

**SPECIFICATION
FOR
LOCKERS, METAL**

(This specification is released for procurement purposes until revised or rescinded.)

SCOPE

This specification covers materials, construction, assembly, and installation of metal clothes lockers. It is not intended to cover all the variations and sizes of storage lockers commercially available, but only those most frequently used by state agencies and public schools.

I. CLASSIFICATION

Type I - Single Tier Lockers

Style A - Sheet steel, semi-louvered doors

Class 1 - Single Row
Class 2 - Double Row

Size 1 - 12" x 12" x 66" (305 mm x 305 mm x 1676 mm)
Size 2 - 15" x 18" x 66" (381 mm x 457 mm x 1676 mm)
Size 3 - 12" x 12" x 78" (305 mm x 305 mm x 1980 mm)
Size 4 - 15" x 18" x 78" (381 mm x 457 mm x 1980 mm)

Style B - Perforated sheet steel ventilated lockers

Class 1 - Single Row

Size 1 - 12" x 18" x 66" (305 mm x 457 mm x 1676 mm)
Size 2 - 18" x 21" x 66" (457 mm x 533 mm x 1676 mm)

Class 2 - Double Row

Size 1 - 12" x 18" x 66" (305 mm x 457 mm x 1676 mm)

Style C - Expanded metal, formed frame lockers

Class 1 - Single Row

Size 1 - 12" x 18" x 66" (305 mm x 457 mm x 1676 mm)
Size 2 - 18" x 21" x 66" (457 mm x 538 mm x 1676 mm)

Class 2 - Double Row

Size 1 - 12" x 18" x 66" (305 mm x 457 mm x 1676 mm)

Style D - Expanded metal, angle iron frame lockers, welded or riveted construction

Class 1 - Single Row

Size 1 - 12" x 18" x 66" (305 mm x 457 mm x 1676 mm)

Size 2 - 18" x 21" x 66" (457 mm x 533 mm x 1676 mm)

Class 2 - Double Row

Size 1 - 12" x 18" x 66" (305 mm x 457 mm x 1676 mm)

Type II - Double Tier Lockers

Style A - Sheet steel, semi-louvered doors

Class 1 - Single Row

Class 2 - Double Row

Size 1 - 12" x 12" x 30" - 66" overall height
(305 mm x 305 mm x 762 mm - 1676 mm overall height)

Size 2 - 15" x 18" x 30" - 66" overall height
(381 mm x 457 mm x 762 mm - 1676 mm overall height)

Size 3 - 12" x 12" x 36" - 78" overall height
(305 mm x 305 mm x 914 mm - 1980 mm overall height)

Size 4 - 15" x 18" x 36" - 78" overall height
(381 mm x 457 mm x 914 mm - 1980 mm overall height)

Style B - Perforated sheet ventilated lockers

Class 1 - Single Row

Size 1 - 12" x 12" x 30" - 66" overall height
(305 mm x 305 mm x 762 mm - 1676 mm overall height)

Size 2 - 18" x 21" x 30" - 66" overall height
(457 mm x 533 mm x 762 mm - 1676 mm overall height)

Class 2 - Double Row

Size 1 - 12" x 12" x 30" - 66" overall height
(305 mm x 305 mm x 762 mm - 1676 mm overall height)

Style C - Expanded metal, formed frame lockers

Class 1 - Single Row

Size 1 - 12" x 18" x 30" - 66" overall height
(305 mm x 457 mm x 762 mm - 1676 mm overall height)

Size 2 - 18" x 21" x 30" - 66" overall height
(457 mm x 533 mm x 762 mm - 1676 mm overall height)

Class 2 - Double Row

Size 1 - 12" x 18" x 30" - 66" overall height
(305 mm x 457 mm x 762 mm - 1676 mm overall height)

Style D - Expanded metal angle iron frame, welded or riveted construction

Class 1 - Single Row

Size 1 - 12" x 18" x 30" - 66" overall height
(305 mm x 457 mm x 762 mm - 1676 mm)

Size 2 - 18" x 21" x 30" - 66" overall height
(457 mm x 533 mm x 762 mm - 1676 mm)

Class 2 - Double Row

Size 1 - 12" x 18" x 30" - 66" overall height
(305 mm x 457 mm x 762 mm - 1676 mm)

Type III - Multiple tier lockers

Style A - Sheet steel, semi-louvered doors

Class 1 - Single Row

Class 2 - Double Row

Size 1 - 12" x 18" x 12" - 66" or 78" overall height
(305 mm x 457 mm x 305 mm - 1676 or 1980 mm overall height)

Size 2 - 12" x 18" x 15" - 66" overall height
(305 mm x 457 mm x 381 mm - 1676 mm overall height)

Style B - Perforated sheet steel ventilated lockers

Class 1 - Single Row

Class 2 - Double Row

Size 1 - 12" x 12" x 12" - 66" or 78" overall height
(305 mm x 305 mm x 305 mm - 1676 mm or 1980 mm overall height)

Size 2 - 12" x 15" x 12" - 66" or 78" overall height
(305 mm x 381 mm x 305 mm - 1676 mm or 1980 mm overall height)

Style C - Expanded metal, formed frame lockers

Class 1 - Single Row
Class 2 - Double Row

Size 1 - 12" x 12" x 12" - 66" or 78" overall height
(305 mm x 305 mm x 305 mm - 1676 mm or 1980 mm overall height)

Size 2 - 12" x 15" x 12" - 66" or 78" overall height
(305 mm x 381 mm x 305 mm - 1676 mm or 1980 mm overall height)

Style D - Expanded metal, angle iron frame, welded or riveted construction

Class 1 - Single Row
Class 2 - Double Row

Size 1 - 12" x 12" x 12" - 66" or 78" overall height
(305 mm x 305 mm x 305 mm - 1676 mm or 1980 mm overall height)

Size 2 - 12" x 15" x 12" - 66" or 78" overall height
(305 mm x 381 mm x 305 mm - 1676 mm or 1980 mm overall height)

Type IV - Two person lockers

Class 1 - Single Row
Class 2 - Double Row

Size 1 - 15" x 15" x 78" overall height
(381 mm x 381 mm x 1980 mm overall height)

Size 2 - 15" x 18" x 78" overall height
(381 mm x 457 mm x 1980 mm overall height)

II. APPLICABLE STANDARDS

Not applicable to this specification.

III. REQUIREMENTS

A. STEEL

Steel shall be mild, annealed, cold rolled, free of any surface imperfections.

B. BOLTS, NUTS, WASHERS, ETC.

Bolts, nuts, and washers and any other fastening devices shall be cadmium or zinc plated or otherwise treated to be made rustproof.

C. FRAMES

Frames for Style D lockers shall be minimum 1" x 1" x 1/8" (25.4 mm x 25.4 mm x 3 mm) steel angle, welded construction.

D. DOOR FRAMES

Door frames for Style A, B, and C shall be formed from minimum 16 gauge steel. Vertical members shall have an additional flange to form a continuous strike. Corners shall be lapped and welded into a rigid assembly. Top and bottom cross members shall provide support for the front edge of the top and bottom. Style C frames shall be formed to provide a channel to receive edge of expanded metal or expanded metal shall be securely welded to frames. Style D frames shall be 1" x 1" x 1/8" (25.4 mm x 25.4 mm x 3 mm) steel, welded or riveted construction.

E. DOORS

Doors for Style A lockers shall be of one piece minimum 16 gauge steel with vertical edges formed into channel shaped reinforcements. The other edges shall be flanged at right angle to the face of the door.

Doors for Style B lockers shall be as above with perforations with formed door frames as in Section D above.

Doors for Style C, single, double and triple tier lockers shall be 16 gauge formed steel, with channel for receiving edges of expanded metal mesh or mesh securely welded. Doors for four or more tiers shall be perforated 16 gauge steel with edges formed for rigidity.

Doors for Style D lockers one, two, and three tiers high shall be framed with 1" x 1" x 1/8" (25.4 mm x 25.4 mm x 3 mm) steel angle covered with 13 gauge expanded metal mesh. Lockers four or more tiers high shall be 14 gauge perforated steel and formed at the edge to give a finished edge and rigidity.

F. LOUVERS

All doors for Style A lockers shall have two sets of louvers. One centrally located near the top of the door and one near the bottom. Single tier louver sets shall be not less than six per set. Double tier shall be not less than four per set. Louvers for smaller doors shall be in proportion to the size of the door.

G. PANELS

Common side panels in Style A lockers shall be minimum 24 gauge steel. There shall be no holes more than 1/4" (6.3 mm) diameter in the panels. Common back panels in Style A and B shall be minimum 24 gauge steel with no holes larger than 1/4" (6.3 mm) in the panel. Common backs for Style C and D shall be not less than 16 gauge steel. Vertical edges of all panels less than 16 gauge shall be flanged to provide rigidity at vertical corners. Top shelves and bottoms for Styles A and B shall be minimum 24 gauge steel, Styles C and D minimum 16 gauge and shall be formed at edges for reinforcing and fastening.

Side panels for Style C and D lockers shall be minimum 13 gauge flattened expanded metal welded to frame or inserted and welded in channel of frames on Style C lockers.

Optional finished end panels and all filler panels shall be minimum 20 gauge steel. These panels shall be one piece and have no unused holes exposed. All exposed vertical edges on Style A lockers shall be of flanged double thickness metal.

All expanded metal panels on Style D lockers shall be welded to the frames at not less than 6" (152.4 mm) intervals.

H. CLOSED BASES

Closed bases shall be minimum 20 gauge steel and formed so as to give adequate rigid support to the lockers. The steel shall be treated so as to make it rustproof before painting.

I. LEGS

Legs 6" (152.4 mm) high shall be supplied as standard unless otherwise specified in the Invitation for Bids. Legs shall be formed from minimum 16 gauge steel. Single unit lockers shall have a leg at each corner and sectional groups shall have not less than two front legs on each door frame and back legs as required for adequate support. All legs shall have a provision for compensating for uneven floors and a means of anchoring to the floor.

J. TOPS

Flat tops shall be standard. Sloping tops shall be supplied when specified on the Invitation for Bids.

K. NUMBER PLATES

Each locker shall be provided with a securely attached aluminum, zinc or brass number plate with black filled numerals not less than 3/8" (9.5 mm) high. Number sequence shall be specified on the Invitation for Bids.

1. Fasteners

Heads of bolts used to assemble panel sections and top and bottom shall be round (Truss) head slotless type. All bolts shall be inserted from the outside and shall be firmly tightened. Rivets used to secure hinges shall be oval not less than No. 10, 0.134" (3.4 mm) diameter. Other rivets shall be oval or truss head with a body diameter of not less than 5/32" (4.0 mm). Spring clips shall be one piece design and shall require access to the locker interior for removal.

L. HINGES

All hinges shall be not less than 2" (50 mm) long, five knuckle, tight pin, of not less than 0.050" (1.27 mm) thickness. All doors over 48" (1220 mm) long shall have three hinges and all others shall have two hinges per door. Style D multiple tier, four or more high may use 16 gauge knife hinges riveted to frame and operating on 3/16" (4.7 mm) diameter pins welded to door.

M. SILENCERS

On Style A and B lockers soft rubber or other suitable silencers shall be used in close proximity to each latching point.

N. DOOR HANDLES AND LATCHING MECHANISM

The door latching mechanism for Type I and II, Styles A and B shall be the pre-locking type, allowing the door to be locked while open and then closed without unlocking. Doors more than 48" (1220 mm) high shall have minimum of three latching points. Doors less than 18" (457 mm) high shall have a minimum of one latching point. All others shall have minimum of two latching points. Type III locker doors to have one point catch and Styles C and D doors may be self-locking, or may be lever locking. Latch points to be as described above. Standard handle and locking arrangement shall be padlocks with 9/32" (7.1 mm) diameter shackles.

O. INTERIOR EQUIPMENT

All Type I lockers shall have a shelf located approximately 9" (9230 mm) from the top. All Type I, single tier and Type II, double tier, lockers shall have a minimum of one single prong wall hook on each side and back and one double prong ceiling hook. Hooks shall be rustproof and of ball tip design. Type IV lockers shall have a minimum of one single prong wall hook on each side wall. In lockers 18" (457 mm) deep, clothes hanger rod may be furnished in lieu of ceiling hook in Types I and II lockers and wall hooks in Type IV lockers.

P. CONSTRUCTION

Lockers shall exhibit first class workmanship throughout. They shall have all smooth surfaces with no exposed burrs or edges that might cause injury to the user or damage to clothing.

Construction details not specifically described in this specification shall be according to the manufacturer's standard practice.

Q. FINISH

All parts shall be thoroughly cleaned and given a rust preventive undercoat treatment prior to painting. A baking enamel shall be applied and properly baked. Coating shall be uniform and minimum 0.5 mil thick. There shall be no areas inside or out that show lack of coverage of the metal or grainy texture.

R. ASSEMBLY AND INSTALLATION

All assembly shall be secure and rigid. All bolts shall be equipped with lock washers or locknuts and securely tightened. Lockers installed against a wall shall be securely anchored to the wall. Sections not adjacent to a wall shall be anchored to the floor to prevent overturning. Exposed ends shall have ALL holes filled with bolt heads of matching color. End panels covering all fastenings and attached with blind fastenings shall be offered as an option. Lockers installed in recesses shall have all spaces between lockers and adjacent walls completely covered with trim so that no cracks are left around the perimeter of the lockers.

S. OPTIONS

1. Sloping top instead of standard flat top

2. Finished end panels attached with blind fasteners so that no holes or bolt heads are visible.
3. Type base (legs, closed base, no base).
4. On Style B lockers, which parts to be perforated, doors, sides, backs and/or bottoms.

IV. WARRANTY

The contractor warrants to the owner that all lockers furnished under this specification will be new, of good material and workmanship, and agrees to replace promptly any part or parts which by reason of defective material or workmanship shall fail under normal use, free of negligence or accident, for a minimum period of 12 months from date of acceptance. Such replacement shall be free of any charge to the owner or his representative.

V. SERVICE, PARTS, AND MANUALS

The contractor shall furnish complete written instructions for installations, an operation and maintenance manual, and a complete list of replacement parts or assemblies.

VI. ACCEPTANCE EVALUATION AND QUALITY ASSURANCE

Prior to acceptance and payment, the lockers and installation furnished under this specification shall be inspected by the purchaser or his authorized representative for compliance with this specification and the Invitation for Bids. Certified evidence of having successfully passed the prescribed tests shall be required.

A. LEG TEST

A 50 pound sandbag shall be placed in the bottom of the locker and the door or doors closed. The locker then shall be dragged in the upright position not less than 10' (3050 mm) across the grain of a firm, clean, smooth wood surface. The locker then shall be tilted to a dragging position approximately 20° from the horizontal and dragged across a 3 1/2" (89 mm) high barrier fixed to the wood surface. Two legs of the locker shall be tested at a time and both legs shall contact the barrier and impact the floor at the same time. This test shall be conducted on all four sides of the locker. There shall be no breaks or cracks in the legs and permanent deflection shall be not more than 2°. There shall be no torn grain in the wood floor after the upright drag.

B. STATIC LOADS

When the indicated static loads are applied, there shall be no binding of the door and no breaks, cracks, or permanent deflection. The maximum permanent deflection permitted in sides, back and hanger rods shall be 1/16" (1.6 mm).

- Sides - 75 lb. (34 Kg)
- Back - 75 lb. (34 Kg)
- Bottom - 100 lb. (45.4 Kg)
- Front edge of bottom - 225 lb. (102 Kg)
- Shelf - 50 lb. (22.7 Kg)
- Hanger rods - 50 lb. (22.7 Kg)
- Doors - 200 lb. (91 Kg)

The weight on the doors shall be suspended by a rope or other means not more than 3" (76 mm) from the latch side and the door moved in a normal way on its hinges not less than six times in each direction through not less than 150°.

C. DOOR LOCKING

With the door open and not padlocked, insert a 3/16" (4.8 mm) diameter rod or padlock shackle through the door handle padlock eye. Close the door and proceed with the test. The doors shall resist all efforts to open them.

Alternately strike the closed door and door frame with moderate blows from a 24 oz. (680 g) rubber mallet around the perimeter of the door while manipulating the door handle to attempt to open the door. This test shall be conducted with the locker in the upright position.

Elevate the closed locker 6 to 8 inches (150 to 200 mm) above the unpadded floor in the upright position and release in a free fall and upon impact attempt to open the door.

D. FINISH TESTS

Finish test panels shall be 20 gauge metal and finished as specified in Section III. R. Finish.

The dried film shall show no evidence of cracking or flaking under seven power magnification after a panel has been bent through 180° over a 1/8" (3.2 mm) diameter rod.

The dried film shall withstand a firm stroke of a 2H pencil held at a 45° angle and pushed across the film surface without evidence of marring when viewed at an oblique angle in a strong light.

When the panel is cut through the finish to the metal to form a 1/8" (3.2 mm) grid, and covered with 1" (25.4 mm) wide cellophane tape, there shall be no removal of finish when the tape, firmly applied is removed quickly.

VII. DELIVERY AND PAYMENT

Delivery of and payment for lockers under this specification shall be in accordance with the terms and conditions of the Invitation for Bids. The contractor shall be responsible for any packing, packaging, or protection required to insure delivery in an undamaged condition.

VIII. ORDERING DATA

Purchasers should exercise any desired option offered herein and should specify the following in the Requisition and Invitation for Bids:

1. Title, number, and date of this specification
2. Type, style, class, and size of lockers
3. Color required
4. Number of lockers in sectional groups
5. When lockers are to be installed in recesses
6. Number sequence required
7. Any option offered in Section III.T. Options