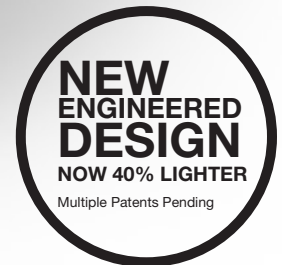


# FHC **ACHIEVE**™

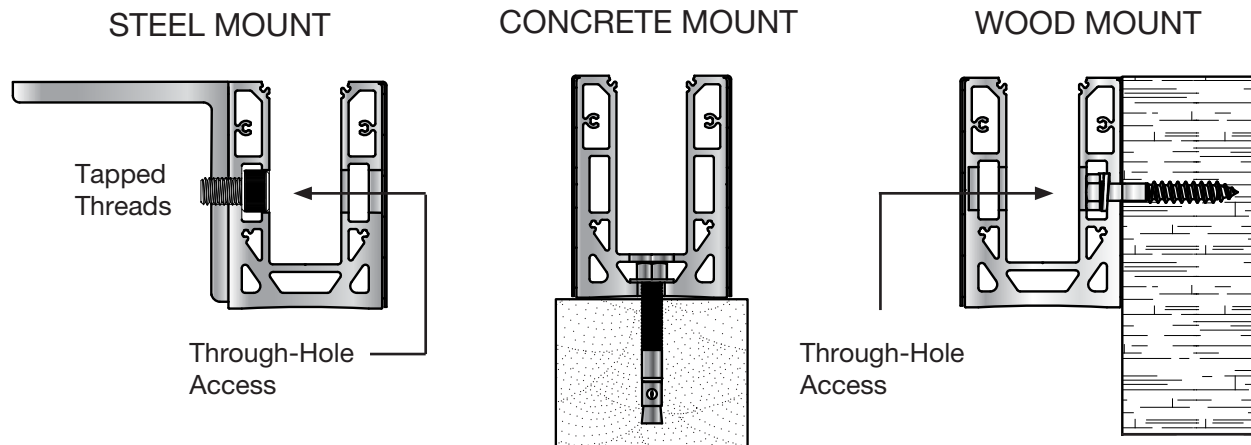
FGR FRAMELESS GLASS RAILINGS



Glass is not included and may require fabrication. Detailed information inside.

## BASE SHOE MOUNTING OPTIONS

**CAUTION: IMPROPER MOUNTING OF ARCHITECTURAL RAILING COMPONENTS CAN RESULT IN SEVERE INJURY OR EVEN DEATH. PLEASE CONSULT A QUALIFIED STRUCTURAL ENGINEER FOR THE APPROVAL OF INSTALLATION PROCEDURES AND MATERIALS AND REFER TO FHC ESR-4814 EVALUATION REPORT.**



ACHIEVE™ Base Shoe profiles are pre-drilled for use with standard fasteners. On Side-Mounted applications, through-holes are required in order to access the fastener heads. Once in place, cladding is applied thereby covering the access holes.

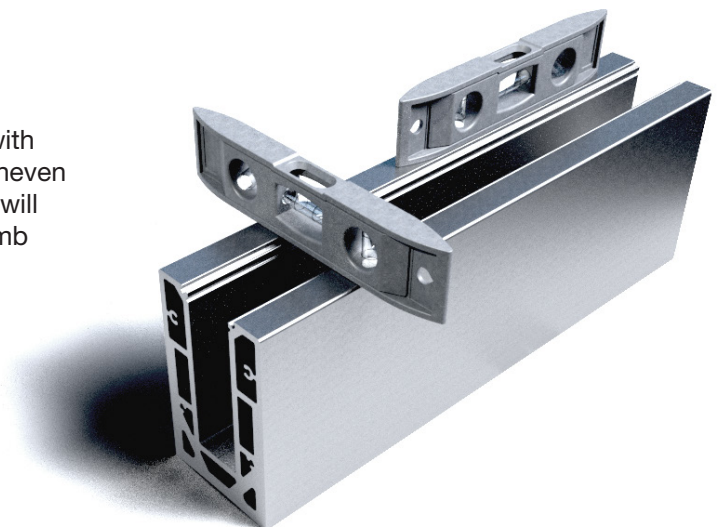
### **IMPORTANT:**

SEAL ALL FASTENER HEADS AND BUILDING PENETRATIONS WITH FHC 5790 SILICONE BEFORE INSTALLING GLASS.

## BASE SHOE INSTALLATION

### **Professional Tip:**

Level all ACHIEVE™ Base Shoes from side-to-side and front-to-back before mounting with fasteners. Use metal shims under the shoes on uneven or sloped surfaces. A level base shoe installation will make it easier to obtain a more accurate and plumb installation.



## BASE SHOE MOUNTING PROCEDURE

### STEP 1:

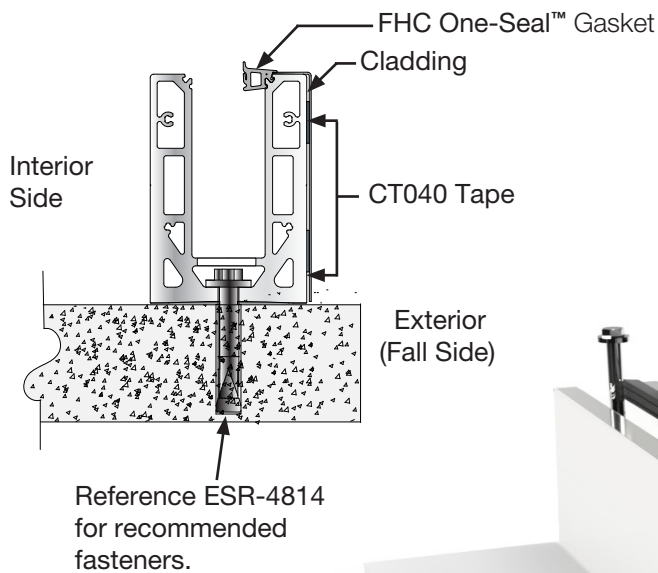
Complete the Base Shoe attachment to the floor or stair substrate using approved fasteners. (Reference ESR-4814 for the recommended fasteners) Continue to check for a level base shoe in both directions.

### STEP 2:

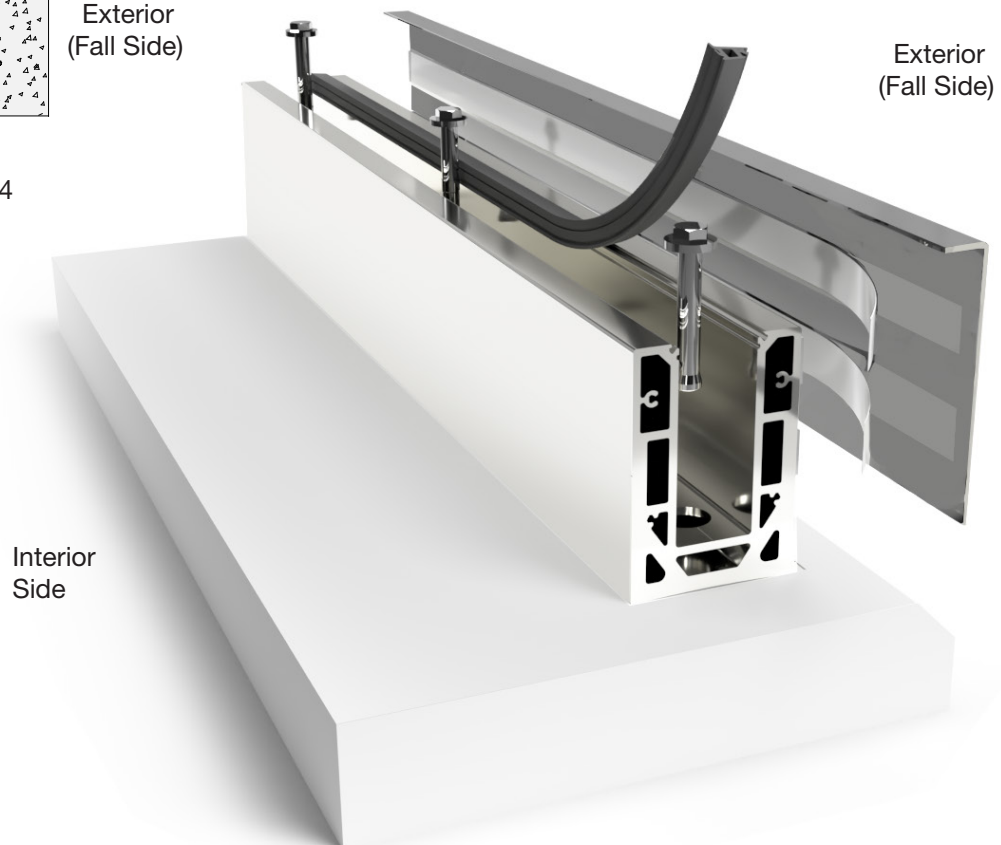
Adhere Cladding on the outside (fall side) of the base shoe using #CT040 Very High Bond Adhesive Tape or #S790BL Silicone Sealant or a combination of both.

### STEP 3:

Insert FHC One-Seal™ Gaskets into the gasket reglets on the outside (fall side) as shown below. If you are wet glazing, omit this step.



Install the Fall Side cladding and outside gaskets prior to installing the glass panels.



# ACHIEVE™ SHIM INSTALLATION

## STEP 1:

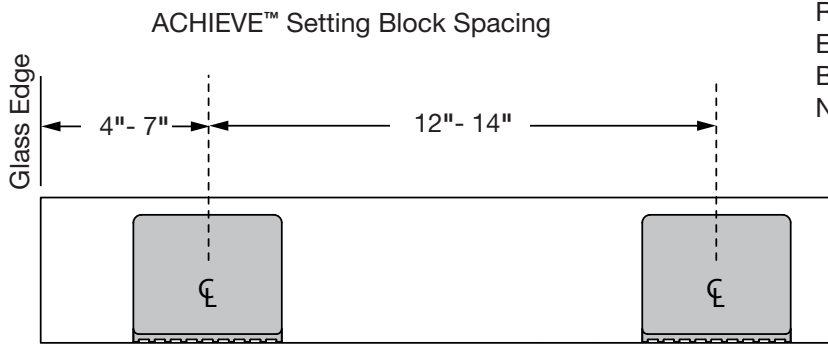
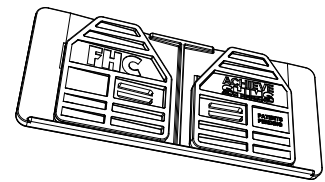
Use the chart in Figure 1 below to determine the number of ACHIEVE™ Shims required for each glass panel to be installed in the ACHIEVE™ Base Shoe.

Place an initial ACHIEVE™ Setting Block into the glass receiving pocket's lower outside corner with the ribbed backside touching the base shoe and centered approximately 4" to 7" from the glass edge. Place a second Setting Block opposite and equal distance from the opposing glass edge.

## STEP 2:

Place remaining ACHIEVE™ Setting Blocks 12" to 14" apart as measured on center and evenly spaced with the same orientation as in Step 1.

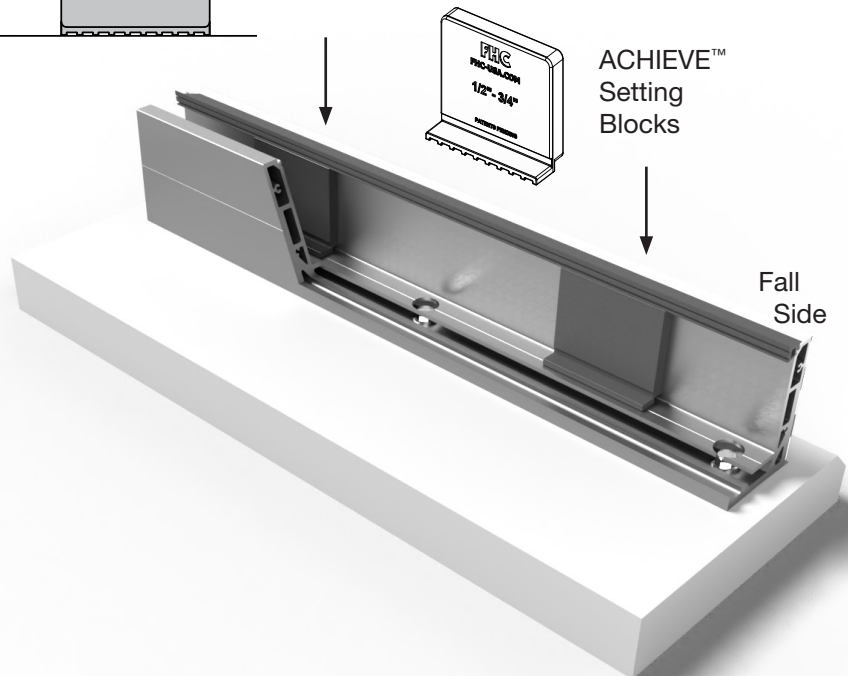
**NOTE: ONE SHIM SET WILL BE REQUIRED FOR EACH SETTING BLOCK IN THE NEXT STEP.**



Minimum ACHIEVE™ Shims Sets Required

MINIMUM SHIM SETS	GLASS LITE WIDTH
1	UP TO 14"
2	14" TO 28"
3	28" TO 42"
4	42" TO 56"
5	56" TO 70"
6	70" TO 84"
7	84" TO 96"

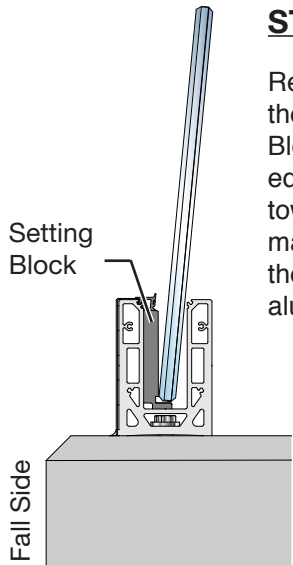
FIGURE 1



## GLASS INSTALLATION

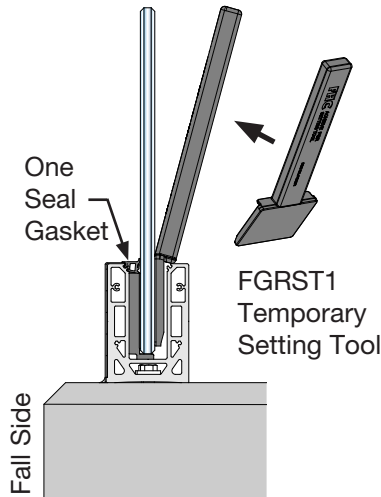
### STEP 3:

Rest the glass panel onto the lower leg of the Setting Block, with the glass top edge leaning slightly back toward the inside. Avoid making glass contact with the One-Seal™ Gasket and aluminum base shoe.

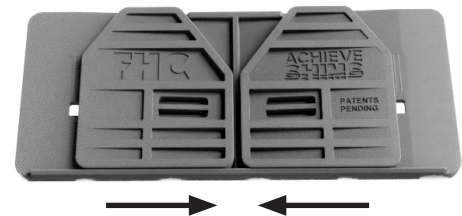


### STEP 4:

Stand the glass up so that it is vertically plumb. It should lightly compress the One Seal™ Gasket. Insert a Temporary Setting Tool at the center of the glass panel to hold it in place.



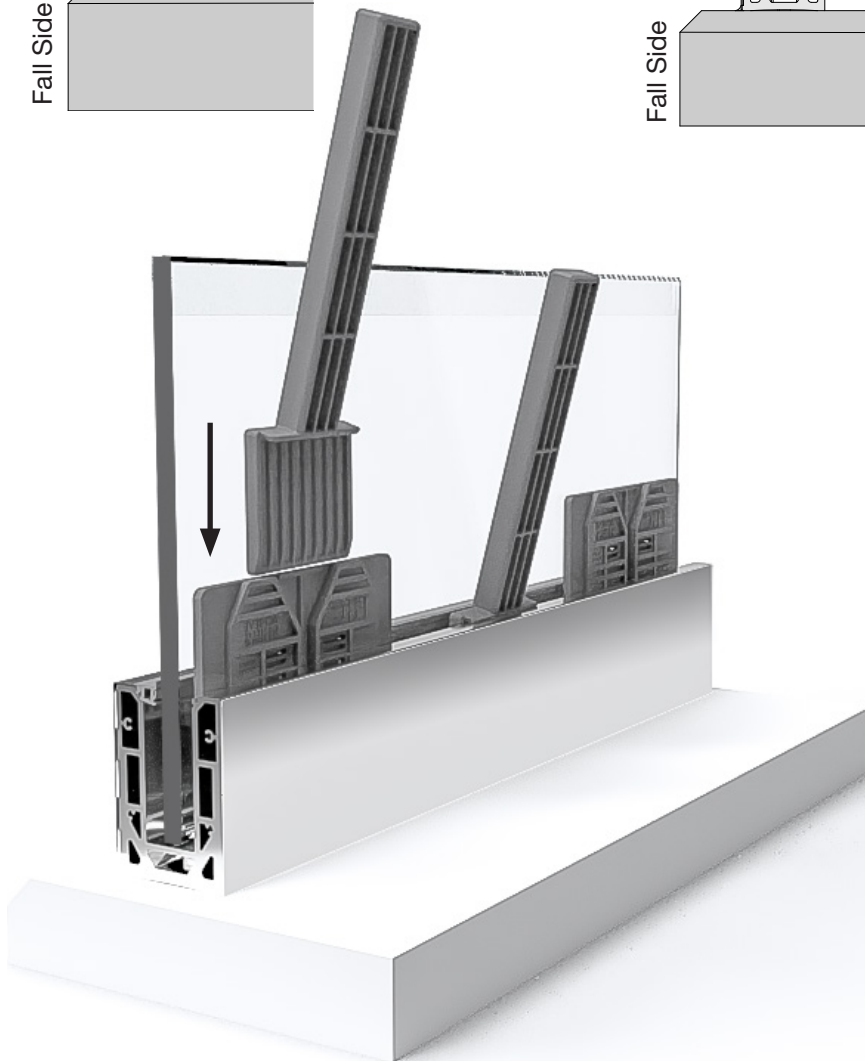
ITEM NO.  
ACH2G /ACH3G  
Shim Sets



**IMPORTANT NOTE:** Slide both shims towards the center prior to inserting into the base shoe.

### STEP 5:

Insert a Shim Set, centered on each setting block location between the glass and the base shoe either by hand or using the second Temporary Setting Tool, press the Shim Sets down until making contact at the bottom of glass receiving pocket.

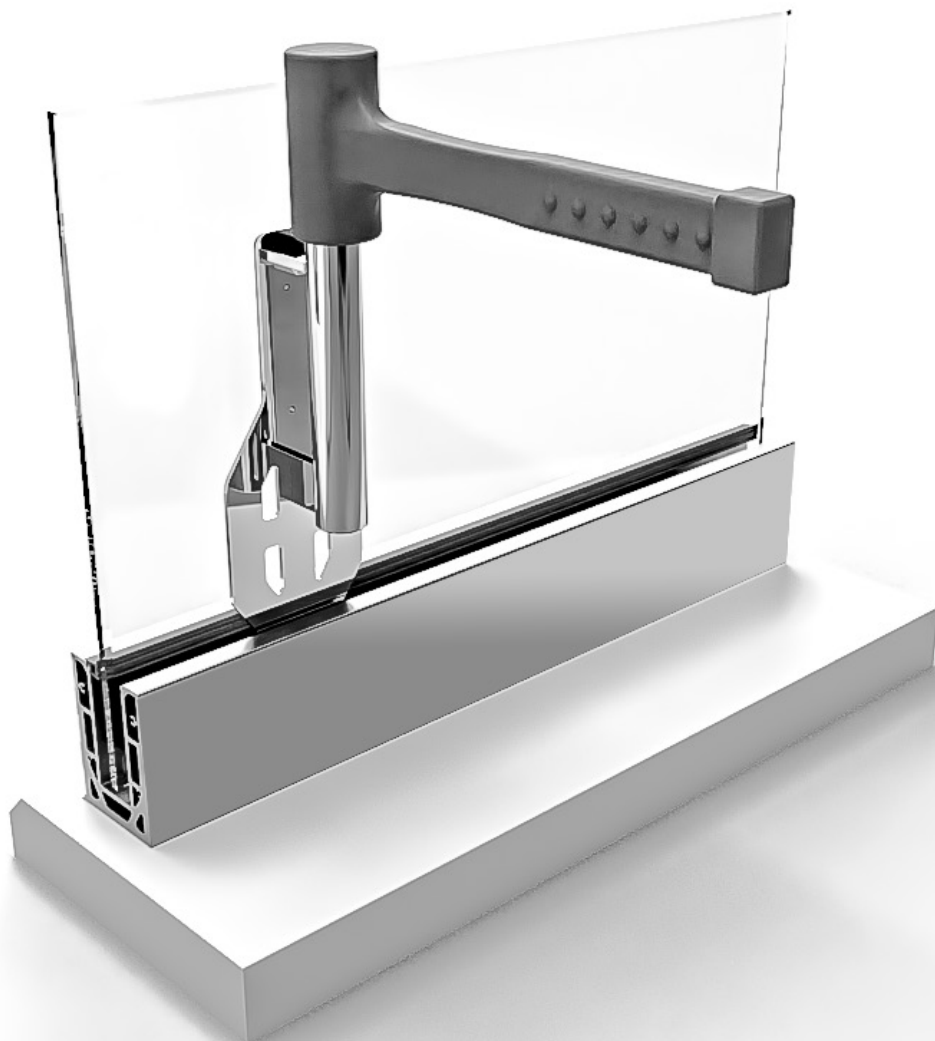
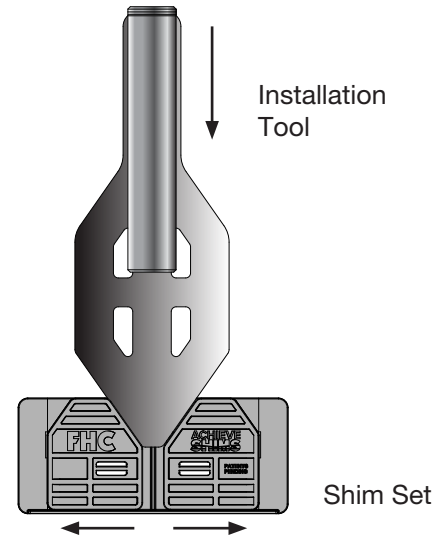




## GLASS INSTALLATION

### STEP 6:

Align and plumb the glass panel. To lock the Shims, insert the spade shaped Installation Tool's tip into the gap formed between the two movable shim pieces. Place the tool's black plastic protection pad against the glass. Grasp the tool's round handle, align vertically, and hold firmly against the glass. Using the supplied 2 pound Dead Blow Hammer, strike the top of the tools round handle to spread the shims. As the Shims separate, the wedge design locks the glass panel in place. **NOTE:** Strike the tool twice to lock each Shim Set.



## GLASS INSTALLATION

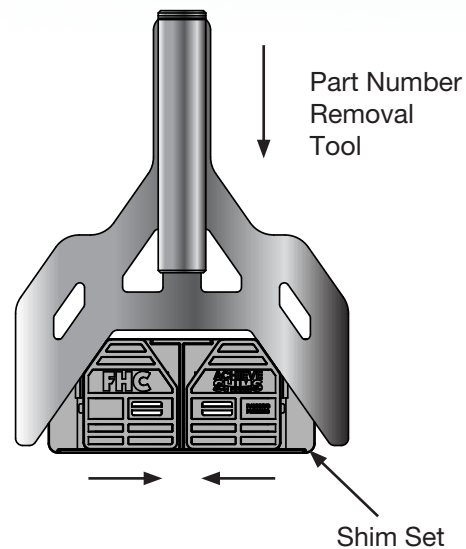
### STEP 7:

Install the interior One-Seal™ Gasket. Use the included vinyl roller to make the appearance even. Try to avoid pushing down the dust lip that contacts the glass. Using a short piece of backer rod and FHC Item No. S790BL Neutral Cure Silicone Sealant, fill the gap between each glass panel, and all exposed base shoe glass panel, and all exposed base shoe glass pocket locations. **NOTE:** The silicone seal should have a 1/4" minimum thickness.



### STEP 8:

To adjust or remove a glass panel start by removing the One-Seal™ Gasket. Use the fork-shaped Removal Tool. Insert the tool's tips into the gap between the glass contact shim piece, and the base shoe, straddling the two movable shim pieces. Using the same technique as with the Installation Tool, strike the Removal Tool two or three times until the Shim Set is loosened. Do this for all Shim Sets contacting the glass to be removed.



## CAP RAIL INSTALLATION

Cap Rails, also called “Guards or Top Rails” are usually required on elevated glass balusters that present a falling hazard. Examples include stairs, balconies, and elevated walkways.

Exceptions may be found in the ICC-ES Evaluation Report ESR-4814 for the ACHIEVE™ Frameless Glass Railing System located in the Appendices of this document.

Cap Rails add stability to segmented glass panels and protect the top glass edge from chipping or breaking.

IBC and IRC both require all Cap Rails to be at least 42" above the finished floor and span at least (3) glass panels if possible.

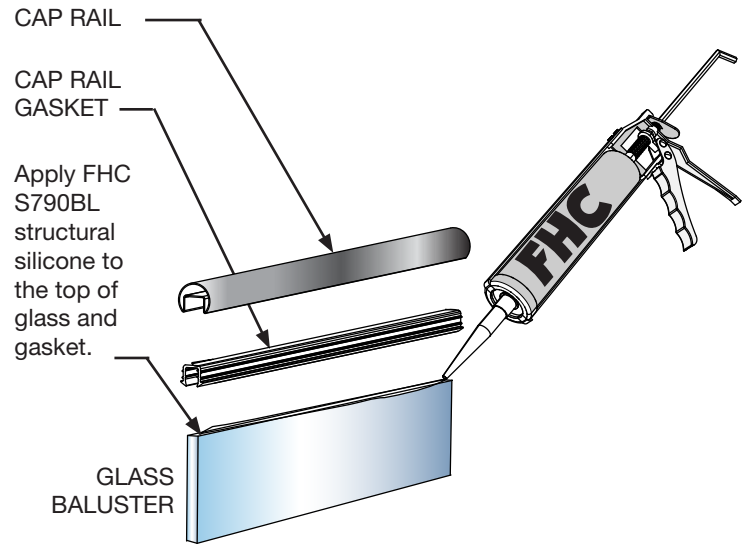


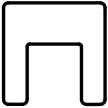














FIG 2 Glass Baluster with RC15 Stainless Cap for 1/2" Glass

- |   |   |  |
|---|---|--|
|  |    |   |
| RC2 2"X1" STAINLESS CAP RAIL FOR 1/2", 9/16" 5/8", 11/16 & 3/4" GLASS   | SC15 1.5" STAINLESS CAP RAIL FOR 1/2", 9/16" 5/8", 11/16 & 3/4" GLASS   | SC20 2" STAINLESS CAP RAIL FOR 1/2", 9/16" 5/8", 11/16, 3/4" & 13/16" GLASS  |
|        |  |  |
| RC15 1.5" STAINLESS CAP RAIL FOR 1/2", 9/16" 5/8", 11/16 & 3/4" GLASS   | RC20 2" STAINLESS CAP RAIL FOR 1/2", 9/16" 5/8", 11/16, 3/4" & 13/16" GLASS   | RC19 1.9" ALUMINUM CAP RAIL FOR 1/2", 9/16" 5/8", 11/16, 3/4" & 13/16" GLASS   |
|    |    |   |
| CRVG1 V-CUT STAINLESS CAP RAIL FOR 1/2", 9/16" & 5/8" GLASS   | CRU1 ALUMINUM CAP RAIL FOR 1/2", 9/16" & 5/8" GLASS   | CRVG7 V-CUT STAINLESS CAP RAIL FOR 11/16" & 3/4" GLASS   |
|    |    |   |
| CRVG8 V-CUT STAINLESS CAP RAIL FOR 13/16" GLASS   | CRU8 ALUMINUM CAP RAIL FOR 13/16" GLASS   | CREC5- STAINLESS STEEL GLASS EDGE PROTECTOR FOR 1/2", 9/16" AND 5/8" GLASS   |
|    |    |   |
| CREC7- STAINLESS STEEL GLASS EDGE PROTECTOR FOR 11/16" AND 3/4" GLASS   | CRU7 ALUMINUM CAP RAIL FOR 11/16" & 3/4" GLASS  | ALUMINUM GLASS EDGE PROTECTOR FOR 9/16" GLASS  |



## OPTIONAL HAND RAIL INSTALLATION



### **STEP 1:**

FHC Glass Mounted Handrail Brackets, require a 3/4" hole in glass to provide clearance for the mounting plates and allow movement for minor adjustments that may have to be made. Refer to your shop drawings for hole locations.

### **STEP 2:**

Install the brackets for the entire run of hand rail on one side. Leave each bracket slightly loose so that they can be positioned to match the hand rail.

### **STEP 3:**

Temporarily clamp the hand rail to the bracket saddles and attach with the bracket screws provided. Refer to the FHC website for a complete collection of hand rail hardware and expert advice.

**NOTE:** Reference the FHC ESR-4814 for recommended Hand Rail Bracket spacing.

