Installation Instructions 3500MWB Handrail

Please read all instructions before installing handrail. Install product in environmentally controlled conditions.

Acclimate the handrail to room temperature 24 hours before installation. When storing straight lengths of materials, lay product flat on a supported surface. Do not lean the rails or lay them on unsupported parallel saw horses.

FIG. 1 HANDRAII RETURN/CORNER (3" ALLOWANCE FOR RETURN), (0" ALLOWANCE FOR OUTSIDE CORNER). ALUMINUM HANDRAIL #1/4-20 SERRATED FLANGE HEX NUT HANDRAIL ALUMINUM SPLINE #1/4-20 X 3/4 HEX HEAD BOLT SHEET METAL SCREV #10-24 x 3/8" CUP POINT SET SCREW WALL GUARD LEFT RETURN (3-11/32" ALLOWANCE WALL GUARD RIGHT RETURN WALL GUARD (3-11/32" ALLOWANCE) WALL GUARD OUTSIDE CORNER (0" ALLOWANCE) IMPACT BUMPER

Note: Wood is a natural material therefore component color may vary. Sort the parts by color (light to dark) before use. Parts may appear different when viewed from the left or the right (metamerism). Keep this in mind when sorting parts.

1. Cut the aluminum handrail top and wood wall guard to the desired lengths leaving allowances for returns and corners. Break sharp edges on metal handrail with fine Emory cloth. Break or chamfer edges on straight wood pieces to match return/corner edges. Finish as needed. See Figure 1.

Handrail Allowances:

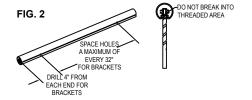
Return - 3"

Outside corner - 0"

Wall Guard Allowances:

Return - 3-11/32"

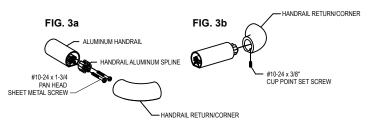
Outside Corners - 0"

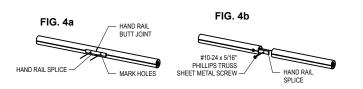


2. Bracket Spacing: Use brackets 4" from each end and spaced a maximum of 32". Drill 1/4" holes on the bottom of the handrail aluminum for brackets. Be careful to drill only through the outer wall of the handrail aluminum. See Figure 2.



- a. Attach splines to handrail using two #10 x 1-3/4" sheet metal screws per spline. See Figure 3a.
- b. Attach returns and corners to handrail by sliding component over the spline and secure with set screws. See Figure 3b.
- 4. For lengths longer than 12', use a splice to join sections. Butt the two sections together, using a splice as a template, mark the hole locations. Drill 1/4" holes on the bottom of the handrail aluminum for the splice. See Figure 4a. Connect the two pieces using the splice and two #10-24 x 5/16" Phillips truss head screws. (Note: splice must be positioned inside handrail). See Figure 4b.

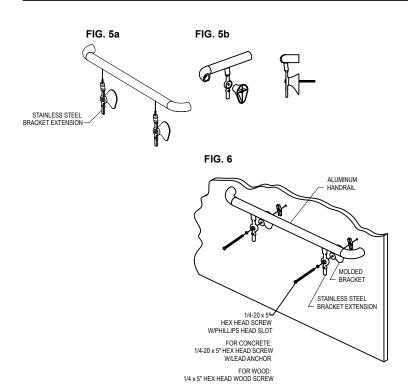


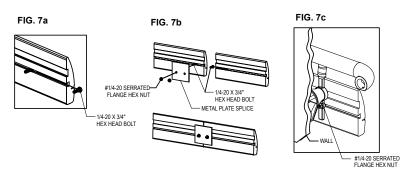


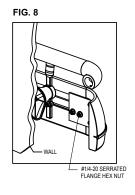


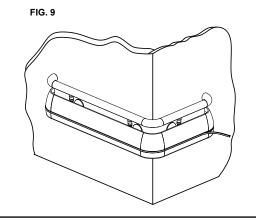
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- Screw bracket extensions into the handrail holes on the bottom of the rail. Tighten and turn bracket extensions until aligned. See Figure 5a.
 Orientation of bracket extension is critical. See Figure 5b.
- 6. Snap a chalk line on the wall 4-7/16" below the top of the handrail. Drill ¾" holes for toggle bolts (drywall/metal stud installation), ½" holes for lead anchor (concrete wall installation) or 1/8" pilot hole (wood screw into wood studs). Attach the molded bracket and stainless steel bracket extension/handrail assemble to the wall. See Figure 6.
- 7. Slide the hex head of the $\frac{1}{4}$ -20 x $\frac{3}{4}$ " bolts into the channel on the back of the wood wall guard. See Figure 7a.

Slide them into position so they align with the holes in the bracket extensions. With lengths longer than 12', use a metal plate splice and $\frac{1}{4}$ -20 x $\frac{3}{4}$ " bolts to join sections. See Figure 7b.

Attach the wood wall guard to the bracket extension using a serrated flange hex nut at each location. See Figure 7c.

- 8. Attach wall guard returns and corners to the straight lengths using ¼-20 x ¾" hex head screws and nuts. See Figure 8.
- 9. Cut impact bumper to the required length. Squeeze a small amount of glue into the bumper slot on the front of the wood wall guard. Work a four foot area of handrail at a time since the glue will set up quickly. Do not allow glue to touch exposed wood surface. Push the bumper into the slot. A rubber hammer may help press the bumper into the slot. See Figure 9.



