and controls.
- B. Adjust water pressure at flushometer valves to produce proper flow.

END OF SECTION 22 42 13.13