

# Installation Instructions

## 3500WS 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.

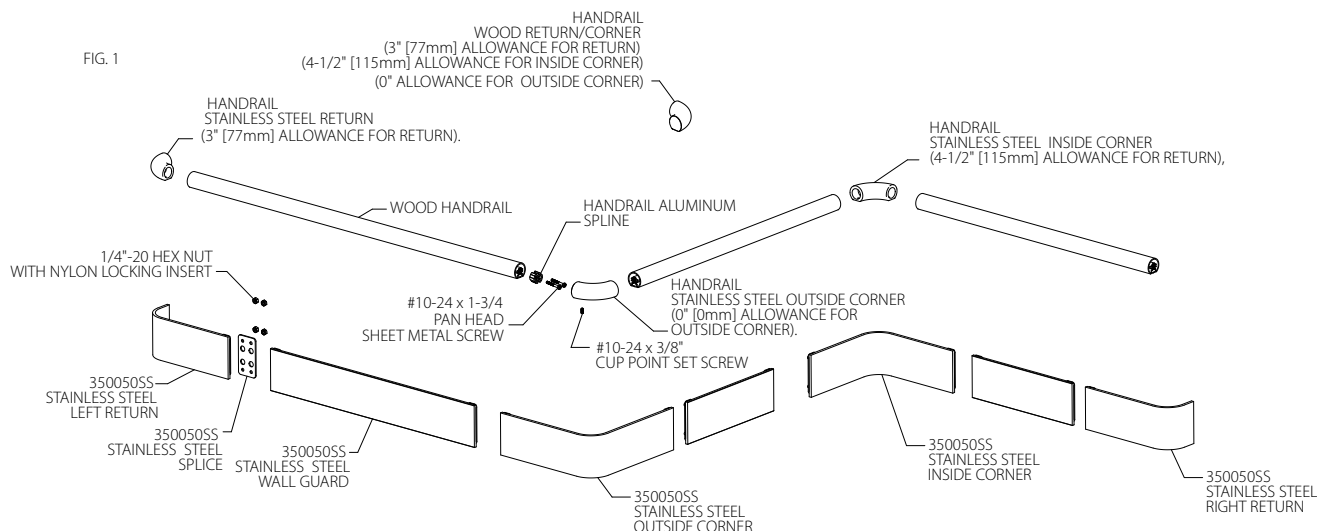
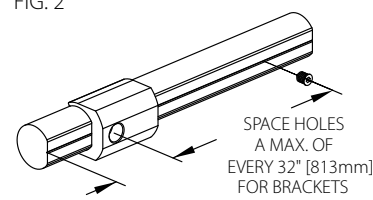


FIG. 2



DRILL 4" [102mm]  
FROM  
EACH END  
FOR BRACKETS

FIG. 3a

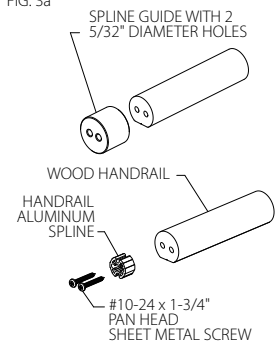
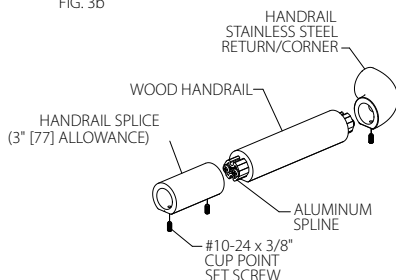


FIG. 3b



**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 wood handrail to the desired length leaving allowances for returns and corners. Break or chamfer edges on straight wood pieces to match return/corner edges. Finish as needed. See **Figure 1**.

**Handrail Allowances:**

Returns – 3" [77mm]

Inside Corner – 4-1/2" [115mm]

Outside Corners – 0" [0mm]

**Wall Guard Allowances:** Stainless steel wall guards are manufactured to customer supplied measurements.

2. Drill 7/8" [22mm] deep holes in the wood rail for threaded inserts using an 11/32" [9mm] drill bit and insert guide for hole placement. Screw threaded inserts into the handrail with 6mm power bit or hex key. Holes should be 4" [102mm] from each return and spaced a maximum of 32" [813mm] O.C. See **Figure 2**.

3. For Stainless Steel Returns, Corners and Splices:

a. Drill 1 1/4" [6mm] deep holes for splines using a 5/32" [4mm] drill bit and a spline guide for hole placement. Attach splines to handrail. See **Figure 3a**.

b. Attach returns, corners and splices to handrail by sliding component over the spline and tighten with set screw. See **Figure 3b**.

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FIG. 4

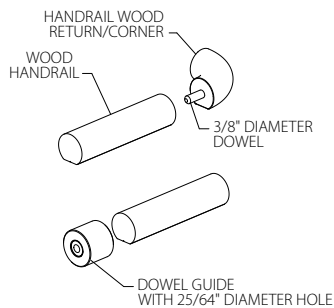


FIG. 5a

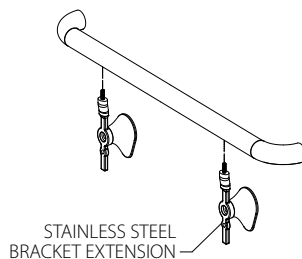


FIG. 5b

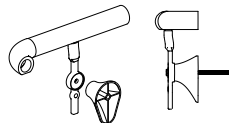


FIG. 6

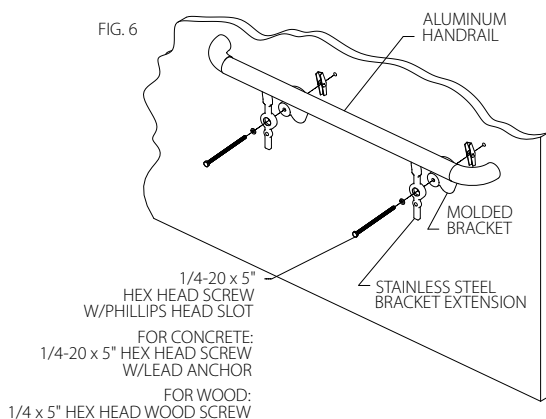


FIG. 7a

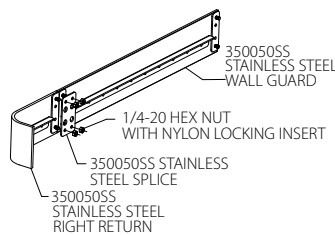


FIG. 7b

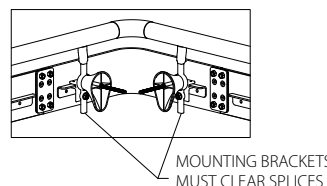


FIG. 8

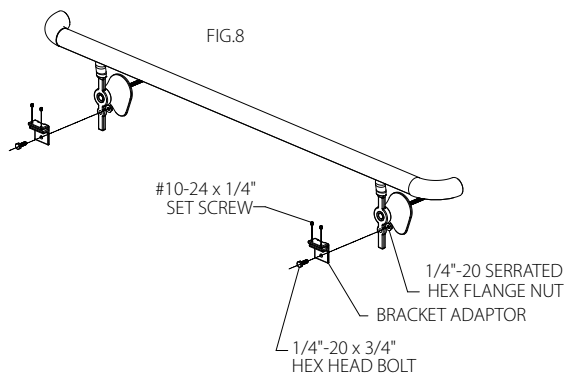


FIG. 9a

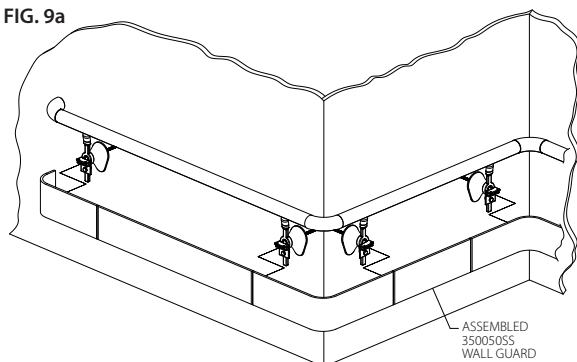
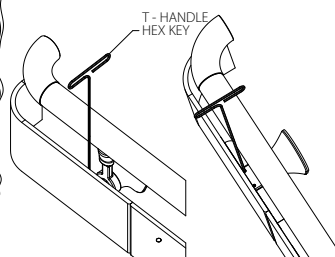


FIG. 9b



4. For Wood Returns and Corners: Drill holes for wood dowels using a 25/64" [10mm] drill bit and a dowel guide for hole placement in each section of rail. Glue and clamp the handrail and return/corner assembly until the glue is set. Align the surfaces of the rail and returns/corners. Note: Joining wood rail to wood rail without using a stainless steel splice, follow instructions in step 4. See **Figure 4**.

5. Screw brackets extensions into the threaded inserts on the handrail and align bracket extensions. See **Figure 5a**. Orientation of bracket extension is critical. See **Figure 5b**.

6. Snap a chalk line on the wall 4-7/16 [113mm] below the top of the handrail. Drill 3/4" [19mm] holes for toggle bolts (drywall/metal stud installation), 1/2" [13mm] holes for lead anchor (concrete wall installation) or 1/8" [3mm] 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. Attach the returns and corners to the straight lengths using splices. Align mating pieces and fit splice plate over 4 studs. Fasten 1/4 hex nut with nylon locking insert, using a 7/16 wrench or socket set. See **Figure 7a**. When determining handrail bracket extension locations, brackets must be clear of splice location. See **Figure 7b**.

8. Attach bracket adapters to the stainless steel bracket extensions, 1/4-20 x 3/4" [19mm] hex head bolt and serrated hex flange nut. Level the adapters. See **Figure 8**.

9. Lift the wall guard assembly into position on the bracket adapters. See **Figure 9a**. any Secure using two set screws in each adapter. See **Figure 9b**.

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