

SECTION 08 91 00

LOUVERS

PART 1: GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings, Details of Construction and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification Sections, apply to work specified in this section.

1.02 SUMMARY

- A. Section includes:

1. Pre-finished aluminum exterior wall louvers.
2. Prior to installation of finished materials, all flexible flashings shall be observed by the Architect. The Architect shall be given a minimum of 72 hours notice prior to the desired observation time. Any finish materials (i.e., brick, insulation, metal, etc.) installed without observation by the Architect shall be removed and replaced at the Contractor's expense.

- B. Related work specified in other sections:

1. Caulking and sealants – Section 07 92 00.
2. Mechanical connections to louvers – Division 23.

1.03 SUBMITTALS

- A. Submit in accordance with Section 01 33 00.

1. Product Data: Submit product data sheet for specified products.
 - a. Performance Certificates: Submit performance certification, if not include in product data.
2. Shop Drawings: Submit shop drawings showing layout, profiles and product components, including anchorage, flexible flashings, accessories, finish colors, patterns and textures.
 - a. Include information necessary for fabrication and installation of louvers. Indicate materials, sizes, thickness, fastening and profiles.
3. Quality Assurance Submittals: Submit the following:
 - a. Test Reports: Certified test reports showing compliance with specified performance characteristics and physical properties.
 - 1) Submit certified test results from an approved testing laboratory showing that the louvers proposed meet the criteria specified herein.
 - b. Certificates: Product certificate signed by manufacturer certifying materials comply with specified performance characteristics and criteria, and physical requirements.

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Package, handle, deliver and store at the job site in a manner which will avoid damage or deformation. Damaged louvers including nicks, scratches and blemishes will be rejected.

1.06 PROJECT CONDITIONS

- A. Field Measurements: Verify actual measurements/openings by field measurements before fabrication; show recorded measurements on shop drawings.
- B. When schedule does not allow time for field measurements, proceed with fabrication without field measurements and coordinate dimensions for workers on site to "Hold" to ensure proper fit of louvers.

PART 2: PRODUCTS

2.01 LOUVERS

- A. Manufacturer: Products by Industrial Louvers, Inc., www.industriallouvers.com, 763-972-2981 are specified. Other manufacturers noted subject to conformance with specification are acceptable: Construction Specialties, Inc., Airline Products Co., Commercial Air Products, The Airolite Co., Arrow United Industries, and Ruskin Manufacturing Co., Cesco Products, Safe-air/Dowco, American Warming and Ventilating.

2.02 WALL LOUVERS

- A. Model: 458XP

- 1. Frame:

- a. Frame Depth: 4 inches.
- b. Material: Extruded aluminum, 6063-T6
- c. Wall Thickness: 0.081 inch, nominal

- 2. Blades:

- a. Style: Drainable
- b. Material: Extruded aluminum, 6063-T6
- c. Wall Thickness: 0.081 inch, nominal
- d. Angle: 35/45 degrees
- e. Centers: 3.875 inches, nominal

- 3. Performance Data:

- a. Performance Ratings: Product must be licensed to bear the AMCA Certified Ratings Seal for Water and Air Performance.
 - 1) Based on testing 48 inches by 48 inches size unit in accordance with AMCA 500-L.
- b. Free Area: 53.4% (8.54 sq.ft)
- c. Water Penetration: Maximum of .01 ounces at an air flow of 1062.8 FPM
- d. Static Pressure Loss: Not more than .15 inch of water gauge at an air flow of 854 FPM free area velocity.

- 4. Louver Accessories:

- a. Exterior Aluminum Sill: Provide sill flashing of same material and finish as louvers where indicated on the drawings.

- b. Louver Screens: Provide framed removable, re-wire-able screens for exterior louvers.
 - 1) Bird Screen:
 - a) Aluminum, 1/2 inch by 0.063 inch expanded, flattened.
- c. Blank Off Panels:
 - 1) Non-Insulated Blank Off Panels factory installed with removable screws and foam tape gaskets:
 - a) 0.040 inch aluminum sheet.
- d. Insulated Blank Off Panels factory installed with removable screws and foam tape gaskets:
 - 1) 2 inch thick and to be faced on both sides with 0.032 inch thick aluminum sheet. Panels to be fabricated with rigid fiberboard core having an R-Value of 8. Panel perimeter frame to be a 0.063 inch thick extruded aluminum Z shape. Panels to be finished to match louvers on one side only.

2.03 MATERIALS

- A. Aluminum Sheet: ASTM B209 Alloy 3003 or 5005 with temper as required for forming, or as otherwise recommended by metal producer to provide required finish.
- B. Aluminum Extrusions: ASTM B221, Alloy 6063.
- C. Fastenings: Provide stainless steel screws and fasteners for aluminum louvers and zinc-coated or stainless steel screws and fasteners for steel louvers. Provide other accessories as required for complete and proper installation.

2.04 FABRICATION

- A. Fabrication Requirements:
 - 1. Performance: Fabricate as required for optimum performance with respect to water penetration, strength, durability and uniform appearance.
 - 2. Size:
 - a. Fabricate louvers in masonry walls to outside dimensions indicated, with allowance of 3/8" on each side for sealant joints.
 - b. Verify sizes with final HVAC shop drawings, including detail dimensions of ductwork, dampers or other fittings abutting louvers.
 - 3. Field Measurements: Verify size, location and placement of louver units prior to fabrication.
 - 4. Shop Assembly:
 - a. Fabricate to minimize field adjustments, splicing, mechanical joints and field assembly of units.
 - b. Preassemble units in shop to greatest possible and disassemble as necessary for shipping and handling.
 - c. Clearly mark units for reassembly and coordinated installation.
 - 5. Accessories: Include supports, anchorages and accessories required for complete assembly.
 - 6. Vertical Mullions: Provide vertical mullions of type and spacing indicated but not further apart than recommended by the manufacturer.
 - 7. Horizontal Mullions: Provide horizontal mullions at horizontal joints between louver units except where continuous vertical assemblies are indicated.

8. Connections: Join frame and blade members to one another by welding, except where field bolted connections between frame members are made necessary by size of louvers.
9. Spacing: Maintain equal blade spacing to produce uniform appearance.

2.05 FACTORY FINISHES

- A. Finish/Colors: Anodized Dark Bronze.

PART 3: EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data, including product technical bulletins, product catalog installation instructions, and product carton instructions for installation.

3.02 EXAMINATION

- A. Site Verification of Conditions: Verify substrate conditions, which have been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.

3.03 INSTALLATION

- A. Louver Installation:
 1. Louvers shall be installed in accordance with manufacturers approved shop drawings and as shown. Provide all necessary fastenings and anchors required to complete installation.
 2. Form tight joints within work of this Section. Fit exposed connections accurately.
 3. Protect metal surfaces from corrosion or galvanic action by application of a heavy coating of bituminous paint on surfaces, which shall be in contact with concrete, masonry or dissimilar metals.

3.04 PROTECTION AND CLEANING

- A. Protect louvers and finish from damage by other trades.
- B. Repair damaged louvers or replace.

END OF SECTION 08 91 00