

SECTION 08 90 00

INDUSTRIAL VENTILATION LOUVER/ DAMPER

****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. **[Top Pivot Louver/ Damper], [Bottom Pivot Louver/ Damper], [Center Pivot Louver/ Damper], [and] [Sliding Louver/ Damper]** Louver/ Dampers with Frames.
2. 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 product.

2. Submit calculations by a qualified engineer, to verify product'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 product'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 louver/damper to perform under positive and negative wind/draft pressures. Specific wind/draft pressure loading must be provided by Architect.

****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 LOUVER/ DAMPER WITH FRAME

- A. Description: Industrial Ventilation Louver/ Damper including frame, panel, and/or 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: VNT.

- B. Substitutions: Not permitted.
- C. Single Source Responsibilities: Obtain all industrial ventilation louver/ damper assemblies from single manufacturer.

2.3 EQUIPMENT

- A. Products Details:
 - 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.

2.4 MATERIALS

- A. Industrial Ventilation Louver/ Damper 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, welded and structurally bonded.
 - 2. Stainless Steel Type 304 or 316: stainless steel of appropriate size and strength, welded and structurally bonded.
- B. Louver/ Damper Panel Sheeting: Panel to be sheeted with 26-gauge pre- finished exterior rib sheeting of the following material;

****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.
- C. Industrial 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;

**** 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.
- D. Frame Mounting Hardware: Provide anchors, as required.

- E. Operating Hardware: Provide hardware appropriate for the size and weight of the industrial ventilation louver/ damper and loads. Hardware to be factory located as practical. Latching hardware to be as indicated on drawings
- F. 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.

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.

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 rollers 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