

**SECTION 08 91 00 - LOUVERS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Louvers, frames, and accessories.

**1.02 RELATED REQUIREMENTS**

- A. Section 23 31 00 - HVAC Ductwork: Ductwork attachment to louvers and blank-off panels.

**1.03 REFERENCE STANDARDS**

- A. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum.
- B. AMCA 500-L - Laboratory Methods of Testing Louvers for Rating.
- C. AMCA 511 - Certified Ratings Program Product Rating Manual for Air Control Devices.
- D. ASTM A666/A666M - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data describing design characteristics, maximum recommended air velocity, design free area, materials and finishes.
- C. Shop Drawings: Indicate louver layout plan and elevations, opening and clearance dimensions, and tolerances; head, jamb and sill details; blade configuration, screens, blank-off areas required, and frames.
- D. Samples: Submit two samples 2 by 2 inches in size illustrating finish and color of exterior and interior surfaces.
- E. Test Reports: Independent agency reports showing compliance with specified performance criteria.

**1.05 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing products of the type specified in this section, with minimum three years of documented experience.
- B. Installer Qualifications: Company specializing in performing work of type specified and with at least three years of documented experience.

**1.06 WARRANTY**

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Provide five year manufacturer's warranty against distortion, metal degradation, and connection failures of louver components.
  - 1. Finish: Include ten year coverage against degradation of exterior finish.

## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Louvers:
  - 1. Airlite Company, LLC: [www.airolite.com/#sle](http://www.airolite.com/#sle).
  - 2. American Warming and Ventilating: [www.awv.com/#sle](http://www.awv.com/#sle).
  - 3. Construction Specialties, Inc: [www.c-sgroup.com/#sle](http://www.c-sgroup.com/#sle).
  - 4. Greenheck.
  - 5. Industrial Louvers, Inc: [www.industriallouvers.com/#sle](http://www.industriallouvers.com/#sle).
  - 6. Ruskin: [www.ruskin.com/#sle](http://www.ruskin.com/#sle).
  - 7. Substitutions: See Section 01 60 00 - Product Requirements.

### **2.02 LOUVERS**

- A. Louvers: Factory fabricated and assembled, complete with frame, mullions, and accessories; AMCA Certified in accordance with AMCA 511.
  - 1. Wind Load Resistance: Design to resist positive and negative wind load of 25 psf without damage or permanent deformation.
  - 2. Intake Louvers: Design to allow maximum of 0.01 oz/sq ft water penetration at calculated intake design velocity based on design air flow and actual free area, when tested in accordance with AMCA 500-L.
  - 3. Drainable Blades: Continuous rain stop at front or rear of blade aligned with vertical gutter recessed into both jambs of frame.
- B. Stationary Louvers: Horizontal blade, extruded aluminum construction, with intermediate mullions matching frame.
  - 1. Free Area: 50 percent, minimum.
  - 2. Pressure Drop: 0.061 inches of water gauge maximum per square foot of free area at velocity of 1250 fpm, when tested in accordance with AMCA 500-L, test unit size 48 inch by 48 inch.
  - 3. Blades: Drainable.
  - 4. Frame: 6 inches deep, channel profile; corner joints mitered and, with continuous recessed caulking channel each side.
  - 5. Aluminum Thickness: Frame 12 gauge, 0.0808 inch minimum; blades 12 gauge, 0.0808 inch minimum.
  - 6. Aluminum Finish: Class I natural anodized; finish welded units after fabrication.

### **2.03 MATERIALS**

- A. Extruded Aluminum: ASTM B221 (ASTM B221M).
- B. Stainless Steel: ASTM A666/A666M, Type 304, soft temper, smooth surface, No. 4 brushed finish.

## **2.04 FINISHES**

- A. Class I Natural Anodized Finish: AAMA 611 AA-M12C22A41 Clear anodic coating not less than 0.7 mils thick.

## **2.05 ACCESSORIES**

- A. Blank-Off Panels: Specified in Section 23 31 00.
- B. Insect Screen: 18 x 16 size aluminum mesh.
- C. Fasteners and Anchors: Stainless steel.
- D. Extended Sill Flashings: Of same material as louver frame, formed to required shape, single length in one piece per location.
- E. Sealant for Setting Sills and Sill Flashing: Non-curing butyl type.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that prepared openings and flashings are ready to receive this work and opening dimensions are as indicated on shop drawings.
- B. Verify that field measurements are as indicated.

### **3.02 INSTALLATION**

- A. Install louver assembly in accordance with manufacturer's instructions.
- B. Install louvers level and plumb.
- C. Set sill members and sill flashing in continuous bead of sealant.
- D. Install flashings and align louver assembly to ensure moisture shed from flashings and diversion of moisture to exterior.
- E. Secure louver frames in openings with concealed fasteners.
- F. Coordinate with installation of mechanical ductwork.

### **3.03 CLEANING**

- A. Strip protective finish coverings.

## **END OF SECTION**

This page intentionally left blank