

SECTION 08331 - OVERHEAD COILING DOORS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Insulated service doors.
- B. Related Requirements:
 - 1. Section 05500 "Metal Fabrications" for miscellaneous steel supports.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type and size of overhead coiling door and accessory.
- B. Shop Drawings: For each installation and for special components not dimensioned or detailed in manufacturer's product data.
 - 1. Include points of attachment and their corresponding static and dynamic loads imposed on structure.
 - 2. Show locations of controls, locking devices, and other accessories.
- C. Samples: For each exposed product and for each color and texture specified.

1.3 CLOSEOUT SUBMITTALS

- A. Maintenance data.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Structural Performance, Exterior Doors: Capable of withstanding the design wind loads.
 - 1. Design Wind Load: Uniform pressure (velocity pressure) of **20 lbf/sq. ft. (960 Pa)**, acting inward and outward.
 - 2. Testing: According to ASTM E 330 or DASMA 108 for garage doors and meeting the acceptance criteria of DASMA 108.

2.2 DOOR ASSEMBLY

- A. Insulated Service Door: Overhead coiling door formed with curtain of interlocking metal slats.

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1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Clopay Building Products.
 - b. Cookson Company.
 - c. Cornell Iron Works, Inc.
 - d. McKeon Rolling Steel Door Company, Inc.
 - e. Overhead Door Corporation.
 - f. Raynor.
 - B. Operation Cycles: Door components and operators capable of operating for not less than 10,000.
 - C. Curtain R-Value: 4.5 deg F x h x sq. ft./Btu (0.792 K x sq. m/W).
 - D. Door Curtain Material: Galvanized steel.
 - E. Door Curtain Slats: Flat profile slats of 1-7/8-inch (48-mm) center-to-center height.
 1. Insulated-Slat Interior Facing: Metal.
 - F. Bottom Bar: Two angles, each not less than 1-1/2 by 1-1/2 by 1/8 inch (38 by 38 by 3 mm) thick; fabricated from hot-dip galvanized steel and finished to match door.
 - G. Curtain Jamb Guides: Galvanized steel with exposed finish matching curtain slats.
 - H. Hood: Match curtain material and finish.
 1. Mounting: Match existing.
 - I. Locking Devices: Equip door with slide bolt for padlock.
 1. Locking Device Assembly: Single-jamb side locking bars, operable from inside with thumb turn.
 - J. Manual Door Operator: Chain-hoist operator.
 - K. Curtain Accessories: Equip door with weatherseals.
 - L. Door Finish:
 1. Baked-Enamel or Powder-Coated Finish: Color as selected by Architect from manufacturer's full range.
- 2.3 DOOR CURTAIN MATERIALS AND CONSTRUCTION
- A. Door Curtains: Fabricate overhead coiling-door curtain of interlocking metal slats, designed to withstand wind loading indicated, in a continuous length for width of door without splices. Unless otherwise indicated, provide slats of thickness and mechanical properties recommended by door manufacturer for performance, size, and type of door indicated, and as follows:
 1. Insulation: Fill slats for insulated doors with manufacturer's standard thermal insulation complying with maximum flame-spread and smoke-developed indexes of 75 and 450,

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respectively, according to ASTM E 84 or UL 723. Enclose insulation completely within slat faces.

2. Metal Interior Curtain-Slat Facing: Match metal of exterior curtain-slat face, with minimum steel thickness of 0.010 inch (0.25 mm).

- B. Curtain Jamb Guides: Manufacturer's standard angles or channels and angles of same material and finish as curtain slats unless otherwise indicated, with sufficient depth and strength to retain curtain, to allow curtain to operate smoothly, and to withstand loading. Slot bolt holes for guide adjustment. Provide removable stops on guides to prevent overtravel of curtain.

2.4 HOODS

- A. General: Form sheet metal hood to entirely enclose coiled curtain and operating mechanism at opening head. Contour to fit end brackets to which hood is attached. Roll and reinforce top and bottom edges for stiffness. Form closed ends for surface-mounted hoods and fascia for any portion of between-jamb mounting that projects beyond wall face. Equip hood with intermediate support brackets as required to prevent sagging.

2.5 LOCKING DEVICES

- A. Slide Bolt: Fabricate with side-locking bolts to engage through slots in tracks for locking by padlock, located on both left and right jamb sides, operable from coil side.
- B. Chain Lock Keeper: Suitable for padlock.

2.6 CURTAIN ACCESSORIES

- A. Weatherseals for Exterior Doors: Equip each exterior door with weather-stripping gaskets fitted to entire exterior perimeter of door for a weather-resistant installation unless otherwise indicated.

2.7 COUNTERBALANCING MECHANISM

- A. General: Counterbalance doors by means of manufacturer's standard mechanism with an adjustable-tension, steel helical torsion spring mounted around a steel shaft and contained in a spring barrel connected to top of curtain with barrel rings. Use grease-sealed bearings or self-lubricating graphite bearings for rotating members.
- B. Brackets: Manufacturer's standard mounting brackets of either cast iron or cold-rolled steel plate.

2.8 MANUAL DOOR OPERATORS

- A. General: Equip door with manual door operator by door manufacturer.

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- B. Chain-Hoist Operator: Consisting of endless steel hand chain, chain-pocket wheel and guard, and gear-reduction unit with a maximum **25-lbf (111-N)** force for door operation. Provide alloy-steel hand chain with chain holder secured to operator guide.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install overhead coiling doors and operating equipment complete with necessary hardware, anchors, inserts, hangers, and equipment supports; according to manufacturer's written instructions and as specified.
- B. Adjust hardware and moving parts to function smoothly so that doors operate easily, free of warp, twist, or distortion. Lubricate bearings and sliding parts as recommended by manufacturer. Adjust seals to provide tight fit around entire perimeter.

END OF SECTION 08331