

SECTION 089000

LOUVERS AND VENTS

PART 1 - GENERAL

1.1 DESCRIPTION

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

1.2 RELATED WORK

- A. Sustainable design requirements and procedures including submittal requirements: Section 018111, SUSTAINABLE DESIGN REQUIREMENTS.
- B. Procedures and requirements for managing and disposing construction and demolition waste: Section 017419, CONSTRUCTION WASTE MANAGEMENT.
- C. ~~DELETED Louvers in steel doors: Section 081113, HOLLOW METAL DOORS AND FRAMES.~~ (ADD#01)
- D. Color of finish: Section 090600, SCHEDULE FOR FINISHES.

1.3 SUBMITTALS

- A. Submit in accordance with Section 013323, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Shop Drawings:
 - 1. Each type, showing material, finish, size of members, operating devices, method of assembly, and installation and anchorage details.
- C. Manufacturer's Literature and Data:
 - 1. Each type of louver and vent.
- D. LEED Submittals: Submit in accordance with Section 018111.
 - 1. LEED submittals are in addition to other submittals. If submitted item is identical to that submitted to comply with other requirements, submit duplicate copies as a separate submittal to verify compliance with indicated LEED requirements.
 - 2. LEED Product Data Submittal Form: Submit completed product data form provided by the Contracting Officer's Representative; certified by vendor, installer, subcontractor, and/or manufacturer as appropriate.

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. The Master Painters Institute (MPI):
 - 1. Approved Product List - September 2011
- C. American Society for Testing and Materials (ASTM):
 - 1. A167-99(R2009) Stainless and Heat-Resisting Chromium - Nickel Steel Plate, Sheet, and Strip

2. A1008/A1008M-10 Steel, Sheet, Carbon, Cold Rolled, Structural, and High Strength Low-Alloy with Improved Formability
3. B209/B209M-03(R2007) Aluminum and Aluminum Alloy, Sheet and Plate
4. B221-08 Aluminum and Aluminum Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes
5. B221M-07 Aluminum and Aluminum Alloy Extruded Bars, Rods, Wire Shapes, and Tubes
- D. National Association of Architectural Metal Manufacturers (NAAMM):
 1. AMP 500-06 Metal Finishes Manual
- E. National Fire Protection Association (NFPA):
 1. 90A-09 Installation of Air Conditioning and Ventilating Systems
- F. American Architectural Manufacturers Association (AAMA):
 1. 2605-11 High Performance Organic Coatings on Architectural Extrusions and Panels
- G. Air Movement and Control Association, Inc. (AMCA):
 1. 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 operable type louvers of size and design shown.
 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 as shown.
 4. Frame shall be mechanically fastened or welded construction with welds dressed smooth and flush.
- B. Performance Characteristics:
 1. Weather louvers shall have a minimum of 59 percent free area

and shall pass 6.35 m/s (1,250 fpm) free area velocity at a pressure drop not exceeding 0.045 kPa (0.18 inch water gage and carry not more than 3.05 g of water per m² (0.01 ounces of water per square foot) of free area for 15 minutes when tested per 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.
 - a. Type: Recessed mullion louver type.
 - b. Louver depth: 150 mm (6 inches).
2. 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 [bar] [handle] arranged for simultaneous operation of blades.
3. 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.

2.3 CLOSURE ANGLES AND CLOSURE PLATES

- A. Fabricate from 2 mm (0.074-inch) thick stainless steel or aluminum.
- B. Provide continuous closure angles and closure plates on inside head, jambs and sill of exterior wall louvers.
- C. Secure angles and plates to louver frames with screws, and to masonry or concrete with fasteners as specified.

2.4 ~~DELETED INTERIOR DOOR LOUVERS~~ (ADD#01)

- ~~A. Fabricate louvers for interior doors 1.2 mm (0.0478-inch) thick steel.~~
- ~~? Make louvers sight-proof type with stationary blades,~~
- ~~? Lightproof louvers shall have stationary blades and be designed to exclude passage of light but permit free ventilation.~~

2.5 AIR INTAKE VENTS

- A. Fabricate exterior louvered wall ventilators for fresh air intake for air conditioning units from extruded aluminum, ASTM B221. Form with integral horizontal louvers and frame, with drip extending beyond face of wall and integral water stops.
- B. Provide aluminum closures where shown for inside face of dummy vents.
- C. Provide 0.8 m (0.032-inch) thick aluminum sleeves where shown.

2.6 FINISH

- A. In accordance with NAAMM Metal Finishes Manual: AMP 500-505

B. Aluminum Louvers Air Intake Vents:

1. Organic Finish: AAMA 2605 (Fluorocarbon coating).

C. Sheet Steel: Baked-on or oven dried shop prime coat.

1. Finish painting of exposed surfaces of shop primed louvers is specified in Section 099100, PAINTING.

2.7 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. 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.

C. 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. Set in cast-in-place concrete in prepared openings.

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.

3.3 CONSTRUCTION WASTE MANAGEMENT

A. General: Comply with Contractor's Waste Management Plan and Section 017419, CONSTRUCTION WASTE MANAGEMENT.

B. To the greatest extent possible, separate reusable and recyclable products from contaminated waste and debris in accordance with the Contractor's Waste Management Plan. Place recyclable and reusable products in designated containers and protect from moisture and contamination.

VA Medical Center, Palo Alto, California
Centers for Ambulatory Care, Polytrauma & Blind
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