SECTION 08 33 13
COILING COUNTER DOORS

SPEC WRITER NOTE:
1. Delete between //_______// if not applicable to project. Also delete any other item or paragraph not applicable in the section and renumber the paragraphs.
2. Use overhead coiling counter shutters as pass windows closures.
3. Use fire rated overhead coiling counter shutters in fire rated partitions and to supplement glazed openings such as service window units-bullet resistant openings. Insure unit location closes deal tray openings.

PART 1 - GENERAL

1.1 DESCRIPTION
A. Section specifies overhead roll up coiling shutters over counter in walls, including frame and counter.
B. Manual push up operation, // and crank up operation //.

1.2 RELATED WORK
A. Lock cylinder and keying: Section 08 71 00, DOOR HARDWARE.
B. Color of shutter; Section 09 06 00, SCHEDULE FOR FINISHES.
C. Field Painting: Section 09 91 00, PAINTING.

1.3 SUBMITTALS
A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
B. Manufacturer's Literature and Data:
   Shutter, each type.
   Installation procedures and instructions.
C. Shop Drawings:
   Shutter, each type, showing details of construction and installation.
   SPEC WRITER NOTE: Update applicable publications to current insure at time of project specification preparation.

1.4 APPLICABLE PUBLICATIONS
A. Publications listed below form a part of this specification to extent referenced. Publications are referenced in text by basic designation only.
B. American Society for Testing and Materials (ASTM):
   A47-99(R2009).........Malleable Iron Castings
A48-03(R2008)..........Gray Iron Castings
A53-10..................Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless
A653-10.................Steel Sheet Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvannealed) by the Hot Dip Process
B209-07..................Aluminum and Aluminum-Alloy Sheet and Plate
B221-08..................Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes
F468-10..................Nonferrous Bolts, Hex Cap Screws, and Studs for General Use
F593-02(R2008)........Stainless Steel Bolts, Hex Cap Screws, and Studs

C. American Welding Society (AWS):
   D1.1-10..................Structural Welding Code Steel
   D1.2-08..................Structural Welding Code Aluminum
   D1.3-08..................Structural Welding Code Sheet Steel

D. National Association of Architectural Metal Manufacturers (NAAMM)
   AMP 500 Series-2006.....Metal Finishes Manual

E. American Architectural Manufacturers Association (AAMA):
   2605-11.................Voluntary Specification for High Performance Organic Coatings on Architectural Extrusions and Panels

F. Federal Specifications (Fed. Spec):
   TT-P-645B...............Primer, Paint, Zinc-Molybdates, Alkyd Type

G. National Fire Protection Association (NFPA):
   80-10....................Fire Doors and Fire Windows

PART 2 - PRODUCTS

SPEC WRITER NOTE: Make material requirements agree with applicable requirements specified in the referenced Applicable Publications. Update and specify only that which applies to the project.
2.1 MATERIALS
A. Aluminum:
   1. Extruded: ASTM B221, alloy 6063-T5.
B. Stainless Steel: ASTM A240, Type 302 or 304.
C. Galvanized Repair Compound: Mil. Spec MIL-P-21035.
E. Galvanized Steel: ASTM A653.
F. Steel Pipe: ASTM A53.
G. Casting: ASTM A47 or A48.

2.2 FABRICATION
A. Weld in accordance with AWS applicable code.
B. Fire Rated Shutter:
   1. Integral counter, shutter, and frame type unit for installation with
      hood and fascia, sloping top, related accessories and components,
      and automation closing by fusible link.
   2. Comply with NFPA 80. The counter shall have Underwriters
      Laboratories Inc., or other nationally recognized laboratory label
      for Class // B // and // C // opening as shown.
   4. Construct of // galvanized steel // and // stainless steel // on
      exposed to view components except counter.
      SPEC WRITER NOTE: Use stainless steel
      counter with painted galvanized steel
      curtain, frames, and hood.
   5. Counter: Minimum 2 mm (0.0747-inch) thick stainless steel with flush
      closed soffits and ends.
   6. Curtain:
      a. Flat type slats, approximately 32 mm (1 1/4-inches) wide.
      b. Bottom bar equipped with recessed flush handles, recessed slide
         bolt on one end, key operated cylinder lock on other end and a
         continuous flexible seal to make contact with counter. Lock
         cylinder specified in Section 08 71 00, DOOR HARDWARE.
   7. Hood and Fascia: Steel Sheet, formed with beads or flanges to
      prevent deflection. // Sloping top exposed ends, hood, and flush
      closures fastened as recommended by manufacturer. //
   8. Frame: Frame jamb sections to include guide slots for curtain with
      receiver for bolts and locks and continuous closure angles.
9. Counterbalance Assembly:
   a. Spring barrel or shaft of steel pipe of sufficient strength to ensure deflection not exceeding 1 mm (0.03-inch) per 300 mm (1 foot) of span.
   b. Barrel or shaft house oil-tempered, helically wound steel spring, and rotate on grease-sealed ball or roller-bearing units.
   c. Spring adjustable from outside.
   d. Brackets not less than 3 mm (0.125-inch) thick steel designed to form end closure support for head.

10. Operation:
   a. Manual Push-up type for curtains less than 2130 mm (7-feet) wide. // Crank operated for curtains over 2130 mm (7-feet) wide with automatic release when activated by fusible link. //
   b. Equip shutter with an automatic closing device actuated by fusible link to release at 130 degrees F. located exposed below the ceiling on both sides of opening in accordance with NFPA No. 80.

11. Sloping Top:
   a. Minimum 0.6 mm (0.0239-inch) thick steel fastened to hood with sheet metal screws.
   b. Exposed ends flush closures fastened as recommended by manufacturer.

C. Non-Fire Rated Shutter:
   1. Integral counter, shutter, and frame type unit for installation with hood and fascia, sloping top, and related accessories and components required for a complete working installation.
   3. Exposed to view components of same metal except as specified.
   4. Counter: 2 mm (0.0747-inch) thick stainless steel with flush closed soffits and ends.
   5. Frame: Minimum 1.5 mm (0.0598-inch) thick steel jamb sections formed to include guide slots for curtain with receiver for bolts and locks and continuous closure angles.
   6. Counterbalance Assembly:
      a. Spring barrel or shaft of steel pipe of sufficient strength to ensure deflection not exceeding 1 mm (0.03 inch) per 300 mm (1-foot) of span.
b. Barrel or shaft house oil-tempered, helically wound steel spring, and rotate on grease-sealed ball or roller bearings.

    c. Springs adjustable from outside.

7. Brackets: 3 mm (1/8-inch) thick steel plate designed to form end closure support for hood.

8. Operation: Manual Push-up type for curtains less than 2130 mm (7-feet) wide. // Crank operated for curtains over 2130 mm (7-feet) wide //.

9. Curtain:
    a. Flat type slats approximately 32 mm (1-1/4-inches) wide.
    b. Bottom bar, equipped with recessed flush handles, recessed slide bolts for locking on one end, key operated cylinder lock on other end, and a continuous flexible seal to make tight contact with counter. Lock cylinder specified in Section 08 71 00, DOOR HARDWARE.

10. Hoods: Formed with beads or flanges to prevent deflection. // Sloping tops exposed ends and flush closures. Fastened to hood with sheet metal screws as recommended by manufacturer. //

11. Prime Painted Galvanized Steel Shutters:
    a. Manufactures standard shop coat of light colored rust inhibitive prime paint after fabrication.
    b. Curtain minimum (0.0299-inch) thick galvanized steel.
    c. Sloping top // Hood and Fascia: Minimum (0.0239-inch) thick galvanized steel.
    d. Frames: Galvanized Steel.
    e. Counter: Stainless steel.

12. Aluminum Shutter:
    a. Curtain: Extruded aluminum, minimum 1.3 mm (0.050-inch) thick, with extruded aluminum bottom angle or bars.
    b. // Sloping Top // Hood and Fascia: Minimum 1 mm (0.040-inch) thick, sheet aluminum or 0.6 mm (0.0239-inch) thick stainless steel.
    c. Frames: Stainless steel.
    d. Counter: Stainless steel.

13. Stainless Steel Shutter:
    a. Curtain: 0.8 mm (0.0299-inch) thick stainless steel, with stainless steel bottom angles or bar.
    b. // Sloping top // Hood and Fascia: Stainless steel.
Frames: Stainless steel.
Counter: Stainless steel.

2.3 FINISH

A. Galvanized Steel:
   1. Shop prime painted per NAAMM AMP 501 and 504.
   2. Finish painted under Section 09 91 00, PAINTING.

   SPEC WRITER NOTE: Coordinate with Section 09 06 00, SCHEDULE FOR FINISHES for finish on aluminum. Preferred clear coating.

B. Aluminum:
   1. Finish in accordance with NAAMM AMP 500 and 501 or 504.
   2. Chemically etched medium matte, with clear anodic coating, AA-C22A41. Class II Architectural, 0.06 mm (0.4 mils) thick (AMP 501).

   //3. Chemically etched medium matte with colored anode coating, AA-C22A42 or AA-C22A44 electrolytically deposited metallic compound integrally colored coating, Class II, Architectural, 0.4 mils thick. (AMP 501).

   //4. Fluorocarbon Finish: AAMA 605 (AMP 504) //.

C. Stainless Steel: Mechanical finish No. 4 in accordance with NAAMM AMP 500 and AMP 503.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install in accordance with approved shop drawings and manufacturer's instructions.

B. Locate anchors and inserts for guides, brackets, supports, hardware, and other accessories and components accurately.

C. Securely attach guides to adjoining construction with not less than 10 mm (3/8-inch) diameter bolts, spaced near each end and not over 600 mm (24 inches) apart.
   1. Use fasteners conforming to ASTM F468 and F593.
   2. Use stainless steel bolts with aluminum or stainless steal.
   3. Use toggle bolts to frame walls or hollow masonry.
   4. Use expansion bolts in solid masonry or concrete.

3.2 REPAIR

Repair damaged zinc-coated surfaces by applying galvanized repair compound in accordance with the manufacturer's directions.
3.3 PROTECTION

A. Isolate aluminum in contact with or fastened to dissimilar metal other than stainless steel, white bronze or other metals compatible with aluminum by painting the dissimilar or aluminum with a coat of TT-P-645 primer, or by placing an approved caulking compound, or a non-absorptive tape, or gasket between the aluminum and dissimilar metal.

B. Paint aluminum in contact with masonry or concrete with a coat of TT-P-645.

3.4 ADJUSTING AND CLEANING

A. Lubricate properly, adjust and demonstrate, to operate freely and as specified.

B. Clean upon completion.

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