# PRODUCT SPECIFICATION GUIDE

# MODEL: EXTRUDED ALUMINUM OPERABLE LOUVER

# DIVISION 08 – OPENINGS (PREVIOUSLY DIVISION 10 & 15)

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Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) Format.

The section must be carefully reviewed and edited by the Engineer to meet the requirements of the project and local building code. Coordinate with other specification sections and the drawings.

Delete all "Specifier Notes" when editing this section.

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SECTION 089000

EXTRUDED ALUMINUM OPERABLE LOUVERS

1. GENERAL

SECTION INCLUDES

* + - * 1. Adjustable Combination Louver / Damper

RELATED SECTIONS

* + - * 1. Section 033000 – Cast-in-Place Concrete
        2. Section 042000 – Unit Masonry.
        3. Section 051000 – Structural Metal Framing.
        4. Section 061000 – Rough Carpentry.
        5. Section 074200 – Metal Wall Panels.
        6. Section 076000 – Flashing and Sheet Metal.
        7. Section 079200 – Joint Sealants.
        8. Section 089500 – Vents.
        9. Section 099113 – Exterior Painting.

REFERENCES

* + - * 1. AAMA 2604 – High Performance Organic Coatings on Aluminum Extrusions and Panels.
        2. AAMA 2605 – Superior Performance Organic Coatings on Aluminum Extrusions and Panels.
        3. AMCA 500-L – Laboratory Methods of Testing Louvers for Rating.
        4. AMCA 511 – Certified Ratings Program for Air Control Devices.
        5. ASCE 7 – Minimum Design Loads for Buildings and Other Structures.
        6. ASTM B209 – Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
        7. ASTM B221– Standard Specifications for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wires, Profiles, and Tubes.
        8. ASTM D822 – Standard Practice for Filtered Open-Flame Carbon-Arc Exposure of Paint and Related Coatings.
        9. ASTM D4214 – Standard Test Method for Evaluating the Degree of Chalking of Exterior Paint Films.
        10. ASTM D2244 – Standard Test Method for Calculation of Color Differences from Instrumentally Measured Color Coordinates.
        11. ASTM E 90 – Laboratory Measurements of Airborne Sound Transmission Loss of Building Partitions.

SUBMITTALS

* + - * 1. Comply with requirements of Section 013300 - Submittal Procedures.
        2. Product Data: Submit manufacturer's product data.

Printed catalog pages showing specified model and AMCA Ratings.

* + - * 1. Shop Drawings: Submit shop drawings indicating materials, construction, dimensions, accessories, and installation details.
        2. Samples: Submit color chip sample for units with factory-applied paint.

QUALITY ASSURANCE

* + - * 1. Louvers shall be warranted against manufacturing defects for a period of 5 years.

DELIVERY, STORAGE, AND HANDLING

* + - * 1. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly indicating manufacturer, material, and location of installation.
        2. Storage: Store materials in a dry area indoor and protected from damage and in accordance with manufacturer’s instructions.
        3. Handling: Protect materials and finishes during handling and installation to prevent damage.
        4. Store and dispose of solvent-based materials, and material used with solvent based materials, in accordance with requirements of local authorities having jurisdiction.

PROJECT CONDITIONS

* + - * 1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by the manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer’s absolute limits.
        2. Field Measurements: Verify actual dimensions of openings by field measurements before fabrication.

1. PRODUCTS

MANUFACTURER

* + - * 1. United Enertech, 3005 South Hickory Street, Chattanooga, TN 37421. Phone: 423.698.7715 www.unitedenertech.com

EXTRUDED ALUMINUM LOUVER

* + - * 1. Model: CEL-D-4
        2. Construction:

Material: Mill Finish .081 extruded aluminum.

Frame: 4.19” deep x 0.081” thick. Channel frame. [flanged].

Blades: Adjustable Blade: .061” Extruded Aluminum; Fixed: .081 Extruded Aluminum on 39 degree angle. 4.25” centers

Screen: ½” x 0.063” (12.7 mm x 1.6 mm) expanded and flattened aluminum. [**18-by-16 (1.4-by-1.6) mesh aluminum insect screen**]

Mullion: Visible.

* + - * 1. Performance Data:

Based on testing 48 inch x 48 inch (1222 x 1222) size unit in accordance with AMCA 500L.

Free Area: 46% nominal

Free area size: 7.29 ft²

Maximum Recommended Air Flow thru Free Area: 1,058 fpm

Air Flow: 7,713 cfm

Maximum Pressure Drop: 0.15 in. wg.

Water penetration: Maximum of 0.01 ounces per square foot (3.1 g/m²) of free area at an air flow of 1,058 fpm (5.90 m/s) free area velocity when tested for 15 minutes.

* + - * 1. Design Load:

Wind Load: Louver designs shall withstand the effects of 30 psf of uniform pressure acting inward or outward.

Seismic Performance: Louvers, including attachments to other construction, shall withstand seismic effects determined by ASCE-7.

ACCESSORIES

* + - * 1. Blank-Off Panels

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Specifier Notes: Select one of the following.

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* Non-insulated, aluminum, 0.050-inch (1.27 mm) nominal thickness, black finish, factory installed.
* Insulated, aluminum skin with 1-Inch (25 mm) insulated core, closure frame with perimeter gasket, black finish, and factory installed.
* Insulated, aluminum skin with 2-Inch (51 mm) insulated core, closure frame with perimeter gasket, black finish, and factory installed.
  + - * 1. Extended sills, aluminum, 0.050-inch (1.27 mm) nominal thickness, finished to match louver.

FINISHES

* + - * 1. Finish louvers after assembly as follows:

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* Mill finish
* High Performance Fluoropolymer: Complying with AAMA 2605 and containing not less than 100 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers’ written instructions.
  + - * Color and Gloss: [**As indicated by manufacturer’s designations**] [**Match Architect’s sample**] [**As selected by Architect from manufacturer’s full range**] <**Insert color and gloss**>
* Clear Anodize: Complying with AA-C22A41, Class-1, 0.7 mils (0.018mm) minimum thickness.
  + - * Color: Clear 215-R1
* Integral Color Anodize: Complying with AA-C22A44, Class-1, 0.7 mils (0.018mm) minimum thickness
  + - * Color: [**Champagne**] [**Light** **Bronze**] [**Medium Bronze**] [**Dark Bronze**] [**Black**]

1. EXECUTION

EXAMINATION

* + - * 1. Examine substrates and openings for compliance with requirements for installation tolerances and other conditions affecting performance.
        2. Proceed with installation only after unsatisfactory conditions have been corrected.

PREPARATION

* + - * 1. Clean Opening thoroughly prior to installation.
        2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

INSTALLATION

* + - * 1. Install louvers at locations as indicated on the drawings and in accordance with manufacturer’s instructions.
        2. Install louvers plumb, level, in plane of wall, and in alignment with adjacent work.
        3. Install joint sealants as specified in Section 079000.

CLEANING

* + - * 1. Clean exposed surfaces of louvers with water and mild soap or detergent not harmful to finish taking care to remove fingerprints and soil. Thoroughly rinse surfaces and dry. Do not let soil accumulate during construction period.
        2. Touch-up, repair, or replace louvers damaged during installation and construction so that no evidence remains of the corrective work.

END OF SECTION