



Model FEMA-TITE®
3” Dual Walled Insulated Slats
Rolling Service Door

NOTE: For specifications, architects must choose from a variety of options. The standard choice will be shown first in plain text followed by the one or more highlighted options shown in [brackets]
(Example: “Finish: Galvanized, Unpainted [Powder coated] [Baked enamel]”). **The specifier must make the appropriate choices and delete the others.** (Example: “Finish: ExoShield™ Powder Coated”).

PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes: Electric operated “Auto-Close” 1.0” thick Insulated Metal Backed Rolling Door.
 - 1. Cycle life: Design doors of standard construction for normal use of 20,000 cycles standard.
 - 2. Design doors to withstand a wind load of 250mph (tornado) (300 PSF test at 1.2 times the design pressure).
 - 3. Design doors to withstand a wind load of 200mph (hurricane) (300 PSF test at 1.5 times the design pressure).
- B. Related sections: Related to this section, but not limited to, the following (based on Master Format 2004):
 - 1. Section 01660 – Product Storage and Handling Requirements.
 - 2. Section 04220 – Concrete Unit Masonry.
 - 3. Section 05120 – Structural Steel
 - 4. Section 05500 -- Metal Fabrications.
 - 5. Section 06100 – Rough Carpentry.
 - 6. Section 08310 – Access Doors and Panels.
 - 7. Section 08710 – Door Hardware.
 - 8. Section 09290 – Gypsum Board.
 - 9. Section 09900 – Paints and Coatings.
 - 10. Section 26000 – Electrical.
- C. Products that may be supplied, but are not installed under this section:
 - 1. Control Station
 - 2. Emergency Annunciator





1.02 REFERENCES

- A. ASTM A-653/A-653M – Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- B. ASTM A-36 – Standard Specification for Carbon Structural Steel, Hot Rolled Steel.
- C. ASTM A-123 – Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- D. ASTM A-312 – Standard Specification for Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes.
- E. ASTM A-240 – Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.
- F. ASTM A 276 – Standard Specification for Stainless Steel Bars and Shapes.
- G. ASTM B 209 – Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
- H. ASTM B 221 – Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
- I. ASTM D 4549 – Standard Specification for Polystyrene and Rubber-Modified Polystyrene Molding and Extruding Materials (PS).

1.03 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Provide manufacturer's standard details and catalog data. Provide installation instructions.
- C. Shop Drawings: Furnish shop drawings for architect's approval. Include elevation, sections, and details indicating dimensions, materials, finishes, conditions for anchorage, and support of each door.
- D. Submit manufacturer's recommended operation, troubleshooting, and maintenance instructions.
- E. Product certificate of compliance with ICC 500-2020 - ICC/NSSA Standard for the Design and Construction of Storm Shelters.
- F. Product certificate of compliance with FEMA 361 Safe Rooms for Tornadoes and Hurricanes.
- G. Product certificate of compliance to sustain 300 PSF test pressure in accordance with ASTM E-330.
- H. Product certificate of compliance in accordance with the requirements of ASTM E-1886 Large Missile Impact for FEMA 361 assemblies.

1.04 QUALITY ASSURANCE

- A. Manufacturer: Rolling doors shall be manufactured by a firm with a minimum of five years of experience in manufacturing Hurricane and High Wind Rated/Impact Rated products
- B. ISO 9001:2015 Qualified.
- C. Single-Source Responsibility: Manufacturer shall provide doors, tracks, motors, and accessories for each type of door. Secondary components shall come from a source acceptable to the manufacturer of the primary components.





1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in original packaging supplied by manufacturer with intact labels. Store materials away from harmful environmental conditions and construction.

1.06 WARRANTY

- A. Door Warranty: Provide a two-year written warranty from the date of shipment against defects in materials or workmanship. Installer agrees to repair or replace any defects in materials or workmanship.

PART 2 - PARTS

2.01 MANUFACTURER

- A. Manufacturer: Alpine Overhead Doors, Inc.; 8 Hulse Road Suite 1S, East Setauket, NY 11733. Telephone 800-257-4634 or 631-473-9300. Fax 631-642-0800.

- B. Model: FEMA IMB V9® Insulated Rolling Service Door.

Substitutions: No substitutions permitted.

2.02 MATERIALS

A. Curtain:

1. Slats: Constructed of 1.0" thick interlocking, roll-formed Insulated Metal Backed (IMB) V9 slats. (Slat construction allows for dual coiling flexibility).

a) Slat/Back Cover Material:

- i) Galvanized steel, Structural Quality Grade D, as per ASTM A-653/ A-653 M.

Finish (Can be different for exterior/interior): Galvanized, Unpainted [ExoShield™ Powder Coating] [Baked Enamel] (Minimum coating conforming with Coating Designation G-60 is required).

– OR –

- ii) ASTM 240 Stainless Steel 300 Series Finish: [Mill Finish #2B] [#4 Satin Finish].

b) Insulation: Polystyrene [Foamed-in-place Polyurethane].

- i) Insulation Thickness: 15/16".

- ii) R-Value: 1.0" inch thick slats with an R-Value of 9.00 (U-factor of 0.111), calculated using the ASHRAE Handbook of Fundamentals, and an STC rating of 26, for insulation and noise control.

c) Gauge: (Per manufacturer's standard)

- i) Front/Back slat: Galvanized Steel: 16/16.

- ii) Front/Back slat: Stainless Steel: 16/16.





*16/16 gauge (0.056" thickness for flat slat, 0.112" thickness for combined slats) laminated at 1/16" thickness yields an equivalency of a 12-gauge (0.100" thickness) flat slat profile.

2. Wind Locks: Continuous – Required (Built and Designed for High Cycle Usage)

a) Ductile cast iron, hot-dipped galvanized wind locks riveted (solid rivets, minimum 1/4" thick, on each individual windlock) to each end of every slat to prevent lateral movement and to limit slat deflection and bending stress. Self-lubricating ductile iron windlocks are a wearable component that prevent steel to steel contact and are designed for smooth door operation.

b) Bottom Bar: Two structural formed galvanized steel [stainless steel] angles which extend into guides, designed to reinforce curtain bottom. (Size dependent on dimensions per manufacturer's standard).

i) Galvanized Steel as per ASTM A-653/ A-653 M.

Finish: Galvanized [ExoShield™ Powder Coated].

– OR –

ii) ASTM 240 Stainless Steel 300 Series

Finish [Mill Finish #2B] [#4 Satin Finish].

3. [Vision Lite Panels]: Provide 6" by 1 1/4" oval acrylic panes set into curtain. (Choose number and placement) (Minimum spacing every 3'-0")

B. Guides: Guides shall be designed using structural angles with removable bell mouth curtain stops to allow for curtain maintenance without removal of guides. Bellmouth stops shall be flush with guide groove. Guides shall be fastened with minimum 3/8" bolts at a maximum of 9" o.c. Wall mounting angles shall be fastened to the wall at a maximum 18" of o.c., whether welded to steel or anchored to poured concrete.

a) Material:

i) ASTM A-36 Carbon Structural Steel.

Finish: Gray ExoShield™ Powder Coated [ASTM A-123 Galvanized].

– OR –

ii) ASTM 276 Stainless Steel 300 Series

Finish: Mill Finish #2B.

C. Door Support Brackets and Mounting Plates:

1. Steel plate not less than 1/4" thick. Provide ball bearings at rotating support points. Bolt plates to wall mounting angles with minimum 1/2" fasteners. Plate supports counterbalance assembly and forms end enclosures.

a) Material:

i) ASTM A-36 Carbon Steel:

Finish: Gray ExoShield™ Powder Coated [ASTM A-123 Galvanized].

– OR –

ii) ASTM 240 Stainless Steel 300 Series





Finish: Mill Finish #2B.

D. Counterbalance Assembly: Torsion Counterbalance Assembly: Steel pipe barrel of a size capable of carrying a curtain load with a maximum deflection of 0.03” per foot of door width. Heat-treated helical torsion springs encased in a steel pipe and designed to include an overload factor of 25% to ensure minimum effort to operate. Sealed and pre-lubricated high-speed ball bearing at rotating support points. Torsion spring charge wheel for applying spring torque and for future adjustments.

1. Material:

- a) ASTM A-36 Carbon Structural Steel

Finish: Clear coat of rust inhibitor [Zinc Enriched Powder Coated].

– OR –

- b) A-312 Stainless Steel 300 Series

Finish: Mill Finish.

2. Life Cycle: Springs designed to satisfy 20,000 [50,000] [100,000] cycles. (Cycle defined as one time opening and closing of door).

E. Hood:

1. 24 gauge galvanized steel formed to fit the contour of the end brackets with reinforced top and bottom edges. Provide support bracing for doors wider than 20 feet at every 10 feet to prevent excessive sag. Fastened to end brackets.

2. Shape: Hexagon [Square] [Round]

3. Material:

- a) Galvanized Steel as per ASTM A-653/ A-653 M

Finish: Galvanized, Unpainted [Baked enamel paint] [ExoShield™ Powder Coated].

– OR –

- b) ASTM 240 Stainless Steel 300 Series:

Finish: Mill Finish #2B [#4 Satin Finish].

4. [Fascia]: Galvanized Steel [Stainless Steel] provided where areas behind door hood are open. Materials and finish to be same as hood.

F. Locking:

1. Slide Locks: Provide pad-lockable slide locks for latching and locking door on coil side bottom bar at each jamb extending into slots in guides. [Cylinder/Slide Lock Combination] (Electric Interlocks recommended with motorized doors only).

2. Manual Chain Hoist: Provide pad-lockable chain keeper on guide.

G. Weatherstripping:

1. Bottom Bar: Vinyl astragal.





2. Guides: Snap-on vinyl.
3. Hood: Neoprene baffle.
4. [Lintel baffle].

2.03 OPERATION:

A. Opening/Closing:

1. Motor Operators:

- a) Gear Reduced Hand Chain Operation, provides chain hoist operation with endless steel chain, chain pocket wheel and guard, geared reduction unit, and chain keeper secured to guide.
- b) Heavy Industrial-Duty Gear Head Operator, Alpine® Model Redi-Master™, driven by heavy-duty worm gear in oil bath reduction. Standard auxiliary chain hoist. Horsepower as recommended by manufacturer, with [115v single] [230v single] [208/230v three] [460v three] phase service. Includes an internal electrical failsafe release device for a motor operated door assembly, which requires no ancillary or externally mounted release devices, or any additional wiring. Logic provided for [1] [2] [3] fully monitored safety entrapment protection devices such that the failure of any single monitored device will cause a closing door to revert to an open position. Options to electrically activate door system automatic closure due to [central alarm system activation] [test station activation] or [extended power outage longer than four hours]. Automatic closure speed controlled by an internal variable rate centrifugal governor.
- c) Model Redi-Reset™ inline gear drive motor operator, UL Listed, 3/4 HP minimum, TENV motor, auxiliary chain hoist, internal speed governor, solenoid actuated brake, adjustable limit switches, delay on reverse*, non-resettable cycle counter, adjustable reclose timer*, 3-button open-close-stop wall mount control station, NEMA 1 enclosures. Motor operator shall be mounted horizontally in front of coil and shall not require additional clearance above the top of the coil. Operator shall automatically close the door in an emergency with its “Fail-Safe” function. After power is restored, and alarm is cleared, motor operator shall be ready to operate normally.

2. [Sensing Edges] (For double angle bottom bar): For motorized doors, sensing edges will allow the door to go up in case of obstruction. [Pneumatic Edge] [Electric Edge] [Wireless Edge].

- a) Colors: Gray [Yellow] [Black] [White] [Yellow with black stripes].

3. Emergency Annunciator (Motor Operation Only)

- a) [ADA compliant horn/strobe] [Voice warning module] automatic closing notification system for motor operated doors to provide a warning in advance of automatic door closure upon alarm or motor activation.

2.04 Mounting:

1. Interior face mounted on prepared opening.
2. Interior mounted between jambs and under lintel in a prepared opening.
3. Exterior face mounted on prepared opening.

PART 3 - EXECUTION





3.01 EXAMINATION

- A. Verify that dimensions are correct and project conditions are in accordance with manufacturer's installation instructions; do not proceed with installation until unacceptable conditions have been corrected.

3.02 INSTALLATION

- A. Install units in accordance with manufacturer's instructions.
- B. Ensure that units are installed plumb and true, free of warp or twist, and within tolerances specified by the manufacturer for smooth operation.

3.03 FIELD TESTING

- A. Test doors for regular operation.

3.04 DEMONSTRATION

- A. Instruct the Owner's personnel in correct operation and maintenance of units.

3.05 ADJUST AND CLEAN

- A. Clean units in accordance with manufacturer's instructions.
- B. Restore slight blemishes in finishes in accordance with manufacturer's instructions to match original finish. Remove and provide new units where repairs are not acceptable to the Architect.

END OF SECTION