SECTION 08 34 73 SOUND CONTROL DOOR ASSEMBLIES

PART 1 GENERAL

1.1 SECTION INCLUDES

Mid-Range Sound Control Door and Frame Assemblies

1.2 RELATED SECTIONS

03 30 00 - Cast-in-place Concrete.
03 40 00 - Precast Concrete.
03 60 00 - Grouting.
04 00 00 - Masonry (including 04 05 16 and 04 00 20).
07 92 19 - Acoustical Joint Sealants.
08 71 00 - Door Hardware.
09 00 00 - Finishes.
09 20 00 - Plaster and Gypsum Board.
09 80 00 - Acoustic Treatment (including 09 81 00).
08 10 00 - Doors and Frames.
09 90 00 - Painting and Coating.

1.3 REFERENCES

ASTM A 568/A 568M Standard Specification for Steel, Sheet, Carbon, Structural, and High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled.
ASTM A 653/A 653M Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
ASTM A 924/A 924M Standard Specification for General Requirements for Sheet Steel, Metallic-Coated by the Hot-Dip Process.
ASTM E 90 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
ASTM E 413 Classification for Determination of Sound Transmission Class.
ANSI/SDI A250.10 Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames.
ANSI/SDI A250.11 Recommended Erection Instructions for Steel Frames.
SDI-128 - Guidelines for Acoustical Performance of Standard Steel Doors and Frames.
HMMA 820-TN01 Grouting Hollow Metal Frames.
HMMA 840-TN01 Painting Hollow Metal Products.
HMMA 861 Guide Specifications for Commercial Hollow Metal Doors and Frames.
HMMA 865 Guide Specifications for Sound Control Hollow Metal Doors and Frames.

1.4 ASSEMBLY DESIGN and PERFORMANCE REQUIREMENTS

Sound Control Door Systems shall include doors, frames, threshold, hinges, and acoustical gaskets as needed to attain STC rating.

(Select one of the following two sentences and delete other):

Assembly shall be manufactured for an STC of _____ **(specify)** attained by testing of similar operable units in accordance with ASTM E-90 and ASTM E-413.

Assembly shall be manufactured for an STL (sound transmission loss) of _____ **(specify)** in a range of _____ to _____ Hz, **(specify)** attained by testing of similar operable units in accordance with ASTM E-90 and ASTM E-413.

Sound Control doors and frames shall incorporate recycled materials of at least 30% by weight.

1.5 SUBMITTALS

Unless mutually agreed due to small quantity, submit shop drawings showing profiles, product components, anchors, and accessories. Details deemed to be proprietary by the manufacturer may be identified as such.
Submit installation instructions and installation tolerances if other than as specified in ANSI/SDI A250.11 or HMMA 840.
Submit jobsite storage and protection requirements if other than as specified herein or in ANSI/SDI A250.8, HMMA 861, HMMA 865 or HMMA 840-TN01.
Submit test report from an independent, nationally certified laboratory showing representative operable assemblies tested to ASTM E-90. Reports showing non-operable (sealed) assemblies shall not be permitted unless previously agreed to be acceptable.

1.6 QUALITY ASSURANCE

Installer shall have documented experience in installation of sound control door assemblies.
Fabricate products to tolerances in compliance with SDI-117 except that flatness at face (if exists) shall be permitted to exceed tolerances by no more than 1/8".

1.7 DELIVERY, STORAGE, AND HANDLING

Store and handle products in accordance with ANSI A250.8, HMMA 861, HMMA 865, or HMMA 840-TN01 in manufacturer's original, unopened, undamaged containers.
Protect materials from adverse temperature and humidity conditions.
Store doors and frames upright on wood planking, protected at corners to prevent damage.
Store accessories such as hinges, gaskets, and thresholds in a secure area protected from adverse temperature and humidity conditions.
Do not store in non-vented plastic or canvas shelters.

1.8 COORDINATION

Coordinate work with other directly affected trades, wall construction, and hardware installation.
Coordinate hardware locations with Sections 08 11 13 and 08 12 13.
Coordinate placing of material orders and fabrication schedules with construction progress.

1.9 WARRANTY

Submit written copy of manufacturer's standard warranty documents.

PART 2 PRODUCTS

2.1 MANUFACTURER

Doors and frames shall be manufactured by:

MegaMet Industries, Inc.

P.O. Box 635 (3228 6th Avenue North) Birmingham, AL 35201
WEBSITE: www.megametUSA.com
PHONE: (205) 322-7700 or TOLL FREE: (888) 322-7750
FAX: (205) 322-4600
Substitutions: Not permitted.

2.2 SOUND CONTROL DOORS

Provide 1 3/4" nominal thickness sound control doors as listed in the door schedule and indicated on the Drawings in accordance with this specification. Opening sizes, configurations and types shall be as indicated on the Drawings and/or door schedule.

Cold and hot rolled steel for door faces and reinforcing shall comply with ASTM A 568, ASTM A 1008 and/or ASTM A 1011.

Hot-dip galvanized steel, where indicated on the door schedule, shall comply with ASTM A 653 and ASTM A 924. Coating thickness shall be Class A40 or Class A60 **(specify)**.

Fabricate faces and edges as seamless doors from two sheets of steel with no visible seams on either face or vertical edges; continuously weld door edges, fill and finish smooth.

All doors shall be handed with either square or bevel edges (at manufacturer's option).

Vertical edges shall be reinforced with continuous channels at hinge and lock edges. Channel shall be formed from one member; spliced channels are not permitted.

Door internal construction shall be proprietary design to meet the requirements of the STC or STL rating specified.

Hardware Preparation: Mortise, reinforce, drill, and tap to receive templated mortise hardware; reinforce for specified surface hardware in accordance with HMMA 861 and HMMA 865.

2.3 SOUND CONTROL FRAMES

Provide frames for sound control doors listed in the door schedule and indicated on the Drawings in accordance with this specification. Opening sizes, profiles, anchors, and types shall be as indicated on the Drawings. Profiles may differ based on configurations required to achieve STC or STL rating.

Cold and hot rolled steel for frames and reinforcing shall comply with ASTM A 568, ASTM A 1008 and/or ASTM A 1011.

Hot-dip galvanized steel for frames shall comply with ASTM A 653 and ASTM A 924. Coating thickness shall be Class A40 or Class A60 **(specify)**.

Reinforcing shall be cold rolled or hot rolled steel complying with ASTM A 568, ASTM A 1008 and/or ASTM A 1011.

Fabricate frames with tightly fitting mitered corners and butted stops. Tabs and slots at headers and jambs may be incorporated for factory alignment of assembly.

Weld frames at corners in accordance with HMMA 861 with temporary shipping spreader welded to jambs at bottom. Continuously weld faces internally or externally, fill, and finish smooth.

Mortise, reinforce, drill, and tap to receive templated mortise hardware and reinforce for specified surface hardware in accordance with HMMA 861 and definitions in ANSI/SDI A250.6.

Hinge reinforcement shall be 7 gage, minimum, 1-1/4 inch by 10 inch steel plates securely welded to rabbet, tapped for template hinges.

Reinforcing for other mortise hardware shall be 12 gauge. Thinner material is permissible for mortised hardware (other than hinges) if the reinforcing is formed and the tapped holes are extruded to maintain depth.

Provide frames with one welded-in floor anchor per jamb.

Frames installed in new masonry shall have adjustable strap and stirrup anchors, T-strap anchors or wire anchors; not less than four up to 84 inches and one additional anchor for every 16" or portion thereof above 84".

Frames installed in stud partitions shall have steel anchors of suitable design securely welded to jambs; one above each hinge and others at mid-point between anchors; with corresponding locations on strike jamb. Anchors shall not be designed so that both frame faces are tied together.

Frames installed with anchor bolts shall have frame soffits dimpled or countersunk for 3/8 inch bolts; one above each hinge and others at mid-point between anchors; with corresponding locations on strike jamb. Anchors shall not be designed so that both frame faces are tied together. Anchor bolts are provided by the installer as rough hardware to suit the substrate.

2.3 OPERATING CLEARANCES

Doors shall be undersized from frame opening sizes at head, jamb, and threshold in accordance with actual conditions of tested assemblies.

2.4 HARDWARE LOCATIONS

Unless otherwise specified, hinges and locks shall be located in accordance with HMMA-861.

2.5 ACCESSORIES

Sound Control assemblies shall be provided as a unit consisting of door, frame, anchors (if loose T-strap or wire masonry), door bottom, frame gaskets, threshold, and hinges. Exposed gaskets and threshold shall be aluminum finish with inserts as tested. Hinges shall be 4 1/2" heavy weight (0.180") in USP finish unless ordered otherwise.

2.6 PRIMER FINISH

Clean and treat exposed surfaces of doors and frames to ensure prime paint adhesion; apply one shop coat of "low VOC" gray rust-inhibitive primer meeting acceptance criteria of ANSI A250.10.

PART 3 EXECUTION

3.1 EXAMINATION

Before beginning installation, verify that existing or planned substrate conditions are acceptable for installation sound control assemblies weighing well in excess of common commercial door openings. Consult SDI-128 and HMMA 865 for recommendations and warnings.

Select fasteners of adequate type, number, and quality to perform intended functions.

3.2 INSTALLATION

Fill all voids in frames with 6.0 pcf insulation, taking care not to leave any gaps.

Install frames plumb, straight, and true, rigidly secured in place and properly braced; comply with ANSI/SDI A250.11, SDI-128 and HMMA-865. As defined in these documents, maintain frame installation tolerances as:

Plumb: Plus or minus 1/16".

Square: Plus or minus 1/16".

Alignment: Plus or minus 1/16".

Twist: Plus or minus 1/16".

Grout fill frames in new masonry in accordance with ANSI/SDI A250.8, ANSI/SDI A250.11, and HMMA820-TN01.

Frames installed in drywall partitions shall not be grouted.

Secure any bolted connections to adjacent construction using bolts suitable for the substrate.

Seal any joints around perimeter of frames with materials specified in Section 07 92 19.

Install accessories, doors, and hardware in accordance with manufacturers' templates and instructions.

Touch-up exposed surfaces, scratches or bare edges with a rust inhibitive Direct to Metal primer.

Prepare surfaces for field painting as recommended by door and frame manufacturer and as specified in Section 09 90 00.

Install and adjust gaskets for preliminary fit during construction.

3.3 PROTECTION

Protect installed products and finished surfaces from damage during construction.

3.4 FINAL ADJUSTMENTS

After construction works has been completed in the area, clean and re-adjust gaskets prior to turn-over to Owner.

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