



H-SERIES: HWB 640-1040 SPECIFICATIONS "SMART RAILS" Hangar, Traveling Grouped, Bottom Rolling Door Systems

OPTIONS ARE LISTED IN BOLD, PLEASE MODIFY THESE AREAS AS NEEDED BASED ON YOUR PROJECT

CONSULT MANUFACTURER FOR ADDITIONAL OPTIONS OR MODIFICATIONS.

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. Provide a xx wide by xx high, xx section, electronically operated, bi-parting, bottom rolling hangar door.
- B. Includes bottom rails, top guides and door sections complete with bottom wheels, top guide rollers, electric motor operators with brake (located in sections x, x, x and x), electrical controls, electrical feed rail power supply system, bumper door pick-up system and weatherseals. Traveling group multi-panels x through x or panels x through x are interconnected and can be moved past the centerline of the hangar door opening. All steel is prime painted with the manufacturer's standard structural primer.
- C.
- D. Work by others includes preparation of the building to receive the hangar door, field wiring, field finish paint, top guide supports and exterior and interior metal sheeting and insulation.

1.2 DESIGN CRITERIA

- A. Doors shall be designed to withstand a wind load of 25 pounds per square foot in the closed position. The top guide system shall be capable of accommodating a total of six (6) inches of live load deflection and five (5) inches of uplift.

1.3 SUBMITTALS

- A. Design and submittal drawings shall be approved by the architect prior to hangar door fabrication.
- B. Operation and maintenance manual shall be furnished to the owner.

1.4 DELIVERY, STORAGE AND PLANNING

- A. Store delivered materials and equipment in dry locations with adequate ventilation, free from dust and water, so as to permit access for inspection and handling.

B. Handle materials carefully to prevent damage.

1.5 WARRANTY

A. The door manufacturer shall provide a written standard limited warranty for material and workmanship.

PART 2 - PRODUCTS

2.1 MANUFACTURER

Hangar door shall be as manufactured by Door Engineering and Manufacturing, 400 Cherry Street, Kasota, Minnesota 56050, (800)-959-1352

2.2 MATERIALS

- A. All door section framing members, both vertical and horizontal, shall be hot rolled standard structural steel sections equal to or exceeding ASTM A-36 and comply with AISC specifications. Cold formed "C", "Z" shapes may be used for girts or bracing.
- B. Door section construction: Door sections shall be fabricated in sizes convenient for shipping and shall be of bolted and/or welded construction. Framing members shall be true to dimension and square in all directions. Diagonal bracing shall be provided so that the completed door section assembly will be adequately braced to withstand operational loads.
- C. Weather seals on vertical edges, sill and head are attached at the factory. Vertical weather seals are a bulb type sheet rubber EPDM (Ethylene, Propylene, Diene, Terpolymer) with a resilient urethane foam core. Vertical opposing bulb weather seals between the door sections shall seal against each other and not come in contact with the door sheeting. Head and sill weather seals are flap type sheet rubber EPDM (Ethylene, Propylene, Diene, Terpolymer). All weatherseals shall be retained with full length steel binding strips attached with rust resistant fasteners.
- D. Telescoping top guide rollers: Each door section shall be equipped with two telescoping top guide roller assemblies consisting of horizontal and vertical steel rollers with oil impregnated bronze bearings.
- E. Bottom wheels: Each door section shall have two double flange solid steel wheels with a minimum tread diameter of 12 inches. Each wheel shall be equipped with tapered roller bearings capable of transmitting both vertical and horizontal loads. Bearings shall be provided with grease seals.
- F. Top guide assemblies: Top guide assemblies consisting of wide flange beams and cross bracing shall be factory fabricated sub-assemblies to accommodate the telescoping top roller assemblies and the designed building live load deflection and uplift.

- G. Bottom rails: Full length bottom rail assemblies consisting of rails shall be factory fabricated sub-assemblies from a minimum ASCE 20 lbs./yd. bottom rail with cross bracing and include leveling anchors.

2.3 OPERATING SYSTEM

- A. The bi-parting hangar door shall be operated by an electric motor drive system mounted internally within the door framing of the respective door sections. The electric motor operator shall drive one of the bottom wheels of the powered door sections. The non-powered door sections to be interconnected to the powered door sections by means of a neoprene cushioned mechanical bumper pick-up system. Each traveling grouped multi-panel (door sections x through x or door sections s through x) will travel using the top guide and bottom rail assemblies...two (2) door sections per rail and guide. The grouped sections of the hangar can be parked at each end wall, leaving an opening centered in the hangar bay or travel past the centerline of the hangar bay and be stacked together at either end wall, leaving an offset opening to the hangar bay. This allows access to the entire hangar bay without having to provide door pockets on each side of the opening.

2.4 ELECTRIC OPERATOR

- A. The electric motor operator shall consist of a factory installed electric brake motor, gear reducer, required sprockets, roller chains and chain tensioning devices. The operator shall be capable of emergency manual operation. Electric power shall be 208, 230 or 460 VAC, 60 Hz, three phase.

2.5 ELECTRIC CONTROLS

- A. Electrical controls shall include a factory wired enclosure with disconnect switch, overload and under voltage protection, magnetic reversing starters and control voltage transformer mounted on the powered door sections. Control circuits shall not exceed a nominal 110 volts.
- B. A control station of constant pressure "OPEN" and "CLOSE" pushbuttons shall be factory mounted near the leading edge of the powered door sections, also located in this same enclosure is the "OVERRIDE" pushbutton that allows the traveling grouped door sections to pass the centerline of the hangar bay.
- C. Limit switches shall be provided to stop the travel of the door sections in their fully open or fully closed positions. Limit switches shall be factory mounted on the powered door sections, actuating cans shall be field mounted on the top guide assemblies.
- D. Electric power shall be brought to the powered door sections with a multi-conductor electrical feedrail located at the top track elevation next to the most interior track. This will provide electrical power to the most interior door sections x and x. The incoming electrical power for the door sections x and x is provided by a draped SO electrical cord coming from either center door sections x or x.

- E. All electrical wiring from the electric motor operator internal to the powered door section shall be factory wired in conduit to a junction box near the top of the door section.

PART 3- EXECUTION

3.1 PAINTING

- A. Clean all steel surfaces after fabrication. Steel surfaces painted with manufacturer's standard structural primer.

3.2 INSTALLATION

- A. Assemble and install the bottom rail assemblies, top guide assemblies and door sections in accordance with approved drawings and installation instructions. All door openings, roof and floor shall be completely installed prior to the installation of the door. Permanent or temporary electric wiring shall be brought to the door opening before installation is started.
- B. Door shall be set plumb, level and square, and with all parts properly fastened, mounted, etc. All moving parts shall be tested, adjusted and left in good operating condition.

3.3 ADJUSTING AND CLEANING

- A. Inspection of the doors and complete operating test will be made by the installer in the presence of the general contractor or architect as soon as the erection is complete. Any defects noted shall be corrected. After door approval in the above test, the general contractor must assume the responsibility for any damage or rough handling of the doors during construction until the building is turned over to the owner and final inspection is made.
- B. Clean surfaces and repaint abraded or damaged primed surfaces to match factory-applied finish.

END OF SECTION