



## Model SMOKE FIRE INTEGRAL SPLIT FRAME®

Flat Slats

Rolling Counter Doors

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

### GENERAL

#### 1.01 SUMMARY

- A. This section includes: [Manual] or [Electric] operated Integral Frame Counter Shutter.
1. Cycle life: Design doors of standard construction for normal use of 10,000 cycles standard [up to 400,000 cycles].
  2. Provide doors with Underwriter’s Laboratories, Inc. (UL) label for the fire rating classification. [1 ½ hr.], or [3/4 hr.].
  3. Manually resettable drop out mechanism with optional release devices. (For automatically resettable doors see specs for Auto Fire-Shut®)
  4. Design doors to fit a wall thickness of minimum 4”.
- 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 06100 – Rough Carpentry.
  5. Section 08310 – Access Doors and Panels.
  6. Section 08710 – Door Hardware.
  7. Section 09290 – Gypsum Board.
  8. Section 09900 – Paints and Coatings.
  9. Section 26000 – Electrical.
  10. Section 28310 – Fire Detection and Alarm

#### 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
- 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.
- 1.04 QUALITY ASSURANCE
- A. Manufacturer: Manufacturer of a Retro-Fit Split Integral Frame with a minimum of five years experience.
  - B. 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.
  - C. Fire-Rated Assemblies: Provide all doors with fire resistance rating required to comply with governing regulations which are inspected, tested, listed and labeled by UL, complying with NFPA 80 for class of opening. Provide UL label permanently fasted to each fire door assembly. Door shall be tested under UL10B and ULC10B, and provided with a [1 ½ hr.] [3/4 hr.] rating.
- 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 one year written warranty from date of installation against deficiencies due to defects in materials or workmanship. Installer agrees to repair or replace any defects in materials or workmanship.
  - B. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.

## PART 2 - PRODUCTS

### 2.01 MANUFACTURER

- A. Manufacturer: Alpine Overhead Doors, Inc.; 8 Hulse Road Suite 1S, East Setauket, NY 11733. Telephone 1-631-473-9300. Fax 631-642-0800.
- B. Model: SMOKE FIRE-SHUT SPLIT FRAME® Air Leakage Rated Rolling Counter Fire Door

### 2.02 MATERIALS

- A. Curtain:
  - 1. Slats: Constructed of interlocking, roll-formed 1¼" baby flat slats.



- a) Material:
  - i) Galvanized steel, G90 coating exterior (G60 interior), Structural Quality Grade C, as per ASTM A 653/ A 653 M  
Finish: Galvanized [Powder coated] [Baked enamel] (Minimum coating conforming with Coating Designation G-01 is required)  
– OR –
  - ii) ASTM 240 Stainless steel 300 series  
Finish: [Mill finish #2B] [#4 satin finish]
- b) Gauge: (Per manufacturer's standard) Minimum 22 gauge as manufacturer standard [20 gauge].
2. Endlocks :
  - a) Stamped, hot-dipped, galvanized endlocks riveted (solid rivets, minimum 3/16" thick) to each end of alternate slats to prevent lateral movement and to limit slat deflection and bending stress.
3. Bottom Bar: (Size dependent on dimensions per manufacturer's standard)
  - a) Two roll formed steel angles of minimum 1"x 1 1/2"x 1/8", designed to reinforce curtain bottom.
    - i) Galvanized Steel as per ASTM A 653/ A 653 M  
Finish: Gray shop prime [Powder Coated] [Baked Enamel]  
– OR –
    - ii) ASTM 240 Stainless Steel 300 Series  
Finish: [Mill finish #2B] [#4 satin finish]  
– OR –
    - iii) ASTM 240 Stainless Steel 400 Series
  - b) Tubular Bottom Bar
    - i) Galvanized Steel as per ASTM A 653/ A 653 )  
Finish: Gray shop prime [Powder Coated] [Baked Enamel]  
– OR –
    - ii) ASTM 240 Stainless Steel 300 Series (available up to 10'10" X 6'4")  
Finish: [Mill finish #2B] [#4 satin finish]  
– OR –
  - c) [Weather Stripping]: Neoprene astragal (On double angle bars).
- B. Integral Frame:
  1. 16 gauge steel frame with guides incorporated into jamb design, reinforced by 12 gauge mounting structure (Bolt with 1/4" bolts at 12" o.c.). Built to fit \_\_\_\_\_" wall thickness. [Door sill plate of 14 gauge steel to match door frame]. Can be built solid for walls under construction or as split-frame to fit into finished spaces.
  - a) Material:



- i) Galvanized Steel as per ASTM A 653/ A 653 M  
Finish: Gray shop prime [Powder Coated] [Baked Enamel]  
– OR –
    - ii) ASTM 240 Stainless Steel 300 Series  
Finish: [Mill finish #2B]
- C. Door Support Brackets and Mounting Plates:
  - 1. Minimum 12 gauge steel plate. Provide ball bearings at rotating support points. Bolt plates to mounting structures with minimum 1/4" fasteners. Plate supports counterbalance assembly and forms end closures.
    - a) Material:
      - i) ASTM A 36 Carbon Steel:  
Finish: Gray shop prime coat [Baked enamel paint] [Powder coated].  
– OR –
      - ii) ASTM 240 Stainless Steel 300 Series  
Finish: [Mill Finish #2B]
- D. Counterbalance Assembly: Torsion
  - 1. Counterbalance assembly: Steel pipe barrel of a size capable of carrying a curtain load with a maximum deflection of 0.03" per foot (2.5 mm per meter) 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 prelubricated high speed ball bearing at rotating support points. Torsion spring charge wheel for applying spring torque and for future adjustments.
    - a) Material:
      - i) ASTM A 36 Carbon Structural Steel  
Finish: Gray shop prime coat [A 123 Hot-Dip Galvanized]  
– OR –
      - ii) A 312 Stainless Steel 300 Series  
Finish: Mill finish
    - b) Life Cycle: High Cycle springs designed to satisfy 10m through 400m life cycles. Consult engineering if height exceeds width for any cycle above 20m. (Cycle defined as one time opening and closing of door)
- E. Hood:
  - 1. 16 gauge steel formed to fit the contour of the end brackets with reinforced top and bottom edges. Fasten to end brackets with #10 sheet metal screws.
  - 2. Shape: Square
  - 3. Material:
    - a) Galvanized Steel as per ASTM A 653/ A 653 M  
Finish: [Baked enamel paint] [Powder coated]



– OR –

- b) ASTM 240 Stainless Steel 300 Series:
  - Finish: [Mill finish #2B] [#4 satin finish]
- 4. [Fascia]: Galvanized [Stainless steel] provided where areas behind door hood are open. Materials and finish same as hood.

F. Locking:

- 1. Provide padlockable slide locks for latching and locking door on coil side bottom bar at each jamb extending into slots in guides. (Electric Interlocks recommended with motorized doors only)
- 2. [Cylinder Locks]: Only available on tubular bottom bars. Operated from coil [fascia][both] side(s). [Cabinet Style] [Masterkeyable]

G. Smoke Seals:

- 1. Bottom Bar: UL Tested PVC double bulb seal.
- 2. Guides and Head: Replaceable, UL Listed, nylon pile smoke seals sealing against Fascia side of curtain.

2.03 OPERATION:

- A. Opening/Closing: Manual push-up [Manual hand crank] [Motor Operator].
- B. Automatic closure is activated by fusible link [Fire Door Release Device].
- C. [Manual hand crank]:
  - 1. Provide crank hoist operator including crank gear box, steel crank drive shaft and geared reduction unit. Fabricate gear box to completely enclose operating mechanism and be oil-tight.
- D. [Motor Operators]:
  - 1. Redi-Midget® Gear Reduced Jackshaft Door Operator.
  - 2. [Sensing Edges] (For double angle bottom bar): For motorized doors, sensing edges 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]
- E. Release Devices:
  - 1. Fusible link with chain system:
    - i) Activation: Melting of fusible link at 165° Fahrenheit. When automatic closing is activated, chain shall disengage causing door to close.
    - ii) Closing speed controlled by Integral Oscillating governor [Viscous governor].
    - iii) Average closing speed: No less than 6" per second and not more than 24" per second as per NFPA 80 Section 6, paragraph 4.1.5.



2. [Redi-Release™ Release Devices]: Electric Fail-Safe devices used in conjunction with fusible link. [Smoke detector] Choose ONE from either standard models or Class 1-8:
- a) Redi-Release Class 1-A: Manually operated system that can be tied into most fire alarm systems.
 

– OR –
  - b) Redi-Release Class 2-B: All the features of Class 1, with the additional capability to allow motor operation. If operator is chosen, an electrical edge is recommended.
 

– OR –
  - c) Redi-Release Class 3-B2: All the features of Class 2 with the addition of standard Alpine Control Panel and Standard Electric Safety Edge. Allows door to automatically go up in case of an obstruction.
 

– OR –
  - d) Redi-Release Class 4-B2/RR: All the features of Class 3 with the addition of the Alpine Uninterrupted Power Supply (Battery backup) that is self-activating during a power outage.
 

– OR –
  - e) Redi-Release Class 5-C: Includes independently adjustable delays of 10 seconds on alarm activations (10 sec. max. adjust) and 10 seconds on power loss (30 sec. max. adjust) with a hold/release rating of 40 lbs.
 

-OR-
  - f) Redi-Release Class 6-C+: All the features of Class 5-C with:
    - i) The hold open/release device shall recognize that the door is in the closed position and where motor driven, be capable of sensing that power is available to the motor. The device may be wired to close on alarm.
    - ii) [Audible and visual annunciators]: To operate during alarm closing cycle.
  - g) Redi-Release Class 7-AFC: All the features of Class 6-C+ with:
    - i) 72-hour battery backup with low/no battery logic sounder.
    - ii) Sounder/Strobe annunciator: To sound during closure due to alarm or power loss.
  - h) Redi-Release Class 8-VAS: A solid-state speech module. Provides a warning tone:
    - i) Warning tone followed by a voice message/warning, prior to fire door closure.
    - ii) Can drive up to two speakers , allowing for annunciation on each side of the opening.

#### 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.
4. Built-in for walls under construction



## 2.05 Fire Ratings:

### 1. Underwriter's Laboratories:

Doors are constructed to conform within requirements specified by Underwriters Laboratories, Inc. (UL). Doors are automatic and self-closing, Doors sizes and UL fire ratings are follows:

Sizes : For openings up to 10' 10" in width by 6' 4" in height:

Labels : UL 1 ½, 1 or ¾ hour Labels.

## 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 manufacturer for smooth operation.
- C. Preparation for opening and installation of fire door to be in strict compliance with NFPA-80.

### 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.