

SECTION 08100 - METAL DOORS AND FRAMES

PART 1 - GENERAL

1.01 QUALITY ASSURANCE

- A. Provide doors and frames complying with Steel Door Institute "Recommended Specifications Standard Steel Doors and Frames" SDI-100.
- B. Fire Rated Door Assemblies: Provide assemblies complying with NFPA 80 and labeled in accordance with ASTM E-2074-00. Comply with UL 10C "Positive Pressure Fire Tests of Door Assemblies".

PART II - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Subject to compliance with requirements, provide steel doors and frames by one of the following:
 - Amweld/Div. American Welding & Mfg. Co.
 - Ceco Corp.
 - Curries
 - Fleming Steel Doors and Frames, an Assa Abloy Group Company
 - Steelcraft/Div. American Standard Co.

2.02 MATERIALS

- A. Hot-Rolled Steel Sheets and Strip: Commercial quality carbon steel, pickled and oiled, complying with ASTM A 1011.
- B. Cold-Rolled Steel Sheets: Commercial quality carbon steel, complying with ASTM A 1008.
- C. Galvanized Steel Sheets: Zinc-coated carbon steel sheets, complying with ASTM A-653, G60 zinc coating, mill phosphatized.
- D. Supports and Anchors: Fabricate of not less than 18-gage galvanized sheet steel.
- E. Inserts, Bolts, and Fasteners: Manufacturer's standard units, except hot-dip galvanize items to be built into exterior walls, complying with ASTM A 153, Class C or D as applicable.

2.03 SHOP APPLIED PAINT

- A. Primer: Rust-inhibitive enamel or paint, either air-drying or baking, suitable as a base for specified finish paints.

2.04 FABRICATION

- A. Comply with SDI-100 requirements as follows:
 - Interior Doors: SDI-100, Grade II, heavy-duty, Model 1, minimum 18-gage faces, 1 $\frac{3}{4}$ " thick.
 - Exterior Doors: SDI-100, Grade III, extra heavy-duty Model 2, minimum 16-gage faces, 1 $\frac{3}{4}$ " thick.

- B. Fabricate exposed faces of doors from only cold-rolled steel.
- C. Fabricate frames with 12-gage concealed stiffeners, reinforcement, edge channels, louvers, and moldings from either cold-rolled or hot-rolled steel (at fabricator's option). Factory weld all frames. Field welding/fabrication is prohibited.
- D. Fabricate exterior doors, panels, and frames from galvanized sheet steel. Close top and bottom edges of exterior doors as integral part of door construction or by addition of minimum 16-gage inverted steel channels.
- E. Exposed Fasteners: Unless otherwise indicated, provide countersunk flat Phillips heads for exposed screws and bolts.
- F. At exterior locations provide thermal insulating door and frame assemblies, tested in accordance with ASTM A-1363.
- G. Provide assemblies with U factor of 0.41 BTU/Hr. Ft. squared/deg. F or better.
- H. Finish Hardware Preparation: Doors and frames to receive mortised and concealed finish hardware. Comply with applicable requirements of ANSI A115 series specifications.

2.05 STANDARD STEEL FRAMES

- A. Provide metal frames for doors, of types and styles as shown on drawings. Conceal fastenings, unless otherwise indicated.
Exterior doorframes shall be minimum 16-gage cold-rolled furniture steel.
Interior doorframes shall be minimum 18-gage cold-rolled furniture steel.

Fabricate frames with mitered and welded corners. K-D Frames are prohibited.

Form exterior frames of hot-dip galvanized steel.
- B. Door Silencers: Except on weather-stripped frames, drill stops to receive 3 silencers on strike jambs.

PART III - EXECUTION

3.01 INSTALLATION

- A. Comply with SDI-105 "Recommended Erection Instructions For Steel Frames", SDI-100 and NFPA 80.
- B. Frames: In masonry construction, locate 3 wall anchors per jamb at hinge and strike levels.

At in-place concrete or masonry construction, set frames and secure to adjacent construction with machine screws and masonry anchorage devices.
Install fire-rated frames in accordance with NFPA Std. No. 80.
In metal stud partitions, install at least 3 wall anchors per jamb at hinge and strike levels.
In open steel stud partitions, place studs in wall anchor notches and wire tie. In closed steel stud partitions, attach wall anchors to studs with tapping screws.
- C. Final adjustments: Check and readjust operating finish hardware items, leaving steel doors and frames undamaged and in complete and proper operating condition.

END OF SECTION