

SECTION 089000
INDUSTRIAL VENTILATION LOUVER / DAMPER

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Top Pivot Louver / Damper
- B. Bottom Pivot Louver / Damper
- C. Center Pivot Louver / Damper
- D. Sliding Louver / Damper

1.2 RELATED SECTIONS

- A. Section 04810 - Unit Masonry Assemblies.
- B. Section 05120 - Structural Steel.

1.3 REFERENCES

- A. ASTM A 36 - Standard Specification for Carbon Structural Steel.
- B. ASTM A 167 - Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.
- C. ASTM A 276 - Standard Specification for Stainless Steel Bars and Shapes.
- D. ASTM A 500 - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
- E. AISI CL 304 - American Iron and Steel Institute.
- F. ASME Structural Welding Code Section IX.
- G. AWS D1.1 - Structural Welding Code - Steel.

1.4 DESIGN / PERFORMANCE REQUIREMENTS

- A. Design louver / damper to perform under positive and negative wind/draft pressures. Specific wind/draft pressure loading must be provided by Architect.

1.5 SUBMITTALS

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- A. Submit under provisions of Section 01300.
- B. 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.
- C. 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.
- D. 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 ventilation louver.
 - 2. Submit stamped calculations by a registered professional engineer from within the state or territory where the project will be constructed of substantially improved, to verify the ventilation louver's ability to withstand the design loading.
- E. Closeout Submittals: Provide Operation and Maintenance data to include methods for maintaining installed products, precautions against cleaning materials and methods detrimental to finishes and performance.
- F. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer must demonstrate a minimum of five 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. Welder Qualifications: Welders Certified in accordance with American Welding Society Procedures: AWS-1-GMAW-S, WPS No. B2.004.90 for applicable material used in production of specified product.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging container with identification labels intact until ready for installation.
- B. Protect materials from exposure to moisture.
- C. Store materials in a dry, warm, ventilated, weather-tight location. If outdoor storage is required, block materials to store at an incline, to prevent pooling of any moisture and

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promote runoff. Tarp materials in a tent-like arrangement, elevated above the product with open sides to allow airflow. Store all other hardware 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 shop drawings or consult with factory for proper lift points.

1.8 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 absolute limits.

1.9 COORDINATION

- A. Coordinate work with other operations and installation of adjacent materials to avoid damage.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Approved Manufacturer: PS Access Solutions™, 1150 48th Street, Grand Forks, ND 58201. Toll Free Tel: 877-446-1519. Email: 4psinfo@psindustries.com. Website: www.psaccesssolutions.com or www.psindustries.com.
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.
- D. Obtain all industrial ventilation louver / damper assemblies from single manufacturer.

2.2 EQUIPMENT

- A. Industrial Ventilation Louver / Damper: Provide the following assemblies:
 - 1. Top Pivot Louver / Damper
 - 2. Bottom Pivot Louver / Damper
 - 3. Center Pivot Louver / Damper
 - 4. Sliding Louver / Damper
- B. Products Details:

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1. **Product design requires analysis of project in coordination with PS INDUSTRIES INCORPORATED. Submit project details, drawings, operating requirements, and airflow requirements to PS INDUSTRIES INCORPORATED for analysis and recommended product configurations and details.**

2.3 MATERIALS

- A. Industrial Ventilation Louver / Damper:
 1. Steel: Structural or formed steel shapes conforming to ASTM A 36; tubing conforming to ASTM A 500 Grade B, ASTM A 513; bars conforming to ASTM A 36, M1020; of appropriate size and strength with welded construction.
 2. Stainless Steel: Stainless steel conforming to ASTM A 276.
- B. Louver / Damper Panel Sheeting: Panel to be sheeted with 26-gauge pre-finished exterior rib sheeting.
 1. Steel: Commercial Quality-Low Carbon steel conforming to ASTM A 569, ASTM A 366, ASTM A 36; of appropriate size and strength with welded construction.
 2. Stainless Steel: Stainless steel conforming to ASTM A 167, 304 or 316 alloy.
- C. Frame to include jamb and head members for field locating and installation on structure. Jamb members to be designed and fabricated with appropriate material as required for the loading.
 1. Steel: Structural or formed steel shapes conforming to ASTM A 36 of appropriate size and strength.
 2. Stainless Steel: Stainless steel conforming to ASTM A 167 using 304 or 316 alloy of appropriate size and strength.
- D. Frame Mounting Hardware: Provide anchors, as required.
- E. Operating Hardware: Provide hardware sized for the size, weight, and loading of the industrial ventilation louver / damper. Hardware to be factory located as practical. Latching hardware to be as indicated on Drawings.
- F. Steel Shop Finish: Apply in accordance with manufacturer recommendations and instructions.
 1. Primer: One shop coat of manufacturer's standard shop primer (S-W Kemflash Primer E61-R-26).
 2. Optional Finish: One shop coat of Standard Industrial Enamel (S-W Industrial Coatings B54 Series)
- G. Stainless Steel products to be mill finish, welds ground smooth, not polished, and are factory acid washed, neutralized and rinsed after fabrication.

2.4 FABRICATION

- A. Fit and shop assemble items in largest practical sections, for delivery to site.

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- 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 substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

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 installations instructions, approved shop drawings, shipping, handling, and storage instructions, and product carton instructions for installation.
- B. Frames shall be installed level, square, plumb, and rigid.
- C. Tolerances: All dimensional requirements must be in accordance with manufacturer's installation instructions and shop drawings.

3.4 FIELD QUALITY CONTROL

- A. Products to be operated and field verified including the sealing surfaces to assure that they maintain contact at the correct sealing points.
- B. Verify that rollers and latching assemblies operate freely and correctly.
- C. Verify all anchorage is in accordance with manufacture's installation instructions and applicable data sheets.

3.5 CLEANING

- A. Repair or replace damaged installed products or components.
- B. Touch up damaged finish.

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3.6 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

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