

08332 OVERHEAD COILING DOORS

SPECIFIER: This section replaces two previous sections, 08330 and 08331 (2004), for non-insulated and insulated OH coiling doors, both chain- and electric-operated. All are now specified as high wind & impact resistant.

Before editing, check to see that wind DPRs (design pressure ratings) have been calculated by structural engineer of record following ASCE 7, and placed on the Drawings.

Drawings rarely show which type of OH coiling door is to be used in each location. Editing this section tells the contractor where each crank- or electric-operated door goes without making him guess from (frequently) incomplete Drawing notes.

CSI 2004 MasterFormat number: 08 33 23.

An optional keynote to Drawings follows the major product title, for A/Es using National CAD Standard.

PART 1 GENERAL

1.1 RELATED REQUIREMENTS

- A. Coordinate overhead coiling door work with work before and after, especially wood blocking, sealants, padlocks / keys, electric power and intrusion detectors.

1.2 REFERENCES

- A. American Society for Testing and Materials (ASTM): Specifications for:
 - 1. A653-05 Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot Dip Process.

1.3 OVERALL STANDARDS

- A. American Society of Civil Engineers (ASCE) 7, Minimum Design Loads for Buildings and Other Structures.
 - 1. ASCE 7 has been followed in the A/E's calculations (signed and sealed by a Florida-registered professional engineer) of required positive and negative (\pm) wind load resistances shown in the Drawings' wind pressure diagrams and which are based on wind speed of 146 mph, exposure category C, wind load classification III, and wind load importance factor of 1.15.

1.4 PERFORMANCE REQUIREMENTS

- A. Performance in the Florida High Velocity Hurricane Zone (HVHZ).
 - 1. Each overhead coiling door assembly shall be built to withstand the positive and negative (\pm) Design Pressures Ratings (DPR) shown in these Contract Documents.
 - 2. Where these DPRs, as shown on the Drawings, exceed the DPR stated in a specified door's Notice of Approval (NOA), provide strengthening, supported by rational analysis without further testing, that can be approved by AHJs as adequate to resist DPRs that are higher than those for which the door assembly was tested (by the door producer) and approved (by Product Control Division of Miami-Dade County BCCO).
 - 3. Provide products strengthened to withstand each shown DPR at no additional cost to the Board.

1.5 SUBMITTALS

Follow 01330

- A. Product Data. Description of each product, including standards met, applicable NOA, and the following:
 - 1. Any needed redesign of door assembly to bring each actual door size up to the DPR level required by Contract Documents for its location in the building.
 - 2. Producer's installation instructions.
- B. Shop Drawings. Location of each door in the facility, dimensions, operation, power requirements and insulation (if any), needed blocking, fastening of rails, modifications for withstanding the specified wind pressure requirement in each location, method of wiring for electric power and intrusion detection, and details for proper installation.

PART 2 PRODUCTS

Follow 01600

SPECIFIER: The door producers that are cited here produce doors having Miami-Dade product approval in widths ranging from 9 to 16 ft. 12, 14, 15 and 16 ft wide doors are sometimes required in our schools. Some producers have NOAs only up to 8 ft width. They are not cited here.

If any doors are less than 9 ft wide, the NOA cited below for all producers will still apply.

If any door is more than 16 ft wide, the producers cited here may not make a door with an NOA. Check www.co.miami-dade.fl.us/buildingcode/ to see if there are any doors with NOAs for the needed width (greater than 16 ft). Change the producer and NOA cited below to one or more NOAs that are valid.

You may have to use a heavier gage of steel.

FYI: Raynor does make an 8 ft wide door (but none wider) with an NOA. Thus, for the many schools that have only an 8 ft door, there are cited 5, not just 4, producers that you can analyze before you specify.

FYI: OH Door makes 22 and 27 ft wide doors with NOAs and Cornell can go to 25 ft..

2.1 OVERHEAD COILING DOOR, CHAIN OPERATED, NON-INSULATED [08330-ohcd-co]

- A. Description. Lockable steel slat door, hand chain operated, hooded, with end-locks at each slat, as well as bottom seal and weather-sealing at head and jambs. Doors shall be without vision panel and mounted on steel brackets and tracks or jambs to the interior face of wall. Provide torsion spring or weight counterbalance on doors in openings greater than 75 ft². Galvanize and factory coat all parts of door assembly.

SPECIFIER: In 2. below, select (or list) locations – or give actual room numbers.

- 1. Maximum door width: 12 ft.
- 2. Non-insulated slats, at doors to [receiving areas,] [non-air conditioned vocational shop areas] [and _____]: Provide in thickness and steel tensile strength required by NOA, but in no case less than 0.047 in. thick (20 ga), with endlocks.
- 3. Tracks and mounting brackets: Heavy duty steel, designed to resist imparted lateral forces from wind loads on the endlocked slats.
- 4. Endlocks: Cast iron or steel, each riveted twice to each end of each slat.
- 5. Bottom bar: Steel angles, with EPDM or neoprene strip seal attached.
- 6. Weather seal: Extruded EPDM or neoprene, or nylon brush, at head and jambs.
- 7. Hood: Round, steel, with EPDM or neoprene air infiltration baffle.
- 8. Steel padlocking bar and lock for door: Retractable, with padlock and keys masterkeyed as described in 08710.
- 9. Key-operated chain lock. Provide lock and keys masterkeyed as described in 08710.
- 10. Galvanizing: ASTM A653, G90.

11. Factory coating: Baked primer coat + powdercoat finish coat, in one of producer's standard colors as selected by A/E; AAMA 2602.

B. Standard. Current Miami-Dade Notice of Acceptance (NOA) for this product, suitable for opening size and for resisting the wind pressure at each door's location.

1. NOA shall be for both Large and Small Missile Impact.

C. Product / Producer:

1. Each of the following products has a Design Pressure Rating as listed in table below. Some producers have products with similar NOAs that may be a basis for design.

2. These NOAs, and other NOAs for similar products by the same producer, shall be the basis for selecting an overhead coiling door that most nearly meets the required DPR as shown in the Contract Documents at each door location.

3. If the wind pressure is greater than the product's DPR, modify the selected product to achieve the DPR by strengthening it as described in a shop drawing to be submitted to the A/E. Upon approval, modify the product and adjacent work accordingly.

4. Table of products tentatively approved before A/E's review of submittals:

	<u>Product</u>	<u>Producer</u>	<u>M-DC NOA</u>	<u>DPR</u>	<u>Contact</u>
a.	Slat Roll-Up Door,	Best Rolling Drs	05-0606.03	± 90	305 351-1686
b.	Rolling Steel Door	Cornell Iron Wks	07-0106.02	± 60	305 887-5399
c.	Rolling Steel Door,	Overhead Door	05-1003.23	± 65	305 594-1900
d.	DuraCol Optima	Raynor Gar. Drs	04-0303.04	± 66	305 594-3810
e.	Equal product in quality and performance as reviewed and approved by A/E and Board.				

2.2 COILING DOOR, ELECTRIC OPERATED, INSULATED [08330-ohcd-eo]

A. Description. Lockable steel slat door, electrically operated, with all safety devices, torsion spring counterbalance in hood, end-locks at each slat, and bottom seal and weather-sealing at head and jambs. Doors shall be without vision panel and mounted on steel brackets and tracks or jambs to the interior face of wall. Galvanize and factory coat all parts of door assembly.

SPECIFIER: Normally, this expensive door, with its thermal / acoustical insulation, is used only at auditoriums with stages. It is electrically operated because of the usual large size needed. It must be padlocked for security during long periods when it is not in use.

In 2. below, select (or list) locations – or give actual room numbers.

1. Maximum Door Width: 12 ft.
2. Insulated slats, at doors serving [auditorium] [and airconditioned vocational shop] [and _____] areas: 0.047 in. (20 gage) steel, or thicker, of tensile strength required by NOA, with endlocks. Provide 1/2 in. thick 1.0 lb/ft³ density polystyrene foam inserts inserted beneath an interior 24 gage steel cover.
3. Tracks and mounting brackets: Heavy duty steel, designed to resist imparted lateral forces from wind loads on the endlocked slats.
4. Endlocks: Cast iron or steel, each riveted twice to each end of each slat.
5. Bottom bar: Steel angles, with weather-sealing EPDM or neoprene safety edge attached.
6. Weather seal: Extruded EPDM or neoprene, or nylon brush, at head and jambs.
7. Hood: Round, steel, with EPDM or neoprene air infiltration baffle.
8. Door locking bar: Steel, with keeper for padlock. Provide lock and keys masterkeyed as described in 08710.

9. Electric operation and controls. 3-phase motor with electric button operator affixed to wall, requiring constant pressure to open or close. Provide override to allow manual operation by crank or chain when power is not available.
 10. Safety features shall include safety edge and infra-red obstruction sensors / cutoffs.
 11. Warning sign: 2 in. letters in black on yellow acrylic base: REMOVE PADLOCK BEFORE OPERATING ELECTRIC COILING DOOR.
 12. Galvanizing: ASTM A653, G90.
 13. Factory coating: Baked primer coat + powdercoat finish coat, in one of producer's standard colors as selected by A/E; AAMA 2602.
- B. Standard. Current Miami-Dade Notice of Acceptance (NOA) for this product, suitable for opening size and for resisting the wind pressure at each door's location.
1. NOA shall be for both Large and Small Missile Impact.
- C. Product / Producer:
1. Each of the following products has a Design Pressure Rating as listed in table below. Some producers have products with similar NOAs that may be a basis for design.
 2. These NOAs, and other NOAs for similar products by the same producer, shall be the basis for selecting an overhead coiling door that most nearly meets the required DPR as shown in the Contract Documents at each door location.
 3. If the wind pressure is greater than the product's DPR, modify the selected product to achieve the DPR by strengthening it as described in a shop drawing to be submitted to the A/E. Upon approval, modify the product and adjacent work accordingly.
 4. Table of products tentatively approved before A/E's review of submittals:

<u>Product</u>	<u>Producer</u>	<u>M-DC NOA</u>	<u>DPR</u>	<u>Contact</u>
a. Slat Roll-Up Door, by	Best Rolling Drs	05-0606.03	± 90	305 351-1686
b. Rolling Steel Door, by	Cornell Iron Wks	07-0106.02	± 60	305 887-5399
c. Rolling Steel Door, by	Overhead Door	05-1003.23	± 65	305 594-1900
d. DuraCol Optima, by	Raynor Gar. Drs	04-0303.04	± 66	305 594-3810
e. Equal product in quality and performance as reviewed and approved by A/E and Board.				

PART 3 EXECUTION

Follow 01700

3.1 EXAMINATION AND PREPARATION

- A. Before starting door installation, installer shall, with the Contractor, inspect OH coiling door locations to ensure that earlier construction is complete and free of defects.
1. Check opening dimensions.
 2. Check to see that each door assembly can be fastened directly to structure using the blocking and anchoring that has been installed as required in the NOA.
- B. Do not start installing doors until defective earlier construction and conditions have been completed and corrected in ways that are acceptable to door producer and installer.

3.2 INSTALLATION

- A. Delivery and Storage. Store products to protect them from weather and physical damage
- B. Installing.

1. Install overhead coiling door assemblies following producer's current published instructions, except as more stringently specified or specified in more detail herein.
2. Secure tracks to structural members only.
3. Erect door assemblies plumb, level, and aligned to ensure smooth door operation.
4. Install weather seals and air baffle so as to keep air intrusion to a minimum.
5. Coordinate electrical aspects of electric-operated door installation with electric power and access control, intrusion-detection, and alarm wiring.
6. Erect specified warning sign at all electric-operated doors.

3.3 COMMISSIONING

- A. Demonstrate to A/E and Board that each door is in good operating condition under all conditions of operation. ///