

This section includes AMBICO Acoustic Steel Sliding Door assemblies which includes electric operators as an integral part of the assembly. This section includes proprietary, descriptive and performance type specification requirements. Edit to avoid conflicting requirements. 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 Acoustic steel sliding doors [and panels].
- .2 Factory- supplied acoustic sliding door hardware counterbalance system and valance.
- .3 Factory-supplied electric door operators.
- .4 [Factory supplied glass and glazing.]
- .5 Leading and following, head and sill seals and threshold.
- .6 Factory finishing.

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 05 50 00 - Metal Fabrications: Steel channel frame to suit metal door and operator.
- .3 Section 08 34 73.13- Steel Sound Control Door and Frame Assemblies
- .4 Section 08 71 10 - Door Hardware - General.
- .5 Section 09 91 00 - Painting: Field painting of doors.
- .6 Section 26 05 20– Electrical: Electrical wiring, conduit, and disconnects for electrical hardware.

1.3 REFERENCES

List reference standards that are included within the text of this section. Delete references that do not apply to this project.

- .1 ASTM A653/A653M-15e1 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- .2 CSA G40.20-13/G40.21-13 - General requirements for rolled or welded structural quality steel / Structural quality steel.
- .3 ASTM A1011-17a Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength.
- .4 AWS D1.1/D1.1M:2015, Structural Welding Code - Steel.
- .5 ASTM E90-09(2016) - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
- .6 ASTM E413-16 - Classification for Rating Sound Insulation.
- .7 USGBC – LEED v4.

1.4 PERFORMANCE REQUIREMENTS

Include this article if all doors should meet the same STC requirement; otherwise, specify individual STC for door types in Part 2 or in a schedule. AMBICO acoustic steel sliding door assemblies can provide minimum Sound Transmission Class (STC) 33 and maximum STC 59.

- .1 Acoustic Performance: Minimum Sound Transmission Class (STC) [33] [59] [] tested to ASTM E90. Label indicating sound transmission class shall be applied to the door assembly.

1.5 SUBMITTALS

- .1 Section [01 33 00]: Submission procedures.
- .2 Product Data: Provide product data on door construction and [_____].

- .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 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.
 - .3 Installation Instructions: Submit manufacturer's installation instructions.

Include the following ONLY if specifying for a LEED project. Specify only the technical requirements necessary to achieve the credits desired for this project. The Type 3 EPD is normally required for LEED v4 certification. AMBICO STC products offer significant advantages to firms interested in supporting LEED certification. In particular, AMBICO products comply with both LEED for Schools as well as LEED for Healthcare.

- .5 Sustainable Design:
 - .1 Section 01 35 18: LEED documentation procedures.
 - .2 Provide required LEED documentation for Product [recycled content] [regional materials] [low emitting materials].
 - .3 Manufacturer's Certificate: Certify that Products meet or exceed [specified requirements].
- .6 Closeout Submittals
 - .1 Section 01 78 10: Submission procedures.
 - .2 Warranty Documentation: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with and registered with manufacturer.
 - .3 Sustainable Design Closeout Documentation: [_____].

1.6 QUALITY ASSURANCE

- .1 Manufacturer: Minimum 5 years documented experience manufacturing sliding acoustic door assemblies.
- .2 Provide Products of this section from a single manufacturer, unless components are referenced specifically in other sections.
- .3 Manufacturer: Minimum 5 years documented experience manufacturing sound control door assemblies.

- .4 Pre-installation Meeting: Convene a pre-installation meeting [2] [] weeks before start of installation of door, door hardware and operator assemblies. Require attendance of parties directly affecting work of this section, including contractor, architect, installer, and manufacturer's representative. Review installation and coordination with other work.
- .5 Manufacturer: Minimum 5 years documented experience manufacturing blast resistant sliding steel door assemblies.

1.7 DELIVERY, STORAGE AND PROTECTION

- .1 Section [01 61 00]: Transport, handle, store, and protect products.
 - .1
 - .2 Store in vertical position, spaced with blocking to permit air circulation between components.
 - .3 Store materials out of water and covered to protect from damage.
 - .4 Clean and touch up scratches or disfigurement caused by shipping or handling with zinc-rich primer.

1.8 WARRANTY

- .1 Manufacturer's Limited Warranty: Two (2) 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
- .2 Toll Free Phone 888-423-2224
Phone 613-746-4663

Fax 613-746-4721

Toll Free Fax 800-465-8561

.3 Other Acceptable Manufacturers:

.1 [_____].

.2 [_____].

.4 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 door assemblies.

.2 Reinforcement [Channel]: To CSA G40.20/G40.21, coating designation to ASTM A653/A653M, [ZF75] ([A25]).

.3 Structural Plate: Hot rolled steel to ASTM A1011.

2.3 ACCESSORIES

AMBICO Acoustic Steel Sliding Door Assemblies are supplied with sliding door hardware and electric operators as an integral part of the tested assembly. All other accessories specified in this section shall be supplied by the door manufacturer.

.1 Weight Box: shall be constructed from structural steel members. Counterweight shall have internal angle guides to enclose and guide the counterweights for the full travel. The weight box shall be braced at the building structure by the door erector.

.2 Guide Assembly: Shall be constructed from structural steel members with base and guide covered with 1/4" thick steel plate. The guide assembly shall be braced at the building structure by the door erector.

.3 Section Guides: Each door section shall have continuous member that shall mate with the guide angles. The section guides shall be bolted to the door section for easy field installation or replacement removal of the sections.

- .4 Track and hangers: shall be integrated into Assemblies consistent with weight of the door leafs and the specified acoustic performance ratings.
- .5 Insulation of Weight boxes and Guides: Exposed surfaces of the weight boxes and guides shall be insulated with 1” thick polystyrene insulation and shall be back sheeted with 18 gage galvanized steel sheet.
- .6 Model # 45 Drive and Counterbalancing Mechanism: positive frictionless drive will consist of machined cable sheaves and steel sprockets mounted on a solid cold rolled steel shaft. All rotating elements will rotate on a heavy duty, grease-packed-for life, self-aligning flange bearing. The drive unit will be modular and will be mounted in a removable heavy gage drive housing. For maximum safety two cables shall be provided for each section as well as two roller chains for the bottom section. The drive and idler housings will be seated and bolted to the weight box and door guide assemblies for easy servicing. Counterweight sets will be suspended by heavy duty roller chains and preformed galvanized cables assuring the smooth travel of each door panel. Steel pick up members with rubber shock absorbing cushions will ensure smooth and quiet operation.
- .7 Fail-Safety Device: The door will be equipped with a fail safety device that shall instantly cut power to the motor preventing further damage.
- .8 Acoustic seals: Provide leading, following, head and sill seals, tested as part of the ASTM E90 assembly to meet the specified STC rating.
- .9 Primer: Rust inhibitive zinc phosphate [VOC compliant with local indoor air quality regulations].

2.4 FABRICATION

- .1 Manufacture doors and frames to STC rating of [33] [54] [___], measured in accordance with ASTM E90.
- .2 Steel Doors, Sliding Door Type:
 - .1 Sheet steel faces, thickness, design, and core suitable to achieve specified acoustic performance.
 - .2 Acoustic core construction, longitudinal edges [mechanically inter-locked with visible edge seams] [tacked and filled seamless] [fully welded].
 - .3 Weld structural steel channels flush to top and bottom of door.
 - .4 Weld hardware reinforcement plates in place.
 - .5 Reinforce doors where surface-mounted hardware is required.

- .6 Affix permanent metal nameplates to door and frame, indicating manufacturer's name, door tag, model number, and performance rating.

2.5 ELECTRICAL SPECIFICATIONS

Electrical operators shall be supplied by the acoustic steel sliding door manufacturer and shall be an integral part of the Acoustic Steel Sliding Door Assembly.

- .1 Electric Operator: The electric operator shall have the following characteristics:
 - .1 The unit shall be UL approved. The unit shall have a heavy duty worm-gear reducer with a NEMA “C” flange and shall have a minimum 220 volt, 3 phase motor.
 - .1 The unit shall be supplied with an electromechanical brake, rotary screw type limit switches and manual operation chain hoist.
 - .2 The unit shall be supplied with an electrical interlock for manual operation. Where the door is electrified the door speed shall be 8”-10” per second and shall include soft start and stop. .
- .2 Door Controls and Electrical Equipment
 - .1 The door control shall have integral piggyback control panel.
 - .2 The door shall have a separate control panel located at the ground level. This panel shall be provided by Section 26 05 20 –Wire and box connectors: Electrical wiring, conduit and disconnects.
 - .3 The controls will include a heavy duty reversing starter, thermal overload relays as well as control relays.
 - .4 Time delay shall be provided on reversing. Timer shall be supplied to close the door. A reversing safety system shall be provided on the door.
 - .5 [Control interface and interlock with any third-party system.]

2.6 FINISHES

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

- .2 Finish Painting: finish painting shall be by Section 09 91 00.

Part 3 Execution

3.1 INSTALLATION

- .1 Install components including door panels, seal components, door hardware and operator in accordance with manufacturer's written instructions.
- .2 Coordinate with [masonry] [gypsum board] [concrete] [_____] wall construction for anchor placement.
- .3 Utilize welders certified by [Canadian Welding Bureau (CWB)] [American Welding Society (AWS)] for field welding.
- .4 Install hardware and door panel system with counterbalance and adjust to operate smoothly.
- .5 Install and adjust leading, following, head and sill acoustic seals.
- .6 Adjust operable parts for correct clearances and function.
- .7 Install, connect, test and adjust the operator, safety devices and set limits.
- .8 Finish paint in accordance with Section 09 91 00. Touch up painted finishes where damaged.

3.2 FIELD QUALITY CONTROL

- .1 Field supervision to be conducted on-site by factory personnel during the initial installation period. Final commissioning of blast resistant, sliding steel door assemblies shall occur in the presence of a factory representative.
- .2 Provide manufacturer's representative to inspect door installation, and test minimum five (5) cycles of operation. Correct any deficient doors, hardware or electrical accessories.

END OF SECTION