

SECTION 12315

MANUFACTURED TABLE SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes factory-assembled metal table units.
- B. Related Sections include the following:
 - 1. Division 11 Section "Laboratory Fume Hoods" for manufactured laboratory fume hoods.
 - 2. Division 12 Section "Painted Steel Laboratory Casework" for manufactured laboratory casework and countertops.
 - 3. Division 12 Section "Stainless Steel Laboratory Casework" for manufactured laboratory casework and countertops.
 - 4. Division 12 Section "Manufactured Wood Casework" for manufactured wood casework and countertops.
 - 5. Division 12 Section "Manufactured Plastic Laminate Casework" for manufactured plastic laminate casework and countertops.

1.2 PERFORMANCE REQUIREMENTS

- A. Static Load Performance of Table Units: Design table units to withstand the maximum static loads indicated without causing deformation or tipping of the table.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples for Selection: Manufacturer's color charts showing the full range of colors, textures, and patterns available for each type of material exposed to view.
 - 1. Color chart for table finish, casework finish and edge treatments.
 - 2. Plastic laminate for countertops and shelving, 2 by 3 inches (50 by 75 mm).
 - 3. One unit of each type of exposed hardware.
- C. Maintenance Data: For countertops and finishes to include in maintenance manuals specified in Division 1.
- D. Warranties: Special warranties specified in this Section.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A firm experienced in manufacturing table units similar to those indicated for this Project and with a record of successful in-service performance.
- B. Source Limitations for Cabinets: Obtain tables and cabinets through one source from a single manufacturer.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Do not deliver tables until painting and similar operations that could damage, soil, or deteriorate units have been completed in installation areas.
- B. Protect finished surfaces from soiling and damage during handling and installation. Keep covered with polyethylene film or other protective covering.
- C. Deliver factory-assembled units.

1.6 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install table systems until building is enclosed, wet-work is complete, and HVAC system is operating and will maintain temperature and relative humidity at occupancy levels during the remainder of the construction period.
- B. Field Measurements: Where laboratory casework is indicated to fit to existing construction, verify dimensions of existing construction by field measurements before fabrication and indicate measurements on Shop Drawings.

1.7 WARRANTY

- A. General Warranty: Special warranty specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B. Special Warranty: Written warranty, executed by manufacturer agreeing to repair or replace components of table systems that fail in materials or workmanship within specified warranty period.
 - 1. Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by the following:
 - 1. Cambridge Series by New England Laboratory Casework Co., Inc. 781-932-9980.
www.newenglandlab.com email info@newenglandlab.com

2.2 WELDED TABLE SYSTEMS

- A. Style 100 H-Frame Standing Height Workstation: 36 inch high units as follows:
 - 1. Construction: All-welded construction of 16 gage apron and 2 inch square tubing creating a full perimeter frame capable of supporting an evenly distributed 1,000 pound load.
 - 2. Legs: 16 gage, 2 inch square tubing with adjustable levelers.
 - 3. Intermediate Hanging Rail: 16 gage steel for suspended cabinet installation.
 - 4. Lower Cross Members: 16 gage steel tubing.
 - a. Cross Rail Location: **[Rear.] [Center.] [Specify]**
 - 5. Work Surface: **[Plastic Laminate.] [Epoxy Resin.] [Phenolic Resin.] [Stainless Steel.] [Maple.]**

- B. Style 110: H-Frame Sitting Height Workstation: 30 inch high units as follows:
1. Construction: All-welded construction of 16 gage apron and 2 inch square tubing creating a full perimeter frame capable of supporting an evenly distributed 1,000 pound load.
 2. Legs: 16 gage, 2 inch square tubing with adjustable levelers.
 3. Intermediate Hanging Rail: 16 gage steel for suspended cabinet installation.
 4. Lower Cross Members: 16 gage steel tubing.
 - a. Cross Rail Location: **[Rear.] [Center.] [Specify]**
 5. Work Surface: **[Plastic Laminate.] [Epoxy Resin.] [Phenolic Resin.] [Stainless Steel.] [Maple.]**
- C. Style 200: C-Frame Standing Height Workstation: 36 inch high units as follows:
1. Construction: All-welded construction of 16 gage apron and 2 inch square tubing creating a cantilevered frame capable of supporting an evenly distributed 500 pound load. Provide 14 gage, 2 inch square bottom frame with adjustable levelers.
 2. Intermediate Hanging Rail: 16 gage steel for suspended cabinet installation.
 3. Work Surface: **[Plastic Laminate.] [Epoxy Resin.] [Phenolic Resin.] [Stainless Steel.] [Maple.]**
- D. Style 210: C-Frame Sitting Height Workstation: 30 inch high units as follows:
1. Construction: All-welded construction of 16 gage apron and 2 inch square tubing creating a cantilevered frame capable of supporting an evenly distributed 500 pound load. Provide 14 gage, 2 inch square bottom frame with adjustable levelers.
 2. Intermediate Hanging Rail: 16 gage steel for suspended cabinet installation.
 3. Work Surface: **[Plastic Laminate.] [Epoxy Resin.] [Phenolic Resin.] [Stainless Steel.] [Maple.]**
- E. Style 400: H-Frame Hydraulic Workstation H Frame:
1. Construction: All-welded construction of 16 gage apron and 2 inch square tubing creating a full perimeter frame capable of supporting an evenly distributed 1,000 pound load.
 2. Legs: 2 inch square tubing with **[hand-crank] [electric motor]**, hydraulic leveling mechanism and elastomer floor contacts. Provide height adjustment from 30 to 42 inches.
 3. Intermediate Hanging Rail: 16 gage steel for suspended cabinet installation.
 4. Cross Members: 16 gage steel tubing.
 - a. Cross Rail Location: **[Rear.] [Center.] [Specify]**
 5. Work Surface: **[Plastic Laminate.] [Epoxy Resin.] [Phenolic Resin.] [Stainless Steel.] [Maple.]**
- F. Style 450: C-Frame Hydraulic Workstation:
1. Construction: All-welded construction of 16 gage apron and 2 inch square tubing creating a cantilevered frame capable of supporting an evenly distributed 500 pound load.
 2. Legs: 2 inch square tubing with **[hand-crank] [electric motor]**, hydraulic leveling mechanism and elastomer floor contacts. Provide height adjustment from 30 to 42 inches.
 3. Intermediate Hanging Rail: 16 gage steel for suspended cabinet installation.
 4. Cross Members: 16 gage steel tubing.
 - a. Cross Rail Location: **[Rear.] [Center.] [Specify]**
 5. Work Surface: **[Plastic Laminate.] [Epoxy Resin.] [Phenolic Resin.] [Stainless Steel.] [Maple.]**
- G. Style 500: H-Frame Pin Adjustable Height Workstation:
1. Construction: All-welded frame construction of 16 gage apron and 2 inch square tubing creating a full perimeter frame capable of supporting and evenly distributed 1,000 pound load.
 2. Legs: 16 gauge, 2 inch square exterior tubing with interior sliding tubing, perforated at 1 inch increments for pushpin height adjustment. Provide adjustable levelers on bottom of legs. Provide 12 inch height adjustment from 30 to 42 inches.
 3. Intermediate Hanging Rail: 16 gage steel for suspended cabinet installation.
 4. Lower Cross Members: 16 gage steel tubing.
 - a. Cross Rail Location: **[Rear.] [Center.] [Specify]**
 - b. Cross members welded to exterior steel tubing.

5. Work Surface: **[Plastic Laminate.] [Epoxy Resin.] [Phenolic Resin.] [Stainless Steel.] [Maple.]**
- H. Style 550: C-Frame Pin Adjustable Height Workstation:
1. Construction: All-welded construction of 16 gage apron and 2 inch square tubing creating a cantilevered frame capable of supporting and evenly distributed 500 pound load.
 2. Legs: 16 gauge, 2 inch square exterior tubing with interior sliding tubing, perforated at 1 inch increments for pushpin height adjustment. Provide adjustable levelers on bottom of legs. Provide 12 inch height adjustment from 30 to 42 inches.
 3. Intermediate Hanging Rail: 16 gage steel for suspended cabinet installation.
 4. Lower Cross Members: 16 gage steel tubing.
 - a. Cross members welded to exterior steel tubing.
 5. Work Surface: **[Plastic Laminate.] [Epoxy Resin.] [Phenolic Resin.] [Stainless Steel.] [Maple.]**
- I. Style Q Series: H-Frame Dual Bolt Adjustable Height Workstation:
1. Construction: All-welded frame construction of 16 gage apron and 2 inch square tubing creating a full perimeter frame capable of supporting and evenly distributed 1,000 pound load.
 2. Legs: 16 gauge, 2 inch square exterior tubing with stainless steel interior sliding tube, threaded at 1 inch increments for dual bolt height adjustment. Interior sliding tube shall be enclosed at one end with a threaded insert plate. Threaded insert plate for interchangeable casters and levelers shall be welded to the bottom of the table legs.
 3. Provide adjustment that allows for 30 to 37 inch table heights while on casters or levelers. Casters and levelers shall be interchangeable without affecting table height adjustment range.
 4. Provide Casters: 4 by 1-1/4 inch polyurethane wheels with dual locking mechanism for locking both swivel and wheel. Provide caster with 250 pound load capacity per caster. Provide attached as shown on drawings, provide levelers loose for future use.
 5. Provide 4 adjustable levelers attached as shown on drawings, provide casters loose for future use.
 6. Intermediate Hanging Rail: 16 gage steel for suspended cabinet installation.
 7. Lower Cross Members: 16 gage steel tubing
 - a. Cross Rail Location: Rear
 - b. Cross members welded to exterior steel tubing.
 8. Work Surface: **[Plastic Laminate.] [Epoxy Resin.] [Phenolic Resin.] [Stainless Steel.] [Maple.]**
- J. Suspended/Mobile/Base Cabinets:
1. Design and construction shall be as in section 12 35 53 - Laboratory Metal Casework.
 2. Mobile cabinets: Provide casters in lieu of a toe kick. Casters shall be rated for 165lbs minimum each and shall be locking type. Cabinet height must ensure 2-½ " of clearance under the table frame.
 3. Suspended base cabinets: Provide a system of cold-rolled steel hanger rails attached to the casework frames. Installation and removal to be accomplished without the use of tools.
 4. Base cabinets: Provide cabinets with nylon glides on levelling feet. Level cabinets to underside of table assembly

2.3 WORK SURFACES

- A. Plastic Laminate Work Surface: 1 inch thick medium density particleboard core with .050 inch thick high-pressure laminate on top surface, phenolic backer sheet, and 3 mm matching PVC edge treatment. Laminate color as selected by the Architect from manufacturer's standard options.
- B. Epoxy Resin Work Surface: 1 inch thick, **[black onyx,] [Tier one grey, graphite, forest green, tan or dark khaki] [Tier two pearl, platinum, pacific blue, ivory, sand or bronze] [Tier three alpine white, steel blue or pewter]** factory molded of DURCON modified epoxy-resin formulation, uniform mixture

throughout full thickness with smooth, non-glare finish. Finish edges with a [1/8 inch bevel] [3/16 inch radius] and drip groove. **[Provide Greenstone epoxy with recycled content]**

- C. Phenolic Work Surface: **[3/4 inch] [1 inch]** thick phenolic resin sheet. Monolithic panel made from kraft paper saturated in phenolic resin that is heated, compressed and finished on both side. Color as selected by Architect from manufacturer's standard options.
 - 1. Polished black edges finished with a **[bullnose.] [1/8 inch bevel.] [3/16 inch radius.]**
- D. Stainless Steel Work Surface: Type **[304] [316]** stainless steel tops and working surfaces with #4 finish, unless otherwise specified. Provide 16 gauge stainless steel on all exposed surfaces, reinforced on the underside by 16 gauge galvanized steel channels, so spaced as to prevent twisting, oil-canning or buckling. Form exposed edges of tops into a **[1" thick] [1 1/4" thick with marine edge]** channel shape. After fabrication and polishing, give the surfaces of the tops a strippable protective coating to protect the tops during shipment and installation. Coat the underside of tops with a sound deadener. **[Enclose the underside with a finished stainless steel panel]**
- E. Butcher Block Work Surface: Rock-hard, edge grained laminated maple, electronically bonded together utilizing controlled pressure and resin adhesives.
 - 1. Thickness: **[1-3/4 inch.] [2-1-4 inch.] [3 inch.]**
 - 2. Edge Style: **[Straight.] [Radius edge.] [Bullnose edge.]**
 - 3. Finish: Dura Kryl 102, acrylic wear-resistant wood finish.

2.4 ACCESSORIES

- A. Casters: 4 by 1-1/4 inch polyurethane wheels with dual locking mechanism for locking both swivel and wheel. Provide caster with 250 pound load capacity per caster.
- B. Vertical Uprights:
 - 1. Construct of 1-5/8 inch by 1-5/8 inch by 12 gage channel. Bolt to rear legs of workstation to provide infinite adjustment of accessories above the work surface.
 - 2. **[In lieu of the standard uprights provide custom 1.5" x 1.5" tube steel uprights laser-cut with slots for adjustable shelving brackets for adjustment on 1" increments.]**
- C. Flat Overhead Shelf: Provide shelf consisting of the following:
 - 1. **[3/4] [1] [1-1/8]** inch thick medium density particleboard core with high-pressure laminate surface and melamine backer sheet with 3 mm PVC edge treatment.
 - 2. **[3/4] [1]** inch thick, **[black onyx,] [Tier one grey, graphite, forest green, tan or dark khaki] [Tier two pearl, platinum, pacific blue, ivory, sand or bronze] [Tier three alpine white, steel blue or pewter]** factory molded of DURCON modified epoxy-resin formulation, uniform mixture throughout full thickness with smooth, non-glare finish. Finish edges with a **[1/8 inch bevel.] [3/16 inch radius.] [Provide Greenstone epoxy with recycled content]**
 - 3. **[3/4] [1]** inch thick phenolic resin sheet. Monolithic panel made from kraft paper saturated in phenolic resin that is heated, compressed and finished on both side. Color as selected by Architect from manufacturer's standard options.
 - a. Polished black edges finished with a **[bullnose.] [1/8 inch bevel.] [3/16 inch radius.]**
 - 4. **[1] [1-1/4]** inch thick formed stainless steel.
 - 5. Shelving hardware:
 - a. **[Provide heavy-duty welded steel support frame with infinite adjustment to vertical uprights. Welded "I" frame shelf support constructed of 1-1/2 inch, 16 gage, square steel tubing and 1-1/2 by 1-1/2 by 1/8 inch steel angle with 1/4 inch thick attachment plates.]**

- b. **[Provide bookend brackets and steel [stainless steel] shelving for use with slotted uprights.]**
- D. Lower Shelf: 12 inch deep shelf consisting of the following:
1. **[3/4] [1] [1-1/8]** inch thick medium density particleboard core with high-pressure laminate surface and melamine backer sheet with 3 mm PVC edge treatment.
 2. **[3/4] [1]** inch thick, **[black onyx,] [Tier one grey, graphite, forest green, tan or dark khaki] [Tier two pearl, platinum, pacific blue, ivory, sand or bronze] [Tier three alpine white, steel blue or pewter]** factory molded of DURCON modified epoxy-resin formulation, uniform mixture throughout full thickness with smooth, non-glare finish. Finish edges with a **[1/8 inch bevel.] [3/16 inch radius.] [Provide Greenstone epoxy with recycled content]**
 3. **[3/4] [1]** inch thick phenolic resin sheet. Monolithic panel made from kraft paper saturated in phenolic resin that is heated, compressed and finished on both side. Color as selected by Architect from manufacturer's standard options.
 - a. Polished black edges finished with a **[bullnose.] [1/8 inch bevel.] [3/16 inch radius.]**
 4. **[1] [1-1/4]** inch thick formed stainless steel.
 5. Provide heavy-duty welded steel support frame with infinite adjustment to vertical uprights.
 6. Lower shelves are not for use with storage cabinets.
- E. Full Depth Lower Shelf: Full depth shelf consisting of the following:
1. **[3/4] [1] [1-1/8]** inch thick medium density particleboard core with high-pressure laminate surface and melamine backer sheet with 3 mm PVC edge treatment.
 2. **[3/4] [1]** inch thick, **[black onyx,] [Tier one grey, graphite, forest green, tan or dark khaki] [Tier two pearl, platinum, pacific blue, ivory, sand or bronze] [Tier three alpine white, steel blue or pewter]** factory molded of DURCON modified epoxy-resin formulation, uniform mixture throughout full thickness with smooth, non-glare finish. Finish edges with a **[1/8 inch bevel.] [3/16 inch radius.] [Provide Greenstone epoxy with recycled content]**
 3. **[3/4] [1]** inch thick phenolic resin sheet. Monolithic panel made from kraft paper saturated in phenolic resin that is heated, compressed and finished on both side. Color as selected by Architect from manufacturer's standard options.
 - a. Polished black edges finished with a **[bullnose.] [1/8 inch bevel.] [3/16 inch radius.]**
 4. **[1] [1-1/4]** inch thick formed stainless steel.
 5. Provide heavy-duty welded steel support frame with infinite adjustment to vertical uprights.
 6. Lower shelves are not for use with storage cabinets.
- F. Tubular Instrument Shelf: 10 inch deep, shelf consisting of the following:
1. **[3/4] [1] [1-1/8]** inch thick medium density particleboard core with high-pressure laminate surface and melamine backer sheet with 3 mm PVC edge treatment.
 2. **[3/4] [1]** inch thick, **[black onyx,] [Tier one grey, graphite, forest green, tan or dark khaki] [Tier two pearl, platinum, pacific blue, ivory, sand or bronze] [Tier three alpine white, steel blue or pewter]** factory molded of DURCON modified epoxy-resin formulation, uniform mixture throughout full thickness with smooth, non-glare finish. Finish edges with a **[1/8 inch bevel.] [3/16 inch radius.] [Provide Greenstone epoxy with recycled content]**
 3. **[3/4] [1]** inch thick phenolic resin sheet. Monolithic panel made from kraft paper saturated in phenolic resin that is heated, compressed and finished on both side. Color as selected by Architect from manufacturer's standard options.
 - a. Polished black edges finished with a **[bullnose.] [1/8 inch bevel.] [3/16 inch radius.]**
 4. **[1] [1-1/4]** inch thick formed stainless steel.
 5. Provide 16 gage, 1-1/2 inch square, welded steel support frame with 1-1/2 by 1-1/2 by 1/8 inch angle cross member.
- G. Modesty Panel: 1 inch thick medium density particleboard core with melamine laminate surface each side and T-mold edges. Fasten to rear legs of table unit.

- H. Task Light: T5 Fluorescent light fixture with on/off rocker switch and 6 foot power cord. Can be mounted to the underside of any shelf. Color 4100K cool white with 8000 hour life rating. Multiple lights can be daisy-chained together for longer tables.
- I. Electrical Strip Assembly: 15 amp, 115 volt, electrical strip with on/off switch, circuit breaker, power indicator light and 6 foot power cord. Provide a minimum of 3 outlets per linear foot of table. Mount to heavy-duty mounting rail with infinite adjustment on vertical uprights. Color grey.
- J. Book Stop Rail: 16-gage, formed steel mounted to uprights at desired height above shelf.
- K. Shelf Ledger: 16 gage angle mounted to underside of shelf for retaining objects.
- L. Book Ends: 10 inch deep, 13 gage steel **[fastened to the bottom of shelf.][integral to shelf bracket for slotted upright]**
- M. Monitor Arm: 14" pole mounted monitor arm with 6 different mounting options. Provide 75mm and 100mm VESA monitor mount adapters. Monitor arm rotates 360 degrees at three joints. Tilt up to 200 degrees. Able to hold 40lb (18 kg) monitors.
- N. Keyboard Tray: 16 ga steel hanging bracket with articulating slide-out keyboard tray. Tilt from 0 to -15 degrees. Height adjustable 6.25". Right or left-hand 8" mousepad platform. Weight capacity 8.5 lbs (3.8 kg)

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: Install in locations indicated on the drawings.

3.2 ADJUSTING AND CLEANING

- A. Verify that operating parts work freely and fit neatly. Adjust and lubricate hardware and moving parts.
- B. After completing unit installation, including accessories, inspect exposed finish. Remove protective coverings, if any, and clean exterior and interior of units.
- C. Repair or replace damaged parts, dents, buckles, abrasions, and other defects affecting appearance or serviceability so table units are in an acceptable condition at time of Substantial Completion.

END OF SECTION 12315