

This section includes standard commercial Stainless Steel Doors and Frames. This section relies on both the Canadian Steel Door Manufacturers Association (CSDMA.org) industry standard, as well as on the Hollow Metal Manufacturers Association (NAAMM.org) industry standard. This section includes proprietary, descriptive and performance type specifications. Edit to avoid conflicting requirements.

Part 1 General

1.1 SECTION INCLUDES

This article includes a summary of the content of this section which will not be included in other sections. This article is NOT intended to be used as a trade or other form of jurisdictional content.

- .1 [Non-rated] [fire rated] pressed stainless steel frames.
- .2 [Non-rated] [fire rated] hollow stainless steel doors [and panels].
- .3 [Interior] [Exterior] glazed light stainless steel frames.
- .4 [Louvres.] [Glass and glazing.]

1.2 RELATED SECTIONS

This article references other specification sections that inter-rely on this section. This listing should include those sections that describe subjects or products that affect this section directly.

- .1 Section [_____ - _____]: Masonry mortar fill of metal frames.
- .2 Section 08 71 10 - Door Hardware - General.
- .3 [Section 08 81 00 - Glass Glazing: Glazing for installation in doors.]
- .4 Section 07 92 00 - Joint Sealing: Caulking between doors and adjacent construction.

1.3 REFERENCES

Edit this article after editing the rest of this section. List reference standards that are included within the text of this section, when edited for a project specification. Delete references that do not apply to this project.

- .1 ASTM A240/A240M-07e1 - Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.
- .2 Canadian Steel Door Manufacturers Association (CSDMA), Selection and Usage Guide for Steel Doors and Frames, 2009.
- .3 HMMA 802-0 - Manufacturing of Hollow Metal Doors and Frames.
- .4 HMMA 840-07 - Installation and Storage of Hollow Metal Doors and Frames.
- .5 HMMA 841-07 - Tolerances and Clearance for Commercial Hollow Metal Doors and Frames.

- .6 UL 10c-16 Standard for Positive Pressure Fire Tests of Door Assemblies
- .7 NFPA 80-16- Standard for Fire Doors and Other Opening Protectives.
- .8 HMMA 866-12 - Guide Specifications for Stainless Steel Hollow Metal Doors and Frames.
- .9 ICC/ANSI A117.1-2003- Accessible and Usable Buildings and Facilities.
- .10 USGBC – LEED v4.

1.4 REGULATORY REQUIREMENTS

Include the following article only if fire rated assemblies are specified. AMBICO can supply Stainless Steel Doors and Frames with a 45, 90, or 180 minute fire rating label. Cores of fire rated doors must be stiffened.

- .1 Installed Door and Frame Assembly: Conform to [NFPA 80] [_____] for fire rated class [as scheduled.] [as indicated.].
- .2 Installed Door and Frame Assembly: Conform to handicap code [ANSI/ICC A117.1]

1.5 SUBMITTALS

- .1 Product Data: Provide product data on standard door construction and [_____].
- .2 Shop Drawings: Indicate door and frame elevations, internal reinforcement, anchor types and spacing, closure methods, [finishes] location of cut-outs for hardware, and cut outs [for glazing] [for louvres].
- .3 Samples: Submit manufacturer's stainless steel finish samples showing range of material variation as well as polishing details.
- .4 Sustainable Design:
 - i) Section 01 35 18: LEED documentation procedures.
 - ii) Provide required LEED documentation for Product.
 - iii) Submit Type 3 Environmental Product Declaration (EPD) for Products of this Section.
 - iv) Manufacturer's Certificate: Certify that Products meet or exceed [specified requirements].

1.6 QUALITY ASSURANCE

- .1 Perform Work to requirements of [CSDMA (Canadian Steel Door Manufacturers Association)] [HMMA (Hollow Metal Manufacturers Association)] standards.
- .2 Manufacturer: Minimum 5 years documented experience manufacturing stainless steel, door and frame assemblies.

- .3 Provide Products of this section from a single manufacturer, unless components are referenced specifically in other sections.

1.7 DELIVERY, STORAGE AND PROTECTION

- .1 Section [01 61 00]: Transport, handle, store, and protect products.
- .2 Comply with HMMA 840.
- .3 Weld minimum two temporary jamb spreaders per frame prior to shipment.
- .4 Remove doors and frames from wrappings or coverings upon receipt on site and inspect for damage.
- .5 Store in vertical position, spaced with blocking to permit air circulation between components.
- .6 Store materials out of water and covered to protect from damage.

1.8 WARRANTY

- .1 Manufacturer's Limited Warranty: Five (5) years from date of supply, covering material and workmanship.

Part 2 Products

2.1 MANUFACTURERS

List the manufacturers acceptable for this project. Edit the subsequent descriptive specifications of Part 2, to identify project requirements and to eliminate any conflict with specified manufacturer's products.

- .1 AMBICO Limited
 1120 Cummings Avenue
 Ottawa, Ontario, Canada K1J 7R8
 Toll Free Phone 888-423-2224
 Phone 613-746-4663
 Toll Free Fax 800-465-8561
 Fax 613-746-4721
- .2 Other Acceptable Manufacturers:
 - .1 [_____].
 - .2 [_____].
- .3 Substitutions: [Refer to Section 01 60 00.] [Not permitted.]

2.2 MATERIALS

Note: Type #304 stainless steel alloy is standard. Type #316 alloy may be specified for extremely corrosive environments, such as in the presence of chlorine

- .1 Stainless Steel: ASTM A240, type [304] [316] alloy.

.2 Door Core:

Only one door core should be selected Edit to avoid potential conflicts.

- .1 Honeycomb: paper hexagonal cells
 - .2 Polystyrene: Rigid, extruded, closed cell board, 1 pound per cubic foot (16 kg per cubic meter) density minimum, conforming to ASTM C 578, Type 1
 - .3 Stiffened: Continuous vertical formed stainless steel sections, 0.026 in. (0.6 mm) minimum thickness, spaced with interior webs not more than 6 in. (152 mm) apart, which upon assembly, span the full thickness of the interior of the door. Voids between stiffeners shall be filled with fibreglass or mineral rock-wool batt-type material.
- .3 Fabrication Tolerances: To HMMA 841.

2.3 ACCESSORIES

The following paragraphs identify the components needed to complement the materials cited above..

- .1 Exterior Top Caps: Stainless steel flush channel.
- .2 Frame Thermal Breaks: Rigid polyvinylchloride extrusion.
- .3 Glazing Stops: Formed stainless steel channel, minimum 16 mm (0.625 inch) high, [butted] [mitred] corners; prepared for countersink style [tamperproof] screws. Material to match alloy of the door faces.
- .4 Louvres: [Roll formed stainless steel], [inverted [V] [Y] [slat] blade], [sight proof] [light proof] [_____] percent free area; [_____] style frame with [surface] [tamperproof] fasteners; [_____] manufactured by [_____]. Material to match alloy of door face. [Louvre to be factory supplied and installed by manufacturer.]
- .5 Glass: [In accordance with Section [08 81 00]] [_____]. Glazing to be supplied by others.

2.4 FABRICATION

Include this article to identify specific shop fabrication requirements. Choose one of the following two paragraphs: Flush Doors or Stile and Rail Doors

- .1 Stainless Steel Doors: [1.2] [1.6] [2.0] mm ([18] [16] [14] gauge) thick stainless steel, door faces. Door alloy and all alloy of all parts and reinforcements shall be identical.
- .2 Flush Design: [Fire rated] [Non-fire rated].
 - .1 Flush Design: [lock seam door construction, longitudinal edges mechanically inter-locked with visible edge seams.] [butt seam door construction, longitudinal edges fully welded with no visible edge seam]
 - .2 Top and Bottom Channels: Inverted, recessed, welded steel channels.
 - .3 Astragals: Stainless steel [Z] [T] shaped astragals for double doors.
 - .4 Exterior Door: Flush stainless steel top caps.

- .5 Fabricate with stainless steel hardware reinforcement plates welded in place.
 - .6 Core: [honeycomb] [polystyrene] [stiffened].
- [OR]**
- .1 Stile and Rail Design: [1.2] [1.6] mm ([18] [16] gauge) thick stainless steel, door faces. Not fire rated.
 - .1 [Lock seam door construction, longitudinal edges mechanically interlocked with visible edge seams.] [Butt seam door construction, longitudinal edges fully welded with no visible edge seam]
 - .2 Door panel will have visible face seams where stiles and rails intersect.
 - .3 Top and Bottom Channels: Inverted, recessed, welded steel channels.
 - .4 Astragals: Stainless steel [Z] [T] shaped astragals for double doors.
 - .5 Exterior Door: Flush stainless steel top caps.
 - .6 Fabricate with stainless steel hardware reinforcement plates welded in place.
 - .7 Core: [honeycomb] [polystyrene] [polyurethane].
 - .2 Stainless Steel Frames: frame alloy and alloy of all parts and reinforcements shall be identical.
 - .1 Stainless Steel Frames: [1.6] [2.0] [2.8] mm ([16] [14] [12] gauge) thick stainless steel, welded type construction, mitred corners.
 - .2 Factory assemble and weld stainless steel frames.
 - .3 Stainless Steel Mullions for Double Doors: [Fixed] [Removable] type.
 - .4 Fabricate with stainless steel hardware reinforcement plates welded in place.
 - .5 Reinforce frames wider than 1200 mm (48 inches) with roll formed stainless steel channels fitted tightly into frame head, flush with top.

2.5 FINISHES

Edit the following to identify finish. Choose from Standard or Custom finishes. Not: zinc phosphate primer may be applied to #2B mill finish stainless steel if required

- .1 Standard Stainless Steel Finish: [#2B Mill Finish] [#4 Satin] [#6 Hairline] [#8 Mirror] [Colored].
- [OR]**
- .2 Custom Finish: [Embossed] [Etched] [Patterned] [Non-directional] [Textured] [_____]

Part 3 Execution

3.1 INSTALLATION

- .1 Install components to manufacturer's written instructions.

- .2 Install doors and frames to [CSDMA] [HMMA 840] standards [and in accordance with NFPA 80, and local authority having jurisdiction].
- .3 Coordinate with [masonry] [gypsum board] [concrete] [_____] wall construction for anchor placement.
- .4 Set frames plumb, square, level and at correct elevation.
- .5 Allow for deflection to ensure that structural loads are not transmitted to frame.
- .6 Adjust operable parts for correct clearances and function.
- .7 Install [louvers,] [glazing and] door silencers.

3.2 ERECTION TOLERANCES

- .1 Section 01 73 00: Tolerances.
- .2 Installation tolerances of installed frame for squareness, alignment, twist and plumbness are to be no more than $\pm 1/16$ in (1.5mm) in compliance with HMMA 841.

3.3 FIELD QUALITY CONTROL

- .1 Provide qualified manufacturer's representative to instruct installers on the proper installation and adjustment of door assemblies.
- .2 Provide manufacturer's representative to inspect door installation, and test minimum five (5) cycles of operation. Correct any deficient doors.

END OF SECTION