



**08 1100**  
**Hollow Metal Doors and Frames**

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A. General:

1. Minimum door opening width shall be 3'-0" except in special cases, e.g. closets, custodial equipment rooms, limited access spaces, mechanical rooms.

B. Performance Requirements:

1. Interior Doors: Steel Door Institute (SDI) SDI-100, Level 2
2. Exterior Doors: Steel Door Institute (SDI) SDI-100, Level 3
3. Exterior doors and frames and interior doors and frames at kitchens, dishwashing, shower rooms, mechanical rooms, and as directed by the Owner shall be hot-dip galvanized.
4. Exterior doors shall be insulated to achieve a minimum R-value of 2.5, when tested in accordance with ASTM C1363.
5. Interior doors to mechanical rooms and acoustically sensitive areas shall be sound-deadened, with an STC rating equal to the enclosing wall. Consult on locations with Owner.

C. Products:

1. Hollow Metal Frames: Frames shall have mitered and welded, ground, filled and dressed smooth corners for new masonry construction. Frames should be mitered and welded, ground, filled and dressed smooth for new stud wall construction when time allows.
  - a. Frame Gage: 14 gage exterior, openings over 4'-0", and frames with automatic operators; 18 gage all other interior frames.
  - b. Hardware Preparation: Comply with the requirements of ANSI A250.4, Type A.
  - c. Jamb anchors:
    - 1) Minimum Thickness: 18 gage steel, 7 gage wire
    - 2) New Masonry Walls:
      - a) Furnish manufacturer's standard "T" anchor. Three anchors up to 7'-6" height, add one anchor per foot above 7'-6".
      - b) Furnish wire anchors for doors with conduit in jamb.
    - 3) Stud Partitions:
      - a) Use manufacturer' standard to suit the metal stud framing condition. Four anchors up to 7'-6" height, add one anchor per foot above 7'-6".
    - 4) Existing Masonry or Concrete:



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- a) Existing opening anchors. Manufacturer's standard.
- 2. Hollow Metal Doors:
  - a. Construction:
    - 1) Face sheets shall have smooth, seamless, and unbroken surface without "oil-canning." Minimum door thickness: 1-3/4"
    - 2) Doors shall be seamless with vertical edge seams welded, ground, filled and dressed smooth to make them invisible and provide a smooth flush surface.
    - 3) Doors shall have 1/8" bevel in 2" on hinge and lock edges.
    - 4) Door face sheets shall have vertical mechanical interlocking joints on hinge and lock edges.
  - b. Top and bottom edges of all doors shall be closed with 14-gauge channels. Provide top caps at exterior doors. Weep holes shall be provided in the bottom channel of exterior doors at 1'-0" o.c. to permit the escape of entrapped moisture.
    - 1) Doors shall be reinforced, stiffened, insulated, or sound deadened in accordance with:
      - a) Listing compliance for rating in fire, smoke or temperature rise assemblies.
      - b) SDI and HMMA standards for interior doors.
      - c) Manufacturer's standard for steel-stiffened doors.
    - 2) Doors shall be mortised and adequately reinforced for all hardware for high frequency use.
      - a) Mortised hardware reinforcements shall be drilled and tapped at the factory.
      - b) Surface applied hardware shall be field drilled by installer.
    - 3) Vision panels cutouts shall be factory made and framed with mitered corners.
      - a) Fixed moldings shall be securely welded to the door on the corridor, exterior or security side. Loose stops shall be not less than 20-gauge steel with mitered corner joints secured to frame opening by zinc-coated countersunk screws.
    - 4) Provide 14-gauge steel overlapping astragals where scheduled and/or required to meet Fire Rating.
- D. Installation:
  - 1. Install frames plumb, true and square, in accordance with ANSI A250.11 and manufacturer's written instructions.
  - 2. Prior to installation, doors and frames shall be checked and verified for size, swing, squareness, alignment, twist and plumbness. Permissible installation tolerances shall not exceed the following:
    - a. Squareness + 1/16": measured on a line, 90 degrees from one jamb, at the upper corner of the frame at the other jamb
    - b. Alignment + 1/16": measured on jambs on a horizontal line parallel to the plane of



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- the wall.
- c. Twist + 1/16": measured at face corners of jambs on parallel lines perpendicular to the plane of the wall.
  - d. Plumbness + 1/16": measured on the jamb at the floor
3. Frames installed in concrete or masonry walls: Coat interior of frame with asphaltic paint, except fire-rated frames.

END OF SECTION