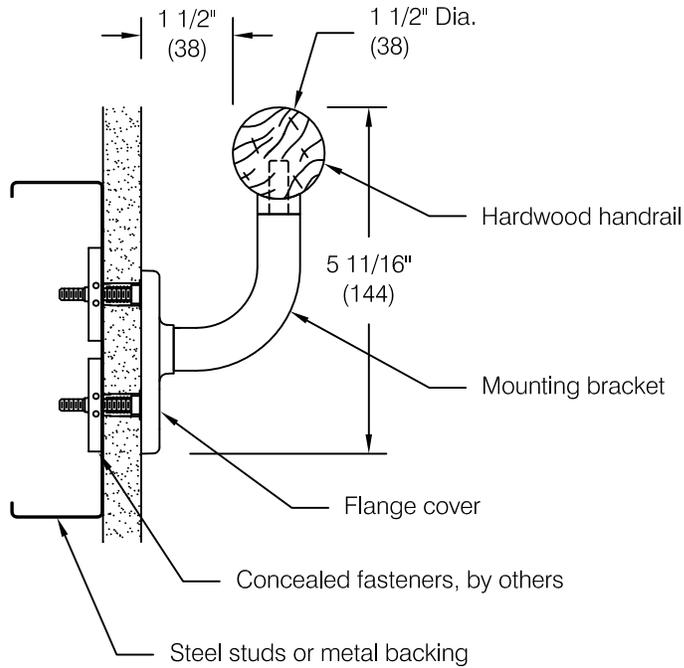
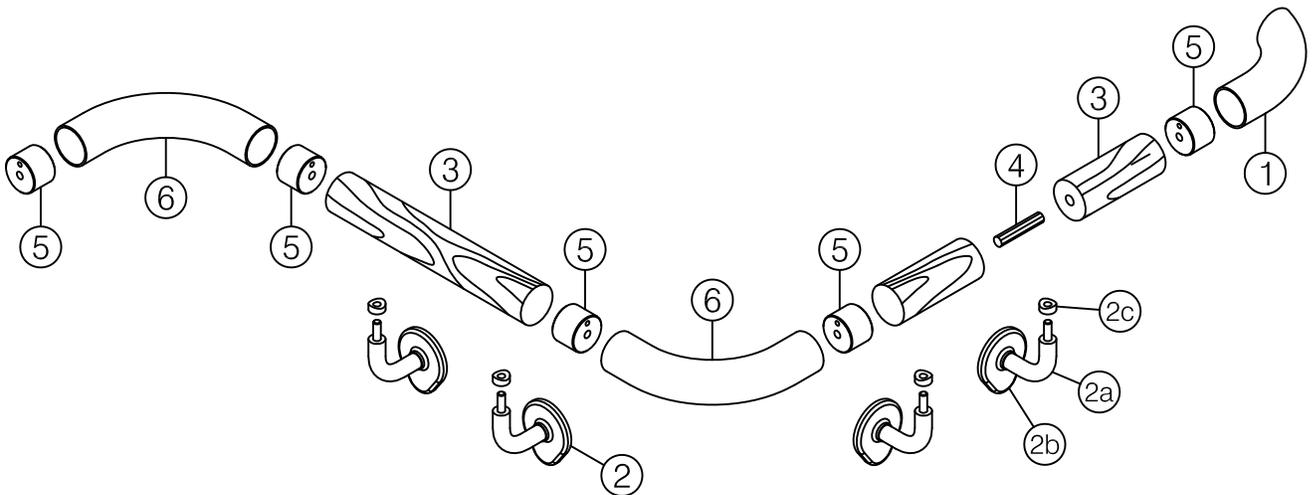


BR-1600 Series Handrail



This installation instruction is applicable to:

BR-1600



Component Part Numbers:

- 1.) BR-1625 left/right return
- 2.) BR-1607F bracket
 - a. Base plate and rod, welded assembly
 - b. Flange cover
 - c. Shim
- 3.) BW(*)-1600 wood rail
- 4.) SPL-1600 splice
- 5.) BRA-1625 insert
- 6.) IOC-1650 inside/outside corner



BR-1600 Series Handrail Installation Instructions

Architectural Products Division

- Step 1:** Determine top of handrail height and snap a chalk line 3 1/2" below for the centerline of the two uppermost mounting holes, see **fig 1**.
- Important:** Store material in a clean dry place where the temperature is maintained above 50°F (10°C). Walls and rooms should be maintained at a minimum of 65°F (18°C) for at least 48 hours prior to installation. Acclimate materials to normal building conditions for at least 24 hours before cutting and installing.
- Step 2:** Layout and cut wood rail. See **Cutting Adjustment Diagrams and Schedule** for adjustments to wood rail length at wall returns and corners. Refer to **Minimum Layout Configurations** for additional information. Care should be taken to select the straightest lengths of wood for the longest handrail spans. Select wood of similar grain and coloration when joining sections end to end. See **step 9** for splicing information.
- Important:** All cuts must be square. Deburr using 120 grit sandpaper being careful not to damage finish.
- Step 3:** Color the perimeter of unfinished wood rail ends using a stain pen or touch-up stain, see **fig 2**.
- Step 4:** With wood rail cut to length use BRJ-1600 drill jig to locate and drill mounting hole for BRA-1625 aluminum insert at all locations that will receive a wall return or corner accessory, see **fig 3**. With drill jig seated flush against end of rail drill into wood a minimum of 1" deep using a 3/16" diameter drill bit in the jig center hole.
- Important:** Drill jig is double ended, always use best fitting end.
- Step 5:** Apply a thin coat of ADH-50 adhesive (provided) to one face of the BRA-1625 aluminum insert. Place the insert with the adhesive face against the dowel and secure in place using the #14 x 2" hex washer head screw provided. Keep aluminum insert centered on rail while tightening. With the insert in place, drill into wood approximately 3/4" using a #27 bit and the small hole provided in the insert as a guide. To prevent the insert from rotating, install #8 x 1 1/2" Philips round head wood screw (provided), see **fig 4**.
- Step 6:** Install BR-1625 wall returns and one side of IOC-1650 corners by applying a 1/8" bead of ADH-50 adhesive inside the accessory opening, see **fig 5**. With adhesive in place slide return or corner accessory over BRA-1625 insert and align with wall construction, see **fig 6**.
- Important:** It will be necessary to hold wall return and corner accessories in place while adhesive cures to prevent movement or an undesirable gap from forming at the wood rail joint. Apply tape over butt joint seam to hold accessory in place, when the adhesive dries remove tape being careful not to damage the finish.
- Step 7:** Lay the railing on a flat surface with the underside facing up. The wall return and corner accessories will help to stabilize the rail while bracket mounting holes are added. Using a 1/4" diameter drill, locate and drill bracket mounting holes 3/4" deep in the underside of the wood handgrip. Thread bracket mounting holes with a 5/16"-18 plug tap.
- Important:** Allow adhesive used in **step 7** to cure before handling the rail. Holes must be drilled perpendicular to the railing and to the flat surface on which the rail is laid, see **fig 7**. Failure to do so may prevent railing from mounting properly to wall.
- Brackets must be spaced:**
- Not to exceed 32" on center
 - 1 7/8" to 6" on center from end of wood rail at returns and corner accessories
 - A maximum of 3" from end of wood at splice to provide support at splice, see **fig 8**
 - To align with metal studs (on metal stud construction) or preferably with horizontal metal backer plate (by others)
- Step 8:** Slide a flange cover loosely over the bracket base plate and rod assembly. Slide a shim over the threaded stud with the "cup" facing upward, see **fig 9**. Thread a bracket into each hole and tighten to align base plates in line with each other and parallel to the rail. Be sure cup of shim is seated properly against rail.
- Step 9:** Using the rail and bracket assembly as a template, locate and drill mounting holes in wall construction. Mark the location of all three holes while aligning the center of the two uppermost holes with the chalk line provided in **step 1**. Choice of hardware will dictate hole diameter.
- Step 10:** Mount rail and bracket assembly to wall with the appropriate hardware according to wall construction.
- Suggested hardware:**
- Drywall: Toggler® brand toggle bolts
 - Masonry: Plastic Alligator® insert
- Important:** Be sure to install corner accessories between rails before securing rail at both sides of corner. Use adhesive to install corner accessories as noted in **step 6** for handrail returns, see **fig 5**.
- Step 11:** Refer to **fig 8** for splicing of wood rail. Locate splice a maximum of 3" from bracket. Using BRJ-1600 installation jig, drill 3/16" diameter pilot hole 1" deep in opposing ends of wood rail. Using a 3/8" diameter drill increase pilot hole for 3/8" diameter dowel pin. Apply a small amount of adhesive in each hole, insert dowel pin, and butt rails tightly together.
- Important:** Drill jig is double ended, always use best fitting end.
- Step 12:** Press cover flange firmly into place over base plate of each bracket until seated squarely against wall.

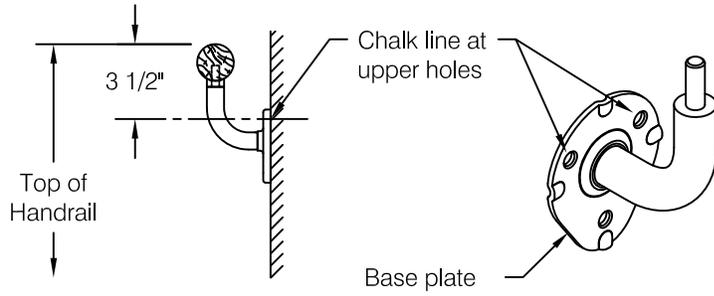


fig 1

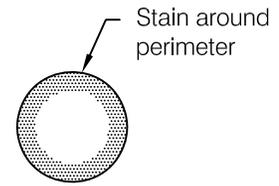


fig 2

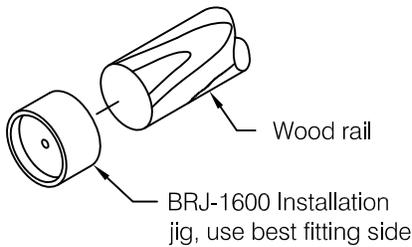


fig 3

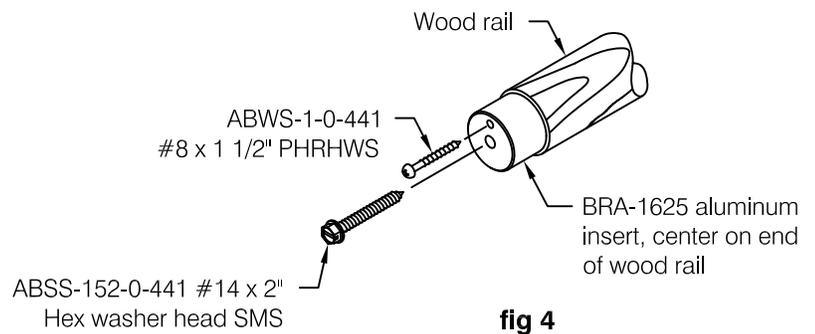


fig 4

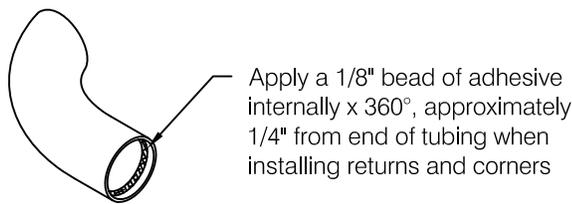


fig 5

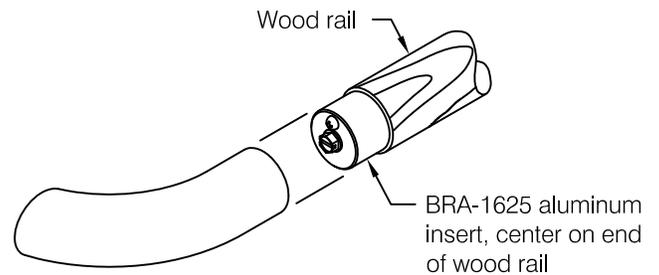


fig 6

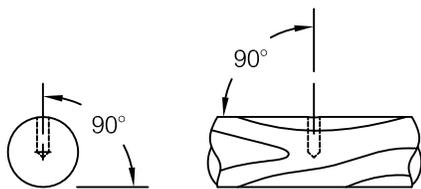


fig 7

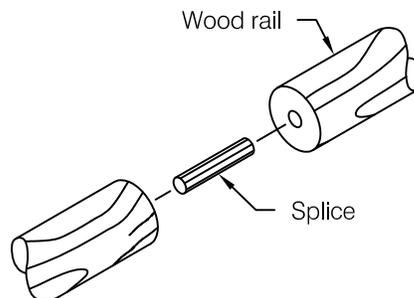


fig 8

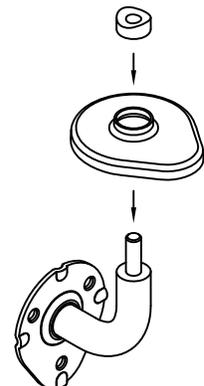
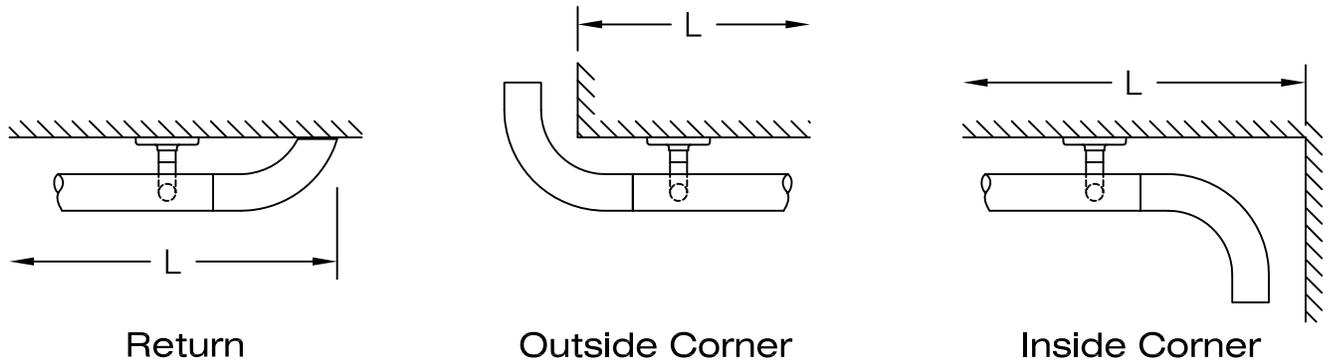


fig 9

Cutting Adjustment Diagrams and Schedule



Wood Rail	
Return	L - 5 1/16"
Outside Corner	L - 2 1/4"
Inside Corner	L - 6 3/4"

Minimum Layout Configurations

