

**SECTION 08 91 19**

**FIXED LOUVERS**

**PART 1 GENERAL**

**1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 specification section, apply to work of this section.

**1.2 SECTION INCLUDES**

- A. Fixed louvers and frames
  - 1. Fixed blade louvers
  - 2. Drainable lowers
  - 3. Storm-proof louvers
  - 4. Hurricane resistant louvers
- B. Screening
- C. Blank out sheeting

**1.3 REFERENCES**

- A. AMCA 500-L (Air Movement and Control Association International, Inc) – Laboratory Methods of Testing Louvers for Rating
- B. ASTM A167 – Standard Specification for Stainless and Heat Resisting Chromium Nickel Steel Plate, Sheet, and Strip
- C. ASTM A653/A653M – Standard Specification for Steel Sheet, Zinc Coated (Galvanized) or Zinc Iron Alloy Coated (Galvannealed) by the Hot Dip Process
- D. ASTM B209 – Standard Specification for Aluminum and Aluminum Alloy Sheet and Plate
- E. ASTM B221 – Standard Specification for Aluminum and Aluminum Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes
- F. FBC - Florida Building Code

**1.4 PERFORMANCE REQUIREMENTS**

- A. Provide a louver to permit passage of air without blade vibration or noise.
- B. Louvers to permit minimum 50% free area.

**1.5 SUBMITTALS**

- A. Submit under provisions of Section 01 33 00.
- B. Shop Drawings: Indicate louver layout plan and elevations, opening and clearance dimensions, tolerances; head, jamb, and sill details; blade configuration; screens, blank out areas required and frames.
- C. Provide product data describing design characteristics, maximum recommended air velocity, free area, materials, and finishes.
- D. Submit samples 12 x 12 illustrating finish and color of exterior and interior pre-finish.
- E. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

**1.6 OPERATION AND MAINTENANCE DATA**

- A. Submit under provisions of Section 01 77 00.
- B. Maintenance Data: Include lubrication schedules and adjustment requirements.

**1.7 QUALITY ASSURANCE**

- A. Perform work in accordance with AMCA Certification for louvers.

**1.8 QUALIFICATIONS**

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum with 5 years of experience.

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#### 1.9 REGULATORY REQUIREMENTS

- A. Conform to applicable codes for closing of operable louvers in conjunction with the fire and smoke alarm system.
- B. Provide -Florida Building Code Product Approval certificates for exterior louvers.
- C. Products Requiring Electrical Connection: Listed and classified by UL as suitable for the purpose specified and indicated.

#### 1.10 FIELD MEASUREMENTS

- A. Verify that field measurements are as indicated on shop drawings.

#### COORDINATION

- B. Coordinate work under provisions of Section 01 31 00.
- C. Coordinate work with installation of wall assembly.
- D. Coordinate work with installation of mechanical ductwork and electrical services to motorized devices.

#### 1.11 WARRANTY

- A. Provide 10-year warranty under provisions of Section 01 77 00.
- B. Warranty: Include coverage for degradation of finish.

### **PART 2 PRODUCTS**

#### 2.1 MATERIALS

- A. Aluminum shall be ASTM B221, 6063 alloy, T5, extruded shape, pre-finished with mill applied fluropolymer finish.
- B. Steel sheet shall be ASTM A653/A653M, galvanized to G90 zinc coating, pre-finished with shop applied fluropolymer finish.
- C. Stainless steel shall be ASTM A167, Type 304, soft temper, smooth surface.

#### 2.2 SCREENS

- A. Bird screen shall be interwoven wire mesh of steel 0.063" diameter wire, with 1/2" open weave, square design.
- B. Insect screen (Note: To be only used if specified by the Mechanical Engineer in the Design Documents, but in no case is it to be used on fresh air intake) shall be 18 x 16 size aluminum mesh set in aluminum frame.

#### 2.3 ACCESSORIES

- A. Fasteners and Anchors: Stainless steel type
- B. Primer: Zinc chromate, alkyd type
- C. Flashings: Of same material as louver frame
- D. Sealants: Type specified in Section 07 92 00
- E. Sleeve: 12-ga Aluminum

#### 2.4 FABRICATION

- A. Louver Blade Design:
  - 1. Inverted 'Y' shape or Inverted V shape, reinforced with intermediate stiffeners, integral and lateral rainwater stops positioned on blade.
  - 2. Drainable and/or storm-proof as indicated on plans.
- B. Louver Frame: Channel shape, mechanically fastened welded corner joints.
- C. Intermediate Mullions: Provide a concealed piece of formed steel, or formed and extruded aluminum profiled to suit louver frame.
- D. Head and Sill Flashings: Roll formed or extruded to required shape, single length in one piece per location.

- E. Screens: Install a screen mesh in a shaped frame, with reinforce corner construction, and shop installed to louver with fasteners.
- F. Blank Out Sheeting on Interior of Louver:
  - 1. Use the same material as louver and frame configuration of single sheet.
  - 2. Separate dissimilar metals to prevent electrolytic action.
- G. Design and fabricate louver to prevent entry of wind driven rain into the building.
  - 1. Provide louver, which traps rain and diverts water back to the exterior and not into the building or the wall cavity.
- H. Sleeve:
  - 1. Fabricate an aluminum sleeve around entire perimeter of louvered opening, 16" in horizontal depth, with a 1 ½" perimeter flange at the exterior perimeter, with an upturned flange along the back of the sleeve, so there is at least 2" between the bottom of the ductwork and the bottom of the sleeve.
  - 2. The sleeve is to serve as a pan to collect wind driven rainwater diverted back to the exterior of the building envelope, and shall be pressure and impact rated.
  - 3. Seal all louvers to wall penetrations through the sleeve.
  - 4. Also, seal both the exterior and interior perimeter of the sleeve.

## 2.5 FINISHES

- A. Shop coat the exterior steel surfaces, screens, and blank-out sheeting with a coat of primer for field painting.
- B. Final finishes of exterior aluminum surfaces, screens, and blank-out sheeting as selected by architect.
- C. The interior steel surfaces, screens, and blank-out sheeting shall be of galvanized or galvannealed, unfinished material.
- D. Interior aluminum surfaces, screens, and blank-out sheeting shall be of mill finished.
- E. Stainless steel shall be a No. 4 finish.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verify site conditions under provisions of Section 01 31 00.
- B. Verify that prepared openings and flashings are ready to receive work and opening dimensions are as indicated on shop drawings.

### 3.2 INSTALLATION

- A. Install louver assembly in accordance with manufacturer's instructions.
- B. Install louvers level and plumb.
- C. Install flashings and align louver assembly to ensure moisture shed from flashings and diversion of moisture to exterior.
- D. Secure louvers in opening framing with concealed fasteners, removable and hinged for maintenance purposes.
- E. Install bird and insect screen and frame to exterior of louver, hinge screens for access.
- F. Install insect screens and frame to intake louvers.
- G. Install bird screens to exhaust louvers.
- H. Install perimeter sealant and backing rod in accordance with Section 07 92 00.

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3.3 ADJUSTING

- A. Adjust work under provisions of Section 01 77 00.
- B. Adjust operable louvers for freedom of movement of control mechanism.
  - 1. Lubricate operating joints.

3.4 CLEANING

- A. Clean work under provisions of Section 01 77 00.
- B. Strip protective finish coverings.
- C. Clean surfaces and components.

END OF SECTION