

**SECTION 11 27 00  
PHOTOGRAPHIC PROCESSING EQUIPMENT**

SPEC WRITER NOTES:

1. Delete between // \_\_\_\_ // if not applicable to project.
2. Delete other items or paragraphs in the section that are not applicable and renumber the paragraphs.

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

This section specifies sinks, cabinets, and fittings required for photographic processing.

**1.2 RELATED WORK**

- //A. Metal Casework: Section 12 31 00, MANUFACTURED METAL CASEWORK.//
- //B. Plastic Casework: Section 12 34 00, MANUFACTURED PLASTIC CASEWORK.//
- C. Plumbing Connections: Section 22 11 00, FACILITY WATER DISTRIBUTION and Section 22 66 00, CHEMICAL-WASTE SYSTEMS FOR LABORATORY AND HEALTHCARE FACILITIES.
- D. Electrical Connections: Section 26 05 21, LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (600 VOLTS AND BELOW).

**1.3 QUALITY CONTROL**

- A. Manufacturer Qualifications: Manufacturer regularly and presently manufactures photographic lab equipment.
- B. Chemical Resistance: Photographic lab equipment is resistant to the following chemicals, as evidenced by manufacturer's standard 24-hour test for spill resistance:

Acetic Acid	98%	Hydrochloric Acid	33%
Acetone		Methyl Alcohol	
Ammonium Hydroxide	28%	Mineral Oil	
Amyl Acetate		Nitric Acid	60%
Benzene		Phenol	10%
Butyl Alcohol		Phosphoric Acid	5%
Calcium Hypochlorite	Saturated	Sodium Hydroxide	20%
Carbon Tetrachloride		Sodium Sulfate	Saturated
Chromic Acid	20%	Sulfuric Acid	77%
Ethyl Acetate		Toluene	
Ethyl Alcohol		Trichlorethylene	

Formic Acid	90%	Xylene	
Gasoline		Zinc Chloride	Saturated

C. Electrical Components and Devices: UL listed and labeled for intended use.

**1.4 SUBMITTALS**

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Manufacturer's Literature and Data: Include the following:
  - 1. Illustrations and descriptions of photographic lab equipment.
  - 2. Optional auxiliary equipment and controls that will be included for project.
- C. Shop Drawings: Show details of fabrication, installation, adjoining construction, coordination with plumbing work, anchorage, and other work required for complete installation.
- D. Certification: Submit manufacturer's certification that units conform to chemical-resistance requirements.
- E. Field Test Reports: Indicate dates and times of tests and certify test results.

**1.5 APPLICABLE PUBLICATIONS**

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.
- B. Scientific Equipment and Furniture Association (SEFA):
  - 2-2010 ..... Installation, Recommended Practices for Scientific Laboratory Furniture and Equipment
  - 7-2010 ..... Fixtures

**PART 2 - PRODUCTS**

**2.1 SINKS UNITS**

- A. Manufactured from a blended-resin formulation that resists the corrosive effects of rapid fixers, color bleaches, iron chloride, and other chemicals required in photographic and graphic arts processing.
- B. Fabrication: Molded in one piece with radius outside and inside corners.
- C. Sink Bottom Surface: Constructed to produce positive drainage while supporting processing trays and tanks in a level position.

## 2.2 MECHANICAL SERVICE FIXTURES

- A. General: Heavy grade, designed for photographic laboratory use, complying with requirements in SEFA 7.
- B. Valve Bodies: Stainless steel or red brass alloy with minimum 81 percent copper.
- C. Thermostatic Water Temperature Control Unit:
  - 1. Control unit capable of maintaining preselected temperature range of 18 to 24 degrees C (65 to 75 degrees F); consisting of thermostatic temperature-control valve, stop-check valves with removable strainers, dial thermometer, and fittings as required for complete assembly; ready for connection to hot-, cold-, and chilled-water supply.
  - 2. Install removable cartridge filter capable of removing particulate matter 5 microns or larger. Locate filter in line after thermostatic valve and in position where cartridge may be easily replaced.

- D. Gooseneck Faucet:

SPEC WRITER NOTE: Nickel-copper alloy is marketed under the Monel trade name.

- 1. Compression-type valve with stainless-steel or nickel-copper-alloy seat, thermosetting heat-resisting valve disc, and stainless-steel or nickel-copper-alloy locking screw or nut.
  - 2. Equip each gooseneck with removable 10 serrated hose connector.
  - 3. Equip each faucet with angle-type vacuum breaker.
- E. Washer Jet System:
  - 1. Compression-type valve with stainless-steel or nickel-copper-alloy seat, thermosetting valve disc, and stainless-steel or nickel-copper-alloy locking screw or nut; four stainless-steel, brass, or bronze water jets designed for circulation of water; and fittings as required for complete assembly.
- F. Finish: Exposed parts, except stainless-steel, polished chrome plate.

## 2.3 WATER CHILLER

- A. Hermetically sealed, water-cooled water chiller mounted remotely or adjacent to unit served, capable of producing chilled water when blended with water at 29 degrees C (85 degrees F).
- B. Incoming water supply, will produce flow rate of 0.095 L/s (1-1/2 gpm) of water at 18 degrees C (65 degrees F).

**2.4 TRAPS AND PIPES**

Provide chemical-resisting pipe traps with clean-out plugs and fittings as specified for chemical waste service in Section 22 66 00, CHEMICAL-WASTE SYSTEMS FOR LABORATORY AND HEALTHCARE FACILITIES. Clean-out plug is removable without tools.

**2.5 CABINETS**

- A. Material: // Metal // Plastic laminate // Metal or plastic laminate //.
- //1. For metal cabinets, see Section 12 31 00, MANUFACTURED METAL CASEWORK.//
  - //2. For plastic-laminate cabinets, see .//
- B. Hardware: Factory installed; exposed surfaces with chrome-plated satin finish.
- 1. Hinges: Hospital type, steel or brass, 5 knuckle, 64 mm (2-1/2 inches).
  - 2. Catches: Plunger type, top and bottom each door, or roller type, top each door.
  - 3. Pulls: Cast or forged metal, or metal-reinforced plastic bar.
  - 4. Silencers: Rubber, two per door.

**2.6 FABRICATION**

- A. Plumbing: Plumb each sink unit at factory.
- 1. Factory test plumbing at 689 kPa (100 psig) hydrostatic pressure.
- B. For sink units containing electrically controlled components, wire and make connections within unit at factory.
- C. Factory install service fixtures in locations shown on drawings.

**PART 3 - EXECUTION****3.1 INSTALLATION**

Install units according to manufacturer's written instructions and relevant requirements in SEFA 2.

**3.2 TESTING**

- A. Field test installed units after water systems are pressurized for proper operation.
- 1. Operate each component of equipment. During and after testing, there shall be no evidence of leaks, electrical malfunction, or other symptom of failure.
  - 2. For units that fail testing, make adjustments and corrections to installation, or replace units, and repeat tests until units operate properly.

**3.3 PROTECTING AND CLEANING**

- A. Protect equipment from dirt, water, and chemical or mechanical injury during the remainder of the construction period.
- B. At the completion of work, clean equipment as required to produce ready-for-use condition.

**3.4 INSTRUCTIONS**

Instruct personnel and transmit operating instructions in accordance with requirements in .

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