



SWING-OUT DOORS



1. Scope

This specification defines the materials and design criteria of a complete **swing-out door system** manufactured by WELL BILT INDUSTRIES of Williston, Florida.

2. Materials

All materials used for the construction of **swing-out door system** components shall be new and free from any defects or imperfections which could affect serviceability.

- **2.1** Hot rolled structural steel shapes shall conform to ASTM A36 with a minimum yield strength of 36,000 psi. Tensile strength is 58,000 to 80,000 psi.
- **2.2** Cold formed structural steel shapes such as cee's, zee's and channels shall conform to ASTM A570 grade 55 with minimum yield strength of 57,000 psi.
- **2.3** Welded mechanical tubing shall conform to ASTM A-500 grade B with a minimum yield strength of 46,000 psi. Typical tensile strength is 58,000 psi.
- **2.4** Mechanical fasteners critical to the assembly of function of a **swing-out door system** shall be ASTM A-325 or SAE grade 5.
- **2.5** Elastomeric sealing elements to seal bottoms of the door system shall be fabricated using EPDM type 40 elastomer. EPDM is for outdoor and high temperature applications. It resists ozone, steam, water, oxygenated solvents plus animal and vegetable oils.

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3. Framing

The basic outer frame shall be constructed of hot rolled or cold formed structural steel shapes or in the case of relatively small door sections, welded mechanical tubing.

- **3.1** Vertical structural members, referred to as stiles or jambs shall be one piece for the height of the door. They shall be designed for a maximum vertical plane deflection not to exceed the door height in inches divided by 180 ($L/180$) at specified code and wind load conditions. Where wind load is not specified, a standard wind load of 90 MPH shall be used.
- **3.2** Door Horizontal Members
 - **3.2.1** Bottom beam or sill shall be structurally capable of supporting the total weight of the finished door and transmitting that weight plus the lateral force due to wind.
 - **3.2.2** Doors shall be fabricated from hot rolled or cold rolled structural shapes.
 - **3.2.3** Intermediate horizontal members or girts are normally fabricated from hot or cold structural shapes. Members are typically spaced so as to provide proper spacing for attaching the customers exterior sheeting.
 - **3.2.4** Intermediate vertical members shall be hot or cold formed structural shapes as required to accommodate imposed loads.
 - **3.2.5** Diagonal bracing shall be $\frac{3}{4}$ " diameter steel threaded rod with a turn buckle for adjusting square of door.
 - **3.2.6** Construction – Except for small door sections which can be transported in one piece, WELL BILT INDUSTRIES *swing-out door systems* are fabricated in sections which can be easily shipped. These sections are then bolted at the job site to clips that are welded to the vertical members.

4. Roller

One bottom roller shall be provided for each door leaf. Roller shall be located on the side opposite the hinges. Roller shall be of a minimum of 4" dia. x 2" wide and rated at 800 pound load capacity.



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5. Hinges

Heavy duty hinges are welded on the doors by WELL BILT INDUSTRIES. The number and location varies with door size and wind load requirements. Hinges must be welded to the supporting structure. Hinges are fabricated with ¾ inch diameter pins and have been tested to withstand 15,000 lbs. tension loading. Hinges are Pre-lubed for life.

6. Locking Mechanism

Single handle to lock door, both at top and bottom. Provide two (2) loose sleeves for contractor to install into floor and top header. Locking pins are 1" diameter C1018 CRS. Handle fitted with a red plastic grip.

7. Safety Chains

High strength 7mm Grade 80 chain for each door leaf. Provide each chain with one (1) hasp welded to top of door leaf and one (1) shipped loose. Ship two (2) load rated spring snaps loose with each chain.

8. Closure

When double doors are provided, a 3"x 3"x ¼ " closure angle shall be mounted to one door. Also a pull handle shall be welded to the opposite door.

9. Protective Finish

Standard finish on WELL BILT INDUSTRIES doors is a low voc gray oxide primer. This provides short term protection of the metal surfaces until the door is installed and can be painted with a finish coat of paint. Red oxide and finish paint available upon request.

10. Weather Seals

WELL BILT INDUSTRIES shall provide EPDM style 40 black rubber and galvanized retainer strips for bottom and top weather seals. The sides to have rubber double type self adhesive seal.

11. Information & Documentation

WELL BILT INDUSTRIES provides drawings, cut sheets and instructions adequate for the preparation of the job site and the assembly and installation of the **swing-out door system**.

12. Compliance

WELL BILT INDUSTRIES doors are constructed to comply with all codes and specifications provided at the time an order is initiated. Wind load compliance certification by a professional engineer licensed to practice in the state of Florida is available if required. WELL BILT INDUSTRIES is a Miami-Dade County Approved Hangar Door Manufacturer and was issued a Certificate of Competency.

13. Warranty

WELL BILT INDUSTRIES **swing-out door systems** are warranted for one year from the date of purchase against defects in material and workmanship. Refer to WELL BILT INDUSTRIES for specific details

14. Optional - Electric

As an option the **swing-out door system** can be automated with a manual open/manual close, auto open/auto close or auto open/manual close. The system utilizes 110 volt primary and secondary (control) voltage. The system also has the option of hardwiring or standard 110 volt wall receptacle plug. Circuit must be 15 amp rated with breaker.

15. Optional - Safety Features Remote Control

Photo Eye Sensor
Warning Bell
Safety Edge
Keyed Lockout
Auto-Reverse (Safety Edge Option)

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