



## Equipment Cart Series Specifications

### **PART 1 - GENERAL**

Summary: The following specification is written to provide the level of design expectation of the owner and architect in regards to the quality/functionality of the product and installation for the table systems.

#### 1.1 SECTION INCLUDES

- A. Free standing tables.

#### 1.2 RELATED SECTIONS

- A. Division 11 Section 53 00, "Laboratory Equipment"
- B. Division 12 Section 36 00, "Countertops"
- C. Division 22 Section 40 00, "Plumbing Fixtures"
- D. Related Work to be Performed by Others:
  - a. Final connection to service lines of all plumbing and electrical fixtures attached to laboratory furniture, tables, service carriers and ceiling panels.

#### 1.3 SYSTEM DESCRIPTION

- A. The Equipment Carts consists of laboratory grade carts available in fixed height with leveler glides or casters and manual height adjustment style with leveler glides or casters. The table accepts additional accessories such as: two types of vertical uprights, electrical manifolds, gas manifolds, shelving in various depths and materials, lighting, computer monitor arms, CPU holders, keyboard trays and apparatus rod systems. All available accessories are listed and shown in the CiF Solutions product catalog and in a separate specification for accessories.

#### 1.4 SUBMITTALS

- A. Shop Drawings:
  - 1. Comply with Division 1
  - 2. Submit a PDF file of 11x17 shop drawings consisting of:
    - a. Finish, hardware, construction options selection sheet
    - b. Small scale floor plan showing casework in relation to the building.
    - c. Large scale elevations and plan views.
    - d. Cross-sections; service runs; locations of blocking within walls (blocking is done by others); rough-in requirements and, sink centerlines.
  - 3. Drawings should include data and details for construction of the laboratory casework as well as information regarding the name, quantity, type and construction of materials (such as hardware, gauges, etc.), that will be used to complete the project.
- B. The manufacture or purchaser of any equipment prior to approval by the owner's representative will be undertaken at the manufacturer's risk.
- C. Field Measurements: In instances in which casework is indicated to fit to other construction,



### 1.5 QUALITY ASSURANCE

- A. Qualification of Bidder/Manufacturer: The following list of information should be provided to the Architect at least ten (10) days prior to the bid opening:
  - 1. List of manufacturing facilities
  - 2. A list of five (5) installations of comparable stature completed within the past 3 years
- B. Source Limitations: All table systems, including countertops, service fittings and accessories, should be obtained from a single source to ensure consistency in project delivery.
- C. Area mockups shall be as indicated on the shop drawings. Mockup areas must be priced for disassembly and reassembly and used within the project.

### 1.6 DELIVERY, STORAGE AND HANDLING

- A. Packaging, Shipping, Handling and Unloading Packaging: Products should have packaging adequate enough to protect finished surfaces from soiling or damage during shipping, delivery and installation.
- B. Handling: Care, such as the use of proper moving equipment, experienced movers, etc., should be used at all times to avoid damaging the tables. Until installation takes place, any wrapping, insulation or other method of protection applied to products from the factory should be left in place to avoid accidental damage.
- C. Acceptance at Site: Table systems will not be delivered or installed until the conditions specified under Part 3, Installation section of this document have been met.
- D. Storage: table systems should be stored in the area of installation. If, prior to installation, it is necessary for table systems to be temporarily stored in an area other than the installation area, the environmental conditions shall meet the environmental requirements specified under the Project Site Conditions article of this section.
- E. Waste Management and Disposal: The installer of the table systems is responsible for removing any waste or refuse resulting from the installation of, or work pertaining to the table systems; thereby leaving the project site clean and free of debris. Trash container/s to be provided by others.

### 1.7 PROJECT SITE CONDITIONS

- A. Building must be enclosed (windows and doors sealed and weather-tight).
- B. An operational HVAC system that maintains temperature and humidity at occupancy levels must be in place; Relative humidity must be regulated and stable between 25% and 55% per AWI standards before products are brought on site, throughout project completion and with the site moving forward while the building is in use by the owner.
- C. Ceiling, overhead ductwork and lighting must be installed; prior to the delivery and installation of the table systems.
- D. Site must be free of any further construction such as "wet work."

### 1.8 WARRANTY

- A. Furnish a written warranty that Work performed under this Section shall remain free from defects as to materials and workmanship for a period of two (2) years from date of acceptance. Defects in materials and workmanship that may develop within this time are to be replaced without cost or expense to the Owner.
  - 1. Defects include, but are not limited to: Discoloration or lack of finish integrity, cracking or peeling finish, weld or structural failure and failure of hardware.



2. The warranty specifically does not cover any product or hardware, which has been incorrectly installed, including poor climate conditions, exposed to excessive loads or abuse.
  3. The warranty is in effect while the product is being used as it was intended and owned by the original purchaser of the products and services covered.
  4. The purchaser shall notify CiF Lab Solutions immediately of any defective products. CiF Lab Solutions shall be given a reasonable opportunity to inspect the product prior to its return. No product shall be returned to CiF Lab Solutions until written shipping instructions are received by purchaser. Repair or replacement of the non-conforming products or their parts, or refund of the purchase price shall be at CiF Lab Solutions sole option. CiF Lab Solutions shall not be liable for any incidental or consequential damages, expenses or losses whether incurred in connection with injury to persons or property.
- B. All non-casework items supplied, but not manufactured at CiF Lab Solutions shall be covered under the original manufacturer's warranty.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Basis-of-Design Product: CiF Lab Solutions 53 Courtland Avenue, Vaughan, ON, Canada L4K3T2
- B. Substitution Limitations:
- C. Substitutions will be considered only when other manufacturers submit substitution requests in accordance with procurement substitution and/or substitution procedures, or provide a comparable product with the following support information detailed below:
- D. Written documentation stating specification compliance regarding construction, materials, and standard of quality and manufacturing techniques.
- E. Note all deviations to the drawings and/or specifications in writing.
- F. The owner, or its designated representative, reserves the right to reject any proposal that in his opinion fails to meet the criteria established by this specification. Such a decision shall be final.

NOTE: Manufacturer's that are listed as basis of design or approved are still obligated to hold ALL specification requirements as called out in this document. There will be NO EXCEPTIONS in materials or fabrication permitted that have not been requested in writing and responded to with approval, during an RFI period prior to bid.

### 2.2 MATERIALS

- A. Steel:
  1. Sheet steel: High quality cold rolled mild steel meeting the requirements of ASTM A1008 CS Type B in 18ga and 14ga U.S. Standard (cold rolled CR). High quality hot rolled pickled & oiled (HRP&O) steel meeting the requirements of ASTM A1011 CS Type B in 11ga and 7ga U.S. Standard.
  2. Tube steel: High quality square and rectangular tube meeting the requirements of ASTM A500 for 1.5" x 2.5" rectangular and ASTM A513 for 1.75", 1.5" and 1.25" square, with various wall thicknesses for all.
- B. Hardware:
  1. Casters:
    - a. 5" swivel caster, 4" diameter wheel



- i. Shall be 5.3" nominal height with 4" diameter wheel.
      - ii. Front two casters to have swivel and tread lock brake system.
      - iii. Rear two casters are swivel without brake system.
      - iv. Shall have a minimum load rating of 400 lbs per caster.
      - v. Have a 1/2"-13 threaded stem for mounting.
    2. Leveler glides
      - a. Plastic base glide with metal cap and integral hex nut and metal threaded stem.
      - b. Thread type is 3/8-16 x 2" long.
      - c. Base diameter is 1 3/8".
    3. Plastic end caps are low density polyethylene, black in color.
  - C. Lower Shelf (optional)
    1. Epoxy Resin lower shelf: Shelf is to be flat, black, 3/4" or 1" thick with beveled, rounded top edge on the exposed edges. Shelves should be manufactured of one piece and cut to the maximum lengths possible.
    2. Phenolic Resin lower shelf: Shelf is to be flat, black, 3/4" or 1" thick with beveled, rounded top edge on the exposed edges. Shelves should be manufactured of one piece and cut to the maximum lengths possible.
    3. Plastic Laminate lower shelf: Shelf is to be 3/4" or 1 inch thick industrial grade M3 rated particleboard core material. Fabrication shall be with vertical grade laminate surface with a balancing backer sheet. Edges shall be edged with 3mm PVC edge banding or .020" thick banding.
    4. Thermofused lower shelf: Shelf is to be 3/4" or 1 inch thick industrial grade M3 rated particleboard core material. Edges shall be edged with 3mm PVC edge banding or .020" thick banding.
  - D. Countertops:
    1. Epoxy Resin Countertops: Countertops are to be flat, black, 1" thick with beveled, rounded top, front edge and all corners. Ends of countertop to be square. Front overhangs should have a drip groove on the underside. Tops should be manufactured of one piece and cut to the maximum lengths possible.
    2. Phenolic Resin Countertops: Countertops are to be 1" inch thick with beveled, rounded top, front edge and all corners. Ends of countertop to be square. Front overhangs should have a drip groove on the underside. Tops should be manufactured of one piece and cut to the maximum lengths possible.
    3. Plastic Laminate Countertops: Particleboard core material for plastic laminate surfaced countertops is to be 1 inch thick industrial grade M3 rated particleboard. Fabrication shall be with horizontal grade laminate surface with a backer sheet. Edges shall be edged with 3mm PVC edge banding.

## 2.3 FABRICATION

- A. Table frame
  1. End frame
    - a. Upper and lower end frame cross rails are 11 gauge HRP & O steel formed into a 1.5" wide x 2.50" tall channel shape with mating 11 gauge HRP & O steel inner channel. The two channels are welded along the seams to form a rigid shape.
    - b. Two vertical 1.5"-14 gauge square tube legs are welded to the upper and lower end frame cross rails.
    - c. The front and rear openings of the horizontal cross rails are covered with a black plastic end cap.
    - d. Adjustable height table version



- i. The table height range is 8" adjustable on 1.0" center adjustments with a range from 28" to 36".
    - ii. Adjustment is accomplished by removing the ¼"-20 button head machine screw and plastic knob in each leg (4 total) and moving the inner legs to the new position, then replacing the screws and knobs. No tools are required for adjustment.
    - iii. The inner leg is a formed 1.25" channel from 11 gauge HRP & O with adjustment holes at 1.0" on center. It is welded to the upper top end frame cross rail assembly.
  2. Cross rails
    - a. The front and rear upper cross rails are 1.00" x 2.50" 11 gauge steel tubing. The cabinet hanging rail is formed from 11 gauge HRP & O steel and is welded to the tubing.
    - b. The rear lower cross rail is 1.00" x 2.50" 11 gauge steel tubing.
    - c. The optional shelf front lower cross rail is 1.00" x 2.50" 11 gauge steel tubing.
  3. Flat steel parts are laser cut ensuring a high quality edge, component fit and finish.
  4. All exterior and exposed surfaces are finished in a powder-coated finish.
  5. All horizontal cross rails screw to the welded end frames with a formed "U" bracket. The bracket is attached to the end frame with (2) #10-32 thread cutting machine screws. The cross rails slide over the "U" bracket and are secured to it with (1) #10-32 thread cutting machine screw at each end.
  6. Leveler glide table version
    - a. The bottom of the table legs have a welded on threaded T-nut insert. The leveler glide is threaded in the insert.
  7. Caster table version
    - a. Tables with casters use a caster puck that is .375" thick x 2.00" diameter and is welded to the bottom of the horizontal legs. A threaded center hole is used to thread the caster stem into. The caster is a swivel type with 4" diameter wheel.
  8. Lower shelf option
    - a. Available in half and full depth utilizing the existing side and rear horizontal cross rails for support along with an additional front horizontal cross rail. Shelf material options are listed in section 2.2 C and in the CiF product catalog.

## 2.4 METAL FINISHES

- A. Powder coating
  1. Preparation: Spray parts to clean with a heated cleaner/phosphate solution, rinse with water, spray to pretreat with phosphate solution, rinse with water on two steps to finish. Dry immediately in temperature controlled heated oven.
  2. Application: Electrostatically apply powder coat of selected color and immediately bake in temperature controlled oven to assure a smooth, hard finish. Surfaces to have a chemical resistant, high grade furniture finish.
  3. Exposed finish thickness to be between 2.0 mil & 3.0 mil.

## PART 3 - EXECUTION

### 3.1 INSTALLERS

- A. Installer Qualifications: For installation and maintenance of units, an authorized representative of the manufacturer required for this project.



### 3.2 EXAMINATION

- A. Site Verification of Conditions: Casework will not be delivered or installed until the following conditions have been met:
  - 1. Building must be enclosed (windows and doors sealed and weather-tight).
  - 2. An operational HVAC system that maintains temperature and humidity at occupancy levels must be in place; Relative humidity must be regulated and stable between 25% and 55% per AWI standards before products are brought on site, throughout project completion and with the site moving forward while the building is in use by the owner.
  - 3. Ceiling, overhead ductwork and lighting must be installed.
  - 4. Site must be free of any further construction such as “wet work.”

NOTE: In the event that any of the specified requirements for installation are not present at the time of requested delivery, the general contractor or owner must provide the casework manufacturer with a letter of deviation that releases the manufacturer from any responsibility or liability from any damage to the products resulting from the unfavorable building conditions.

### 3.3 INSTALLATION

- A. Table systems:
  - 1. The table is shipped in knocked down form and requires assembly in the field by a qualified installer.
  - 2. The table should be set in the intended place and leveler glides adjusted (if this option was selected) so that the table is level and all four glides are contacting the floor. There are no leveling adjustments for tables with the swivel caster options.
- B. Countertop Installation:
  - 1. Countertops are to have been fabricated in lengths to fit the table dimensions and should not need to be cut or altered to fit.
  - 2. Tops will be anchored to the table system with screws running through brackets already affixed to the table structure. Pilot holes will need to be drilled by the installer appropriate to the screw size. Epoxy and Phenolic resin counter tops should also utilize 100% pure silicone adhesive between the table deck structure and underside of the countertop for a secure, permanent mounting method.
- C. Cleaning
  - 1. Wipe all surfaces down with a mild general purpose cleaner. Do not wash down or immerse any part of the table with liquid or water for cleaning purposes, but rather use a damp cloth.
  - 2. Countertops and any shelving should be cleaned and free of grease or streaks.
- D. Weight rating & system loading
  - 1. The load rating listed below is for static loads that are evenly distributed over the entire area of the table system. The entire area encompasses loads applied to the countertop, weight of hanging cabinets and loads placed within the cabinets, and loads placed on shelving above and below the countertop.
    - a. Load rating not to exceed 500 lbs (226 kg) for all Equipment Carts.

END OF SECTION

Revision Schedule

**Date Revised** **Items Revised**

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