SECTION 08331

ROLLING FIRE DOORS

FIREKING® MODEL 640

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Overhead Door Corporation pioneered the upward-acting door industry, inventing the first upward-acting door in 1921 and the first electric door opener in 1926. Today, we continue to be the industry leader through the strength of our product innovation, superior craftsmanship and outstanding customer support, underscoring a legacy of quality, expertise and integrity. That's why design and construction professionals specify Overhead Door Corporation products more often than any other brand.

This specification includes rolling fire doors. Overhead Door Corporation offers a wide array of rolling steel doors to meet the most demanding fire safety standards, unusual opening sizes and aesthetic requirements. Designed to close automatically in the event of a fire or alarmed event, our fire-rated doors are available for service door and counter applications in commercial, industrial, institutional and retail uses.

PART 1 GENERAL

1.1   SECTION INCLUDES
** NOTE TO SPECIFIER ** Delete items below not required for project.

    A.   Rolling counter fire doors.

1.2   RELATED SECTIONS
** NOTE TO SPECIFIER ** Delete any sections below not relevant to this project; add others as required.

    A.   Section 05500 - Metal Fabrications: Support framing and framed opening.

    B.   Section 06200 - Finish Carpentry: Wood jamb and head trim.

    C.   Section 08710 - Door Hardware: Product Requirements for cylinder core and keys.

D. Section 09900 - Painting: Field applied finish.

E. Section 16130 - Raceway and Boxes: Conduit from electric circuit to door operator.

F. Section 16150 - Wiring Connections: Power to disconnect.

1.3 REFERENCES
** NOTE TO SPECIFIER ** Delete references from the list below that are not actually required by the text of the edited section.

A. ASTM A 653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

B. ASTM A 666 - Standard Specification for Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.

C. ASTM A 924 - Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.

D. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).

E. NEMA MG 1 - Motors and Generators.

F. NFPA-80 – Standard for Fire Doors and Fire Windows.

1.4 DESIGN / PERFORMANCE REQUIREMENTS

A. Fire Rated Assemblies: Provide assemblies complying with NFPA 80 and listed in UL Directory or Intertek Testing Services (Warnock Hersey Listed) Directory.

1.5 SUBMITTALS

A. Submit under provisions of Section 01300.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
    1.   Preparation instructions and recommendations.
    2.   Storage and handling requirements and recommendations.
    3.   Details of construction and fabrication.
    4.   Installation methods.

C. Shop Drawings: Include detailed plans and elevations, details of framing members, anchoring methods, clearances, hardware, and accessories.

** NOTE TO SPECIFIER ** Delete selection samples if colors have already been selected.
D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) long, representing actual product, color, and patterns.

F. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

G. Operation and Maintenance Data: Submit lubrication requirements and frequency, and periodic adjustments required.

1.6   QUALITY ASSURANCE

    A.   Manufacturer Qualifications: Company specializing in performing Work of this section with a minimum of five years experience.

    B.   Installer Qualifications: Installer Qualifications: Company approved by manufacturer, specializing in performing Work of this section with minimum three years experience, with IDEA Certified Installers and service technicians on staff.

1.7   DELIVERY, STORAGE, AND HANDLING

    A.   Store products in manufacturer's unopened packaging until ready for installation.

    B.   Protect materials from exposure to moisture. Do not deliver until after wet work is complete and dry.

    C.   Store materials in a dry, warm, ventilated weathertight location.

1.8   PROJECT CONDITIONS

    A.   Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.9   COORDINATION

    A.   Coordinate Work with other operations and installation of adjacent materials to avoid damage to installed materials.

1.10   WARRANTY

    A.   Manufacturer's Warranty: Provide manufacturer's two year limited warranty.

** NOTE TO SPECIFIER ** Include the one of the following Optional PowderGuard Finish warranty paragraph if included for the Door(s) specified. Delete if not applicable.

    B.   PowderGuard Finish
        1.   PowderGuard Premium Applied to curtain, guides, bottom bar, headplates: Manufacturer's limited Premium Finish warranty for 2 years.
        2.   PowderGuard Zinc Base Coat applied to guides, bottom bar, headplates plus PowderGuard Premium applied to curtain and top coat for guides, bottom bar, headplates: Manufacturer's limited Zinc Finish warranty for 4 years.
        3.   PowderGuard Textured: Applied to curtain, guides, bottom bar, headplates: Manufacturer's limited Textured Finish warranty for 3 years.
        4.   PowderGuard Zinc Base Coat applied to guides, bottom bar, headplates plus PowderGuard Textured applied to curtain and top coat for guides, bottom bar, headplates: Manufacturer's limited Zinc Finish warranty for 4 years.

PART 2 PRODUCTS

2.1   MANUFACTURERS

    A.   Acceptable Manufacturer: Overhead Door Corporation, 2501 S. State Hwy. 121, Suite 200, Lewisville, TX 75067.   ASD. Tel. Toll Free: (800) 275-3290. Phone:

(469) 549-7100. Fax: (972) 906-1499. Web Site: www.overheaddoor.com. E-mail: info@overheaddoor.com.

B.   Substitutions: Not permitted.

C.   Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2   ROLLING COUNTER FIRE DOORS

A.   Rolling Counter Fire Doors: Model 640 Counter Fire Doors.
    1.   Label: Provide rolling fire doors certified with the following listing.

        a.   UL or ULC 3-Hour Class A Label for installation on masonry or steel jamb walls (face mounted). Door may be welded to the face of steel jambs.
        b.   FM 3-Hour Class A Label for masonry or concrete walls, steel wall jambs or with steel tubes set against fire walls (masonry or non-masonry construction) .
        c.   UL or ULC 1-1/2-Hour Class B Label for installation in non-masonry walls, face mounted or between jambs.
        d.   FM 1-1/2-Hour Class B Label when installed on 2-hour fire-rated gypsum dry walls.
    2.   Curtain: Interlocking slats, Type F-158 fabricated of 22 gauge galvanized steel. Endlocks shall be attached to ends of alternate slats to maintain curtain alignment and prevent lateral slat movement.

    3.   Glazing: Fire-rated vision panels, four panels 3 inch by 5/8 inch (76 by 16 mm).
    4.   Finish:

        a.   Galvanized Steel: Slats and hood galvanized steel to ASTM A 653 finished with a rust-inhibitive roll coating process, including bonderizing, a 0.2 mils thick baked prime paint, and a 0.6 mils thick baked top coat.

            1)   Polyester Top Coat.
                (a)   Gray polyester.
                (b)   Tan polyester.
                (c)   White polyester.
                (d)   Brown polyester.
            2)   Powder Coat:

(a) PowderGuard Premium: Weather resistant polyester powder coat color as selected by the Architect.

(b) PowderGuard Textured powder coat, color as selected by the Architect.

    b. Non-galvanized exposed ferrous surfaces shall be black powder coated.

5. Bottom Bar:

    a. Single steel angle bottom bar.

    b. Single steel angle bottom bar with 1/4 inch (6 mm) foam astragal.

    c. Tubular locking bottom bar.

6. Guides:

    a. Roll-formed black powder coated steel shapes.

    b. Roll-formed black powder coated steel with brush smoke seals.

    c. Fastening Guides to Masonry Fire Walls: UL listed expansion anchors, or by through-bolts on soft brick or hollow block walls, or by bolts on steel jambs.

    d. Fastening Guides to Non-Masonry Fire Walls: Comply with the manufacturer's listing.

7. Brackets:

    a. Hot rolled steel to support counterbalance, curtain and hood.

8. Finish; Bottom Bar, Guides, and Brackets:

    a. Finish: Black powdercoat finish.

    b. Finish: PowderGuard Premium powder coat color as selected by the Architect.

    c. Finish: PowderGuard Zinc base coat, gray with PowderGuard Premium powder coat color as selected by the Architect.

    d. Finish: PowderGuard Textured powder color as selected by the Architect.

    e. Finish: PowderGuard Zinc base coat, gray with PowderGuard Textured powder color as selected by the Architect.

9. Counterbalance: Helical torsion spring type. Counterbalance shall be housed in a steel tube or pipe barrel.

10. Hood:

    a. Galvanized painted steel. Hood support provided for wall openings over 13 feet 6 inch (4.11 m) wide.

    b. FM approved hood shall be equipped with thermally controlled, internal flame baffle.

    c. Provide with exterior UL Listed, brush smoke seal.

11. Manual Operation:

        a.   Manual push.

        b.   Crank operation.

12.   Automatic Closure:

        a.   Standard Fire Door: UL approved release mechanism equipped with a 165 degree fusible link.

        b.   Fire Sentinel time-delay release mechanism provides an added measure of safety to control the doors' closure.

13.   Locking:

        a.   Two interior bottom bar slide bolts for manually operated doors.

        b.   Cylinder lock for manually operated doors.

        c.   Interior slide bolt lock for electric operation with interlock switch.

        d.   Cylinder lock for electric operation with interlock switch.

14.   Wall Mounting Condition:

        a.   Face-of-wall mounting.

        b.   Between jambs mounting.

15.   Plastic Laminated Fire Rated Countertops: Provide counter fire doors with Overhead Door Corporation plastic laminated fire rated countertops.

        a.   Label: Plastic laminated fire rated countertops shall bear Warnock Hersey International 1-1/2 hour label for countertops up to 8 feet by 4 feet (2.44 m by 1.22 m). Sizes over 8 feet by 4 feet (2.44 m by 1.22 m) will bear an Warnock Hersey International Oversize Label.

        b.   Shape: Provide shape as indicated on the Drawings. To include: I or T copable for face mounted doors; Rectangular H (no cope), I or T copable for between mounted doors. No aprons or additional pieces shall be allowed.

        c.   Core: Interior core of fire rated composite and high density particleboard.

        d.   Finish: Top, bottom and all edges shall be covered with plastic laminate.

        e.   Color: Top and all edges as selected by the Architect from any color from Formica, Wilsonart or Nevamar brands of plastic laminate.

        f.   Mounting Hardware: Provide with all necessary mounting hardware.

PART 3 EXECUTION

3.1   EXAMINATION

    A.   Verify opening sizes, tolerances and conditions are acceptable.

    B.   Examine conditions of substrates, supports, and other conditions under which this work is to be performed.

    C.   If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Install rolling counter fire doors in compliance with requirements of NFPA 80. Test fire-release system and reset components after testing.

C. Use anchorage devices to securely fasten assembly to wall construction and building framing without distortion or stress.

D. Securely and rigidly brace components suspended from structure. Secure guides to structural members only.

E. Fit and align assembly including hardware; level and plumb, to provide smooth operation.

** NOTE TO SPECIFIER ** Select the following paragraph for electric operation of counter doors and delete if not required.
F. Coordinate installation of electrical service with Section 16150. Complete wiring from disconnect to unit components.

** NOTE TO SPECIFIER ** Select the following paragraph for Fire Sentinel Devices used with doors. Delete if not applicable.
G. Install and test Fire Sentinel release device(s) in accordance with the manufacturer's instructions and in compliance with applicable regulations and codes of the local authority having jurisdiction.

H. Coordinate installation of sealants and backing materials at frame perimeter as specified in Section 07900.

I. Install perimeter trim and closures.

3.4 ADJUSTING

A. Test for proper operation and adjust as necessary to provide proper operation without binding or distortion.

** NOTE TO SPECIFIER ** Select the following paragraph for Fire Sentinel Devices used with doors. Delete if not applicable.
B. Release device(s) shall be tested and witnessed for proper operation with the door manufacturer recommendations

C. Adjust hardware and operating assemblies for smooth and noiseless operation.

3.5 FIELD QUALITY CONTROL

A. Functional testing of fire door and window assemblies shall be performed by IDEA Certified personnel with knowledge and understanding of the operating components of the type of door being subject to testing.

3.6   CLEANING

   A.   Clean curtain and components using non-abrasive materials and methods
          recommended by manufacturer.

   B.   Remove labels and visible markings.

   C.   Touch-up, repair or replace damaged products before Substantial Completion.

3.7   PROTECTION

   A.   Protect installed products until completion of project.

                                   END OF SECTION