

SECTION 119500
ARTS AND CRAFTS EQUIPMENT (*AD-03)

PART 1 GENERAL

1.01 SUBMITTALS

- A. Product Data: For each product type and accessory. Include product data, installation instructions, and manufacturer's recommendations.
- B. Shop Drawings: Indicate space required, clearances, and relationship to adjacent construction. Provide ventilation duct layout and routing.
- C. Operation and Maintenance Data: For kilns, kiln controls, and ventilation systems, to include in operation and maintenance manual.
- D. Specimen warranty.

1.02 QUALITY ASSURANCE (*AD-03)

1.03 DELIVERY, STORAGE, AND HANDLING

- A. Deliver kilns, ventilation systems, and accessories to project site in manufacturer's original packaging, with protective coverings intact.
- B. Store under cover and elevated above grade. Do not stack items on top of kilns.
- C. Protect from damage due to weather, excessive temperature, and construction operations.

1.04 WARRANTY

- A. See Section 017800 - Closeout Submittals for additional warranty requirements.
- B. Manufacturer Warranty: Provide two-year manufacturer warranty for kiln systems, including kiln, ventilation, accessories, and workmanship.

PART 2 PRODUCTS

2.01 MANUFACTURERS, GENERAL

- A. Substitutions: The following products are listed by basis-of-design. Substitutions are acceptable for all products; submit complete product data including comparison in accordance with Division 1 requirements.

2.02 GAS KILN

- A. Basis-of-Design: Bailey DLX FL 22/14.
- B. Gas Kiln: Provide front-loading gas kiln with components, options and accessories for a complete kiln system, including the following:
 - 1. Outside Unit Dimensions: 46.5 inches W by 62 inches D by 70.5 inches H.
 - 2. Total Inside Volume: 22 cu. ft.
 - 3. Stack Space: 14 cu. ft.
 - a. Stack Area Dimensions: 24 inches W by 25 inches D by 41 inches H.
 - 4. Ventilation: Provide kiln manufacturer's standard high-temperature combustion hood for kiln size indicated. Coordinate with Division 23 mechanical for vent pipe.
 - 5. Provide residual hood with draft inducer; to be controlled by a fail-safe master on/off wall switch (master switch powers on both the kiln and draft inducer simultaneously).

6. Provide with manufacturer's standard accessory furniture kit consisting of shelves and assorted post sizes. Basis-of-Design Bailey - Studio 18/12.
7. Provide with manufacturer's standard oxygen probe accessory.
8. Provide with manufacturer's safety system including high limit controller, soak control, ultra violet safety system, fire eye control, thermocouple, solenoids, and automatic ignition system (basis-of-design Bailey "High Limite #3 Safety Flame System").
9. Provide manufacturer furnished double-wall insulated vent system and roof termination.

2.03 POTTERY WHEELS

- A. Standard Pottery Wheel:
 1. Basis-of-Design: Brent "C" Pottery Wheel.
 2. Provide complete pottery wheel assembly including table, legs, controller, motor and belt assembly, and foot pedal.
 3. 14 inch diameter aluminum head.
 4. Capable of handling 225 lbs of clay.
 5. 3/4 hp, 7 amp DC motor.
 6. Electrical: 110 V, 1 Ph, 60 Hz.

2.04 SCREEN PRINTING EQUIPMENT

- A. Screen Exposure Equipment:
 1. Basis-of-Design: NuArc; MSP 3140.
 2. Maximum Screen Frame Size: 31 inches by 40 inches.
 3. Electrical: 110 V, 1 Ph, 60 Hz, 18 A.
- B. Screen Washout Booth:
 1. Basis-of-Design: RhinoTech Professional Series; 572-30.
 2. Size: 72 inches wide by 60 inches high by 30 inches deep.

2.05 KILN ACCESSORIES

- A. Electric Kiln Filtration System: Provide in electric kiln room at location indicated.
 1. Basis-of-Design: Powermatic; PM
 2. Dimensions: Nominal 33 inches long by 25 inches wide by 13 inches high.
 3. Airflow: Three speed, 547 CFM, 706 CFM, 1196 CFM (basis-of-design).
 4. Motor: 115 V, 1 Ph, 60 Hz, 3.5 A; 1/4 HP.
 5. Filtration: Double filter system with replaceable filters; outer filter shall remove 99% of 5 micron particles and inner filter shall remove 85% of 1 micron particles.

2.06 DYE VAT (FLOOR KETTLE) (*AD-03)

- A. Dye Vat: Self-contained, electrically-heated steam jacketed, Type 316 stainless steel floor kettle with domed cover, 2-inch diameter sanitary drawoff line, three adjustable legs; 32-inch outside diameter.
 1. Basis-of-Design: Groen Model EE-40 (40 gallon).
 2. Accessories: Provide with the following basket inserts, swing faucets, automatic water filler, kettle brush kit, contour measuring strip, and gallon etch marks.
 3. Electrical: 208-240 V; 3 Ph; 60 Hz.

2.07 STORAGE CABINETS (*AD-03)

- A. **Flammable Storage Cabinets: Pre-fabricated 18-gauge steel cabinets, tall storage cabinet; complying with the following: (*AD-03)**
1. **Basis-of-Design: Eagle; Model 1923X.**
 2. **Dimensions: 24 inch wide by 18 inch deep by 65 inch high; nominal.**
 3. **Construct to NFPA 30 and applicable OSHA requirements.**
 4. **Fire Resistance: Maximum internal temperature of 325 degrees F at the center, and 1 inch from top of the cabinet when cabinet is subjected to a ten minute fire test that simulates fire exposure of a standard time-temperature curve specified in ASTM E119.**
 5. **Shelves: Provide three shelves; full depth, adjustable.**
 6. **Bottom Pan: 2 inches deep, corrosion-resistant, liquid-tight pan covering entire bottom of cabinet.**
 7. **Cabinet Hardware: UL-listed.**
 - a. **Hinges: Full-length stainless steel continuous (piano) hinges.**
 - b. **Self-closing Doors: Comply with requirements of NFPA 1 and ICC (IFC). Minimum 90 degree opening. Three-point latch arrangement, door(s) shutting and latching automatically when hold-open device's fusible link melts at 165 degrees F under fire conditions outside the cabinet. At pair of doors, synchronize latching so that both doors always fully close.**
 - c. **Door Handles: Manufacturer's standard, with slip-resistant grip.**
 - 1) **Provide manufacturer's standard cylinder lock and key set.**
 8. **Signage: Provide manufacturer's standard signage reading "FLAMMABLE - KEEP FIRE AWAY" or similar message in bright red color.**
- B. **Acid/Corrosive Storage Cabinets: Pre-fabricated 18-gauge steel undercounter cabinets, complying with the following: (*AD-03)**
1. **Basis-of-Design: Justrite; Model 8923222.**
 2. **Dimensions: 35 inch wide by 22 inch deep by 35 inch high; nominal.**
 3. **Construct to NFPA 30 and applicable OSHA requirements.**
 4. **Fire Resistance: Maximum internal temperature of 325 degrees F at the center, and 1 inch from top of the cabinet when cabinet is subjected to a ten minute fire test that simulates fire exposure of a standard time-temperature curve specified in ASTM E119.**
 5. **Shelves: Provide one full depth, adjustable shelf.**
 6. **Bottom Pan: 2 inches deep, corrosion-resistant, liquid-tight pan covering entire bottom of cabinet.**
 7. **Cabinet Lining: Manufacturer's standard thermoplastic lining to protect against corrosion from drips or off-gassing.**
 8. **Cabinet Hardware: UL-listed.**
 - a. **Hinges: Full-length stainless steel continuous (piano) hinges.**
 - b. **Self-closing Doors: Comply with requirements of NFPA 1 and ICC (IFC). Minimum 90 degree opening. Three-point latch arrangement, door(s) shutting and latching automatically when hold-open device's fusible link melts at 165 degrees F under fire conditions outside the cabinet. At pair of doors, synchronize latching so that both doors always fully close.**
 - c. **Door Handles: Manufacturer's standard, with slip-resistant grip.**
 - 1) **Provide manufacturer's standard cylinder lock and key set.**
 9. **Signage: Provide manufacturer's standard signage reading "FLAMMABLE - KEEP FIRE AWAY" or similar message in bright red color.**

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verification of Conditions: Verify that all finishes have been completed in installation locations, and verify that clearances to adjacent construction are adequate for proper and safe operation of equipment.
- B. Examine roughing-in of electrical and ventilation systems to verify location of connections is acceptable prior to installation of kilns.

3.02 PREPARATION

- A. Protection of In-Place Conditions: Protect adjacent finishes from damage or wear due to handling and installation of kilns and accessories.

3.03 INSTALLATION

- A. Install kilns and accessories in strict accordance with manufacturer's written instructions.
- B. Coordinate installation with adjacent construction to ensure proper clearances.
- C. Install units in final locations after finishes have been completed in each area.
- D. Install units level, plumb, properly aligned, and securely in place, with control units facing toward clear, open floor space.
- E. Verify that final installation clearances are adequate to properly and safely operate equipment.
- F. Refer to Division 26 for electrical requirements.
- G. Ventilation System:
 - 1. Assemble and install system components on kiln in accordance with manufacturer's written instructions.
 - 2. Coordinate with Division 23 mechanical sections and mechanical Drawings for vent pipe attachment.

3.04 STARTUP, DEMONSTRATION, AND TRAINING

- A. See Section 017900 - Demonstration and Training for additional requirements.
- B. Manufacturer Services: Provide services of manufacturer's field representative to ensure proper operation of kilns and to provide demonstration and training.
- C. Demonstrate proper operation of equipment to Owner's designated personnel.
- D. Training: Train Owner's personnel on operation and maintenance of system.
 - 1. Software: Coordinate with Owner's personnel to ensure that kiln control software is properly installed on Owner's computer hardware. Training shall include the use of control software.

3.05 ADJUSTING, CLEANING, AND PROTECTION

- A. After startup and demonstration, verify proper operation and make any necessary adjustments.
- B. Protect installed kilns from subsequent construction operations. Do not stack or place any materials on or against kilns.
- C. Provide final cleaning of kiln and leave kiln ready for operation.

END OF SECTION 119500
