

**SECTION 08 90 00  
LOUVERS AND VENTS**

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

This section specifies fixed and operable wall louvers, door louvers and wall vents.

**1.3 SUBMITTALS**

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Shop Drawings:  
Each type, showing material, finish, size of members, operating devices, method of assembly, and installation and anchorage details.
- C. Manufacturer's Literature and Data:  
Each type of louver.

**1.4 APPLICABLE PUBLICATIONS**

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.
- B. American Society for Testing and Materials (ASTM):  
B209/B209M-03(R2007) ..... Aluminum and Aluminum Alloy, Sheet and Plate  
B221-08 ..... Aluminum and Aluminum Alloy Extruded Bars, Rods, Wire,  
Shapes, and Tubes  
B221M-07 ..... Aluminum and Aluminum Alloy Extruded Bars, Rods, Wire  
Shapes, and Tubes
- C. National Association of Architectural Metal Manufacturers (NAAMM):  
AMP 500-06 ..... Metal Finishes Manual
- D. National Fire Protection Association (NFPA):  
90A-09 ..... Installation of Air Conditioning and Ventilating Systems
- E. Air Movement and Control Association, Inc. (AMCA):  
500-L-07 ..... Testing Louvers

**PART 2 - PRODUCTS**

**2.1 MATERIALS**

- A. Aluminum, Extruded: ASTM B221/B221M.
- B. Aluminum, Plate and Sheet: ASTM B209/B209M.
- C. Fasteners: Fasteners for securing louvers and wall vents to adjoining construction, except as otherwise specified or shown, shall be toggle or expansion bolts, of size and type as required for each specific type of installation and service condition.
  - 1. Where type, size, or spacing of fasteners is not shown or specified, submit shop drawings showing proposed fasteners, and method of installation.

2. Fasteners for louvers, louver frames, and wire guards shall be of stainless steel or aluminum.

## 2.2 EXTERIOR WALL LOUVERS

### A. General:

1. Provide fixed and/or operable type louvers of size and design to match existing louver type.
2. Heads, sills and jamb sections shall have formed caulking slots or be designed to retain caulking. Head sections shall have exterior drip lip, and sill sections an integral water stop.
3. Furnish louvers with sill extension or separate sill.
4. Frame shall be mechanically fastened or welded construction with welds dressed smooth and flush.

### B. Performance Characteristics:

1. Weather louvers shall at minimum match existing percent free area and free area velocity and meet requirements of AMCA Standard 500-L.
2. Louvers shall bear AMCA certified rating seals for air performance and water penetration ratings.

### C. Aluminum Louvers:

1. General: Frames, blades, sills and mullions (sliding interlocking type); 2 mm (0.081-inch) thick extruded aluminum. Blades shall be drainable type and have reinforcing bosses.
2. Louvers, fixed: Make frame sizes 13 mm (1/2-inch) smaller than openings. Single louver frames shall not exceed 1700 mm (66 inches) wide. When openings exceed 1700 mm (66 inches), provide twin louvers separated by mullion members.
3. Louvers, operable: Louver frame opening sizes, single louver sizes and mullion requirements shall be as specified for fixed louvers.
  - a. Blades: Attach blades to frame with aluminum pivot pins through nylon bearings. Fasten each blade to stainless steel operation arms that are connected to minimum 3 mm (1/8-inch) thick stainless steel operating handle arranged for simultaneous operation of blades. Coordinate with Resident Engineer whether to provide operable components to match that of existing system to be replaced or with a preferred method of operation from options below.
  - b. Spring/chain operation: Exposed operator activated by spring attached to operating // bar // handle // and mounted on frame. //Control of louver shall be by pull chain of required length to be operable from floor. Provide pulleys and brackets as required.
  - c. Hand crank operation: Hand crank operator activated by case hardened gears concealed in aluminum housing. Operators shall be removable and located at jambs. Provide one right-handed operator for each louver.
  - d. Motor operation: Motor operated by approved electric motor. Motors shall be removable and located at jambs of louver. Connect motor operator lever arm to operating bar by means of stainless steel connecting rod.

- e. Automatic operation: Louvers shall be complete with // weights, // pull chain, // chain holder and brackets, // cables, // sheaves, // spring, // 70°C (160°F) fusible link, // and other related items meeting requirements of NFPA 90A. Provide non-ferrous bearings and spindles of replaceable type. //Control of louver shall be by pull chain of required length to be operable from floor. // Louvers shall close automatically in case of fire. //

## **2.10 FINISH**

- A. In accordance with NAAMM Metal Finishes Manual: AMP 500-505
- B. Aluminum Louvers:
  - 1. Anodized finish
    - a. AA-M1X Mill finish, as fabricated.

## **2.11 PROTECTION**

- A. Provide protection for aluminum against galvanic action wherever dissimilar materials are in contact, by painting the contact surfaces of the dissimilar material with a heavy coat of bituminous paint (complete coverage), or by separating the contact surfaces with a performed synthetic rubber tape having pressure sensitive adhesive coating on one side.
- B. Isolate the aluminum from plaster, concrete and masonry by coating aluminum with zinc-chromate primer.
- C. Protect finished surfaces from damage during fabrication, erection, and after completion of the work.

## **PART 3 - EXECUTION**

### **3.1 INSTALLATION**

- A. Set work accurately, in alignment and where shown. Items shall be plumb, level, free of rack and twist, and set parallel or perpendicular as required to line and plane of surface.
- B. Furnish setting drawings and instructions for installation of anchors and for the positioning of items having anchors to be built into masonry construction. Provide temporary bracing for such items until masonry is set.
- C. Provide anchoring devices and fasteners as shown and as necessary for securing louvers to building construction as specified. Power actuated drive pins may be used, except for removal items and where members would be deformed or substrate damaged by their use.
- D. Generally, set wall louvers during progress of the work. If wall louvers are not delivered to job in time for installation in prepared openings, make provision for later installation.

### **3.2 CLEANING AND ADJUSTING**

- A. After installation, all exposed prefinished and plated items and all items fabricated from stainless steel and aluminum shall be cleaned as recommended by the manufacturer and protected from damage until completion of the project.
- B. All movable parts, including hardware, shall be cleaned and adjusted to operate as designed without binding or deformation of the members, so as to be centered in the opening of frame, and

where applicable, to have all contact surfaces fit tight and even without forcing or warping the components

--- E N D ---