

SPECIFIER NOTE: The purpose of this guide specification is to assist the specifier in correctly specifying aluminum siding with a digitally printed finish and their installation. The specifier needs to edit the guide specifications to fit the needs of specific projects. Contact MAIBEC to assist in appropriate product selections and for detailing assistance. Red text in brackets indicates a selection needs to be made.

**SECTION 07 42 53**

**METAL BATTENS AND SLAT ASSEMBLIES**

1. GENERAL
   * + 1. SECTION INCLUDES [EDIT AS REQUIRED]
          1. Aluminum digitally printed architectural battens for exterior and interior horizontal and vertical applications, with primer coat, digitally printed finish and UV Clear Coat.
          2. Aluminum batten accessories with AAMA 2604 solid color paint.
          3. Accessory products including

[BC Brackets]

[CC Brackets]

[SN Brackets]

[End cap]

* + - 1. RELATED SECTIONS
         1. Section 01 74 21 - Construction/Demolition Waste Management and Disposal
         2. Section 05 41 00 - Structural Metal Stud Framing
         3. Section 06 10 00 - Rough Carpentry
         4. Section 06 16 00 - Sheathing
         5. Section 07 20 00 - Thermal Protection
         6. Section 07 25 00 - Weather Barriers
         7. Section 07 60 00 - Flashing and Sheet Metal
      2. REFERENCES (The date of the standard is that in effect as of the date of receipt of bids for the project.)
         1. American Society for Testing and Materials (ASTM)

ASTM B2794 – Resistance of Organic Coating to the Effects of Rapid Deformation - Impact Test

ASTM D523 – [Standard Test Method for Specular Gloss](https://www.astm.org/d0523-14r18.html)

ASTM D1037 Section 14 – Nail Withdrawal Test Methods for Evaluating the Basic Properties of Wood-Base Fiber and Particle Panel Materials

ASTM D2244 – [Standard Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates](https://www.astm.org/d2244-23.html)

ASTM D3359-B – Measuring Adhesion by Tape Test

ASTM D6578 – Determination of Graffiti Resistance

ASTM E84 – Standard Test Method for Surface Burning Characteristics of Building Materials

ASTM G155 – Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials

* + - * 1. American Architectural Manufacturers Association (AAMA) (FGIA)

AAMA 2604 – Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels.

* + - 1. PERFORMANCE REQUIREMENTS
         1. Design batten system to span continuously over structural supports with fastening to structural supports to sustain factored loads in accordance with authority having jurisdiction.
         2. Include expansion joints to accommodate movement between batten system and building structure, caused by structural movements, without permanent distortion, damage to infills, racking of joints, breakage of seals.
         3. Delegated Design: Engage a qualified professional engineer with experience using performance requirements and design criteria indicated.
         4. Performance: Provide battens capable of withstanding the effects of loads and stresses from wind and normal thermal movement without evidencing permanent deformation; or permanent damage to fasteners and anchors.
         5. Wind Load: Uniform pressures (velocity pressures) indicated on project Drawings.
      2. SUBMITTALS
         1. ACTION SUBMITTALS

Product Data: For each type of product, include the following:

Technical data sheet

Installation Instructions

Standard drawing details and application

Aluminum material information

UV Fade Test Reports, by a 3rd Party Testing Agency

Batten and accessory dimension of components and profiles

Digital Style and Color card showing the variation within selected style and color.

Samples: Printed batten **OR** aluminum profile (or printed carton) to match digital Style and Color card

* + - * 1. INFORMATIONAL SUBMITTALS

Product Test Reports: Submit for each type of batten, tests performed by a qualified testing agency.

Sample warranty: For special finish

* + - * 1. CLOSEOUT SUBMITTALS

Maintenance data: For each type of product, including related accessories. Include in Maintenance manuals.

Warranty: Executed copy of the manufacturer’s warranty.

* + - 1. QUALITY ASSURANCE
         1. Coordinate requirements with Section 01 45 00 “Quality Control”.
         2. Mockups: Build mockups to verify selections made and to demonstrate aesthetic effects and to set quality standards for fabrication and installation.

Build mockup of typical batten assembly shown on Drawings including supports, attachments, and accessories

Construct mock-up indicating relationship between battens, wall cladding, windows, and doors.

Do not continue with work of this Section until Consultant has approved mock-up.

Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

* + - * 1. Pre-installation meeting

Conduct meeting at Project Site [Insert location].

Review to verify project drawings and requirements, manufacturer’s installation instructions, and manufacturer’s warranty requirements.

Examine support conditions for compliance with requirements, including alignment between and attachment to structural members.

* + - * 1. Surface Burning Characteristics: In accordance with ASTM E84

Flame Spread Index (FSI): 20

Smoke Developed Index (SDI): 120

* + - * 1. UV Fade Test: In accordance with ASTM G155

AATCC Grey Scale rating after 2000 hours: 4 (not noticeable)

* + - 1. DELIVERY, STORAGE, AND HANDLING
         1. Deliver materials and components in manufacturer’s unopened cartons, properly labeled, and fully identified by product name and brand. Prevent any damage during unloading, storing, and installation.
         2. Store materials off ground and keep clean, dry, and free of dirt and debris. Store away from areas with failing objects or other construction activity that may occur or cause damage.
         3. Stack batten horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store battens to ensure dryness, with positive slope for drainage of water. Do not store battens in contact with other materials that might cause staining, denting, or other surface damage.
      2. SITE CONDITIONS
         1. Field Measurements: Verify battens locations by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
      3. WASTE MANAGEMENT AND DISPOSAL [EDIT AS REQUIRED]
         1. Separate waste materials for recycling in accordance with Section 01 74 21 “Waste Management and Disposal”.
         2. Divert used metal cutoffs from landfill by disposal [into the onsite metals recycling bin] [removed for disposal at the nearest metal recycling facility].
         3. Divert reusable materials for reuse at nearest used building materials facility.
      4. WARRANTY [EDIT AS REQUIRED]
         1. Manufacturer warrants its aluminum siding and soffits are free of defects in material and workmanship, and when installed and maintained according to the manufacturer’s instructions, the products are guaranteed against corrosion.
         2. Cladding system: 50 years limited warranty from date of Substantial Completion on Extruded Aluminum Profiles, non-prorated.

SPECIFIER NOTE: Select the appropriate Finish Warranty specific to this project.

* + - * 1. Finish Warranty

[Digital printed Finish]: “3 layers” finish includes primer, high-definition inkjet printed layer and clear protective coating. Finish warranted to have following properties and period:

Resistance to Cracking and Crazing.

Color stability: No change in the color of the finish exceeding 5 (five) CIE Lab units. CIE illuminant D65, measured according to ASTMD2244 Section 6.3.

Gloss Retention: Finish will retain at least 30% of the initial gloss, measured according to ASTM D523.

Adhesion: The finish will not show any detachment inferior to class 4B.

20 years warranty from date of Substantial Completion. Pending maintenance of the material and finishes as recommended by the manufacturer.

[Painted Finish]: Finish is warranted to have the following properties and period (mounting brackets only):

Resistance to Cracking and Crazing.

Resistance to Chalking: The finish will not chalk more than a numerical rating of 8.

Color stability: No change in the color of the finish exceeding 5 (five) CIE Lab units. CIE illuminant D65, measured according to ASTMD2244 Section 6.3.

Gloss Retention: Finish will retain at least 30% of the initial gloss, measured according to ASTM D523.

Adhesion: The finish will not peel at a rate inferior to class 4B.

25 years warranty from date of Substantial Completion. Pending maintenance of the material and finishes as recommended by the manufacturer.

See Manufacturer Warranty Sheet for full product and finish warranty details.

Contractor’s Labor Warrantees: Three-year labor warranty, starting from [date of Owner acceptance of completed work] [Substantial Performance], to cover repair of materials found to be defective as a result of installation errors.

1. PRODUCTS
   * + 1. MANUFACTURER
          1. Maibec Inc., 4000 Jean-Marchand Street, Unit 108, Quebec City, Quebec Canada G2C 1Y6. [www.maibec.com](http://www.maibec.com/)
       2. MATERIAL
          1. Extruded Aluminum: 6063-T5 alloy in accordance with ASTM B221
          2. Aluminum lattice panel (ALP): AA3003H18 alloy in accordance with ASTM B209
          3. Die cast Aluminum: A380 alloy in accordance with ASTM B26/B26M
       3. ALUMINUM BATTENS [EDIT AS REQUIRED]
          1. General: Provide factory battens designed for field installation and mechanically attaching to wall supports, as recommended by manufacturer.
          2. Fabrication Method: Factory assembled battens with mechanically fastened supports.

SPECIFIER NOTE:   
Select the desired profile specific to project and delete the other indicated profiles. Where more than one profile or size is selected coordinate with drawings for clarity. Dimensions are nominal, refer to technical data sheet for actual sizes.

* + - * 1. Batten Width: 1-inch

[1-inch by 2-inch (25mm by 51mm) aluminum batten]

[1-inch by 3-inch (25mm by 76mm) aluminum batten]

[1-inch by 4-inch (25mm by 102mm) aluminum batten]

[1-inch by 5-inch (25mm by 127mm) aluminum batten]

[1-inch by 6-inch (25mm by 152mm) aluminum batten]

[1-inch by 8-inch (25mm by 203mm) aluminum batten]

Batten Length: [16 feet (4.8m)] [12 feet (3.6m)] [8 feet (2.4m)]

Minimum Wall thickness: 0.062-inch (1.6mm)

Gloss: 15° ±5

* + - * 1. Batten Width: 1.5-inch

[1.5-inch by 2-inch (38mm by 51mm) aluminum batten]

[1.5-inch by 3-inch (38mm by 76mm) aluminum batten]

[1.5-inch by 4-inch (38mm by 102mm) aluminum batten]

[1.5-inch by 5-inch (38mm by 127mm) aluminum batten]

[1.5-inch by 6-inch (38mm by 152mm) aluminum batten]

[1.5-inch by 8-inch (38mm by 203mm) aluminum batten]

Batten Length: [16 feet (4.8m)] [12 feet (3.6m)] [8 feet (2.4m)]

Minimum Wall thickness: 0.062-inch (1.6mm)

Gloss: 15° ±5

* + - * 1. Batten Width: 2-inch

[2-inch by 2-inch (51mm by 51mm) aluminum batten]

[2-inch by 3-inch (51mm by 76mm) aluminum batten]

[2-inch by 4-inch (51mm by 102mm) aluminum batten]

[2-inch by 5-inch (51mm by 127mm) aluminum batten]

[2-inch by 6-inch (51mm by 152mm) aluminum batten]

[2-inch by 8-inch (51mm by 203mm) aluminum batten]

Batten Length: [16 feet (4.8m)] [12 feet (3.6m)] [8 feet (2.4m)]

Minimum Wall thickness: 0.125-inch (3,18mm)

Gloss: 15° ±5

* + - * 1. Acceptable Materials: Maibec digitally printed Architectural aluminum Batten as manufactured by Maibec® Inc.
        2. Substitutions: Not Permitted.
        3. Requests for substitutions will be considered in accordance with the guidelines outlined in Section   
           01 60 00 “Product requirements”.
      1. ACCESSORIES [EDIT AS REQUIRED]
         1. General: Provide as recommended by batten manufacturer for building configuration.

Accessories shall be made from the same material of adjacent batten unless otherwise indicated.

SPECIFIER NOTE:

Select the desired accessory specific to the project and delete the other indicated accessories. Where more than one accessory is selected coordinate with drawings for clarity. Select accordingly.

* + - * 1. Diecast Aluminum Accessories: One Piece bracket; Two (2) Pieces per batten ends

BC Bracket for:

[1-inch (25mm) aluminum batten]

[1.5-inch (38mm) aluminum batten]

[2-inch (51mm) aluminum batten]

Dimensions (W\* x L x H):

[2-inch] [2.5-inch] [3-inch] \* x 1.5-inch x 0.5-inch ([51] [64] [76] x 38 x 12.7mm)

*\* In accordance with batten width above*

Minimum Wall thickness: 0.10-inch (2.5mm)

Finish: RAL 7022 Umbra Grey matte finish

Gloss: 20° ±5

Complete with color match Stainless Steel screws

* + - * 1. Extruded Aluminum Accessories: One Piece bracket

CC Bracket for:

[1-inch (25mm) aluminum batten]

[1.5-inch (38mm) aluminum batten]

[2-inch (51mm) aluminum batten]

Dimensions (W\* x L x H):

[1.3-inch] [1.8-inch] [2.3-inch] \* x 3-inch x 1.2-inch ([32] [44.7] [57.4] \* x 76 x 30.5mm)

*\* In accordance with batten width above*

Metal thickness: 0.125-inch (3mm)

Finish: RAL 7022 Umbra Grey matte finish

Gloss: 20° ±5

Complete with color match Stainless Steel screws

* + - * 1. Extruded Aluminum Accessories: Two (2) Pieces bracket

SN Bracket for:

1-inch (25mm), 1.5-inch (38mm) and 2-inch (51mm) aluminum batten widths

Dimensions (W x L x H): 1-inch x 4-inch x 1-inch (25 x 102 x 25mm)

Metal thickness: 0.10-inch (2.5mm)

Finish: RAL 7022 Umbra Grey matte finish

Gloss: 20° ±5

Complete with color match Stainless Steel screws

* + - * 1. Lattice aluminum end caps

Shall be made from the same material and matching finish of batten unless otherwise indicated.

Dimensions (W x H): Refer to batten size (section 2.3).

Thickness: 0.16-inch (4mm)

Gloss: 15° ±5

Assembly: Glued to batten

* + - * 1. Fasteners: Recommended by manufacturer. Do not use metals that are incompatible with joined materials.

Use types and sizes to suit unit installation conditions.

Use Stainless Steel screws or other types best suited to substrate conditions and environmental exposition. Size specified in technical data sheets, unless otherwise indicated.

Use Anchors and Inserts of type, size, and material required for loading and installation indicated.

Use nonferrous metal or hot dip galvanized anchors and inserts.

Use toothed steel or expansion bolt devices for drilled in place anchors.

* + - 1. FINISHES
         1. Digitally Printed Three-layer Finish

Primer coat: High quality white UV coating applied to aluminum.

Digital printed inkjet coating.

UV Barrier: Protective Clear Coat for UV protection against fading.

Style and Color to match MAIBEC Architectural Aluminum [STYLE and Color reference XXX-XX].

* + - * 1. Solid Color Finish (mounting brackets accessories only)

Liquid-coated finish

Color to match Umbra Grey RAL 7022 matte finish.

* + - 1. FABRICATION
         1. Assemble battens in factory to minimize field splicing and assembly.
         2. Fabricate battens of sizes indicated, with allowances made for fabrication and installation tolerances, adjoining materials' tolerances.

Support System: Detailed on Drawings.

Configuration: Detailed on Drawings.

Include supports, anchorages, and accessories required for complete assembly.

* + - * 1. Provide batten supports of type and at spacings indicated, but not more than recommended by manufacturer.

1. EXECUTION
   * + 1. EXAMINATION
          1. Examine substrates for compliance with requirements for installation conditions affecting performance of metal batten and related accessories.

Examine framing to verify that structural support members and anchorage have been installed within a reasonable tolerance to perform the recommended installation by batten manufacturer.

* + - * 1. Proceed with installation only after unsatisfactory conditions have been corrected.
      1. PREPARATION
         1. Clean substrates of projections and substances detrimental to application.
         2. Inspect product before installation and verify that there is no shipping damage. Ensure proper handling and storage of all material.
         3. Do not install any damaged or questionable product; repair or replace as required for smooth, consistent, and high-quality finished appearance.
      2. INSTALLATION
         1. General: Comply with manufacturer's written installation instructions applicable to products and applications indicated unless more stringent requirements apply.
         2. Install aluminum batten in orientation, size, and locations as indicated. Anchor battens and components of the work securely in place, with provisions for thermal and structural movement.

Align battens as indicated on Drawings.

Install mounting clips, end mounts cap, and internal stiffeners (if applicable).

Locate and place battens level, plumb, and at indicated alignment with adjacent work.

Maintain equal batten spacing to produce uniform appearance, unless otherwise specified.

Provide adequate fastening for calculated wind load.

* + - * 1. Repair finishes damaged by cutting and grinding. Restore finishes so no evidence remains of corrective work. Return items that cannot be refinished in the field to the factory, make required alterations, and refinish entire unit or provide new units.
      1. ADJUSTING AND CLEANING
         1. Remove damaged, improperly installed, or otherwise defective materials and replace with new materials complying with specified requirements.
         2. Periodically clean exposed surfaces of battens that are not protected by temporary covering to remove fingerprints and soil during construction period. Do not let soil accumulate until final cleaning.
         3. Protect battens from damage during construction. Use temporary protective coverings where needed and approved by manufacturer. Remove protective covering at the time of Substantial Completion.
         4. Clean and touch up minor abrasions in finishes with air dried coating that matches color and gloss of, and is compatible with, factory applied finish coating.
         5. Clean finished surfaces according to manufacturer's written instructions and maintain in a clean condition during construction. Before final inspection, clean exposed surfaces with water and a mild soap or detergent not harmful to finishes. Thoroughly rinse surfaces and dry.

**END OF SECTION**

DISCLAIMER:   
  
This Specification has been written as an aid to the professionally qualified Specifier and Design Professional. The use of this Guide requires the sole professional judgment and expertise of the qualified Specifier and Design Professional to adapt the information to the specific needs for the Building Owner and the Project, to coordinate with their Construction Document Process, and to meet all the applicable building codes, regulations, and laws. MAIBEC INC. EXPRESSLY DISCLAIMS ANY WARRANTY, EXPRESSED OR IMPLIED, INCLUDING THE WARRANTY OF MERCHANTABILITY OR FITNESS FOR THE PARTICULAR PURPOSE OF THIS PRODUCT FOR THE PROJECT.