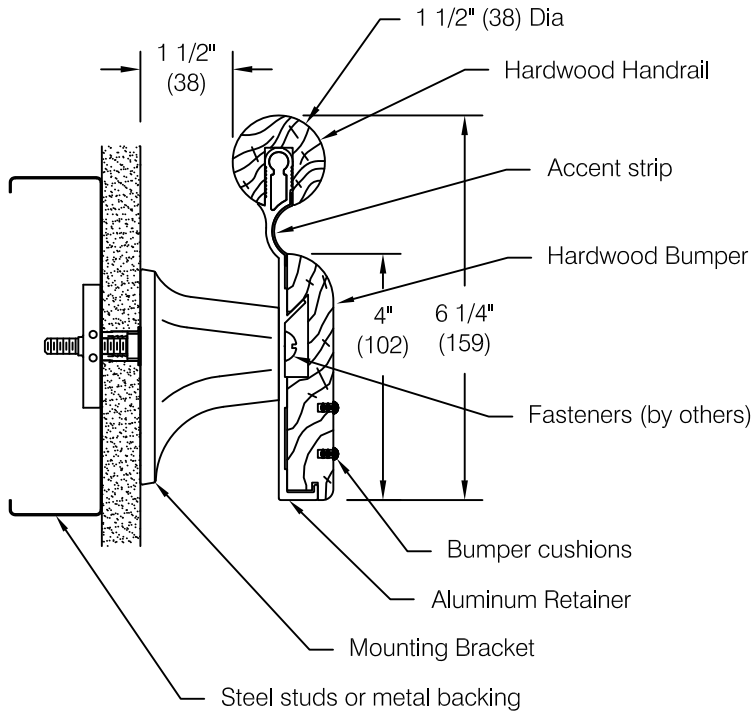
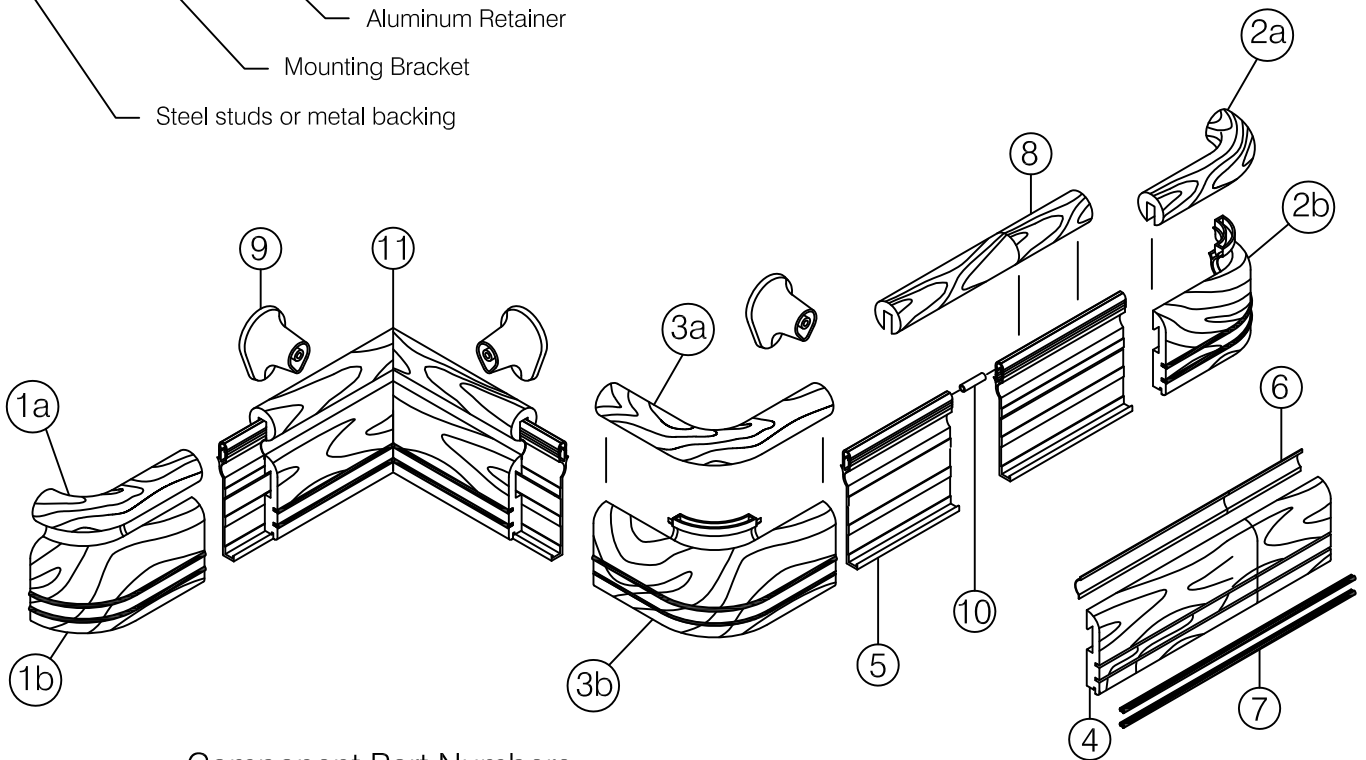


BR-400W Series Handrail



This installation instruction is applicable to:

BR-400W



Component Part Numbers:

- | | |
|-------------------------------|-------------------------------|
| 1) BR-425W Left return | 4) BR-400W Wood bumper guard |
| 1a. BRL-425W Wood top (loose) | 5) BRA-400W Aluminum retainer |
| 1b. Base and accent assembly | 6) BRI-400C Colored accent |
| 2) BR-425W Right return | 7) BRV-400W Bumper cushion |
| 2a. BRR-425W Wood top (loose) | 8) BRW-400 Wood Handrail |
| 2b. Base and accent assembly | 9) BR-108 Mounting bracket |
| 3) OBR-450W Outside corner | 10) SPL-400W Splice |
| 3a. IOC-425W Wood top (loose) | 11) Field miter inside corner |
| 3b. Base and accent assembly | |



Architectural Products Division

BR-400W Series Handrail Installation Instructions

- Step 1:** Determine top of handrail height and snap a chalk line 3 3/4" below for centerline of mounting hardware, see **fig 1**.
Important: Store the material in a clean dry place where the temperature is maintained between 50°F (10°C) and 100°F (38°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:** Cut aluminum retainer. See **Cutting Adjustment Diagrams and Schedule** for adjustments to aluminum retainer length at wall returns and outside corners. Refer to **Minimum Layout Configurations** for additional information.
Important: All cuts must be square and deburred.
- Step 3:** Layout aluminum retainer "face up", mark and drill bracket mounting holes. Use groove in retainer to locate centerline of drilling, see **fig 2**.
Bracket mounting holes must be spaced:
- Not to exceed 32" on center
 - 3 1/2" to 6" from end of aluminum retainer at returns and corner accessories
 - 3"- 6" from end of retainer at inside corners.
 - A minimum of 3" from end of retainer at splices and butt joints.
 - To align with metal studs or preferably with horizontal metal backer plate (by others)
- Step 4:** Locate and drill bracket mounting holes in wall construction using the aluminum retainer as a template or by careful measurement. Choice of hardware will dictate hole diameter.
Important: Be sure to locate aluminum to leave proper spacing for return and corner accessories as detailed in the **Cutting Adjustment Diagrams and Schedule**.
- Step 5:** Drill and countersink accessory base mounting holes along bottom edge of aluminum retainer for #8 flat head wood screws provided. Place an accessory alignment mark 4" in from end of aluminum, see **fig 3a** and **fig 3b**.
- Step 6:** Mount aluminum to wall with the appropriate hardware according to wall construction. Refer to **fig 4** for splicing of aluminum retainer as required on longer handrail lengths. To prevent interference with splice hardware, locate splice joints a minimum of 4" from bracket locations.
Suggested hardware:
- Drywall: Toggle® brand toggle bolts
 - Masonry: Plastic Alligator® insert
- Step 7:** Install 4" wide accessory bases on retainer, align roughly with mark provided in **step 5**. Press downward firmly to ensure part is seated squarely. Drill pilot holes (#29 bit) in the hardwood base using the accessory mounting holes drilled in **step 5** as a location guide. Secure parts with #8 wood screws provided, see **fig 5**.
Note: Corners and return bases are installed before the upper wood handgrip is attached.
- Step 8:** Drill and countersink bumper guard mounting holes along bottom edge of aluminum retainer for #8 flat head wood screws provided, see **fig 3a** and **fig 6**.
Space holes:
- No less than 3/4" from butt joints in wood bumper guard
 - No more than 24" on center
 - In additional locations as required to hold wood true
- Step 9:** Measure between molded connectors and cut accent strip. Accent should extend 1/4" beyond ends of retainer to mate fully with the molded connector, see **fig 7**. Place accent strip in finger groove of rail, with ID marks up, see **fig 8**.
- Step 10:** Apply a bead of construction adhesive to both vertical faces of mounting groove in the accessory wood tops, see **fig 9**. Install over molded connector, accent strip, and aluminum retainer. Press down firmly to seat the accessory squarely against the aluminum. Hold tops in place against retainer using two wraps of packaging tape. Protect wood finish with paper.
Caution:
- Do not apply glue to areas that will mate with molded connector.
 - Do not apply adhesive to the top face of mounting groove or wood will not seat properly on aluminum.
- Step 11:** Measure between wood tops and bases. Cut handrail and bumper guard to fit accordingly. Offset butt joint in wood rails from splice in aluminum retainer. Care should be taken to select the straightest lengths of wood for the longest handrail spans. Select wood of similar grain and coloration to best match accessories and when joining sections end to end.
Note: All cuts must be square and deburred. Deburr using 120 grit sand paper being careful not to damage the finish.
- Step 12:** Color the perimeter of all cut ends of wooden rails using a stain pen or touch-up stain, see **fig 10**.
- Step 13:** Place wood bumper guard over the aluminum retainer starting at one end of the span. Drill pilot holes in bumper guard (#29 bit) using countersunk holes as a location guide. Secure in place with #8 wood screws provided, see **fig 6**.
- Step 14:** Apply a bead of construction adhesive to both vertical faces of the wood handrail mounting groove, see **fig 9**.
Caution:
- Do not apply adhesive to the top face of mounting groove or wood will not seat properly on aluminum.
- Step 15:** Install wood handrail over the aluminum retainer. Align wood handrail at all returns, butt joints and corners, clamp if necessary. Clamp wood handrail to retainer on longer spans (or as required) using two wraps of packaging tape (protect wood and plastic finishes with paper). Remove all clamps and tape after adhesive has set.
- Step 16:** Install flexible bumper cushions. Starting at one end, trim bumper flush at wall end of return, insert bumper into groove in wood base. Install so bumper cushions will span butt joints in wood profiles and accessories, see **fig 11**. To prevent shrinking, be sure not to stretch bumper during the installation process, compress lightly to provide backpressure as bumper is pressed into place.

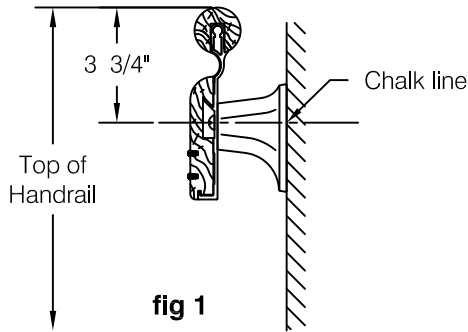


fig 1

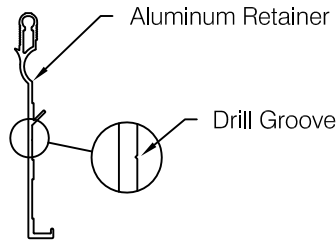


fig 2

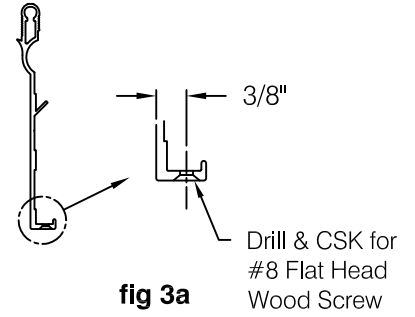


fig 3a

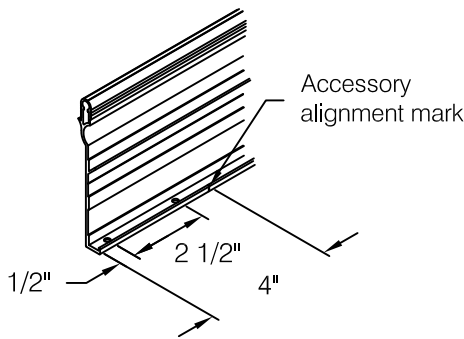


fig 3b

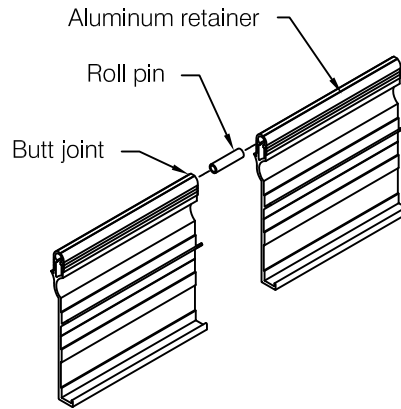
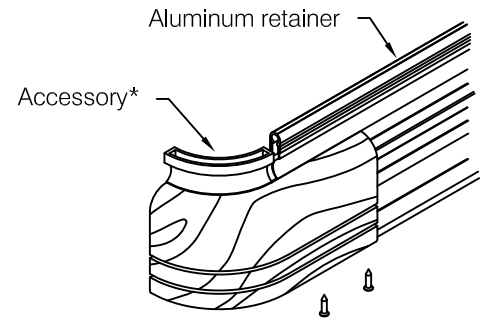


fig 4



* Wall return shown, outside corner similar

fig 5

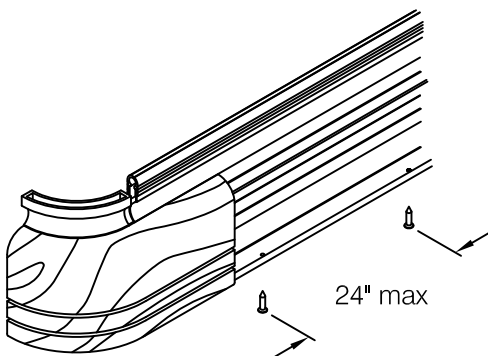


fig 6

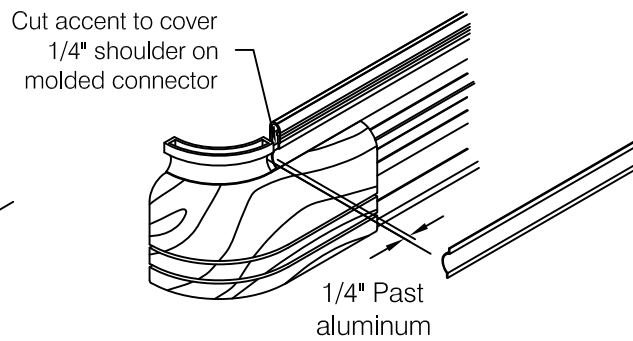


fig 7

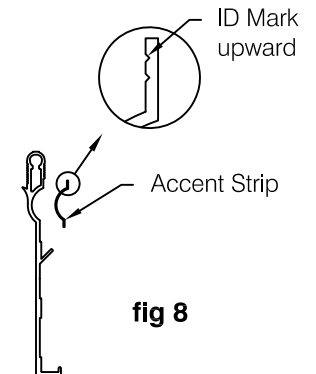


fig 8

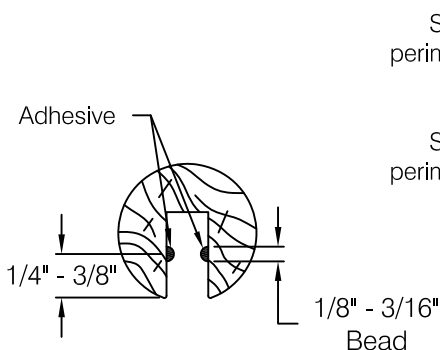


fig 9

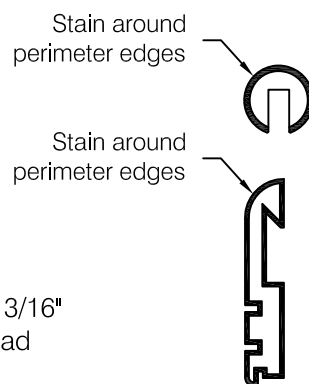


fig 10

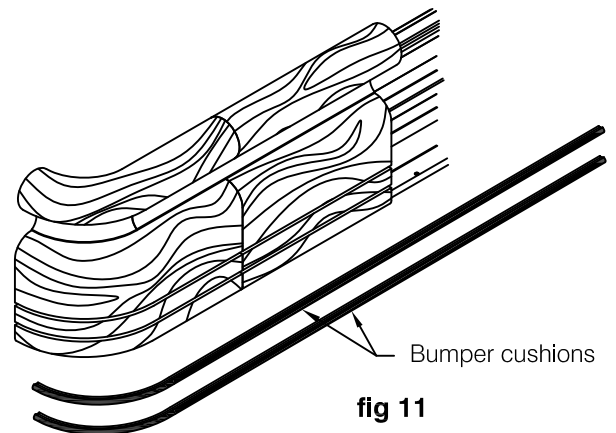
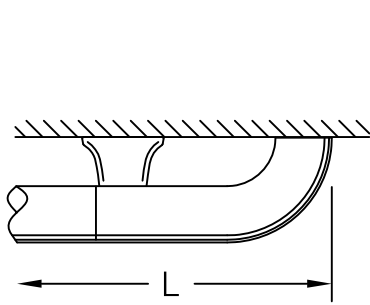
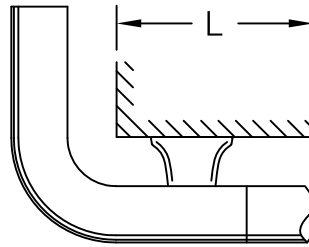


fig 11

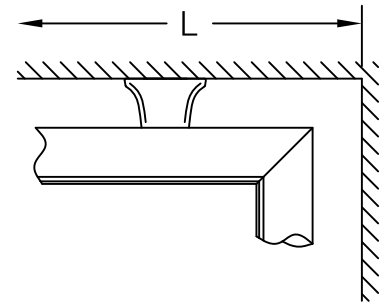
Cutting Adjustment Diagrams and Schedule



Return



Outside Corner



Inside Corner
Mitre

	Aluminum Retainer	Wood Base	Wood Handrail
Return	L - 3 3/16"	L - 7 3/16"	L - 7 3/16"
Outside Corner	L - 0"	L - 4"	L - 4"
Inside Corner	Miter	Miter	Miter

Important: Wood handrail, wood bumper guard, and accent strip to be cut to fit after aluminum and accessories have been installed.

Minimum Layout Configurations

