



Field Join Instructions MB-300 and MB-400 Series

Mad Matter MB-300 Series: (Aluminum Hinge)

1. Use an H-2 (5/64") or a 5/64" Allen Wrench Hex Key.
2. Install the driver bit in the tip of a cordless hand drill, screw gun, or use the wrench for manual removal.
3. Locate the pre-drilled female receiving rail as well as the punched male hinge portion of the rail on the underside of the rails.
4. Slide rails together until the pre-drilled hole and punch line up.
5. Using the provided set screws, insert set screw into the lined-up hole/punch to prevent sections from coming apart.

Mad Matter MB-400 Series: (Vinyl Hinge)

1. Use an H-3 (3/32") Hex Tip Bit Driver, or a 3/32" Allen Wrench Hex Key.
2. Install the driver bit in the tip of a cordless hand drill, screw gun, or use the wrench for manual removal.
3. Slide the hinged section of the mat into the female receiving rail.
4. Using the provided set screws, insert set screw into the end of the rail where the hinge was slid in to prevent sections from coming apart.

Note: After downloading this spec, the Specifier must choose the correct Finish, Insert and Frame options and delete all other options to produce an accurate specification.

MB-300 MB-400

PART 1 - GENERAL 1.01 SUMMARY

MASTER SPECIFICATION

SECTION 12484

FURNISHINGS –ENTRANCE SYSTEMS

1. Section includes: [Entrance matting systems, including aluminum mats and frames]
2. Related Sections: The following sections contain requirements related to this section:
 1. Grouting frames into recess; refer to Section 03 30 00, "Cast-in-Place Concrete" and Section 03 60 00,

"Grouting."

2. Special requirements of various flooring types; refer to Section 09400, "Terrazzo."

1.02 REFERENCES

1. American Society for Testing and Materials (ASTM)
2. The Aluminum Association
3. The Carpet and Rug Institute (CRI)
4. The National Floor Safety Institute (NFSI)
5. Other referenced documents

1. LEED v3 and LEED v4

1.03 SYSTEM DESCRIPTION

A. Performance Requirements: Provide [aluminum entrance floor mat system], which has been manufactured and installed to maintain performance criteria stated by manufacturer without defects, damage or failure.

1.04 SUBMITTALS

1. General: Submit listed submittals in accordance with the Conditions of the Contract and Division 1 Submittal Procedures Section.
2. Product data: Submit product data, including Manufacturer's specification sheet and installation instructions for specified products. Include methods of installation and substrate preparation for each type of substrate.

C. Sustainable Design Submittals: For projects requiring LEED submittal based on LEED v3

1. Submit documentation substantiating that MB-300 Series and MB-400 Series products contain a minimum of 49% pre-consumer recycled content and therefore contributes to Materials & Resources Credit 4.
2. Submit documentation substantiating that the project is located within 500 miles of the manufacturing facility and therefore contributes to Materials & Resources Credit 5
3. Submit documentation substantiating that the project has permanently installed MB-300 Series mat or MB-400 Series mat that is at least 10 feet in length and therefore contributes to Indoor Environmental Quality Credit 5.
4. Sustainable Design Submittals: For projects requiring LEED submittal based on LEED v4
 1. Submit documentation substantiating that MB-300 Series mat or MB-400 Series mat contain a minimum of 49% pre-consumer recycled content and therefore contributes to Materials & Resources Sourcing of Raw Materials Credit.
 2. Submit documentation substantiating that the project is located within 100 miles of the manufacturing facility and therefore contributes to Materials & Resources Regional Material Credit.
 3. Submit documentation substantiating that the project has permanent entryway system at least 10 feet in length that is maintained on a weekly basis and therefore contributes to Indoor Environmental Quality Enhanced Indoor Air Quality Strategies Credit.
5. Shop drawings: Submit shop drawings showing layout, profiles and product components, including anchorage, accessories, finish colors, patterns and textures.
6. Samples: Submit samples for each type and color of exposed entrance mat, frames and accessories required. Provide samples of mat materials.
7. Quality Assurance Submittals: (1) Certified test reports showing compliance with specified performance characteristics and physical properties, and (2) Manufacturer's Installation Instructions.
8. Closeout Submittals: (1) Cleaning & Maintenance Data (Include methods for maintaining installed products and precautions against cleaning materials and methods detrimental to finishes and performance), and (2) Warranty.

1.05 QUALITY ASSURANCE

1. Standard rolling load performance: 350 lb./wheel rating for the MB-300 product and 350 lb./wheel rating for the MB-400 product. (testing used 1,000 passes) ASTM F2753 Rolling Load Over Resilient Floor Covering.
2. Slip resistance in accordance with ASTM C1028 Coefficient of Friction, minimum 0.60 for accessible routes.
3. Flammability in accordance with ASTM E648, Class 1, Critical Radiant Flux, minimum of 0.45 watts/m². Exceeds Class 1 rating as specified in NFPA Life Safety Code 101 and IBC 804.2 Classification.
4. Corrosive resistant surpassed in PPS 1001 Corrosion testing.
5. Single Source Responsibility: Obtain floor mats/grids and frames from one source of a single manufacturer.
6. All materials are sourced domestically in the continental United States, with 99.8% of all sourced materials being manufactured domestically. Finished product manufactured 100% in the United States in accordance with BAA.

1.06 SEQUENCING/SCHEDULING

1. Ordering: Comply with Manufacturer's ordering instructions and lead-time requirements to avoid construction delays.
2. Delivery: Deliver materials in Manufacturer's original, unopened, undamaged packaging.
3. Storage: Store materials in temperature and humidity conditions recommended by Manufacturer and protect materials from exposure to harmful weather conditions.
4. Installation: Except as otherwise indicated herein, sequencing or scheduling for performance of work of this section in relation with other work is Contractor's option. Delay installation of mats until near time of substantial completion for the project.

1.07 PROJECT CONDITIONS

1. Temperature: Maintain temperature where products will be installed before, during and after installation as recommended by Manufacturer.
2. Field Measurements: Where possible, verify actual measurements by field measuring before fabrication and include measurements in shop drawings. To avoid construction delays, coordinate field measurements and fabrication schedule based upon construction progress.
3. Recessed Conditions: It is imperative that the concrete recess is entirely flat and smooth for successful installation. If a concrete contractor is responsible for forming the recess, the pour dimensions may require leveling grout to achieve the proper depth and a smooth finish. The final recess depth must match the specified product and must be field verified. Also, for proper frame installation, the side walls of the concrete recess must also be straight and smooth. Variances with the recess and side walls must be adjusted/corrected prior to product installation.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURER

A. Provide MB-300 Series (aluminum hinge) or MB-400 Series (vinyl hinge)

2.02 MATERIALS

A. Tread rails shall be manufactured from aluminum, complete with co-extruded soft-durometer cushions, supplied in mill finish unless otherwise indicated (anodized – clear, light bronze, medium bronze, dark bronze or black).

MB-300 Series with exposed hinge rail connectors shall be extruded 6063-T6 alloy complete with perforations for drainage.

MB-400 Series shall be extruded 6063-T6 alloy complete with extruded soft-durometer vinyl hinge for coupling rails together.

1. LEED v3

1. IEQ Credit 5: MB-300 Series and MB-400 Series are designed for permanent installation.
2. MR Credit 4: 49% pre-consumer recycled.

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c. MR Credit 5: Material must be manufactured within 500 miles of project location.

2. LEED v4

1. MR Sources of Raw Materials Credit: 49% pre-consumer.
2. MR Regional Material Credit: Material must be manufactured within 100 miles of project location.
3. IEQ Enhanced Indoor Air Quality Strategies Credit: MB-300 Series and MB-400

Series are LEED acceptable permanent entryway systems.

Tread insert options for MB-300 and MB-400:

1. **MonoScrape™ HD Carpet Inserts** shall meet the Carpet and Rug Institute's standard for good indoor air quality. Fibers shall include a minimum of 100, 12 mil monofilament fibers per square inch and colorfast, solution dyed nylon. Available in one of 12 standard colors as offered by Manufacturer. Each polybrush carpet fiber and monofilament shall be fusion-bonded to a rigid two-ply backing to prevent fraying and supplied in continuous splice-free lengths. Carpet weight shall be 33 oz./sq. yd.
2. **Polybrush Inserts** shall be solution-dyed polypropylene fibers with 4,500 total denier, available in one of three standard colors as offered by the Manufacturer. The textured fibers have ultraviolet blockers and color as an integral part of the filament. Each carpet fiber and monofilament shall be fusion-bonded to a rigid two-ply backing to prevent fraying and supplied in continuous splice-free lengths. Carpet weight shall be 33 oz./sq. yd.
3. **Vinyl Inserts** shall include a flexible dual durometer vinyl insert in any one of three colors as offered by Manufacturer.
4. **Vinyl Abrasive Inserts** shall include a flexible abrasive grit tape, bonded to a rigid vinyl tread insert. Tread insert shall be supplied in black, complete with one of five abrasive colors as offered by Manufacturer.
5. **Serrated Aluminum Inserts** shall be extruded 6063-T52 alloy. Serrated aluminum inserts shall be in mill finish unless otherwise indicated (anodized – clear, light bronze, medium bronze, dark bronze or black).

Framing for Aluminum BaseMat Series

1. **B-1 - Beveled Vinyl Frame** shall be 2" wide, with tapered lead-in edge for surface mount applications. The B-1 beveled vinyl frame is available in black only.
2. **B-2 - Beveled Aluminum Frame shall be 1-3/8" wide 6063-T5 aluminum alloy and permanently secures mat for surface mount applications. Frame color shall be supplied in mill finish unless otherwise indicated (anodized – clear, light bronze, medium bronze, dark bronze or black).**
3. **L-3 - Aluminum Recessed Angle Frame** shall be a 7/16" deep recessed frame in 6063-T5 aluminum alloy with 1/8" wide exposed surface. Frame color shall be in mill finish unless otherwise indicated (anodized – clear, light bronze, medium bronze, dark bronze or black).
4. **THFR - Threshold Frame** shall be supplied in 6063-T5 aluminum alloy. For surface/recess installations to provide a flush transition from the entryway door threshold to the mat surface. The frame does not require a leveling screed. The threshold frame shall be supplied in mill finish unless otherwise indicated (anodized – clear, light bronze, medium bronze, dark bronze or black).

1.01

PRODUCT SUBSTITUTIONS

A. Substitutions: No substitutions permitted.

PART 3 – EXECUTION

3.01 SUBSTRATE PREPARATION

A. Examine substrates and conditions where floor mats will be installed. Do not proceed with installation until unsatisfactory conditions are corrected. Subfloor shall be clean and dry, and within acceptable tolerances.

3.02 INSTALLATION

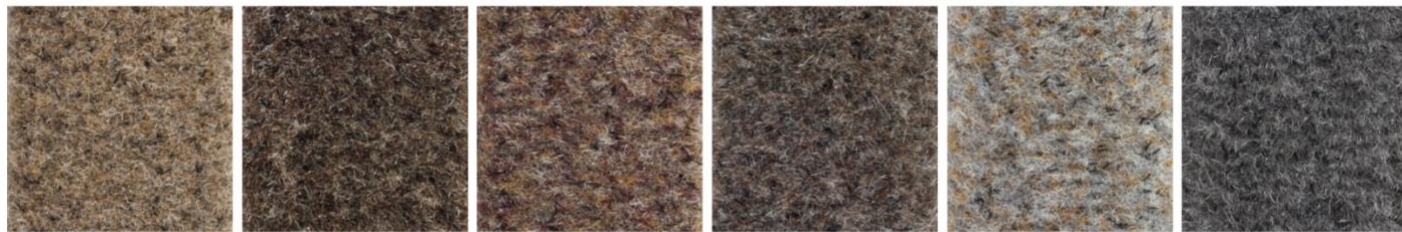
1. Sizes: Shop-fabricate units of floor mat to greatest extent possible in sizes as indicated. Where not indicated otherwise, provide single unit for each mat installation, but do not exceed manufacturer's maximum size recommendation for units intended for removal and cleaning. Where joints in mats are necessary, space symmetrically and away from normal traffic lanes. Miter corner joints in framing elements with hairline joints or provide prefabricated corner units without joints. Where possible, verify sizes by field measurement before shop fabrication.
2. Accessories: [Where indicated for recessed or wall-to-wall installations, provide aluminum framework as recommended by Manufacturer.] [Where indicated for surface mount installations provide beveled aluminum frame or beveled vinyl frame.]
3. General: Strictly comply with Manufacturer's installation instructions and recommendations. Coordinate installation with adjacent work to ensure proper clearances and to prevent tripping hazards.

3.03 CLEANING AND PROTECTION

1. General Cleaning: Refer to Manufacturer's Cleaning and Maintenance Instructions.
2. Owner's Personnel: Instruct Owner's personnel in proper maintenance procedures.
3. Protection: Protect installed product and finish surfaces from damage during construction and until acceptance.

END OF SECTION

Carpet Insert Colors



Espresso

Suede

Java

Spice

Silvermine

Charcoal



Fernwood

Denim

Cast Iron

Black Iron

Onyx

Gray Castle



Shadow

Poly-Brush Insert Colors

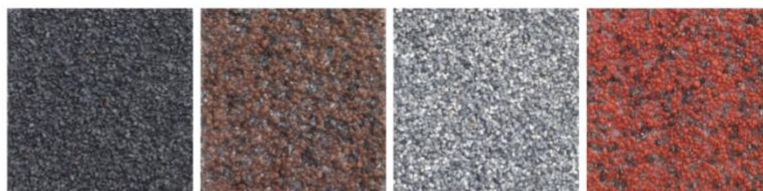


Charcoal

Chocolate Brown

Gray

Abrasive Insert Colors



Black

Dark Brown

Gray

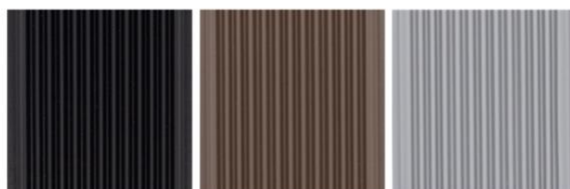
Brick Red

Serrated Metal Insert



Serrated Metal

Vinyl Insert Colors



Black

Brown

Gray



Aluminum Hinge Low Profile Roll Up Floor Mat 3/8"- MB-300
SERIES AND Vinyl Hinge Low-Profile Roll Up Mat 3/8"- MB-400
SERIES

Installation Instructions

Guidelines:

Before any installation is started, be sure to verify:

- Model of mat and frame
 - Size of mat and frame
 - Product color
 - That there are no visual defects or damage from shipment
- Important: No returns will be accepted after the material has been installed.**

Failure to follow these installation instructions may void your warranty.

Installation Instructions:

1. Prepare a recess in the concrete flooring (block out) where the mat will be installed. The recess should be deeper than the total height of your mat and frame; consult your shop drawing for proper depth. Block out an area 6" wider than the outside dimensions of the frame in both directions. This will allow 3" on all sides to maneuver the frames into place.
2. Secure the frame to the concrete using anchor bolts or screws of choice that are set into the floor. Stainless steel screws and plastic anchors may also be used. **Frames come with mitered corners.**
3. Drill holes in the frame at 18to24-inch intervals for the bolts/screws. Countersink the holes as the mat will set inside the frame. (This prevents the mat from riding up on the head of the bolt/screw).
4. Set the frames into position within the recess. Mark the hole locations on the concrete. Remove the frames and drill holes in the floor for the anchors. Clean the concrete dust away and install the anchors.
5. Install the frames using the appropriate anchor bolts. If needed, shim under the frame sections so the top edge of the frame is flush with the finished floor and level.
6. Pour concrete (using non-shrinking grout—sand coat is not recommended) around the edges of the frame (if needed) and in the center of the frame, level with the inside lip of the frame.
7. Level the concrete. Use a board slightly smaller than the frame opening and level the concrete in each section to be flush with the leg of the frame. Make sure the concrete is smooth and level with the lip of the frame so the mat lies perfectly flat and will not shift.

6. Before the concrete hardens, verify that the dimensions are correct, frame is square and level, and the frame corners are at correct angles so the mat will fit properly. Verify the outside frame dimensions are identical to your shop drawing.
 7. After concrete has hardened, install plywood into the recess to fully protect the frame edges until just before the entrance is opened and the mats are installed.
10. Clean all frames and recess before installing mats; debris cannot be tolerated between the frame and mat.

Surface Installation Instructions:

1. Mark the lay out on the floor where ramp frame needs to go for a smooth transition.
2. If holes are not present, drill holes in the frame at 18-24 inch intervals for the bolts/screws. Countersink the holes.
3. Set the frames into position. Keeping the frames in position, mark the hole locations in the floor for the anchors. Drill the holes, clean concrete dust away, and install the anchors.
4. Secure the frame to the floor surface by inserting anchor bolts/screws into lead anchors that are set into the floor. Stainless steel screws and plastic anchors may also be used.
5. Clean all frames and recess before installing mat; debris can not be tolerated between the frame and mat.
6. Place mat, loose laid, within frame. Straighten as needed and position mat square and evenly spaced in recess.
7. Trim square edge vinyl filler equally at top and bottom of mat (use utility knife with sharp blade). Uniformly trimmed filler and a well-positioned mat result in a high quality fit and appearance.

Fabrication Instructions

1. Place mat to be cut on sturdy tabletop surface. On one end of the table, fasten a straight edge bar or angle piece to serve as a stop edge for one end of the product. Be sure bar is square on the table.
2. Butt one end of the mat tight to bar fastened to table.
3. Measure to desired length to be cut and mark product with fine tip black marker. Remove black vinyl cushion on bottom of mat if needed for level cutting surface.
4. If trimming only 1/4" or so, cut carefully with a portable band saw. Prior to cutting, clamp an additional bar or straight edge to top of product to hold grid steady. If trimming more than 1/4" or so, a circular saw with a sturdy carbide-tipped blade will work just as

well. Use a straight edge or angle piece for saw to travel against to achieve a nice even cut. **Be sure to clamp straight edge to product prior to cut.**

5. After cut, clean any smudges or markings with lacquer thinner. If set screws have been cut off, re-install new screws as needed to secure rails. Brush out ends of tread, then singe with a propane torch (on low setting).

6. Clean up product and return to service.

Slide-on Filler/Drill-on Filler Installation Instructions:

1. Prior to working with vinyl, soak the pieces in a hot water tub. This will straighten any curves or kinks in the product. Remove from the hot water and lay out pieces straight on a flat surface. Let cool prior to installation.

2. Place mat on a sturdy tabletop surface. On one end of the table, fasten a straight edge bar or angle piece to serve as a stop edge for one end of the mat. Be sure bar is square on table.

3. To install slide-on filler (filler piece with ball at one edge), feed one end into the female socket of rail at outside edge of mat. Pull to opposite end of rail, leaving a little bit to overhang rail at each end. On the backside of the rail, approximately 2" from the end of rail, drill a hole through only one layer of rail to allow room for an 8/32" x 1/4" set screw to fit into rail and hold filler securely in place. Do this at both ends of rail. Be careful to not drill too deeply and go through top layer of rail leaving a visible hole. Use a sharp utility knife or pruning-type shear to cut excess filler. Be careful to cut a straight line.

4. To install drill-on filler (filler piece with flap at one edge), flip mat face down on table top. Carpet will face table top and back of mat will be face up. Butt one end of the mat tight to bar fastened to table. Adjust width of mat (traffic direction) to desired dimension and attach to table with screws in between drain holes of hinge. This will keep mat from shifting while attaching filler. Lay filler piece at mat edge with flap covering rail bottom and vertical wall of filler pushed snugly up to rail ends. Drill hole through vinyl filler flap and carpeted rail to insure tight fit of filler flap to rails. Use compressed air to blow out debris from drilled holes. If not cleared properly, filler will not fit tight to rails. Use a #44 large flange pop rivet to fill hole and press firmly as you pop rivet to hold filler snug at end of rails. Go down length of filler every four to five rails and attach filler. Once this is complete and filler is held in good position, go down entire length and drill remaining holes following the same procedure.

5. Leave filler overhanging by 3" at each end. To fasten drill-on filler to slide-on filler at joints, apply super glue on flap and vertical edge where fillers meet. Use caution to not allow super glue to run onto top surface of fillers and spoil the finish. Once joints are securely fastened, use a sharp utility knife or pruning-type shear to trim excess filler. Be careful to make a square cut.

Rail Removal/Addition Instructions:

1. Use an H-2 (5/64") or a 5/64" Allen Wrench Hex Key.
2. Install the driver bit in the tip of a cordless hand drill, screw gun, or use the wrench for manual removal.
3. For the MB-300 Series, back out the set screws located on the left side of the mat. For the MB-400 Series, back out the set screws located in the hinge channel at the end of the rail.
4. Slide rail forward to remove rail from mat.
5. Using the same process in reverse, reassemble and re-set screw remaining mat pieces together.

POTENTIAL LEED CREDITS

for projects using Recessed Mats (based on LEED-NC, version 3)

➤ **Indoor Environmental Quality Credit 5 (1 point): Indoor Chemical & Pollutant Source Control**

Recessed products are intended for permanent installation. To qualify for IEQ Credit 5, the product must be at least 10 feet in length in the primary direction of travel. Recessed products may contribute to LEED IEQ Credit 5.

➤ **Materials & Resources Credit 4 (1-2 points): Recycled Content**

Recessed products are manufactured from approximately 49% pre-consumer recycled content. Recessed Series products may contribute to LEED MR Credit 4.

- Recessed Series products with HD carpet or polybrush insert have 45.8% pre-consumer recycled content.
- Recessed Series products with all other inserts have 38.30% pre-consumer recycled content.

➤ **Materials & Resources Credit 5 (1-2 points): Regional Materials**

The manufacturing facilities are located in Minnesota, USA. Depending upon the project location, using these products may qualify for LEED MR Credit 5.

Warranty

The Mad Matter, Inc warrants to its purchasers, for a period of two years on standard products from the date of shipment, that any entrance floor mat or grid will be free of defects in workmanship and materials. The liability of The Mad Matter, Inc is strictly limited to repair or replacement of the product that, in our opinion, were properly installed and subsequently found defective. The warranty is not applicable if the mats or grids are damaged by overloading or if standard cleaning and maintenance procedures are not respected. No claims for consequential damages of any nature will be allowed. This warranty is in lieu of all other warranties, expressed or implied.