



SECTION 08360
SECTIONAL OVERHEAD DOORS
591 SERIES THERMACORE® INSULATED STEEL DOORS

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PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Insulated Sectional Overhead Doors.
- B. Electric Operators and Controls.
- C. Operating Hardware, tracks, and support.

1.2 RELATED SECTIONS

- A. Section 03300 - Cast-In-Place Concrete: Prepared opening in concrete. Execution requirements for placement of anchors in concrete wall construction.
- B. Section 04810 - Unit Masonry Assemblies: Prepared opening in masonry. Execution requirements for placement of anchors in masonry wall construction.
- C. Section 05500 - Metal Fabrications: Steel frame and supports.
- D. Section 06114 - Wood Blocking and Curbing: Rough wood framing and blocking for door opening.
- E. Section 07900 - Joint Sealers: Perimeter sealant and backup materials.
- F. Section 08710 - Door Hardware: Cylinder locks.
- G. Section 09900 - Paints and Coatings: Field painting.
- H. Section 11150 – Parking Control Equipment: Remote door control.
- I. Section 16130 - Raceway and Boxes: Empty conduit from control station to door operator.
- J. Section 16150 - Wiring Connections: Electrical service to door operator.

1.3 REFERENCES

- A. [ANSI/DASMA 102](#) - American National Standard Specifications for Sectional Overhead Type Doors.

1.4 DESIGN / PERFORMANCE REQUIREMENTS

- A. Wind Loads: Design and size components to withstand loads caused by pressure and suction of wind acting normal to plane of wall as calculated in accordance with applicable code.

1. Design pressure of _____ lb/sq ft (_____ kPa).
- B. Wiring Connections: Requirements for electrical characteristics.
 1. 115 volts, single phase, 60 Hz.
 2. 230 volts, single phase, 60 Hz.
 3. 230 volts, three phase, 60 Hz.
 4. 460 volts, three phase, 60 Hz.
- C. Single-Source Responsibility: Provide doors, tracks, motors, and accessories from one manufacturer for each type of door. Provide secondary components from source acceptable to manufacturer of primary components.

1.5 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 1. Preparation instructions and recommendations.
 2. Storage and handling requirements and recommendations.
 3. Installation methods.
- C. Shop Drawings: Indicate plans and elevations including opening dimensions and required tolerances, connection details, anchorage spacing, hardware locations, and installation details.
- D. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
- E. Operation and Maintenance Data.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum five years documented experience.
- B. Installer Qualifications: Authorized representative of the manufacturer with minimum five years documented experience.
- C. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories, Inc. acceptable to authority having jurisdiction as suitable for purpose specified.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened labeled packaging until ready for installation.
- B. Protect materials from exposure to moisture until ready for installation.
- C. Store materials in a dry, ventilated weathertight location.

1.8 PROJECT CONDITIONS

- A. Pre-Installation Conference: Convene a pre-installation conference just prior to commencement of field operations, to establish procedures to maintain optimum working conditions and to coordinate this work with related and adjacent work.

1.9 WARRANTY

- A. Warranty: Manufacturer's limited door and operators System warranty for 10 year against delamination of polyurethane foam from steel face and all other components for 3 years or 20,000 cycles, whichever comes first.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Overhead Door Corp., 2501 S. State Hwy. 121, Suite 200, Lewisville, TX 75067. ASD. Tel. Toll Free: (800) 275-3290. Phone: (469) 549-7100. Fax: (972) 906-1499. Web Site: www.overheaddoor.com. E-mail: sales@overheaddoor.com.
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 INSULATED SECTIONAL OVERHEAD DOORS

- A. Insulated Steel Sectional Overhead Doors: 591 Series Thermacore Insulated Steel Doors by Overhead Door Corporation. Units shall have the following characteristics:
 - 1. Door Assembly: Metal/foam/metal sandwich panel construction, with PVC thermal break and weather-tight ship-lap design meeting joints.
 - a. Panel Thickness: 1-5/8 inches (41 mm).
 - b. Exterior Surface: Ribbed, textured.
 - c. Exterior Steel: .015 inch (.38 mm), hot-dipped galvanized.
 - d. End Stiles: 16 gauge.
 - e. Spring Counterbalance: Sized to weight of the door, with a helically wound, oil tempered torsion spring mounted on a steel shaft; cable drum of diecast aluminum with high strength galvanized aircraft cable. Sized with a minimum 7 to 1 safety factor.
 - 1) Standard cycle spring: 10,000 cycles.
 - 2) High cycle spring: 25,000 cycles.
 - 3) High cycle spring: 50,000 cycles.
 - 4) High cycle spring: 75,000 cycles.
 - 5) High cycle spring: 100,000 cycles.
 - f. Insulation: CFC-free and HCFC-free polyurethane, fully encapsulated.
 - g. Thermal Values: R-value of 14.86; U-value of 0.067.
 - h. Air Infiltration: 0.08 cfm at 15 mph; 0.08 cfm at 25 mph.
 - i. Pass-Door:
 - 1) Provide with optional pass door.
 - j. High-Usage Package: Provide with optional high-usage package.
 - k. Partial Glazing of Steel Panels:
 - 1) 1/8 inch (3 mm) Acrylic glazing.
 - 2) 1/4 inch (6 mm) Acrylic glazing.
 - 3) 1/8 inch (3 mm) Clear Lexan glazing.
 - 4) 1/4 inch (6 mm) Clear Lexan glazing.
 - 5) 1/2 inch (12.5 mm) Clear Lexan Insulated glazing.
 - 6) 1/8 inch (3 mm) Tempered glass.
 - 7) 1/4 inch (6 mm) Tempered glass.
 - 8) 1/2 inch (12.5 mm) Tempered Insulating Glass.
 - 9) 1/4 inch (6 mm) Wire glass.
 - 10) 1/8 inch (3 mm) Double Strength glass.

- 11) 1/2 inch (12.5 mm) Double Strength Insulating Glass.
 - 12) 1/8 inch (3 mm) Low E glazing.
 - 13) 1/4 inch (6 mm) Low E glazing.
 - 14) 1/2 inch (12.5 mm) Low E Insulated glazing.
 - 15) 1/8 inch (3 mm) Solar Bronze glazing.
 - 16) 1/4 inch (6 mm) Solar Bronze glazing.
 - 17) 1/2 inch (12.5 mm) Solar Bronze Insulated glazing.
 - 18) 1/8 inch (3 mm) Obscure glazing.
 - 19) 1/4 inch (6 mm) Obscure glazing.
 - 20) 1/2 inch (12.5 mm) Obscure Insulated glazing.
 - 21) 1/4 inch (6 mm) Twin-Wall Polycarbonate (clear, bronze, white).
 - 22) 3/8 inch (9.5 mm) Twin-Wall Polycarbonate (clear, bronze, white).
 - 23) 5/8 inch (15.87 mm) Triple-Wall Polycarbonate (clear, bronze, white).
- i. Full Glazed Aluminum Sash Panels:
- 1) 1/8 inch (3 mm) Acrylic glazing.
 - 2) 1/4 inch (6 mm) Acrylic glazing.
 - 3) 1/8 inch (3 mm) Clear Lexan glazing.
 - 4) 1/4 inch (6 mm) Clear Lexan glazing.
 - 5) 1/2 inch (12.5 mm) Clear Lexan Insulated glazing.
 - 6) 1/8 inch (3 mm) Tempered glass.
 - 7) 1/4 inch (6 mm) Tempered glass.
 - 8) 1/2 inch (12.5 mm) Tempered Insulating Glass.
 - 9) 1/4 inch (6 mm) Wire glass.
 - 10) 1/8 inch (3 mm) Double Strength glass.
 - 11) 1/2 inch (12.5 mm) Double Strength Insulating Glass.
 - 12) 1/8 inch (3 mm) Low E glazing.
 - 13) 1/4 inch (6 mm) Low E glazing.
 - 14) 1/2 inch (12.5 mm) Low E Insulated glazing.
 - 15) 1/8 inch (3 mm) Solar Bronze glazing.
 - 16) 1/4 inch (6 mm) Solar Bronze glazing.
 - 17) 1/2 inch (12.5 mm) Solar Bronze Insulated glazing.
 - 18) 1/8 inch (3 mm) Obscure glazing.
 - 19) 1/4 inch (6 mm) Obscure glazing.
 - 20) 1/2 inch (12.5 mm) Obscure Insulated glazing.
 - 21) 1/4 inch (6 mm) Twin-Wall Polycarbonate (clear, bronze, white).
 - 22) 3/8 inch (9.5 mm) Twin-Wall Polycarbonate (clear, bronze, white).
 - 23) 5/8 inch (15.87 mm) Triple-Wall Polycarbonate (clear, bronze, white).
2. Finish and Color:
- a. Two coat baked-on polyester:
 - 1) Interior color, white.
 - 2) Exterior color, white.
 - 3) Exterior color, brown.
 - 4) Exterior color, tan.
 - 5) Exterior color, gray.
 - b. Baked-on Kynar polyvinylidene fluoruoride high performance coating:
 - 1) Exterior color, white.
 - 2) Exterior color, brown.
 - 3) Exterior color, beige.
3. Windload Design: Provide to meet the Design/Performance requirements specified.
4. Hardware: Galvanized steel hinges and fixtures. Ball bearing rollers with hardened steel races.
5. Lock:
- a. Interior mounted slide lock.
 - b. Interior mounted slide lock with interlock switch for automatic operator.
 - c. Keyed lock.
 - d. Keyed lock with interlock switch for automatic operator.

- e. Locking mechanism designed to maintain security for exterior while permitting break out when impacted from the inside.
- 6. Weatherstripping:
 - a. EPDM bulb-type strip at bottom section.
 - b. Flexible Jamb seals.
 - c. Flexible Header seal.
- 7. Track: Provide track as recommended by manufacturer to suit loading required and clearances available.
 - a. Size:
 - 1) 2 inch (51 mm).
 - 2) 3 inch (76 mm).
 - b. Type:
 - 1) Standard lift.
 - 2) Vertical lift.
 - 3) High lift.
 - 4) Low headroom.
 - 5) Follow roof slope.
- 8. Manual Operation: Pull rope.
- 9. Manual Operation: Chain hoist.
- 10. Electric Motor Operation: Provide UL listed electric operator, size and type as recommended by manufacturer to move door in either direction at not less than 2/3 foot nor more than 1 foot per second. Operator shall meet UL325/2010 requirements for continuous monitoring of safety devices.
 - a. Entrapment Protection: Required for momentary contact, includes radio control operation.
 - 1) Pneumatic sensing edge up to 18 feet (5.5 m) wide. Constant contact only complying with UL 325/2010.
 - 2) Electric sensing edge monitored to meet UL 325/2010.
 - 3) Photoelectric sensors monitored to meet UL 325/2010.
 - b. Operator Controls:
 - 1) Push-button operated control stations with open, close, and stop buttons.
 - 2) Key operated control stations with open, close, and stop buttons.
 - 3) Push-button and key operated control stations with open, close, and stop buttons.
 - 4) Flush mounting.
 - 5) Surface mounting.
 - 6) Interior location.
 - 7) Exterior location.
 - 8) Both interior and exterior location.
 - c. Special Operation:
 - 1) Pull switch.
 - 2) Vehicle detector operation.
 - 3) Radio control operation.
 - 4) Card reader control.
 - 5) Photocell operation.
 - 6) Door timer operation.
 - 7) Commercial light package.
 Explosion and dust ignition proof control wiring.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until openings have been properly prepared.

- B. Verify wall openings are ready to receive work and opening dimensions and tolerances are within specified limits.
- C. Verify electric power is available and of correct characteristics.
- D. If preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install overhead doors and track in accordance with approved shop drawings and the manufacturer's printed instructions.
- B. Coordinate installation with adjacent work to ensure proper clearances and allow for maintenance.
- C. Anchor assembly to wall construction and building framing without distortion or stress.
- D. Securely brace door tracks suspended from structure. Secure tracks to structural members only.
- E. Fit and align door assembly including hardware.
- F. Coordinate installation of electrical service. Complete power and control wiring from disconnect to unit components.

3.4 CLEANING AND ADJUSTING

- A. Adjust door assembly to smooth operation and in full contact with weatherstripping.
- B. Clean doors, frames and glass.
- C. Remove temporary labels and visible markings.

3.5 PROTECTION

- A. Do not permit construction traffic through overhead door openings after adjustment and cleaning.
- B. Protect installed products until completion of project.
- C. Touch-up, damaged coatings and finishes and repair minor damage before Substantial Completion.

END OF SECTION