

Inset Metal Laboratory Casework

PRODUCTS

2.01 MANUFACTURER

- A. Design, materials, construction and finish of casework specified is the minimum acceptable standard of quality for inset metal laboratory casework. The basis of this product specification is Invincible Furniture, 842 South 26th Street, Manitowoc, WI 54220.

2.02 CASEWORK MATERIALS

- A. Sheet steel: Mild cold rolled and leveled unfinished steel.
- B. Minimum gauges:
1. 20 gauge: Drawer bodies.
 2. 18 gauge: Exterior/interior drawer fronts, scribing strips, filler panels, enclosures, shelves, security panels, sloping tops, door fronts, case tops, ends, bottoms, bases, backs, vertical posts, uprights, and access panels.
 3. 16 gauge: Interior door panels, top front rails, top rear gussets, intermediate horizontal rails, table legs and frames, leg rails and stretchers.
 4. 11 gauge: Table leg corner brackets and gussets for leveling screws.
- C. Glass for glazed swinging and sliding doors (framed and unframed):
6mm (1/4" thick) Tempered Glass

2.03 CASEWORK FABRICATION

- A. Base Units, Wall, Upper and Tall Cases:
1. Base units - 28 3/4" (sitting height) and 34 3/4" (standing height). End panels and back reinforced with internal reinforcing front and rear posts. Base units shall be 22" overall in depth.
 2. Wall and Tall Cases - 30" and 84" in height. Formed end panels with front and rear reinforcing post channels; back shall be formed steel panel, recessed 3/4" for mounting purposes.
 3. Center divider panel: Fully enclosed divider panel. Shelf adjustment holes in center divider panel shall be perfectly aligned for level setting, incrementally adjustable to 1/2" on-center full height of unit.
 4. Secure intersection of case members with spot and arc welds. Provide gusset reinforcement at front corners
 5. Base unit backs: Provide drawer units without backs and cupboard units with removable backs for access to services behind units.
 6. Bottoms: Base units and wall cases shall have one piece bottom with front edge formed into front rail, rabbeted as required for swinging doors and drawers and flush design for sliding doors.
 7. Top rail for base units: Interlock with end panels, flush with front of unit.

Inset Metal Laboratory Casework

8. Toe kick for base units: 4" high x 3" deep with formed steel base located at corners of base unit (4 total). Leveling screw is 3/8" diameter with 16 count thread and 1" long with integral bottom flange with minimum 0.56 sq. in. area, accessible through bottom of base unit.
 9. Tops of wall cases: One piece, with front edge formed into front rail.
- B. Drawers:
1. Steel Drawer Fronts: 3/4" thick, double wall steel construction, pre painted prior to assembly and screwed to drawer body.
- C. Drawer bodies: Bottom and sides formed from cold rolled steel with bottom and sides covered and formed top edges. Back panels spot welded to center section.
- Drawer suspension: Heavy Duty Laboratory grade 100 lb. zinc full extension, ball bearing drawer slides.
 - Provide security panels for drawers with keyed different locks (optional).
- D. Doors:
1. Steel Doors Fronts: 3/4" thick, double wall, box steel construction with interior pre painted. Reinforce interior of front panel with steel hat channels on widths over 18". Doors shall close against roller catch.
 2. Sliding doors - solid: Design for easy removal after removal of bottom guide. Doors shall be hung with nylon tired sleeve bearing rollers in formed steel top hung track and shall close against rubber bumpers.
Sliding doors – framed: Hung with steel (in lieu of nylon) sleeve bearing rollers in formed steel top hung track and shall close against rubber bumpers.
- E. Shelves:
1. Form front and back edges down and back 3/4". Form ends down 3/4".
 2. Reinforce shelves over 36" long with welded hat channel reinforcement the full width of shelf.
- F Hardware: Drawer and hinged door pulls.
- Pull Direction at Drawers and Doors
1. Horizontal on drawers, vertical on doors.
 - a. Door/Drawer Pulls:
 - Stainless steel wire finger pull.
 2. Hinges: Institutional type, five knuckle projecting barrel hinges, minimum 2-1/2" long, stainless steel. Provide two hinges for doors up to 36" high; three hinges for doors over 36" high. Drill each leaf for three screw attachment to door and frame.
 3. Door catches:
 - Roller catches.

Inset Metal Laboratory Casework

4. Casters:
120 lb. and 300 lb. load rating casters available in locking and non-locking options.
5. Locks:
 - None (standard default).
 - Option: (select on options menu) 5-pin tumbler, heavy duty cylinder type.*
6. Label holders:
 - None
 - Will work with customer to order correct type and style for Invincible Furniture to be shipped loose and installed in the field.
7. Number Plates:
 - None
 - Will work with customer to order correct type and style for Invincible Furniture to be shipped loose and installed in the field.
8. Shelf clips: Steel, zinc plated, designed to engage in shelf adjustment holes.

2.04 TABLE FRAMES

- A. Table frames: 5" high 'C' channel front and back aprons, end rails and cross rails.
- B. Table drawers: Provide front and back rails; drawer unit, hardware and suspension same as specified for base unit drawers.
- C. Legs: 2" x 2" steel tube legs. Attach legs with two bolts to front and back aprons. Each leg shall have a recessed leveling screw 1 ¼" H, overall 2".
- D. Knee space frame: 2 1/2" or 5" high apron where no drawers required.
- E. Leg rails and stretchers: Channel formed.

2.05 METAL FINISH

- A. Metal finish:
 1. Invincible Furniture Solutions utilizes SEFA proven chemically resistant powder coatings. The painted surfaces will have a SEFA compliant, chemical resistant, high grade laboratory furniture quality finish.
 - a. Exterior and interior exposed surfaces: 2.2 mil average and 1.5 mil minimum.
 - b. Backs of cabinets and other surfaces not exposed to view: 1.2 mil average.
- B. Cabinet Surface Finish Verification:
All casework construction and performance characteristics shall be in full compliance with

Inset Metal Laboratory Casework

SEFA 8 -1999 standards. At the owner's request and expense, an independent, third party performance testing may be submitted, validating compliance and adherence to the finish specifications.

PART 3 – EXECUTION**3.01 INSTALLATION****A. Casework installation:**

1. Set casework components plumb, square, and straight with no distortion and securely anchored to building structure. Level as required using cabinet levelers.
2. Bolt continuous cabinets together with joints flush, tight and uniform, and with alignment of adjacent units within 1/16" tolerance.
3. Secure wall cabinets to solid supporting material, not to plaster, lath or gypsum board.
4. Abut top edge surfaces in one true plane. Provide flush joints not to exceed 1/8" between top units.

3.02 ADJUSTING

- A. Repair or remove and replace defective work, as directed by [Architect] [Owner] upon completion of installation.
- B. Adjust doors, drawers, hardware, fixtures and other moving or operating parts to function smoothly.

3.03 CLEANING

- A. Clean shop finished casework, touch up as required.
- B. Clean countertops with diluted dishwashing liquid and water leaving tops free of all grease and streaks. Use no wax or oils.

3.04 PROTECTION OF FINISHED WORK

- A. Provide all necessary protective measures to prevent exposure of casework and equipment from exposure to other construction activity.
- B. Advise contractor of procedures and precautions for protection of material, installed laboratory casework and fixtures from damage by work of other trades.

— END OF SECTION —