

SECTION 08 11 13

HOLLOW METAL DOORS AND FRAMES

PART 1 GENERAL No Requirements

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. CECO
- B. Southwestern Hollow Metal
- C. Steelcraft
- D. Curries
- E. Mesker Door

2.02 MATERIALS

A. Hollow Metal Doors:

1. Steel used in the construction of hollow metal shall be of the best quality full cold-rolled furniture stock, free from scale, buckles and pits and meet all NAAMM/HMMA Specifications.
2. Hollow metal doors shall be units manufactured from 16-gauge face sheets, 16-gauge channel at top and bottom, 20-gauge internal stiffeners at 6" on center, and 8-gauge continuous edge strip, offset at hinges. 1 3/4" overall finished thickness, unless indicated otherwise by DPS prior to construction document completion.
3. Door stiles shall be beveled 1/8" in 2".
4. Door rails and stiles shall be continuous welded and ground smooth, with no visible seams on vertical edges.
5. Exterior doors shall be insulated with expanded Polystyrene insulation.
6. Doors shall be properly fabricated and reinforced to receive and coordinate with all hardware as scheduled.
7. Pre-finish doors with baked on or bonderized primer.
8. Doors shall be free of defects affecting appearance, operation, fit or functioning of hardware items.

B. Hollow Metal Frames:

1. Exterior and stairwell frames shall be fabricated from 14-gauge cold-rolled steel. All other frames shall be fabricated from 16-gauge cold-rolled steel.
2. Frames are to be continuously electric-welded at all exposed joints, miters and stops. Miter and weld corners the full length of all exposed joint surface's full width and depth, and grind smooth.
3. The lock side of the jamb of **interior** frames that are not scheduled to receive weather-stripping or smoke seals shall be prepared for rubber silencers.
4. Glazing stops shall be located on the occupied (room) side of frames, unless otherwise indicated.
 - a) Unless otherwise indicated by DPS, glazing stops shall be either 3/4" x 5/8", 20-gauge standard glazing beads, continuous single piece for each length, and butted at corner joints. Secure glazing beads to frame with countersunk cadmium or counter sunk zinc-plated screws. Stops to be fabricated for installation on the inside (occupied side) of frames.
5. Frames shall be properly cut, mortised, reinforced, drilled and tapped for hinges, strikes, holders where required. Do not drill and tap for surface-mounted closers and brackets.

C. Reinforcing Frame:

1. Hinge reinforcement for metal frames with wood doors:
 - a) Thickness: 3/16".
 - b) Length: 12".
 - c) Width: full width of frame (frame face to frame face).
 - d) Number of spotwelds above and below each cutout: 6, and shall be 3/16" in diameter.
2. Hinge reinforcement for metal frames:
 - a) Thickness: 1/4".
 - b) Length: 18".
 - c) Width: full width of frame (frame face to frame face).
 - d) Number of spot welds above and below each cutout: 8, and shall be 3/16" in diameter.
3. For continuous hinged door, reinforcing shall be full width and full length of frame. Reinforcing shall have minimum thickness of 1/8", welds shall be 1" long located on 8" centers at each face of frame.
4. Strike, flush bolt, hold-open and all surface-mounted hardware: 12-gauge.
5. Closer and brackets: 3/16" on frame. 12 gauge angle on door.
6. For door openings wider than 42" and for multiple openings, head members shall be reinforced full-length with 12-gauge angle or channel stiffeners.
7. Reinforcing plates shall be one-piece integral units, bent for flush mounting of hinges.

D. Provide cover boxes in back of all hardware cutouts.

E. Provide metal adjustable clip angles spot-welded to bottom of each door jamb member; provide holes in angles to receive floor anchorage.

F. Before shipment, install a temporary spreader at bottom of door frames. Do not remove spreader until frames are secured in place.

G. After fabrication, frames shall be cleaned and given a shop coat of red oxide primer, baked on or bonded, or a coat of gray zinc chromate rust-inhibitive flow-coat baked on primer.

H. Frame Anchors:

1. Concrete or masonry walls: UL welded-on 16-gauge adjustable strap anchors at least 2-1/2" x 10". Stirrup straps shall be appropriately corrugated and/or perforated.
2. Metal stud wall: 18-gauge "Z" anchors securely welded to frame.
3. Existing masonry openings: countersunk drilled UL-type masonry anchor, length as appropriate for permanence.
4. Provide three (3) masonry anchors for frames up to 7'-6" in height, and four (4) anchors for frames up to 8'-0" in height. For masonry and frame openings over 8'-0" in height, add one (1) anchor for each 2'-0" in height or fraction thereof.
5. Provide four (4) stud frame anchors for frames up to 7'-6" in height and five (5) anchors for frames up to 8'-0". For stud openings over 8'-0" in height, add one (1) anchor for each 2'-0" in height or fraction thereof.

I. Filling Frames:

1. All bolted frame anchors shall be countersunk and shall have flat-head countersunk screw heads filled and ground smooth prior to painting.

PART 3 EXECUTION

3.01 INSPECTION

- A. Frames which cannot be repaired to new condition shall be rejected and replaced with new fabrications.

3.02 INSTALLATION (FRAMES)

- A. Expansion and/or sleeve anchors with heads exposed on the frame surface shall have bolt head depressions filled and sanded so fasteners are not visible.
- B. Frames installed in masonry walls shall be slushed full with grout or mortar.
- C. Gypsum Partition Frames:
 - 1. Construct one-piece metal door and borrowed light frames used with gypsum panel and gypsum-base partitions to prevent twisting or movement. Frames must be securely anchored. Partition must fit securely in frame so that wall and frame work as a unit. The frame must have throat opening between trim returns that accurately fits the overall thickness of the partition.
- D. UL-Bolted Frames:
 - 1. Install frames for concrete or masonry openings with UL bolts and sleeves. Countersink bolt heads, fill depressions and grind smooth.

3.03 TOLERANCES

- A. For doors to receive weather-stripping, clearances to frame and threshold or floor shall be according to tolerances established by the weather-stripping manufacturer for proper functioning of the installed assembly.
- B. Maximum clearances for all other doors shall be 1/8" clearance at jamb, mullion and head; 1/8" clearance at meeting stiles; 3/8" at door bottom to floor (1/4" at pairs); and 1/8" to threshold.
- C. Fire-rated doors shall be fit according to the specifications of NFPA Bulletin 80.

END OF SECTION 08 11 13