

SECTION 083300 - ROLLING COUNTER FIRE SHUTTERS / SMOKESHIELD

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Manual automatic closing rolling counter fire doors with SmokeShield®UL leakage rated assembly label.
- B. Related Sections:
 - 1. 055000 Metal Fabrications. Door opening jamb and head members.
 - 2. 061000 Rough Carpentry. Door opening jamb and head members.
 - 3. 099100 Painting. Field painting.

1.2 SYSTEM DESCRIPTION

- A. Performance Requirements:
 - 1. Provide doors with Underwriters' Laboratories, Inc. label for the fire rating classification, 3/4 hr
 - 2. Provide doors with Underwriters' Laboratories, Inc. label for "Leakage Rated Assembly" or "S" label demonstrating product tested to UL 1784.
 - a. Comply with NFPA 105 air leakage requirements

1.3 SUBMITTALS

- A. Reference Section 013300 Submittal Procedures; submit the following items:
 - 1. Product Data
 - 2. Shop Drawings: Include special conditions not detailed in Product Data. Show interface with adjacent work.
 - 3. Quality Assurance/Control Submittals:
 - a. Provide proof of manufacturer ISO 9001:2015 registration
 - b. Provide proof of manufacturer and installer qualifications
 - c. Provide manufacturer's installation instructions
 - 4. Closeout Submittals:
 - a. Operation and Maintenance Manual
 - b. Certificate stating that installed materials comply with this specification

1.4 QUALITY ASSURANCE

- A. Qualifications:

1. Manufacturer Qualifications: ISO 9001:2015 registered and a minimum of five years experience in producing counter fire doors and smoke control units of the type specified
2. Installer Qualifications: Manufacturer's approval

1.5 DELIVERY STORAGE AND HANDLING

- A. Reference Section 016600 - Product Storage and Handling Requirements.

1.6 WARRANTY

- A. Standard Warranty: Two years from date of shipment against defects in material and workmanship
- B. Maintenance: Submit for owner's consideration and acceptance of a maintenance service agreement for installed products

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Basis of Design: Cookson: Model ERC11 - Other acceptable manufacturers are:

1. Cornell
2. Clopay Building Products
3. Amarr

2.2 MATERIALS

- A. Curtain:

1. Slat Configuration:

- a. Galvanized Steel with Finish as Described Below: No. 1F, interlocked flat-faced slats, 1-1/2 inches (38 mm) high by 1/2 inch (13 mm) deep, minimum 22 gauge ASTM A 653, Commercial Quality, galvanized steel with plain steel bottom bar and vinyl astragal.

2. Finish:

- a. Powder Coat System:

- 1) Powder Coat color as selected by Architect from manufacturer's color range, more than 180 colors.
- 2) SpectraShield Ultra – Ultra Powder Coat to be applied as a protective top coat over SpectraShield finish. Top coat is a polyester based structured wear resistant clear powder coat of 2.5-3.5 mils cured film thickness. ASTM D-3363 pencil hardness: 2H or better. Tested per ASTM B117. Base coating of

SpectraShield color as selected by Architect from manufacturer's color range, more than 180 colors.

- B. Endlocks: Fabricate continuous interlocking slat sections with high strength galvanized steel endlocks riveted to slats per UL requirements
- C. Guides:
 - 1. Configuration & Finish:
 - a. Steel: minimum 12 gauge formed shapes
 - 1) Powder Coat: Zirconium treatment followed by baked-on polyester powder coat, color as selected by Architect from manufacturer's standard color range; minimum 2.5 mils (0.065 mm) cured film thickness; ASTM D-3363 pencil hardness: H or better
- D. Counterbalance Shaft Assembly:
 - 1. Barrel: Steel pipe capable of supporting curtain load with maximum deflection of 0.03 inches per foot (2.5 mm per meter) of width
 - 2. Spring Balance: Oil-tempered, heat-treated steel helical torsion spring assembly designed for proper balance of door to ensure that maximum effort to operate will not exceed 25 lbs (110 N). Provide wheel for applying and adjusting spring torque.
- E. Brackets: Fabricate from reinforced steel plate with permanently lubricated ball or roller bearings at rotating support points to support counterbalance shaft assembly and form end closures
 - 1. Finish:
 - a. Powder Coat: Zirconium treatment followed by baked-on polyester powder coat, color as selected by Architect from manufacturer's standard color range; minimum 2.5 mils (0.065 mm) cured film thickness; ASTM D-3363 pencil hardness: H or better.
- F. Hood and Mechanism Covers:

24 gauge galvanized steel with reinforced top and bottom edges. Provide minimum 1/4 inch (6.35 mm) steel intermediate support brackets as required to prevent excessive sag.

 - 1. Finish:
 - a. Powder Coating System (Color Selected by Architect):
 - 1) ASTM A 653 galvanized base coating treated with dual process rinsing agents in preparation for chemical bonding, gray baked-on base coat and gray baked-on polyester finish coat

- 2) Zirconium pre-treatment followed by baked-on polyester powder coat; minimum 2.5 mils (0.065 mm) cured film thickness; ASTM D-3363 pencil hardness: H or better

G. Smoke Seals & UL Smoke Label:

1. Bottom Bar: UL tested brush seal.
2. Guides and Head: Replaceable, UL Listed, brush seals sealing against fascia side of curtain

2.3 OPERATION

A. Manual Operation:

1. FireGard™ Series Manual Push-Up Operation: Conventional spring tension release operating system
 - a. Provide bottom bar lift handles and a pull-down pole with hook
 - b. Activate automatic closure by melting of a fusible link.
 - c. Maintain automatic closure speed at an average of 6" – 24" per second
 - d. Reset of spring tension, mechanical dropouts or release devices to be completed only by an approved and trained door systems technician
 - e. Drop test and reset door system twice by all means of activation and comply fully with NFPA 80, Section 5

2.4 ACCESSORIES

A. Locking: None

B. UL Labeled and Listed Countertop to Meet NFPA 80 Requirements:

1. Stainless steel min. 14 gauge type 304 #4 finish: 1 ½ Hour UL Labeled, 2" (51 mm) thick, 14 gauge type 304 #4 finish stainless steel. Rectangular shape design for between jambs mounted unit of size and configuration for opening size and wall construction

E. Fire Emergency Annunciator: ADA compliant horn/strobe fire emergency annunciator to give advanced warning that fire shutter is about to close, activating warning signal upon alarm

F. Operator and Full Bracket Mechanism Cover: 24 gauge stainless steel sheet metal cover to enclose exposed moving operating components at coil area of unit. Finish to match door hood.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates upon which work will be installed and verify conditions are in accordance with approved shop drawings
- B. Coordinate with responsible entity to perform corrective work on unsatisfactory substrates
- C. Commencement of work by installer is acceptance of substrate

3.2 INSTALLATION

- A. Install door and operating equipment with necessary hardware, anchors, inserts, hangers and supports
- B. Comply with NFPA 80 and NFPA 105 and follow manufacturer's installation instructions

3.3 ADJUSTING

- A. Following completion of installation, including related work by others, lubricate, test, and adjust doors for ease of operation, free from warp, twist, or distortion

3.4 FIELD QUALITY CONTROL

- A. Site Test: Test doors for normal operation and automatic closing. Coordinate with authorities having jurisdiction to witness test and sign Drop Test Form

3.5 CLEANING

- A. Clean surfaces soiled by work as recommended by manufacturer
- B. Remove surplus materials and debris from the site

3.6 DEMONSTRATION

- A. Demonstrate proper operation to Owner's Representative
- B. Instruct Owner's Representative in maintenance procedures.

END OF SECTION

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