



SECTION 08 36 00
SECTIONAL OVERHEAD DOORS
591 SERIES THERMACORE® INSULATED STEEL DOORS

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PART 1 GENERAL

1.1 SECTION INCLUDES

**** NOTE TO SPECIFIER ** Delete items below not required for project.**

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

1.2 RELATED SECTIONS

**** NOTE TO SPECIFIER ** Delete any sections below not relevant to this project; add others as required.**

- 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

**** NOTE TO SPECIFIER ** Delete references from the list below that are not actually required by the text of the edited section.**

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

1.4 DESIGN / PERFORMANCE REQUIREMENTS

**** NOTE TO SPECIFIER ** Use the applicable building code to determine the actual loading required and edit the following paragraph accordingly. Coordinate with the manufacturer for the selection of doors to meet the required criteria.**

- 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).

**** NOTE TO SPECIFIER ** Edit the following paragraph for power operators as required. Delete if not required.**

- 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

**** NOTE TO SPECIFIER ** Include the following warranty paragraph for Thermacore® Series 591 commercial sectional doors and model RSX®, RMX®, or RHX® commercial door operators provided together as a System.. Delete if not applicable.**

- 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.overhaddoor.com. E-mail: sales@overhaddoor.com.

**** NOTE TO SPECIFIER ** Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.**

- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 INSULATED SECTIONAL OVERHEAD DOORS

**** NOTE TO SPECIFIER ** Overhead Door Corporation 591 Series Thermacore® Insulated Steel Doors are available up to a maximum width of 35 feet 2 inches and a maximum height of 24 feet 1 inch. Edit as required to suit project requirements.**

- 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.

**** NOTE TO SPECIFIER ** Select one of the following paragraphs and delete the ones not required. 10,000 cycles are standard.**

- 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.

**** NOTE TO SPECIFIER ** The following two paragraphs are optional. Note that Pass-Doors and Knockout Lower Door Sections are not available together. Select one of the following two paragraphs and delete the one not required.**

- i. Pass-Door:
 - 1) Provide with optional pass door.

**** NOTE TO SPECIFIER ** Select one of the following paragraph if required and delete if not required.**

- j. High-Usage Package: Provide with optional high-usage package.

**** NOTE TO SPECIFIER ** Select partial glazing or full glazing from the following glazing paragraphs and edit to select glazing required. Delete those not required or delete entirely if glazing is not required. Partial glazing with two or more sections glazed with 1/4 inch glass or 1/2 inch insulated glass require engineering review by the manufacturer. Full view sash sections are available in widths up to 24 feet 2 inches with 1/8, 1/4 or 1/2 inch insulated glass, up to 30 feet 2 inches with 1/8 inch double strength glass or 1/4 inch acrylic or Lean glazing only. Contact the manufacturer if additional requirements are required.**

- 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).
- l. 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:

**** NOTE TO SPECIFIER ** Select one of the following exterior finish and color paragraphs and delete the ones not required.**

- a. Two coat baked-on polyester:
 - 1) Interior color, white.

**** NOTE TO SPECIFIER ** Select one of the following exterior color paragraphs and delete the ones not required.**

- 2) Exterior color, white.
- 3) Exterior color, brown.
- 4) Exterior color, tan.
- 5) Exterior color, gray.

- b. Baked-on Kynar polyvinylidene fluoride high performance coating:

**** NOTE TO SPECIFIER ** Select one of the following exterior color paragraphs and delete the ones not required.**

- 1) Exterior color, white.
- 2) Exterior color, brown.
- 3) Exterior color, beige.

**** NOTE TO SPECIFIER ** The following paragraph is optional. Contact the manufacturer for additional information. Include the Design/Performance Requirements in Part 1 of this specification.**

- 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:

**** NOTE TO SPECIFIER ** Select one of the following paragraphs and delete the ones not required. Interior mounted slide lock is standard.**

- 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.

**** NOTE TO SPECIFIER ** Select the following paragraph for use with knock-out lower door sections only and delete the ones above.**

- e. Locking mechanism designed to maintain security for exterior while permitting break out when impacted from the inside.

6. Weatherstripping:

**** NOTE TO SPECIFIER ** Select the seals required from the following paragraphs and delete those not required. Bottom seal is standard, jamb seals and head seals are optional.**

- 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.

**** NOTE TO SPECIFIER ** Edit the following track size and type paragraphs as required and delete the ones not required.**

- 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.

**** NOTE TO SPECIFIER ** Select one of the following Operation paragraphs and delete the ones not required. Manual pull rope is standard.**

- 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.

**** NOTE TO SPECIFIER ** Select one of the following protection paragraphs and delete those not required.**

- 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:

**** NOTE TO SPECIFIER ** Select one of the following control paragraphs and delete those not required.**

- 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.

**** NOTE TO SPECIFIER ** Select one of the following mounting paragraphs and delete the one not required.**

- 4) Flush mounting.
- 5) Surface mounting.

**** NOTE TO SPECIFIER ** Select one of the following mounting location paragraphs and delete those not required.**

- 6) Interior location.
- 7) Exterior location.
- 8) Both interior and exterior location.

**** NOTE TO SPECIFIER ** Select special operation features from the following paragraphs and delete those not required. Delete entirely if not required.**

- 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.

**** NOTE TO SPECIFIER ** Select the following paragraph for power operated doors. Delete if not required.**

- 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