

Part 1 General

1.1 SECTION INCLUDES

- .1 Non-fire rated acoustic pressed steel frames.
- .2 Non-fire rated acoustic wood doors.
- .3 Acoustic steel frames and side/transom lites.
- .4 Acoustic glass and glazing.
- .5 Perimeter and bottom acoustic seals, threshold and astragal.
- .6 Factory finishing.

1.2 RELATED SECTIONS

- .1 Section 06 40 00 – Woods, Plastics, & Composites
- .2 Section 09 81 16 - Acoustic Blanket Insulation: Insulation inside door frames.
- .3 Section 07 92 00 - Joint Sealing: Caulking between doors and adjacent construction.
- .4 Section 08 71 10 - Door Hardware - General.
- .5 Section 09 91 15 - Painting: Field painting of frames.

1.3 REFERENCES

- .1 ANSI/WDMA I.S. 1A-13 - Interior Architectural Wood Flush Doors.
- .2 ASTM A653/A653M-15e1 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- .3 ASTM E90-09(2016) - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
- .4 ASTM E413-16 - Classification for Rating Sound Insulation.CSDMA, Selection and Usage Guide for Steel Doors and Frames, 2009.
- .5 FSC – Forest Stewardship Council Standard for Chain of Custody Certification.
- .6 HMMA 802-07 - Manufacturing of Hollow Metal Doors and Frames.
- .7 HMMA 840-16 - Installation and Storage of Hollow Metal Doors and Frames.
- .8 ANSI/ICC A117.1-2003 - Accessible and Usable Buildings and Facilities (Standard and Commentary).
- .9 UL 10C-16 - Standard for Positive Pressure Fire Tests of Door Assemblies.

- .10 USGBC LEEDv4.

1.4 REGULATORY REQUIREMENTS

- .1 Conform to ICC/ANSI A117.1.

1.5 SUBMITTALS

- .1 Section 01 33 00: Submission procedures.
- .2 Product Data: Provide product data on door construction, warranty, and maintenance.
- .3 Shop Drawings: Indicate door and frame elevations, anchor types and spacing, closure methods,[finishes location of cut-outs for hardware, and cut outs for glazing.
- .4 Samples: Submit manufacturer's door finish samples, frame corners, and perimeter acoustic gaskets.
- .5 Test Data:
 - .1 Submit test data indicating compliance with the Sound Transmission Class (STC) requirements. Include laboratory name, test report number, and date of test.
 - .2 Submit certification from test laboratory qualified under the National Voluntary Accreditation Program (NVLAP) of the U.S. Bureau of Standards.
- .6 Installation Instructions: Submit manufacturer's installation instructions.

1.6 QUALITY ASSURANCE

- .1 Perform Work to requirements of WDMA Window and Door Manufacturers Association standards.
- .2 Provide Products of this section from a single manufacturer, unless components are referenced specifically in other sections.
- .3 Manufacturer: Minimum five (5) years documented experience manufacturing sound control door assemblies.
- .4 Pre-installation Meeting: Convene a pre-installation meeting 2 weeks before installation of acoustic door and frame assemblies. Require attendance of relevant subcontractors, consultants, and manufacturer's representative. Review installation and coordination with other work.

1.7 DELIVERY, STORAGE AND PROTECTION

- .1 Section 01 61 00: Transport, handle, store, and protect products.
- .2 Comply with WDMA I.S. 1A for wood doors.
- .3 Comply with HMMA 840 for steel frames, and manufacturer written instructions.
- .4 Weld minimum two temporary jamb spreaders per frame prior to shipment.

- .5 Remove frames from wrappings or coverings upon receipt on site and inspect for damage.
- .6 Store doors in horizontal position, frames in vertical position, spaced with blocking to permit air circulation between components.
- .7 Store materials out of water and covered to protect from damage. Use covering that enables air circulation and does not permit light to penetrate.
- .8 Store doors between 10 to 32 degrees C (50 to 90 degrees F) and 25 to 55 percent relative humidity.
- .9 Clean and touch up scratches or disfigurement to wood and metal surfaces.

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

- .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 Fleming Door Products.
 - .2 Penner Doors and Hardware.
- .3 Substitutions: to be considered by Client and Architect for approved equal or equivalent.

2.2 PERFORMANCE REQUIREMENTS

- .1 Acoustic Performance: Minimum Sound Transmission Class STC 50 tested to ASTM E90.

2.3 MATERIALS

- .1 Sheet Steel:
 - .1 Galvanized steel to ASTM A653/A653M, ZF75 (A25), minimum 1.5 mm (16 ga) thick.
- .2 Reinforcement: Same material as sheet steel.

- .3 Wood door panel: FSC Certified, Urea-formaldehyde free acoustic core with wood veneer facing.
 - .1 Door facing:
 - .1 Wood face veneer: White oak species, quarter-sawn cut; minimum thickness before sanding 0.6 mm (1/42 inch).
 - .2 Door edging:
 - .1 For wood faced doors, provide hardwood stiles with stiles to match wood face and hardwood rails.
 - .2 For plastic laminate doors, provide hardwood stiles and rails.
 - .3 Bottom rail may be omitted if required to meet acoustic performance requirements.
- .4 Glass: Type as tested to achieve STC and fire ratings [factory installed].

2.4 FABRICATION

- .1 Manufacture doors and frames to STC rating of 50, measured in accordance with ASTM E90.
- .2 Wood Doors:
 - .1 Fabricate doors to ANSI/WDMA IS1A. Provide suitable thickness, design, and acoustic core to achieve specified STC and fire performance ratings.
 - .2 Reinforce doors where surface-mounted hardware is required.
 - .3 Drill and tap steel acoustic core for mortised, templated hardware.
 - .4 Astragals: Metal acoustic, with integral acoustic seals for double doors. Meeting stile both active for vertical rod devices.
 - .5 Exit Device Vertical Rods: Surface mounted, with concealed top rod; coordinate with exit hardware devices specified in Section 08 71 10.
 - .6 Factory installed glazing.
- .3 Steel Frames:
 - .1 Sheet steel, metal thickness and appropriate to maintain door STC and fire ratings, mitred corners, fully welded seams.
 - .2 Factory assemble and weld frames.
 - .3 Install and adjust perimeter and bottom acoustic seals around frames and mullions.
 - .4 Mullions for Double Doors: Removable type if required. No mullions.
 - .5 Supply glazing loose, ready for field assembly.
- .4 Affix permanent nameplates to door and frame, indicating manufacturer's name and STC rating.

2.5 FINISHES

- .1 Metal Frame: Factory applied zinc phosphate primer.
- .2 Factory Door Finish: Catalyzed lacquer, premium grade finish to WDMA I.S. 1A, , clear coat WV1, qrt. Sawn white oak veneer, book-matched, end matched.

- .3 Top and Bottom Rails: Factory sealed with wood sealer.

2.6 ACCESSORIES

- .1 Hinges: Heavy duty butt type, refer to Section 08 71 00. Glazing stops for frames: Formed galvanized steel channel, mitred corners; prepared for countersink style screws for side lite and borrowed lite frames.
- .2 Glazing stops for doors: Formed galvanized blade stops, mitred corners; prepared for countersink screws.
- .3 Primer: Rust inhibitive zinc phosphate on frames.
- .4 Threshold: To provide a seal for door in closed position.
- .5 Astragal: Overlapping or meeting stile, supplied loose for field installation. Overlapping astragal to be minimum 2 mm (14 ga) thick.
- .6 Acoustic seals: Provide perimeter and bottom seals, manufacturer standard.

Part 3 Execution

3.1 INSTALLATION

- .1 Install components to manufacturer's written instructions.
- .2 Install wood doors and frames to ANSI/WDMA IS 1A standards, and in accordance with NFPA 80, and local authority having jurisdiction.
- .3 Utilize welders certified by Canadian Welding Bureau (CWB) for field welding.
- .4 Install factory supplied glazing to frames.
- .5 Coordinate with gypsum board wall construction for anchor placement.
- .6 Set frames plumb, square, level at correct elevation, in accordance with Section 05 50 00.
- .7 Allow for deflection to ensure that structural loads are not transmitted to frame.
- .8 Adjust operable parts for correct clearances and function.
- .9 Install and adjust perimeter and bottom acoustic seals.
- .10 Touch up finishes where damaged.

3.2 ERECTION TOLERANCES

- .1 Section 01 73 00: Tolerances.
- .2 Maximum deviation from square, alignment, twist and plumb: +/- 0.75 mm (1/32").

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