



**SECTION 10 51 13
METAL LOCKERS**

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Heavy Gauge Welded Duty Lockers.
- B. Locker benches.

1.02 REFERENCES

- A. ADAAG – Americans with Disabilities Act, Accessibility Guidelines.

1.03 SUBMITTALS

- A. Submit under provisions of Section 01 33 00.
- B. Shop Drawings: Show the following:
 - 1. Dimensioned drawings including plans, elevations, and sections to show locker locations and interfaces with adjacent substrates.
 - 2. Details of assembly, erection, anchorage and clearance requirements.
- C. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and finishes.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Protect locker finish and adjacent surfaces from damage.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

- A. Acceptable Manufacturer: Penco Products, Inc., which is located at: 1820 Stonehenge Drive, Greenville, NC 27858; Tel: 800-562-1000; Fax: 800-248-1555; Email: general@pencoproducts.com; Web: www.pencoproducts.com
- B. Lockers shall be GREENGUARD Gold Certified by UL Environment through the GREENGUARD Certification Program.

2.02 MATERIALS

- A. Steel: Prime grade mild cold-rolled sheet steel free from surface imperfection, capable of taking a high-grade enamel finish and in compliance with ASTM A1008.
- B. Steel: Sheet steel components shall be fabricated using zinc-coated steel free from surface imperfection, capable of taking a high-grade enamel finish and in compliance with ASTM A879.

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- C. Bolts and Nuts: Zinc plated truss fin head bolts and hex nuts.
- D. Provide only metal lockers fabricated in the United States by a single domestic manufacturer.

2.03 HEAVY GAUGE PERSONAL DUTY LOCKERS

- A. Heavy Duty Lockers: All locker body components made of cold rolled steel specially formed for added strength and rigidity and to ensure tight joints at fastening points.
- B. Locker Body: All-Welded Duty Lockers.
 - 1. Sides, Bottoms, Tops, and Shelves:
 - a. 16 gauge steel.
 - b. Solid sides punched for shelf locations on nominal 12 inch centers
 - 2. Backs: Solid 18 gauge steel.
 - 3. Doors:
 - a. 14 gauge steel.
 - b. Standard Ventilation: 6 inch (152.4 mm) wide by 3/4 inch (19 mm) high horizontal louvers arranged in two groups of six.
 - c. Optional Ventilation: 3/4 inch (19 mm) wide by 1-1/2 inch (38 mm) high diamond-shaped perforations or 3/4 inch (19 mm) wide by 1/4 inch (6.4 mm) high security mini louvers.
 - d. Solid doors.
 - 4. Sides: Vertical frames and sides.
 - a. Ventilation: Solid sides
 - b. Optional Ventilation: 3/4 inch (19 mm) wide by 1-1/2 inch (38 mm) high diamond-shaped perforations.
 - 5. Tops: Notched and formed sheet; one continuous flat top for each locker.
 - a. Top shall have a pattern of 1x1/8" slots to facilitate airflow.
 - b. Top shall have a single gang duplex knockout for electrical service provided by other.
 - 7. Shelves: Flanged four sides with additional return flange on front edge to increase strength.
 - 8. Door frames: 16 gauge formed in a channel shape with continuous vertical door strikes.
 - a. Vertical frame members shall be integral with locker side panel. Separate frame and side pieces fastened by welding or nut and bolt are not acceptable
- C. Locker Doors: One piece sheet steel.
 - 1. Provide holes for attaching number plates.
 - 2. Ventilation: Provide louvered doors in manufacturer's standard louver pattern.
- D. Hinges:
 - 1. Continuous type: 16 gauge piano hinge measuring full height of door. Welded to door and attached to locker frame using steel rivets.
- E. Duty Locker Drawer Base with Integral Seat:
 - 1. Welded drawer case assembly punched for attachment to upper locker: 14 gauge steel, 18 inches high by 33 inches deep and same width as locker.
 - 2. 16 gauge drawer body supported by heavy duty ball-bearing extension glides rated at 250 pounds per pair.
 - a. Drawer operation shall be independent of locker operation.
 - b. Drawer sides lanced to accept optional vertical dividers spaced to accept common hanging file folders
 - c. Drawer face with integral finger grab and punched to accept built-in spring bolt locker lock.



3. Hardwood seat: Laminated selected hardwood, 1-1/4 inch (31 mm) full finished thickness, corners rounded and sanded, surfaces finished with two coats of clear lacquer.
 - a. Width: 9-1/2 inches (240 mm) wide.
 - b. Length: As shown, continuous along adjoining lockers with drawer bases

- F. Optional Integral Channel Base: Notched and formed 14 gauge 4 inch (101 mm) integral base; suitable for anchoring to wood or concrete bases.

2.04 DOOR HANDLES AND LATCHING

- A. Single Tier Lockers:
 1. Cremona Latching: Handle shall be a heavy duty turn handle that engages the door frame on three sides. The top and bottom frames are engaged with 3/8 inch (9.5 mm) steel rods, and a 1/8 inch (3 mm) thick center latch engages at the side.
 - a. Double door configurations shall consist of a left hinged door secured its full length by the right hinged door when latched.
 - b. Handle Assembly shall be secured to door using a threaded lock nut to facilitate adjustment and removal for repair if necessary. Welded handle assemblies shall not be accepted.
 2. Single-point latching, single door up to 24 inch wide only:
 - a. Recess handle in door.
 - b. Integral Pocket and Pull: 22 gauge brushed stainless steel securely fastened to door with two lugs and a positive tamper-resistant decorative fastener.
 - 1) Pocket Depth: Sufficient to prevent a combination padlock, built-in combination lock, or key lock from protruding beyond door face.
 - 2) Pull: Formed in pocket.
 - 3) Padlock Staple: Protruding through pocket.
 - c. Provide lock hole cover plate for use with padlocks.
 - d. Locking Device: 11 gauge steel hasp welded to locker frame; include surface for engaging the bolt of a built-in combination or key lock and anti-pry lug and slot to deter prying open when locked.
 - e. 18 inch wide doors shall be reinforced using a 3-1/2 inch (89 mm) wide, 18 gauge vertical pan welded to the top, bottom and hinge side flanges and rear of door skin.
 - f. 24 inch wide doors shall be reinforced using a 20 gauge horizontal box pan MIG-welded a maximum of 8" on center to the hinge and latch side channels, and spot welded a maximum of 8" on center to the door skin along the upper and lower pan edge for optimum strength, quiet operation and stiffness. Pan shall completely enclose and reinforce the rear of the recessed pocket.
 - g. Firmly secure rubber silencers to locker frame.
 3. Multi-point latching with recessed handle, single door up to 24 inch wide only:
 - a. Recess finger-lift control handle in door.
 - b. Pocket: 22 gauge brushed stainless steel securely fastened to door with two tabs and a positive tamper-resistant decorative fastener; of depth sufficient to prevent a combination padlock, built-in combination lock, or key lock from protruding beyond door face.
 - c. Provide lock hole cover plate for use with padlocks.



- d. Attach 14 gauge formed steel lifting piece to latching channel with one concealed retaining lug and one rivet, assuring a positive two-point connection.
- e. Handle Finger Lift: Molded, sound-deadening, attached with rivet; padlock eye for use with 9/32 inch (7.1 mm) diameter padlock shackle.
- f. Latch Clip: Glass-filled nylon engaging the door frame and holding the door shut.
 - 1) Doors 60 inches (1.524 m) High: Three points.
 - 2) Doors 72 inches (1.828 m) High: Three points.
- g. Locking Device: Positive, automatic type, whereby locker may be locked when open, then closed without unlocking.
- h. Firmly secure one rubber silencer in frame at each latch hook.

2.05 INTERIOR EQUIPMENT

- A. Heavy Duty All-Welded Duty Lockers With Doors:
 - 1. Single-Tier, shelf located approximately 12 inches (304.8 mm) below top of locker.
 - a. Pattern of 42 ½ inch holes on 1 inch centers centered over garment side of locker to facilitate airflow.
 - 2. Interior vertical subdivision, 16 gauge
 - 3. Security Compartment; Equipped with chrome knob and punched to accept built-in lock.
 - a. Bottom of compartment punched to accept double prong hook
 - 4. Openings 24 inches (609.6 mm) deep: Two heavy duty 7/8 inch x 2-1/4 inch x 3 inch single prong wall hooks and one 1 inch diameter coat rod.

2.06 ACCESSORIES

- A. Number Plates: Provide each locker with a polished aluminum number plate, 2-1/4 inches (57 mm) wide by 1 inch (25 mm) high, with black numerals not less than 3/8 inch (9.5 mm) high; attach to face of door with two aluminum rivets.
- B. Optional Name Card Holder: Plated steel. Holds 1.25" (31.75 mm) x 2.75" card (69.85 mm).
- C. Locks: Built-in flat key locks; master-key to same series.
- D. Locks: Built-in grooved key locks (pin tumbler); master-key to same series.
- E. Locks: Built-in three-number dialing combination locks capable of at least five different combination changes; provide master key, combination change key, and combination control charts.
- F. Padlocks: Master-keyed three-number dialing combination type padlocks; provide master key.
- G. Interior Equipment
 - 1. Optional Acrylic mirror: Self adhesive, 6 inch (152.4 mm) x 8 inch (203.2 mm).
 - 2. Optional Side Shelves: 16 gauge, flanged on four sides and attached securely to center partition and locker side.
 - a. Punch to accept double prong hook.
 - 3. Optional cell phone/key tray: 8 inch (203.2 mm) x 2 inch (50.8 mm) x 2 inch (50.8 mm). Attaches to vertical subdivision
 - 4. Optional sheet steel document sleeve. 16 gauge measuring 12 inches wide (horizontal storage) or 9-1/2 inches wide (vertical storage) and attached using supplied hardware.

5. Optional Garment separator. Formed from 16 gauge sheet steel and perforated. Mounted underneath the full width shelf.
 6. Optional Parachute/body armor rack. Formed from ¾ inch diameter, heavy wall steel tube. Reinforced by 14 gauge gussets and supports and mounted securely to locker back. Replaces standard rear mounted coat hooks. 180 pound capacity.
- H. Continuous sloped hoods: 16 gauge steel, slope rise equal to 1/3 of the locker depth (18.5 degrees), plus a 1 inch (25 mm) vertical rise at front.
1. Supplied in 72 inch (1829 mm) lengths only.
 2. Slip joints without visible fasteners at splice locations.
 3. Provide necessary end closures.
 4. Finish to match lockers.
- I. Finished End Panels: Minimum 16 gauge steel formed to match locker depth and height, 1 inch (25 mm) edge dimension; finish to match lockers. Install with concealed fasteners.
- J. Front Fillers: 20 gauge steel formed in an angle shape, with 20 gauge slip joint angles formed in an angle shape with double bend on one leg forming a pocket to provide adjustable mating with angle filler.
1. Attachment by means of concealed fasteners.
 2. Finish to match lockers.
- K. Free Standing Benches: Laminated selected hardwood, 1-1/4 inch (31 mm) full finished thickness, corners rounded and sanded, surfaces finished with two coats of clear lacquer.
1. Depth: 9-1/2 inches (240 mm) deep.
 2. Depth: 12 inches (305 mm) deep.
 3. Depth: 24 inches (610 mm) deep.
 4. Lengths: As shown.
- L. Heavy-Duty Bench Pedestals: Steel tubing with 11 gauge steel flanges welded to each end, 16-1/4 inches (412 mm) high, finish to match lockers.
- M. Stainless Steel Free-Standing Bench Pedestals: 2-inch (50 mm) diameter brushed 16 gauge stainless steel formed into a trapezoid, 14 inch (355 mm) wide bottom with two 5/16 inch (7.9 mm) diameter holes, top flange with four 5/16 inch (7.9 mm) diameter holes for fastening to bench

2.07 FABRICATION

- A. Fabricate lockers square, rigid, without warp, with metal faces flat and free of distortion.
- B. Finish: Enamel powder coat paint finish electrostatically applied and properly cured to manufacturer's specifications for optimum performance. Finishes containing volatile organic compounds and subject to out-gassing are not acceptable. Locker exterior and interior shall be painted the same color.
1. Powder Coat - Dry Thickness: 1 to 1.2 mils (0.025 to 0.03 mm).
 2. Powder Coat Plus - Dry Thickness: 2 to 2.2 mils (0.05 to 0.055 mm).
 3. Color: As selected from manufacturer's standard colors.
 4. Special Finish
 - a. Custom color
 - b. Anti-Graffiti
 - c. Anti-Microbial
 - d. TGIC
 - e. Ultra-Weatherable

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PART 3 – EXECUTION

3.01 EXAMINATION

- A. Do not begin installation until substrates and bases have been properly prepared.
- B. If substrate and bases are the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 INSTALLATION

- A. Install metal lockers and accessories at locations shown in accordance with manufacturer's instructions.
- B. Install lockers plumb, level, and square.
- C. Anchor lockers to floor and/or wall at 36 inches (0.914 m) or less, as recommended by the manufacturer.
- D. Bolt adjoining locker units together to provide rigid installation.
- E. Install sloping tops and metal fillers using concealed fasteners. Provide flush hairline joints against adjacent surfaces.
- F. Install benches by fastening bench tops to pedestals and securely anchoring to the floor using appropriate anchors for the floor material.

3.03 ADJUSTING AND CLEANING

- A. Adjust doors and latches to operate without binding. Verify that latches are operating satisfactorily.
- B. Adjust built-in locks to prevent binding of dial or key and ensure smooth operation prior to substantial completion.
- C. Touch-up with factory-supplied paint and repair or replace damaged products before substantial completion.

3.04 PROTECTION

- A. Protect installed products until completion of project.

END OF SECTION

Penco Products, Inc. reserves the right to vary specifications consistent with a policy of continuous product improvement.

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