

DIVISION 083430 / 083416 / 083410  
SPECIFICATIONS  
Hangar Door, Bottom Rolling Door

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

**CONSULT MANUFACTURER FOR ADDITIONAL MODIFICATIONS OR OPTIONS.**

**PART 1 – GENERAL**

1.1 GENERAL

- A. Provide hangar door for a clear opening \_\_\_ **wide by** \_\_\_ **high** in a \_\_\_ **bi-parting**, \_\_\_ **unidirectional or**, \_\_\_ **free floating configuration**.
- B. The hangar door shall consist of \_\_\_ **door panels**.
- C. The hangar door shall be \_\_\_ **manually operated** or \_\_\_ **motor operated**.
- D. Provide bottom rails with all imbeds including leveling plates and anchor bolts, bottom rollers, top roller guides, electric operators where required with accessories, tractor pulls, track cleaners, complete weather stripping and all items incidental to a complete system.

1.2 DESIGN CRITERIA

- A. Hangar Door shall be engineered, signed and sealed by a registered P.E. to withstand \_\_\_ **mph** wind load in the closed position, design shall be to **Importance factor of** \_\_\_ with **Exposure** \_\_\_.
- B. Design of the top guide system will be based on the building deflection and uplift as provided by the building engineer.
- C. Hangar Door shall be designed and constructed of ample size and strength for the loads and stresses imposed under the specified conditions.

1.3 SUBMITTALS

- A. Hangar Door manufacturer will submit for approval all design and shop drawings and complete calculations of all structural, mechanical and electrical features of the door. Wiring diagrams and electrical schematics shall be provided. All information will list in detail each electrical component used including the manufacturers name, identification number and description.

- B. A complete owner and operator manual will be furnished and provided by the door manufacturer to the owner. This manual includes:
  - a. Manufacturers Contact Information
  - b. Door Operating Manual
  - c. Door Warranty
  - d. Door Submittals
  - e. Door Engineering
  - f. A complete specification catalog of electrical components.

#### 1.4 HARDWARE

- A. **Main members** both vertical and horizontal shall be of continuous sections of new hot rolled structural steel equal to or exceeding ASTM A-36 and comply with AISC specifications. Cold-formed C and Z shapes shall be used only for girts and interior bracing and not as structural framing members. All 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 design loads.
- B. **Top guides** shall be either the fixed type or the telescoping type depending on the amount of specified building vertical deflection. Fixed type shall have permanently lubricated rollers that engage both sides of the web of the top track wide flange beam and allow for vertical deflection between the flanges. Telescoping type shall have both vertical and horizontal permanently lubricated rollers that engage both sides of the web of the top track wide flange beam and have the predetermined amount of vertical travel built into the telescoping design of the guide assembly.
- C. **Bottom wheels** shall be steel double flanged to meet the sizing of the bottom rail. Wheels to be fitted with tapered roller bearings and grease fittings. Wheel design will transmit the vertical and horizontal loads. Bottom wheels are designed to accommodate actual dead loads plus wind load specified.
- D. **Bottom rail** shall be fabricated from a minimum ASCE rail of \_\_\_\_\_**lbs.** per yard standard rail, leveling plates of angle and two each double-nut anchor bolts. Anchor bolts to be set in the first pour by the concrete subcontractor. Level plates and rail installed by Aero-Door International, and concrete placed in a second pour by concrete subcontractor and chamfered around the railhead per drawings provided by AeroDoor International.
- E. **Weather stripping** shall consist of 1/8" two-ply cloth inserted neoprene. Vertical weather seals between the door panels and the building jambs and at the head and the bottom of the door shall be flap type or bulb shape held in place by metal retaining strips with fasteners 12" on center. Weather seal is designed to provide a complete weather seal system.
- F. **Track Cleaners:** Brush provided to clear debris from railhead as panel is moved.
- G. **Cane bolt** locking devices shall be provided for locking each panel into the closed position. Cane bolts may be added to motor operated doors, but are primarily used on manually operated door systems. As an alternate for manual operation, wheel brakes may be added.

## 1.5 WARRANTY

- A. Hangar door shall have a 5-year structural warranty against all defects in material and workmanship. All electrical components shall have a standard 1-year warranty against all defects in material.

## PART 2 – PRODUCTS

### 2.1 MANUFACTURER

Hangar door shall be as manufactured by:

AeroDoor International LLC, 2770 Dillard Road, Eustis. FL 32726  
Web: [www.hangardoors.aero](http://www.hangardoors.aero) Phone: 866.226.3667 eMail:

Manufacturer has a minimum of 25 years experience in manufacturing hangar doors of this nature. Door assemblies specified in this section shall be produced in a factory environment and with the highest level of quality control.

### 2.2 ELECTRIC OPERATOR

- A. Electric Motor operation of the sliding hangar doors shall be by either a complete drive system mounted internally within the door framing of the leading door panels or by an external mounted rubber tire unit. Either unit shall consist of the gear head motor operator, gearbox reducer, sprockets, chains, and electrical material to make a complete and operable system. In the event of a power failure the operator may be disconnected and operated manually without damage to the motor and gearbox.
- B. Each operator shall be provided with an acceptable means of emergency conversion to tractor towing.
- C. **Controls:** door control buttons are by constant pressure. Whereas to stop door movement release pressure from the control button. Heavy duty buttons located in oil-tight enclosures with mushroom head buttons.
- D. **Overhead electrification:** The Doors source of power will be by draped cable or continuous trolley duct. Both designed to withstand normal motor amperage loads.
- E. **Limit switches:** Limit switches are provided to stop the travel of the door in both there fully open and closed positions.
- F. **Personnel door interlock switch:** Designed to prevent the hangar door from operating while the personnel door is ajar.
- G. **Warning Horn:** Installed on the powered leaf of the door system not less than 45db. Automatically signals movement of the door and sounds continuously throughout door operation.

## 2.3 PAINT

- A. Door framing members shall be thoroughly cleaned of loose scale, dust or other objectionable materials, which would otherwise interfere with the bond of paint with steel.
- B. All shop painting will be done in dry weather, under cover and free from moisture.
- C. All steel shall be cleaned and coated with one coat of rust inhibiting red oxide primer. All finish paint and special coatings if required are to be done by others.

## **PART 3 - ERRECTION**

### 3.2 INSTALLATION

- ° . Door top track, bottom rail assemblies (excluding concrete work) and complete door panels shall be assembled and erected by AeroDoor International.
- . Others shall install all sheeting, insulation, trim and any architectural metal after the doors are erected and are true and square in all directions.

END OF SECTION