

SECTION 08335

OVERHEAD COILING FIRE DOORS

*Select tools/options and on the view tab, click "Hidden Text" for editing details.

PART 1- GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. [Manually] [Electrically] operated steel overhead coiling fire doors.
 - 2. Operating hardware, controls, and supports.
- B. Related Sections:
 - 1. Division 1: Administrative, procedural, and temporary work requirements.
 - 2. Section [09910 - Paints:] [_____ - _____:] Field painting of doors.
 - 3. Section [_____] - [_____]: Connection to power supply and control devices.

1.2 REFERENCES

- A. ASTM International (ASTM) A653/A653M-03 - Standard Specification for Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- B. National Fire Protection Association (NFPA) 80, 1999 Edition- Standard for Fire Doors and Fire Windows.
- C. Underwriters Laboratories (UL) 10B, 1997 Edition - Standard for Fire Tests of Door Assemblies.

1.3 SYSTEM DESCRIPTION

- A. Design doors to withstand cycle life of [20,000] [50,000] [100,000] [___] cycles.
- B. Door Operation:
 - 1. Fail safe, motor operated, utilizing planetary geared, continuous duty operating system, not relying on spring tension release to initiate closure.
 - 2. Emergency closure achieved:
 - a. Under power: Upon receipt of signal from detection device or alarm system.
 - b. Upon power disruption or by fusible link separation: By means of normally engaged electric holding brake that releases door from any position to gravity close.
 - 3. Speed governing achieved by centrifugal brake at 6 inches per second.
 - 4. 10 second time delay to prevent nuisance drops.
 - 5. Mechanical reset not required.
 - 6. Drop testing performed from floor level without use of ladders or tools.

**** OR ****

- C. Door Operation:
 - 1. Motor operated, utilizing gear reduced, continuous duty operating system, not relying on spring tension release to initiate closure.
 - 2. Emergency closure achieved by disengaging operator drive from any position to gravity close from fusible link separation.
 - 3. Speed governing achieved by centrifugal brake at 6 to 12 inches per second.
 - 4. Release initiated by [fusible link.] [fail safe, time delay release [with 72 hour battery backup to prevent nuisance drops].]
 - 5. Drop testing performed from floor level by means of lockable, resettable test handle without use of ladders or tools.

**** OR ****

- D. Door Operation:

1. Chain hoist operated, utilizing enclosed gear reduction operating system, not relying on spring tension release to initiate closure.
2. Emergency closure achieved by means of gravity from fusible link separation.
3. Speed governing achieved by centrifugal brake at 6 to 12 inches per second.
4. Release initiated by [fusible link.] [fail safe, time delay release [with 72 hour battery backup to prevent nuisance drops]].
5. Drop testing performed from floor level by means of lockable, resettable test handle without use of ladders or tools.

**** OR ****

E. Door Operation:

1. Manual push-up operated, relying on partial spring tension release to initiate closure.
2. Equipped with lift handles and pull-down pole.
3. Emergency closure achieved by means of gravity from fusible link separation.
4. Speed governing achieved by viscous governor at 6 to 24 inches per second.
5. Release initiated by [fusible link.] [fail safe, time delay release [with 72 hour battery backup to prevent nuisance drops]].
6. Drop testing requires counterbalance release and governor systems to be reset by qualified personnel.

1.4 SUBMITTALS

A. Submittals for Review:

1. Shop Drawings: Indicate opening dimensions and required tolerances, jamb connection details, anchorage spacing, hardware locations, installation details, and special conditions.
2. Product Data: Provide information on components, application, hardware, and accessories.

B. Closeout Submittals:

1. Operation and Maintenance Data.
2. Test Records: Drop test results.

C. Sustainable Design Submittals:

1. Recycled products: Indicate percentage of recycled material used in manufacture of products, and percentage classified as post consumer.
2. Regional products: Indicate location of product manufacturer and distance from manufacturer to project site.

1.5 QUALITY ASSURANCE

- A. Fire Door Construction: Conform to UL 10B.
- B. Installed Fire Door Assembly: Conform to NFPA 80.

1.6 WARRANTIES

- A. Provide manufacturer's five year warranty against defects in materials and workmanship.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Contract Documents are based on Series 7000 by C.H.I. Overhead Doors.
- B. Substitutions: Under provisions of [Section [____].] [Division 1.]

**** OR ****

- C. Substitutions: Not permitted.

2.2 MATERIALS

- A. Galvanized Steel Sheet:
 - 1. ASTM A653/A653M, Structural Quality, G90 coating class.
 - 2. Recycled content: Minimum [75] [] percent, with minimum [40] [] percent classified as post consumer.]

2.3 COMPONENTS

- A. Curtain:
 - 1. Material: Galvanized steel.
 - 2. Gage: [Per design requirements.] [18.] [20.] [22.]
 - 3. Profile: [Flat, non-insulated, 2-1/2 inches high x 3/4 inch deep.] [Curved, non-insulated, 2-5/8 inches high x 7/8 inch deep.]
 - 4. End locks: Galvanized malleable iron, attached to every other slat to act as wearing surface and prevent lateral movement.
 - 5. Bottom bar: Two galvanized steel angles bolted back-to-back.
- B. Hood: Minimum 24 gage steel.
- C. Guides: Three minimum 3/16 inch thick steel angles bolted together to form guide channel and mounting surface.
- D. Head Plate: Rectangular steel plate, with precision sealed ball bearings supporting drive side axle.
- E. Barrel Assembly: Steel pipe sized for maximum deflection under loading of 0.03 inch per foot of span, with threaded rings or lugs welded to barrel assembly for curtain attachment.
- F. Springs: Curtain weight counterbalanced by oil-tempered, helically wound torsion springs, grease packed and mounted on steel torsion shaft, designed for minimum 20,000 cycles.
- G. Locking: [[Interior] [Exterior] mounted plated steel slide bolt locks with padlock provisions.] [Chain keeper with padlock provisions.] [Master keyable cylinder operable from [coil] [fascia] [each] side of bottom bar.] [Interlock switches.]
- H. Detection Devices: Three [165] [] degree F fusible links [and] [smoke detectors.] [heat rise detectors.] [connection to building fire alarm and detection system.]
- I. Electric Operator:
 - 1. Gear reduced type of sufficient power to operate door at average speed of 12 inches per second.
 - 2. Power supply: [115 VAC, single phase.] [220 VAC, [single] [three] phase.] [440-480 VAC, three phase.]
 - 3. Disconnect for [manual lift up] [chain hoist] operation in case of power failure.
 - 4. Control station: [24 VDC;] [115 VAC;] [push button] [keyed switch] station marked [OPEN and CLOSE.] [OPEN, CLOSE, and STOP.] [Furnish [four] [] keys per station.]
 - 5. Exterior operator cover: Cover exposed operator parts to provide weather and pest resistance for operator; finish to match hood.
- J. Safety Device: [Photoelectric sensor; detect obstruction and reverse door without requiring door to contact obstruction.] [Electric edge, two wire; detect obstruction and reverse door upon contact with electric strips in vinyl housing.] [Air wave edge; detect obstruction and reverse door upon disruption of bottom edge.] [Electric edge, four wire; fail-safe, self monitoring; detect obstruction and reverse door upon contact with electric strips in vinyl housing.]
- K. Finish:
 - 1. Curtain: [Epoxy primer and polyester finish coat,] [Powder coat,] [] color [to be selected from manufacturer's standards].

2. Guides and head plates: [Rust inhibiting primer.] [Powder coat, [____] color [to be selected from manufacturer's standards.]]
3. Hood: [Epoxy primer and polyester finish coat.] [Powder coat, [____] color [to be selected from manufacturer's standards.]]
4. Bottom bar: [Galvanized.] [Painted to match guides.] [Powder coat, [____] color [to be selected from manufacturer's standards.]]

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install door assembly in accordance with manufacturer's instructions.
- B. Anchor to adjacent construction without distortion or stress.
- C. Fit and align door assembly including hardware, level and plumb, to provide smooth operation.
- D. Make wiring connections between power supply and operator and between operator and controls.

3.2 ADJUSTING

- A. Adjust doors to operate smoothly throughout full operating range.

3.3 TESTING

- A. Perform field drop testing in presence of Owner.

3.4 DEMONSTRATION

- A. Demonstrate proper operation to Owner.

END OF SECTION