

**The Genuine. The Original.**



SECTION 08360 [08 36 00]  
SECTIONAL OVERHEAD DOORS  
THERMACORE® MODEL 591 INSULATED SECTIONAL 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.
- B. Section 04810 – Concrete Unit Masonry.
- C. Section 05500 - Metal Fabrications.
- D. Section 06114 – Wood Framing.
- E. Section 07900 - Joint Sealants.
- F. Section 08710 - Door Hardware.
- G. Section 09900 - Paints and Coatings.
- H. Section 11150 - Parking Control Equipment.
- I. Section 16130 - Raceway and Boxes.
- J. Section 16150 - Common Work Results for Electrical.

**1.3 REFERENCES**

- A. ANSI/DASMA 102 - American National Standard Specifications for Sectional Overhead Type Doors.

#### 1.4 DESIGN / PERFORMANCE REQUIREMENTS

- A. 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.
- B. 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 warranty for 10 year against delamination of polyurethane foam from steel face and all other components for 1 year.
- B. 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 Corporation, 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](http://www.overheaddoor.com). E-mail: [info@overheaddoor.com](mailto:info@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: Model 591 Thermacore Insulated Steel Doors by Overhead Door™ Brand. 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: Tested installed assembly U-factor of 0.13 Btu/hr/SF degrees F; calculated section R-value of 14.86.
    - h. Air Infiltration: 0.08 cfm at 15 mph; 0.08 cfm at 25 mph.
    - i. Pass-Door: 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 Trinar polyvinylidene fluoride high performance coating:
    - 1) Exterior color, white.
    - 2) Exterior color, brown.
    - 3) Exterior color, beige.
3. Wind Load Design: Design as calculated in accordance with applicable code as follows:

- a. Design pressure of \_\_\_\_\_ lb/sq ft (\_\_\_\_\_ kPa).
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.

8) 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 adjacent 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, glass, and polycarbonate according to manufacturer's instructions.
- C. Remove temporary labels and visible markings. Do not remove polycarbonate care and maintenance label required to maintain warranty.

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