



## **HOLLOW METAL DOORS**

### **1.1 Materials**

1.1.1 Cold-Rolled steel doors shall comply with ASTM A366 cold-rolled carbon steel sheet.

1.1.2 Galvanized doors shall comply with ASTM A924 general requirements for steel sheet metallic coated by hot dip process.

1.1.3 Doors shall be free of scale, pitting or other surface defects. Face sheets for interior doors shall be no less than 20 gage. Face sheets for exterior doors shall be not less than 18 gage and shall be zinc coated, and chemically treated for paint adhesion.

1.1.4 All parts, reinforcements and components shall be made of steel unless otherwise indicated.

### **1.2 Design and Construction**

1.2.1 All doors shall have welded joints and shall be seamless construction with no visible seams or joints on the faces or vertical edges. Minimum door thickness shall be 1-3/4".

1.2.2 All doors shall be strong, rigid and neat in appearance, free from warpage or buckle. Corner bends shall be true and straight and of minimum radius for the gage metal being used.

1.2.3 Face sheets shall be stiffened by the use of 1 lb./cubic ft. density pre-cured rigid polystyrene core or paper honeycomb bonded to both panels.

1.2.4 Doors shall have square edges and be non-handed. Hinge mortises shall extend through both door faces and filler plates will be provided to permit the use of left hand or right hand swing.

1.2.5 Door faces shall be joined at their vertical edges by welds on 2 inch centers. All welds shall be ground, filled and dressed smooth to make them invisible and provide a smooth flush surface.

1.2.6 The top and bottom edges shall be closed with a recesses steel channel not less than 16 gage, welded to both panels. Welds shall occur on approximately 2 inches on center.

1.2.7 Openings shall be provided in the bottom closure to permit the escape of



entrapped moisture. The bottom channel of all doors shall be galvanized steel for additional protection against rust due to the escape of such moisture.

1.2.8 All doors shall have a 12 Gage steel closer reinforcement welded to each door panel as standard.

### **Hardware**

1.3.1 Doors shall be mortised, reinforced, drilled and tapped at the factory for fully templated hardware only in accordance with ANSI/DHI A115.1 (Mortise) or A115.2 (Bored). Where surface-mounted hardware is to be applied, doors shall have reinforcing plates only. All drilling and tapping shall be a field operation by installation personnel.

1.3.2 Minimum gages for hardware shall be in accordance with ANSI A250.6-2003.

1.3.3 Hinge Reinforcements 10 Gage Minimum

1.3.4 Reinforcements for locks, flush bolts 14 Gage Minimum

1.3.5 Reinforcements for surface mounted closers 14 Gage Minimum

### **1.4 Door Finish**

1.4.1 After fabrication, all tool marks and surface imperfections shall be dressed clean by grinding, filling and sanding as necessary to make all faces and vertical edges smooth and free of irregularities.

1.4.2 Doors shall be chemically treated to insure maximum paint adhesion.

1.4.3 Doors shall be coated on all exposed surfaces with a rust inhibitive primer which will be baked on.

1.4.4 Primer materials shall comply with ANSI A250.10 Test Procedures and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames.

## **2 M SERIES MASONRY HOLLOW METAL FRAMES**

### **3 Materials**

4 Cold-Rolled steel frames shall comply with ASTM A366 cold-rolled carbon steel sheet.

5 Galvanized frames shall comply with ASTM A924 general requirements for



steel sheet metallic coated by hot dip process and ASTM A653 specifications for steel sheet, zinc coated (Galvanized) or zinc-iron alloy-coated (Galvannealed) by the hot-dip process. The coating weight shall be a minimum of 0.4 oz of zinc per square foot (A40) and shall be chemically treated to insure paint adhesion.

6 All parts, reinforcements, and components shall be made of steel unless otherwise indicated.

## **7 Design and Construction**

8 All finished frames shall be rigid and neat in appearance, square, true and free of defects, warp or buckle. Formed members shall be clean cut, straight and of uniform profile throughout their lengths.

9 Frame members shall be stamped in the flat to a predetermined pattern, designed to provide mitered faces and butted stops.

10 Frames miters shall be a "Tab and Slot" construction for field assembly without the need for welding.

11 Frames shall be reinforced at the miter joints with 18 gage gusset reinforcing to maintain proper alignment.

12 Frame stop heights shall 5/8"

13 Frame faces are 2" as standard.

14 Frame returns shall be 1/2" as standard except the 5-3/4" profile which shall have 7/16" returns.

15 Each jamb shall be supplied with one welded in floor anchor.

16 Each jamb shall be supplied with three snap-in anchors for wood stud; steel stud or masonry construction as specified on the order.

## **17 Frame Finish**

18 Frames shall be chemically treated to insure paint adhesion.

19 Frames shall be coated on all exposed surfaces with a rust inhibitive primer which will be baked on.

## **20 Hardware**

21 Frames shall be mortised, reinforced, drilled and tapped at the factory for fully templated hardware only. Where surface-mounted hardware is to be applied, frames shall have reinforcing plates only. All drilling and tapping shall be a field



operation by installation personnel.

22 Minimum gages for hardware shall be in accordance with ANSI A250.6-1997.

23 Hinge reinforcements 10 Gage Minimum

24 Strike reinforcements 14 Gage Minimum

25 Reinforcements for surface mounted closers 14 Gage Minimum

26 Reinforcements for surface mounted hardware 14 Gage Minimum

27 Strike jambs shall be mortised and reinforced to receive an ANSI/DHI A115.1 (4-7/8" Universal) strike.

28 Strike reinforcements will be covered with a welded-in steel plaster guard.

29 Strike jambs shall be prepared to receive three (3) rubber mutes. (Supplied by others.) 30 Hinge jambs shall be mortised and reinforced to receive 1-1/2 pairs of 4-1/2" x 4-1/2" templated hinges. (2 pair on frames over 7'6" in height).

31 Hinge reinforcements shall be covered with a welded-in steel mortar guard.

32 Double headers shall be prepared to receive two (2) rubber mutes. (Supplied by others.)

### **33 DW SERIES DRYWALL HOLLOW METAL FRAMES**

#### **34 Materials**

35 Cold-Rolled steel frames shall comply with ASTM A366 cold-rolled carbon steel sheet.

36 All parts, reinforcements, and components shall be made of steel unless otherwise indicated.

#### **37 Design and Construction**

38 All finished frames shall be rigid and neat in appearance, square, true and free of defects, warp or buckle. Formed members shall be clean cut, straight and of uniform profile throughout their lengths.

39 Frame members shall be stamped in the flat to a predetermined pattern, designed to provide mitered faces and butted stops.

40 Frames shall be reinforced at the miter joints with 16 gage corner reinforcing



to maintain proper alignment.

41 Frame stop heights shall 5/8"

42 Frame faces are 2" as standard.

43 Frame returns shall be 1/2" as standard.

44 Each jamb shall be supplied with welded in sill anchors.

45 Each jamb shall be supplied with three snap-in anchors for wood stud; steel stud or masonry construction as specified on the order.

#### **46 Frame Finish**

47 Frames shall be chemically treated to insure paint adhesion.

48 Frames shall be coated on all exposed surfaces with a rust inhibitive primer which will be baked on.

#### **49 Hardware**

50 Frames shall be mortised, reinforced, drilled and tapped at the factory for fully templated hardware only. Where surface-mounted hardware is to be applied, frames shall have reinforcing plates only. All drilling and tapping shall be a field operation by installation personnel.

51 Minimum gages for hardware shall be in accordance with ANSI A250.6-1997.

52 Hinge reinforcements 10 Gage Minimum

53 Strike reinforcements 14 Gage Minimum

54 Reinforcements for surface mounted closers 14 Gage Minimum

55 Reinforcements for surface mounted hardware 14 Gage Minimum

56 Strike jambs shall be mortised and reinforced to receive an ANSI/DHI A115.1 (4-7/8" Universal) strike.

57 Strike reinforcements will be covered with a welded-in steel plaster guard.

58 Strike jambs shall be prepared to receive three (3) rubber mutes. (Supplied by others.)

59 Hinge jambs shall be mortised and reinforced to receive 1-1/2 pairs of 4-1/2" x



opening Solutions group

4-1/2" templated hinges. (2 pair on frames over 7'6" in height).

60 Double headers shall be prepared to receive two (2) rubber mutes. (Supplied by others.)