

SECTION 08 34 19

INDUSTRIAL DOORS

****Note to Specifier**** This specification contains component and configuration options.
Where indicated, choose the appropriate choice for your specific project requirements.

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. **[Single Swing], [Paired Swing], [and] [Paired Monorail Swing]** Industrial Swing Doors with Frames.
2. Door Hardware.

B. Related Sections:

1. Division 03 – Cast-In-Place Concrete.
2. Division 04 – Concrete Unit Masonry.
3. Division 05 – Structural Steel Framing.

1.2 SUBMITTALS

A. 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. Installation instructions.

B. Shop Drawings: Provide shop drawings showing layout, profiles, and product components, including anchorage, hardware, and finishes. Include dimensional plans, applicable material specifications, elevations and sections detailing mounting and connections.

1. Contractor to provide manufacturer with field measurements and mounting structure prior to commencement of shop drawings.

C. Calculations: Upon signed finalization and approval of dimensions, mounting location material and configuration, and load requirements;

****Note to Specifier**** Choose one (1) of the following statements.

1. Engineering calculations are not required for this door.

2. Submit calculations by a qualified engineer, to verify door's ability to withstand the design loading.
3. Submit stamped calculations by a registered professional engineer from within the state or territory where the project will be constructed or substantially improved, to verify the flood door's ability to withstand the design loading.

1.3 CLOSEOUT SUBMITTALS

- A. Provide Operation and Maintenance data to include methods for maintaining installed products, precautions against cleaning materials and methods detrimental to finishes and performance.

1.4 QUALITY ASSURANCE

- A. **Manufacturer Qualifications:** Manufacturer must demonstrate a minimum of five (5) years successful experience in design and manufacture of similar related closures. Upon request, provide supporting evidence including list of installations, descriptions, name, and method of contact.
- B. **Minimum Qualifications:** Manufacturer must demonstrate compliance and certification of a Quality Management System administered by the International Organization for Standardization (ISO). Documentation of current certification status to be provided upon request.
- C. **Welder Qualifications:** Welders Certified in accordance with American Welding Society Procedures for applicable material used in production of specified product.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging container with identification markings intact until ready for installation.
- B. Protect materials from exposure to moisture during storage.
- C. Store materials in a dry, warm, ventilated weathertight location. If outdoor storage is required, block materials to store at an incline, to prevent pooling of any moisture and promote runoff. Tarp materials in a tent-like arrangement, elevated above the product with open sides to allow airflow. Store loose or high value components in a dry, controlled environment.
- D. Use caution when unloading and handling product to avoid bending, denting, crushing, or other damage to the product.
- E. When using forklifts, use forks of proper length to fully support product being moved. Consult "Approved for Construction" drawings or consult with factory for proper lift points.

1.6 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 indicated limits.

1.7 COORDINATION

- A. Conduct site survey and provide to manufacturer, prior to manufacturer's commencement of shop drawings, the actual site conditions of the mounting location, to include; material type, dimensions and configuration, interferences with mounting surface, or any other condition that may impact the ability of the gate to be properly installed.
- B. Coordinate work with other operations and installation of adjacent materials to avoid damage.

1.8 WARRANTY

- A. Manufacturer's Standard Warranty: Product to be free from defects in material and workmanship for a period of five (5) years from date of shipment.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Design industrial swing doors to support, solely or in combinates of, temporary super-imposed live loads as indicated below. All applied types of related loadings are transferred from industrial product barriers, solely or in combinations of, by anchorage to structural floor slabs and/or jamb anchorage and direct pressure contact to structural walls or other structural elements.

****Note to Specifier** Delete any loading types that do not apply.**

1. Positive Wind/Draft Pressure Loading
2. Negative Wind/Draft Pressure Loading

- B. Engineer Code Practices: Engineer industrial products to conform to the design requirements that are based on the latest adopted edition of the International Building Code (IBC). LFRD and/or ASD methodologies are applied as appropriate to align with specific project specifications and/or limited published material data.

2.2 SWING INDUSTRIAL DOOR WITH FRAME

- A. Description: Swing, Industrial Metal Door including door frame, door panel, threshold, and/or door hardware.
 1. Approved Manufacturer: PS Access Solutions™, which is located at: 1150 S. 48th Street, Grand Forks, ND 58201; Toll Free Tel: 877.446.1519; Email: 4psinfo@psindustries.com; Web: www.psaccessolutions.com or www.psindustries.com

a. Basis of Design Product: Model: SWG.

B. Substitutions: Not permitted.

C. Single Source Responsibilities: Obtain all swing industrial door assemblies from single manufacturer.

2.3 EQUIPMENT

A. Products Details:

1. Sealing Requirements: EPDM, Brush Seal, or combination, design shall provide an effective barrier against wind, hot/cold temp differences, dust, debris, and moisture.
2. Operation: Provide with hardware operable from both sides.
3. Mounting/Load Transfer: Anchor to existing structure. Industrial Door designed for specific loads and will transfer loads to adjacent structure.
4. Frames to be anchored utilizing mechanical, chemical or other framing methods as designed. Manufacturer to provide anchors, unless otherwise noted or existing structure is no specified.
5. Provide rectangular door opening with square corners to facilitate easy passage.

2.4 MATERIALS

A. Exposed sheet metal of industrial door panel to be formed of the following material type;

****Note to Specifier** Choose one (1) of the following materials.**

1. Steel: Commercial quality, low carbon steel of appropriate size and strength, welded and structurally bonded.
2. Stainless Steel Type 304 or 316: stainless steel of appropriate size and strength, welded and structurally bonded.

B. Industrial door internal structure to be structural tubes, plates, and formed shapes of the following material type;

**** Note to Specifier** Choose one (1) of the following materials.**

1. Steel: commercial quality, low carbon steel of appropriate size and strength with welded construction.
2. Stainless Steel Type 304 or 316: stainless steel of appropriate size and strength with welded construction.

C. Weatherseals to be compressible rubber type or brush, field replaceable.

1. Material: UV Resistant EPDM, and Nylon unless otherwise noted.

D. Door Frame to be manufactured of the same material type and finish as door panel. Frame to include jambs, header jamb, and threshold (optional) members for field location and installation

on structure. Jamb members to be designed and fabricated with appropriate material as required for the loading.

E. Thresholds:

****Note to Specifier** Choose one (1) of the following.**

1. Aluminum: 6000 Series Alloy, ADA Compliant.
2. Stainless Steel: Custom designed, factory formed.
3. No Threshold provided.

F. Frame Mounting Hardware: Provide anchors, as required.

G. Operating Hardware: Provide hardware appropriate for the size and weight of the industrial swing door and loads. Hardware to be factory located on jambs and door panels, as practical. Latching hardware to be as indicated on drawings. Industrial door panel to be factory prepared for applicable latching devices.

1. Hinges: Sized to the requirements of the door
2. Standard Hardware:
 - a. Exterior: Von Duprin 996L lever, classroom function.
 - b. Interior: Von Duprin 98/99 series Rim exit device.

****Note to Specifier** The following are offered as options. Delete if not required.**

- c. Exterior: Oversized Bow Handle provided for easy gloved hand operation (Powder coat #49 gray finish); Cylindrical/ Mortise Lock; or PSI Bar Latch.
 - d. Interior: Cylindrical/ Mortise Lock; or Push Plate.
3. Hardware prep only: Cylindrical lockset, mortise lockset, or panic hardware.
4. Closer; Townsteel TDC40, Heavy Duty Grade 1 (AL689 finish).

H. Placards: Factory mounted, decal labels for product identification.

I. Finish:

1. Steel Shop Finish: Apply the following paint system in accordance with manufacturer recommendations and instructions;
 - a. Primer Only: One (1) shop coat of manufacturer's standard shop primer (S-W Kemflash Primer). No top finish coat.
 - b. Finish: Powder Coat (#49 Gray)

****Note to Specifier** The following Steel Shop finishes are offered as options. Delete if not required.**

- c. Topcoat Finish: One coat of primer as shown above with two shop coats of Standard Industrial Enamel (S-W Industrial Coatings B54 Series).
 - d. Finish: Epoxy; One (1) coat Macropoxy 646 and two (2) coats Acrolon 218.
2. Stainless Steel products to be mill finish, welds are ground smooth, not polished.
 - a. No. 2b, products to be mill finish, welds are ground smooth, not polished.

3. Labeling: Each door will be individually identified for matched installation.

2.5 FABRICATION

- A. Fit and factory assemble items in largest practical sections, for shipment to site.
- B. Fabricate items with joints tightly fitted and secured.
- C. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until mounting substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another subcontractor, notify Architect of uncompleted preparation before proceeding.
- C. Inspect opening for compliance with manufacturer requirements. Verify open conditions are within required tolerances.

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 installation instructions, "Approved for Construction" drawings, shipping, handling, and storage instructions, and product carton instructions for installation.
- B. Frames must be installed level, square, plumb, and rigid.
- C. Tolerances: All dimensional requirements must be in accordance with manufacturer's installation instructions and "Approved for Construction" drawings.
- D. Verify all anchorage is in accordance with manufacturer's installation instructions and applicable data sheets.

- E. Inspect weatherseal for damage, wear, and adhesion. Replace compromised weatherseals immediately.

3.4 FIELD QUALITY CONTROL

- A. Field Testing:
 - 1. Installer to operate and field verified products including the sealing surfaces to assure that they maintain contact at the correct sealing points.
 - 2. Installer to verify that hinges and latching assemblies operate freely and correctly.

3.5 CLEANING

- A. Touch-up, repair or replace damaged products or components before Substantial Completion.
- B. Clean all sealing surfaces.

3.6 PROTECTION

- A. Protect installed products until completion of project.

END OF SECTION