



QuadraMobile - Specifications

Design: The Mobile System shall consist of a rail and deck assembly with 2 or more parallel rails and a platform surface between them, and wheeled carriages, which ride on the rails. The carriages are made to hold shelving as listed above. All systems are constructed of modular components such that any system can be expanded in both length and width, moved or reconfigured in shape, without the need to discard or replace any parts of the original system.

Materials and Workmanship: Components are fabricated of high quality, cold rolled carbon steel, free of scale or rust. Exposed edges and corners are free of sharpness or burrs and all workmanship is of the highest quality as measured by the industry. All components of the System are provided by the factory, complete and ready for installation. No purchase of additional parts or materials, nor cutting or fitting of parts in the field is required.

Modular Floor: The structural frame of the modular floor shall consist of aluminum sub-rail with a steel rail 1/8" x 7/8", and reinforcement tubes. The deck shall consist of 5/8" plywood covered with commercial grade carpet. The reinforcement tubes shall be of no less than 16 gauge steel 3/4" x 1/2". To facilitate moving or rearrangement of the installed mobile system, the rails and decking shall not require fastening in any manner to the building floor nor the use of any material or process damaging to the underlying surface. The system shall be equipped with built-in leveling means as follows: Each rail has pairs of leveling screws (one on each side of the centerline of the rail) spaced along the rail not more than 14" apart. The lower ends of the screws bear on a 14 gauge galvanized steel channel placed on the building floor and running the full length of the rails so as to prevent marring or gouging of the floor. Leveling screws are accessible from the top surface of the deck and may be adjusted at any time during installation or after the System is installed, fully loaded and in use. Deck panels are similarly equipped with levelers midway between the rails. No grout, cement, shims or any other material or process damaging to the floor is used. No removal of equipment or disassembly is required to make leveling adjustments

Mobile Carriages: Base shelf shall be an integral part of the carriage. The wheel-housing member shall be constructed of no less than 12 gauge steel, at least 2-3/4" wide x 2-1/2" high. The Base shelf shall be constructed of no less than 16 gauge steel, 2-3/4" high, slotted to receive dividers and should form an integral part of the carriage assembly. The four-post shelving to be supplied shall attach to the carriage by vibration proof bolts. Design of the carriage is such that the weight-bearing uprights of the shelving rest on the wheel channel directly over the wheels and transmit the full load directly to the rail. Each carriage is designed to accept a mechanical-assist drive either at the time of original installation or any time thereafter without modification to the carriage or removal of equipment or disassembly of any part of the system. Equipment mounted on the carriage is raised not more than 6" above a level floor. A built-in anti-tip system shall lock the carriages to the rails to prevent the attached shelving from tipping.



Fixed Carriages: Fixed Carriages are similar in design and construction to mobile carriages except that instead of wheels they have clamps which lock onto the rails.

Mechanical-assist Drive: The mechanical-assist drive shall consist of a handwheel turning a chain and sprocket assembly engaging a fixed chain recessed into the rail deck. Three effort-to-load ratios are available: 1 lb on the hand wheel to move 1000 lbs.

2 lb. to move 3000 lbs.: 4 lbs. to move 5000 lbs. Each movable carriage shall be equipped with an "Aisle Lock," (a safety device built into the drive mechanism to lock open an aisle).

End Panels: End or Face Panels shall be steel. They shall be full depth and height of the shelving units. Steel e durability and elimination of any off gassing.

Shelving:

4-Post shelving shall be clip design, which does not require any tool to readjust the shelves. Provide on designated units as identified on requirements and drawings.

- a. Closed wall upright construction, 2 full 20-gauge closure panels welded full depth and height of all uprights.
 - b. All shelves and canopy tops shall be constructed of minimum 18 gauge and clipped on the uprights. Shelves floating on support are unacceptable.
 - c. Shelving material:
 1. Minimum gauge shelves: 18
 2. Minimum gauge upright posts: 18
 - d. Shelf Type: Standard plain, with slots, 1" minimum profile.
 - e. Color: As selected by Architect from manufacturer's standards (min. 12 colors).
 - f. Upright height and elevations per drawings. One canopy required on all units.
2. The frame (posts and crossing members) assembly at the extremities of a range shall be as the intermediates one, in order to offer later rearrangement.
 3. The actual width of the shelves shall not be less than 1 1/4" smaller than the nominal dimension.
 4. All shelving shall be back-to-back shelves and shall have capability of being adjusted without use of tools. Canopy tops required on all sections.
 5. All shelves shall be adjustable on 1" centers along the entire height of upright.
 6. Maximum deflection under load; must maintain L/180 or 3/16" which ever is smaller based on a uniform distributed load of 50 lbs. per lineal foot.
 7. All shelf sizes and clear dimensions are mandatory.



8. All shelving components shall be powder coat paint finished, mandatory, for inert finish.
9. Shelving must be supplied with one sway brace every 4 units for maximum rigidity.
10. Rubber dust seal provided at front and rear of all cabinets.

Finish Specification:

All Components (mobile and fixed shelving) shall be painted with an electrostatically applied Powder Coat paint. Powder coat paint finish is required for finish durability and elimination of any off gassing. Finish has to be inert with no volatiles present in finished product. Baked enamel finishes are unacceptable due to off gassing.

1. Gloss: Average specular gloss values must be between 30 and 60 measured with a 60-degree gloss meter in accordance with A.S.T.M. Method 0523-53T.
2. Adhesion of Finish:
 - A. Bending: Finish must show no adverse effects, other than cracks at either end of the test panel no greater than 1/4" when bent around 180 degrees at 1/4" mandrel in one second. This test must be performed with the grain of the steel parallel and transverse to the mandrel (modification of Federal Test standard NO. 141a. Method 6221).
 - B. Impact: Finish must show no cracks or chipping when a 2" diameter steel ball is dropped 10-1/2" onto a painted test panel laid over a 1-1/4" diameter opening.
 - C. Resistance of the finish to abrasion: Finish must resist falling sand abrasion test in accordance to A.S.T.M. method D968-51. The minimum number of liters of sand needed to expose a 5/32" area of substratum should be 30.
 - D. Resistance of the finish to acids and chemicals: Finish must be capable of withstanding exposure to 95% solution of alcohol, 10% solution of acetic acid, machine oil, and undiluted household ammonia for 30 minutes and a 10% solution of lye for 15 minutes and show no signs of discoloration, softening or blemishes.



Resistance of the finish to a lighted cigarette: Finish must show no adverse effects when a cigarette is placed on the surface and allowed to burn until it is completely consumed. After the cigarette has ceased burning, the surface is wiped with a damp cloth and a mild detergent and rinsed with cold water.

INSTALLATION

- B. Permanently attach shelving units to carriages. Stabilize shelving units to comply with mobile storage unit manufacturer's written requirements. Reinforce shelving units to withstand the stress of movement where required and specified.
- C. Install system to comply with final layout drawings, in strict compliance with manufacturer's printed instructions. Position units level and plumb, at proper location relative to adjoining units and related work.
- D. Field Quality Control: Remove and replace components that are chipped, scratched, or otherwise damaged and which do not match adjoining work. Provide new matching units, installed as specified and in manner to eliminate evidence of replacement.
- E. Adjust: Adjust components and accessories to provide smoothly operating, visually acceptable installation.
- F. Cleaning: Immediately upon completion of installation, clear components and surfaces. Remove surplus materials, rubbish and debris resulting from installation upon completion of work and leave areas of installation in neat, clean condition.