

**SPECIFICATION
FOR
TABLES, PUPIL, METAL**

(This specification is released for procurement purposes until revised or rescinded.)

I. SCOPE

The intent of this specification is to define the product requirements and the subsequent procedures for obtaining a Qualified Products Listing (QPL). After the products have been approved, the model or series number will be shown on a separate document QPL7110-10 (latest dated revision) which will be used as the sole approval source for products covered by the Invitation for Bid (IFB).

This specification establishes requirements for steel frame pupil tables, with book storage for use in classrooms and institutions.

II. APPLICABLE SPECIFICATIONS AND STANDARDS

Reference to specifications, standards, test methods, and other documents shall be to the issues in effect on the date of the IFB. Copies of the referenced documents may be obtained from the issuing organizations. The following documents and / or publications form a part of this specification to the extent specified herein:

A. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

1. ANSI A208.1 - Particleboard.
2. ANSI/HPMA HP - Hardwood and Decorative Plywood.
3. ANSI/BIFMA X5.5 – Desk Products
4. ANSI A208.2 – Medium Density Fiberboard (MDF)

B. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

1. ASTM D 1037 - Method for Evaluating properties of wood base Fiber and Particle panel materials.

C. FEDERAL SPECIFICATIONS.

1. L-P 5089 - Plastic sheet, laminated, decorative and non-decorative.
2. LLL-B-810 - Building board (Hardboard) Hard-pressed vegetable fiber.
3. TT-C-490 - Cleaning methods for ferrous surfaces and pre treatments for organic coatings.

D. IRON AND STEEL SOCIETY (ISS).

1. Steel sheet manual.

E. NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION (NEMA).

1. LD-3 - High Pressure Laminate.

III. **CLASSIFICATION**

- A. Pupil tables covered by this specification shall be classified as follows:



TYPE I STYLE A1 & A2



TYPE I STYLE B1

No graphic

TYPE I STYLE C1

Type I - CLOSED CONTAINMENT book storage.

Style A - Leg base with metal tubular frame

- 1.- Fixed height
- 2.- Adjustable height

Style B - Pedestal base.

- 1.- Fixed height
- 2.- Adjustable height

Style C - Leg base with unit body construction

- 1.- Fixed height
- 2.- Adjustable height



TYPE II STYLE A 1

Type II - OPEN CONTAINMENT book storage.

Style A - Leg base with metal tubular frame

- 1.- Fixed height
- 2.- Adjustable height

The above drawings are provided as a visual representation of the different Types and Styles of Pupil tables covered in this specification. These drawings are not intended to represent any preferred type of frame detail design. See specification and IFB for ordering information on frame design, etc.

- B. The pupil tables defined in this document are intended to cover a consolidation of movable tables for general purpose use in classrooms. The defined product requirements herein are **not intended to include all varieties** of the commodity as indicated by the title of this document, or which may be commercially available, **but is intended to cover only those commonly used by state agencies and the public schools**. Listing of a product is not intended to and does not connote endorsement of the product by the state.

IV. GENERAL REQUIREMENTS.

A. Products furnished per this document shall meet or exceed the following requirements:

1. All tables shall be new, unused, and a currently standard product of an established manufacturer except for such deviations as may be required by this document or the Invitation for Bids.
2. All tables shall present a neat, well-finished appearance inside and outside and shall be free from all imperfections and/or defects, which might affect appearance, normal life, or serviceability.
3. All metal parts shall be commercial quality and inherently corrosion resistant or suitably treated to resist corrosion.
4. Plastic surfaces shall be free from ripples and thin spots, and have a bright colorfast appearance.

V. PRODUCT REQUIREMENTS

A. General

The pupil table is defined as a table supported by a frame or structure and or legs constructed from square or round steel. Leg styles shall be a straight and/or tapered type, or pedestal type as categorized in Section III "Classification". Book storage shall be provided underneath the tabletop. There are two types of tables required, **Type I** is defined as "Closed containment, open front" and **Type II** is defined as "Open containment, open front".

Type I, the "Closed containment" book storage type (Closed type). The book storage enclosure shall be constructed of solid sheet metal with all sides, bottom, and back closed. The front shall be open for the entire width to enable easy access for book storage. Type I has three styles of construction.

Style A - Leg base with metal tubular frame. The frame shall be constructed from tubing, which is formed, bent, and/or welded together

Style B - Pedestal base

Style C - Leg base with unit body construction. Legs are not part of a structural tubing frame system, but instead are straight tubing (unbent) sections held in position by part of the body of the table, such as a sheet metal box which is welded to the legs at each corner. The box material thickness and method of leg attachment shall be such that it provides a stable rigid unit suitable for a classroom application. Leg bracing to achieve this rigidity is acceptable.

Type II, the "Open containment" book storage type (Open type) shall be constructed from 1/4 inch diameter minimum steel rods welded together and attached to the table structure or table top under side. This takes the form of a rack or basket design. This rack or basket storage shall be so designed to enable easy front access, while containing the books at the back. Containment on sides is

acceptable. The rack or basket shall be free from sharp, rough edges, or protruding parts that might snag clothing or cause injury. Type II has only one style of construction.

Style A - Leg base with metal tubular frame. The frame shall be constructed from tubing, which is formed, bent, and/or welded together

B. Table Top

The shape of the tabletop shall be rectangular and have a minimum surface area of 430 sq. inches. Table tops may be either Solid Thermoset plastic, or HPL surfaced with any of the following optional core materials, resin board, fiberboard, particleboard or plywood as required in the Invitation For Bid. The thickness shall be a minimum of 9/16 inch. The edges shall be shaped and rounded and the corners shall be rounded; edges shall be sealed. The top surface shall resist stains, scratches, burns, and be non-porous. Resin board, Fiber board, Particle board or Plywood core tablet arms shall be surfaced with a HPL plastic writing surface which must comply with NEMA LD 3 (Latest Date Revision) Grade GP 28 or better. LPL plastic (Low pressure laminate) is not an acceptable alternative material. The bottom of the tablet shall have a backing sheet.

The height of the table is defined as the distance from the floor to the top surface of the table measured perpendicular to the floor. For the fixed height table this measurement shall be not less than 21 inches and not greater than 30 inches. Vendor to specify the heights offered when submitting the bid. Tables with adjustable heights (Type I Style A.2 B.2. & C.2, Type II Style A.2) shall be adjustable to provide incremental table heights ranging from 21 inches to 30 inches (nominal).

The definition of Thermoset plastic is; A material having properties of becoming permanently hard and rigid when heated and cured. It is capable of changing from a plastic or fusible state by a chemical reaction effected by heat or other means, leading to a complex polymer.

C. Glides

Glides shall be steel-cushioned, nylon or all steel and be of the "boot" (ferrule) design. There shall be a minimum of one retaining clip or heavy-duty pressure ring holding the booted glide within the leg tubing. Glides shall be a self-leveling swivel type design. The outside diameter of the glide pad that contacts the floor shall be 3/4 inch minimum. Glides shall not be easily removed without the use of tools.

D. Finish (Metal parts) and structure

Product should be available either painted or chrome plated as a unit, or painted and chrome plated as a unit as required in the Invitation for Bids

- 1. Painted:** All painted surfaces shall be thoroughly cleaned and free of dirt, oil, grease, moisture, or other foreign matter prior to painting.

After cleaning, the frame shall be coated with a paint- bond coating and a rust inhibitor compatible with the top or finish coat. The finish coat shall consist of a high temperature enamel applied and baked in accordance with the paint manufacturer's recommendations (or the manufacturer's standard acrylic/epoxy based enamel coating of comparable quality). The enamel shall be the non-chipping type. There shall be no indication of rust, or decay, under the coating. An equivalent thermoset epoxy resin dry powder coating, electro-statically applied, shall also be acceptable.

- 2. Chrome Plated:** All metal, which is to be chrome plated shall be subjected to the manufacturer's standard electrical and chemical cleaning process. Chrome shall be plated over a Nickel base. The chrome shall be corrosion and chip resistant.

3. Structural requirements

Legs and related attachments shall have the gauge thickness and strength properties, of the steel selected, to provide a structure that will withstand the continuous normal loads found in a daily classroom environment.

The chair must successfully complete the performance test as defined in ANSI/BIFMA X5.5, latest revision. Tests must be performed by an independent testing laboratory.

VI SAMPLING AND INSPECTION

Products furnished under this specification may be inspected by, or at the direction of the Standards section and/or the ordering State Agency, Institution, college or Public school either at the destination or place of manufacture. Random samples of delivered items may be selected and checked for compliance with this specification. If it is found that the product does not meet the requirements of this specification, the Division of Purchase and Contract may proceed as stipulated in the Terms and Conditions of the bid.

VII WARRANTY AND SERVICE

A. General

All products shall be guaranteed against defects in materials, workmanship, and performance for a minimum of TWO YEARS. The Warranty shall begin on the date of acceptance of the product by the ordering facility. During this Warranty period, the vendor shall repair or replace defective material, components, or units at no cost to the user or his representative (this shall include round trip travel and freight to user's site). The Vendor shall guarantee that the product will be a standard and continuing item in the manufacturer's current product line. The basic product shall be identifiable by regular catalogue numbers in the manufacturer's published literature and price list.

B. Availability of Service

Factory authorized service shall be available statewide within the State of North Carolina. An adequate supply of parts shall be made available to the State for the expected life of the products covered by this specification. Refer to the IFB for specific requirements.

VIII PACKING / PACKAGING

A. General

Packaging for shipment shall be in accordance with the best industry practice and in a manner readily accepted by common carriers engaged in interstate commerce. Within the shipping carton, the units shall be packed in a manner designed to eliminate damage during shipment.

B. Marking

Each shipping container shall be clearly marked with the following:

1. Name of contents
2. Quantity
3. Name and Address of the Manufacturer

Shipping documents shall include the following:

1. Customer's Purchase Order Number
2. Name and Address of the Ordering Agency

IX ORDERING DATA

A. General

(This information is for Purchase and Contract use only.)

Purchaser should specify the following in the Invitation for Bids.

1. Title, Number, Date of this specification.
2. Classification (type/style) of the unit desired.
3. Type of tablet material i.e.; 'a.'= Solid plastic,'b.'= High Pressure Laminate
4. Specify table height (if fixed)
5. Type of Finish (painted or plated)