

SECTION 08 31 00

ACCESS HATCHES

****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. Inspection Access Hatch with Frame.
2. Access Hatch 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 access hatch.

2. Submit calculations by a qualified engineer, to verify access hatch'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 access hatch'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, and weathertight location. If outdoor storage is required, elevate materials on blocks and position them at an incline to prevent moisture from pooling and to promote runoff. Cover materials with a tarp in a tent-like arrangement, leaving the sides open to allow airflow. Store loose or high-value components in a dry, controlled environment.
- D. Use caution when unloading and handling the 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 one (1) year from date of shipment.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Design industrial sliding roof hatch to support, solely or in combines 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 existing curbs or new construction, 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 ACCESS HATCH WITH FRAME

- A. Description: Industrial Access Hatch, fully-assembled Access Hatch including hatch frame, hatch panel, and hatch 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;
www.psindustries.com

Web: www.psaccesssolutions.com or

a. Basis of Design Product: Model: ACH.

B. Substitutions: Not permitted.

C. Single Source Responsibilities: Obtain all access hatch assemblies from single manufacturer.

2.3 EQUIPMENT

A. Products Details:

1. The PS Access Solutions® Access Hatch is an inspection door that provides access to material flow and mechanical parts, perfect for conveyers, refineries, blade changeouts and mines. This versatile hatch features a low-profile flanged frame and gasketing.

a. Order/Opening Size Dimensions and Weights:

STOCKED MILD STEEL			
ORDER SIZE	OPENING SIZE DIMS		SHIPPING WEIGHT
	WIDTH	LENGTH	
8" x 8"	8"	8"	12 lbs.
12" x 12"	12"	12"	18 lbs.
12" x 18"	12"	18"	23 lbs.
16" x 16"	16"	16"	25 lbs.
18" x 18"	18"	18"	29 lbs.
18" x 24"	18"	24"	37 lbs.
24" x 24"	24"	24"	44 lbs.

STOCKED STAINLESS STEEL 304-2b			
ORDER SIZE	OPENING SIZE DIMS		SHIPPING WEIGHT
	WIDTH	LENGTH	
12" x 12"	12"	12"	18 lbs.
24" x 24"	24"	24"	44 lbs.

2. Sealing Requirements: EPDM gasket, full perimeter design shall provide an effective barrier against wind, hot/cold temp differences, dust, debris, and moisture.
3. Operation: One-handed operation.
4. Mounting/Load Transfer: Anchor to existing structure and new construction. Access hatch designed for specific loads and will transfer loads to adjacent structure.
5. Frames to be anchored utilizing mechanical, chemical or other framing methods as designed. Installer to provide anchors, unless otherwise.
6. Provide rectangular opening with square corners to facilitate easy passage.

2.4 MATERIALS

A. Industrial Access/ Inspection Hatch:

****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: stainless steel of appropriate size and strength, welded and structurally bonded.

B. Hatch Panel: Shall be 10-gauge formed steel sheeting or plate. Perimeter edges of hatch panel to be of flanged design to protect gasketing.

****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: stainless steel of appropriate size and strength, welded and structurally bonded.

C. Frame: Frames shall be fabricated from 10-gauge formed steel shane in the same material type and finish as the hatch panel. Frame shall have a maximum depth of one (1) inch to the surface of the closed hatch panel and shall be sloped away from the opening on all four (4) sides to minimize debris buildup.

****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: stainless steel of appropriate size and strength, welded and structurally bonded.

D. Hinges: Hinges to be sized to the requirements of the hatch, but at a minimum provide two (2), 7-gauge steel offset hinges per panel, factory welded in place. Hinges to be an integral part of the hatch panel and frame construction, requiring no field fasteners to the door leaf or frame.

E. Standard weatherseals to be EPDM, factory applied full perimeter, and field replaceable.

1. Material:
 - a. UV Resistant EPDM seal. Maximum temperature rating of 450° F set in and adhered to door panel with Silicone RTV with a maximum temperature rating of 600° F.

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

- b. Hi-Temperature silicone, rated up to 450° F.
- c. Hi-Temperature fiberglass rope, rated up to 1000° F.

F. Operating Hardware: Provide hardware appropriate for the size and weight of the access/inspection hatch. Hardware to be factory located as practical.

1. Standard Latching Hardware: Rigid Quarter-Turn Mechanical Latch is fabricated of 7-gauge steel. Latch to be field adjustable and bi-directional latching capable.

G. 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 DTM Epoxy 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 (1) coat of primer as shown above with one (1) shop coat of manufacturer's standard two-component polyurethane (S-W Genesis® Lustral™ Single Stage System – LST3).
 - 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.

H. Options:

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

1. Special Locking Assemblies.
2. HatchGuard™ Inspection Screen.
3. Pressure Relief Latches.
4. Blast Loading.

I. Labeling: Factory mounted, decal labels for product identification.

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.

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. Product 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