

This section includes AMBICO Detention Steel Door and Frame assemblies that can be fire rated or non-rated. This section relies on both the Canadian Steel Door Manufacturers Association (CSDMA.org) industry standard, as well as on Hollow Metal Manufacturers Association (NAAMM.org) industry standard. This section includes proprietary, descriptive and performance type specification requirements. 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] detention pressed steel frames.
- .2 [Non-rated] [fire rated] [thermally insulated] detention hollow steel doors [and panels].
- .3 [Interior] [Exterior] glazed light frames.
- .4 [Louvres] [Glass and glazing][food pass][access door]

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 34 60 -Detention Door Hardware
- .4 [Section 08 81 00 - Glass Glazing: Glazing for installation in doors.]
- .5 Section 09 91 15 - Painting: Field painting of [doors] [frames] [doors and frames].

1.3 REFERENCES

- .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 ASTM A653/A653M-06 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- .3 Canadian Steel Door Manufacturers Association (CSDMA), Selection and Usage Guide for Steel Doors and Frames, 1990.
- .4 HMMA 802-92 - Manufacturing of Hollow Metal Doors and Frames.
- .5 HMMA 840-99 - Installation and Storage of Hollow Metal Doors and Frames.

- .6 HMMA 841-07 - Tolerances and Clearance for Commercial Hollow Metal Doors and Frames.
- .7 HMMA 863-04 – Detention Security Hollow Metal Doors and Frames.
- .8 NFPA 80-07 - Standard for Fire Doors and Other Opening Protectives.

1.4 REGULATORY REQUIREMENTS

Include the following article only if fire rated assemblies are specified. AMBICO can supply Detention Steel Door and Frame Assemblies with a 45, 90 or 180 minute fire rating label.

- .1 Installed Door and Frame Assembly: Conform to [NFPA 80] [_____] for fire rated class [as scheduled.] [as indicated.]. Label indicating fire resistance shall be applied to the door and door frame.
- .2 Installed Door and Frame Assembly: Conform to [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, closure methods, [finishes] location of cut-outs for hardware, and cut outs for [glazing] [louvres].
- .3 Samples: Submit manufacturer's door corner sample as well as frame corner sample.

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 hollow metal door assemblies.

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.
- .7 Clean and touch up scratches or disfigurement caused by shipping or handling with zinc-rich primer.

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

- .1 Sheet Steel: Galvanized steel to ASTM A653/A653M.
- .1 Coating designation [Z275] ([G90]) for exterior door assemblies.
- .2 Coating designation [ZF001] ([A01]) for interior doors assemblies.
- .2 Stainless Steel: ASTM, A240, type [304] [316]

2.3 DETENTION DOORS

- .1 [Galvanized Steel] [Stainless Steel]
- .1 Steel sheet faces [_____] mm ([_____] inch) thick, [flush] [_____] design.
- .2 Core: Stiffened core in conformance with HMMA 863 standards.
- .2 Fabrication Tolerances: To HMMA 841.

2.4 DETENTION FRAMES

- .1 [Galvanized Steel] [Stainless Steel]
- .1 Steel sheet [_____] mm ([_____] inch) thick.
- .2 Fabrication Tolerances: To HMMA 841.

2.5 ACCESSORIES

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

- .1 Exterior Top Caps: Rigid polyvinylchloride extrusion.
- .2 Glazing Stops: Formed [brass] [bronze], minimum 16 mm (0.625 inch) high, [butted] [mitred] corners; prepared for countersink style [tamperproof] screws.
- .3 Louvres: [Roll formed [steel] [aluminum]] [Extruded aluminum] material, [inverted [V] [Y] [slat] blade, [sight proof] [light proof] [] percent free area; [] style frame with [surface] [tamperproof] fasteners; [] manufactured by []. Louvers to be factory supplied [and pre-installed].
- .4 Food Pass to be supplied by others.
- .5 Access Door to be supplied by others.
- .6 Glass: [In accordance with Section [08 81 00]] []. Glazing to be supplied by others.

2.6 FABRICATION

- .1 Detention Doors:

Include this article to identify specific shop fabrication requirements. The following two paragraphs apply to all construction 'types', unless otherwise indicated.

- .1 Door Edge Construction: Longitudinal edges [mechanically inter-locked] [welded, filled and sanded] with [no] visible edge seams.
- .2 Door Core Construction: Stiffened with continuous steel sections, spaced with interior webs not more than 6 in. (152mm) apart, which upon assembly span the full thickness of the interior of the door.
- .3 Top and Bottom Channels: Inverted, recessed, welded steel channels.
- .4 Astragals: Metal [Z] [T] shaped astragals for double doors.
- .5 Exterior Door: Flush PVC top caps.
- .6 Reinforce doors where surface mounted hardware is required
- .7 Drill and tap for mortised, templated hardware.
- .8 Fabricate doors with hardware reinforcement plates welded in place.
- .2 Detention Frames:
 - .1 Welded Frames: [2.0] [] mm ([14] [] gauge) thick base metal thickness, welded type construction, mitred corners.
 - .2 Factory assemble and weld frames.
 - .3 Mullions for Double Doors: [Fixed] [Removable] type.
 - .4 Fabricate frames with hardware reinforcement plates welded in place.
 - .5 Reinforce frames wider than 1200 mm (48 inches) with roll formed steel channels fitted tightly into frame head, flush with top.

2.7 FINISHES

- .1 Galvanized Steel Finish: Factory applied zinc chromate primer [to be applied to all exposed surfaces] [touch-up only, where product has been welded and ground smooth].

[OR]

- .2 Stainless Steel Finish: [#2B Mill Finish][#2B Mill finish and prime painted][#4 Satin Finish].

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.
- .8 Finish paint in accordance with Section 09 91 15.

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 ten (10) cycles of operation. Correct any deficient doors.

3.4 SCHEDULE

Include this article to identify specific variations of products or installation requirements. If door and/or frame schedules are listed on drawings or on separate schedule sheets, do not repeat statements in this article.

.1 Detention Steel Door and Frame Schedule:

Tag	Room	Nominal Size	Thickness	Material	Glazing	Fire Rating	Louvres	Comments
D-1	100	750mm x 3600mm	44mm	GS	D	FR		
D-2	101	3'0" x 8'0"	1 3/4"	SS	C	NFR		
<ul style="list-style-type: none"> Material types: GS = Galvanized Steel, SS = Stainless Steel Glazing types: A = Halflite, B = Fulllite, C = Narrowlite D=Flush Fire Label types: FR= Fire rated to 180 minutes, NFR= Non-fire rated 								

END OF SECTION