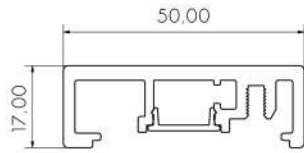
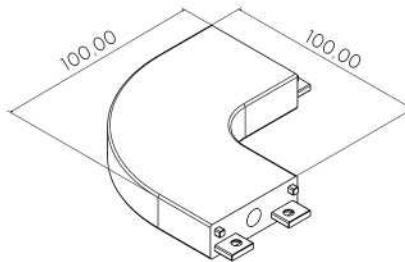


## 1

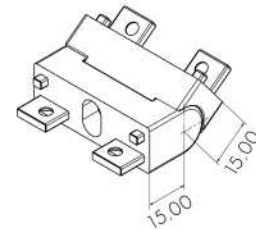
### PRODUCT OVERVIEW



RICHIE RAIL 17 HANDRAIL EXTRUSION



RICHIE RAIL 17 90° BEND



RICHIE RAIL 17 VARIABLE ANGLE JOINER

## 2

### PLAN INSTALLATION

**IMPORTANT NOTE: WALL BRACKETS SHOULD ALWAYS BE FIXED TO A SOLID MATERIAL (E.G. TIMBER). DO NOT USE ON TEXTURED SURFACES SUCH AS ROUGH CAST WALLS OR TEXTURED WALL PAPER. MAXIMUM SPAN/DISTANCES:**

- BETWEEN WALL BRACKETS IS 750MM (MEASURED PARALLEL WITH THE PITCH OF THE HANDRAIL).
- FROM A JOIN IS 50MM (AT LEAST ONE SIDE OF A JOIN).
- FROM AND END IS 100MM.
- FROM A VARIABLE ANGLE BEND IS 50MM
- FROM A 90° BEND IS 50MM

1. MEASURE REQUIRED HEIGHT OF TOP OF HANDRAIL ABOVE STAIR PITCH (CHECK LOCAL BUILDING REGULATIONS FOR HEIGHT), THEN RUN A STRING LINE 98MM BELOW THE REQUIRED FINISHED HEIGHT OF THE HANDRAIL. USE THIS LINE TO MARK THE FIXING POINTS. THIS LINE IS ALSO THE CENTRE LINE OF THE MOUNT FLANGE (SEE PAGE 2 FOR MORE DETAIL).

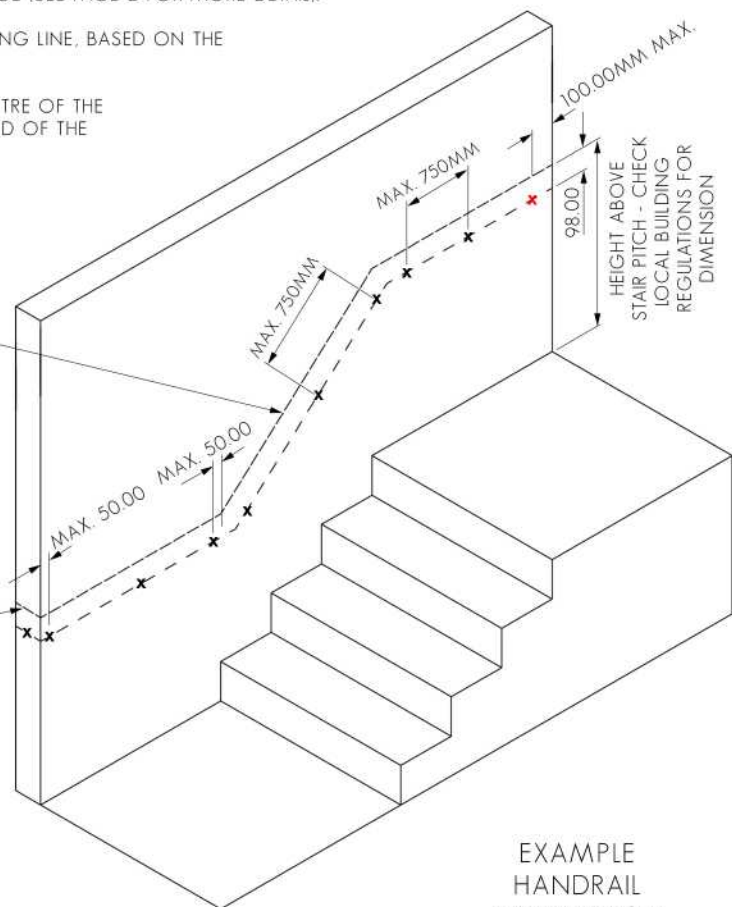
2. MARK FIXING POINT LOCATIONS ALONG THE STRING LINE, BASED ON THE MAXIMUM SPANS/DISTANCES AS OUTLINED ABOVE.

3. BRING POWER CABLE THROUGH WALL AT THE CENTRE OF THE FIXING POINT. THIS WOULD TYPICALLY BE AT ONE END OF THE HANDRAIL - SEE FIG. 1.

TOP OF FINISHED HANDRAIL LOCATION (LINE PROJECTED ONTO WALL FOR CLARITY)

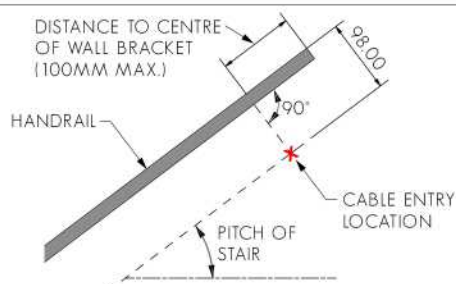
x = FIXING POINTS  
x = CABLE ENTRY FIXING POINT

FIXING POINT LINE



EXAMPLE HANDRAIL INSTALLATION

FIG. 1 - LOCATE CABLE ENTRY POSITION



## 3

### INSTALL WALL BRACKETS

**IMPORTANT NOTE: WALL BRACKETS SHOULD ALWAYS BE FIXED TO A SOLID MATERIAL (E.G. TIMBER). DO NOT USE ON TEXTURED SURFACES SUCH AS ROUGH CAST WALLS OR TEXTURED WALL PAPER. MAXIMUM SPAN/DISTANCES:**

- BETWEEN WALL BRACKETS IS 750MM (MEASURED PARALLEL WITH THE PITCH OF THE HANDRAIL).
- FROM A JOIN IS 50MM (AT LEAST ONE SIDE OF A JOIN).
- FROM AND END IS 100MM.
- FROM A VARIABLE ANGLE BEND IS 50MM
- FROM A 90° BEND IS 50MM

1. IF USING PLASTERBOARD SPACERS (RECOMMENDED FOR ANY INSTALLATION ONTO PLASTERBOARD), USE A 38MMØ HOLE SAW TO DRILL HOLE THROUGH PLASTERBOARD AND REMOVE CUT-OUT TO REVEAL TIMBER FIXING BEHIND. IF SPACER IS NOT REQUIRED, GO TO STEP 3.

2. FEED LOW VOLTAGE CABLE FROM WALL THROUGH PLASTERBOARD SPACER AND INSERT SPACER INTO HOLE IN PLASTERBOARD.

3. FEED LOW VOLTAGE CABLE THROUGH MOUNT FLANGE AND SCREW-FIX MOUNT FLANGE (SEE FIG.2 FOR MOUNT FLANGE ORIENTATION) TO WALL. ENSURE O-RING IS PROPERLY POSITIONED IN MOUNT FLANGE GROOVE.

4. PUSH COVER PLATE A SHORT WAY ONTO WALL BRACKET, THEN PUSH WALL BRACKET OVER MOUNT FLANGE. PUSH COVER PLATE OVER MOUNT FLANGE SO IT SITS TIGHT AGAINST WALL. LOCK WALL BRACKET TO MOUNT FLANGE USING THE 2X M4X5 GRUB SCREWS.

5. REPEAT STEPS FOR SOLID BRACKETS (THOSE WHICH DO NOT HAVE A POWER FEED).

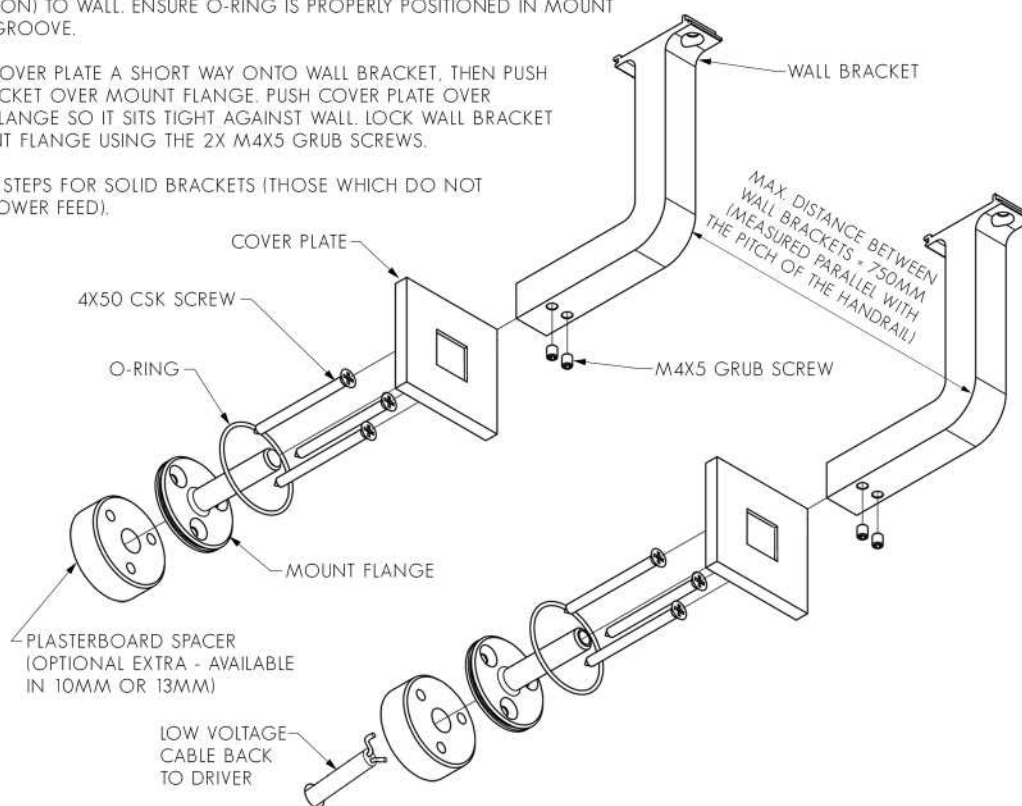


FIG. 2 - MOUNT FLANGE SHOULD BE ORIENTATED WITH TWO SCREWS AT TOP

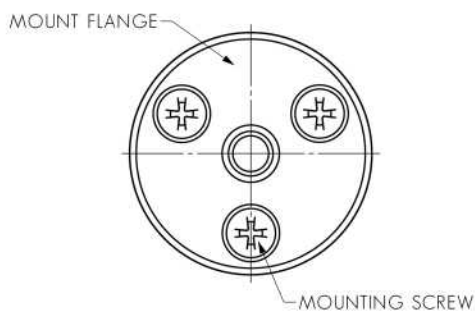
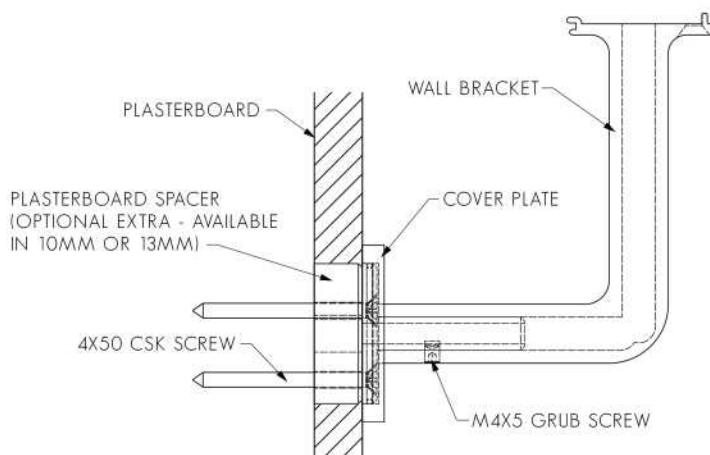


FIG. 3 - ENSURE WALL BRACKETS ARE ASSEMBLED CORRECTLY & FIRMLY.



## 4

### INSTALL HANDRAIL, BENDS AND ANGLE JOINERS ON TO WALL BRACKETS

NOTE: RICHIE RAIL 17 EXTRUSION IS NOT SYMMETRICAL. ONE SIDE HAS AN EXTRUDED SCREW RAIL WHICH MUST BE ON THE SIDE FARTHEST FROM THE WALL. SEE FIGURES 4 OR 5 ON PAGE 4 FOR DIRECTION.

1. START INSTALLING THE SYSTEM FROM ONE END. IN THE CASE OF THE EXAMPLE SHOWN ON PAGE 1, CUT THE FIRST LENGTH OF RICHIE RAIL 17 EXTRUSION TO THE REQUIRED LENGTH. ONLY USE A VERY SHARP BLADE SUITABLE FOR ALUMINIUM. CUT MUST BE ACCURATE AND CLEAN. DO NOT SCREW RICHIE RAIL 17 EXTRUSION TO WALL BRACKETS UNTIL AFTER LED STRIP HAS BEEN INSTALLED ON THE FOLLOWING PAGE - THIS SHOULD BE A "DRY-FIT" ONLY.

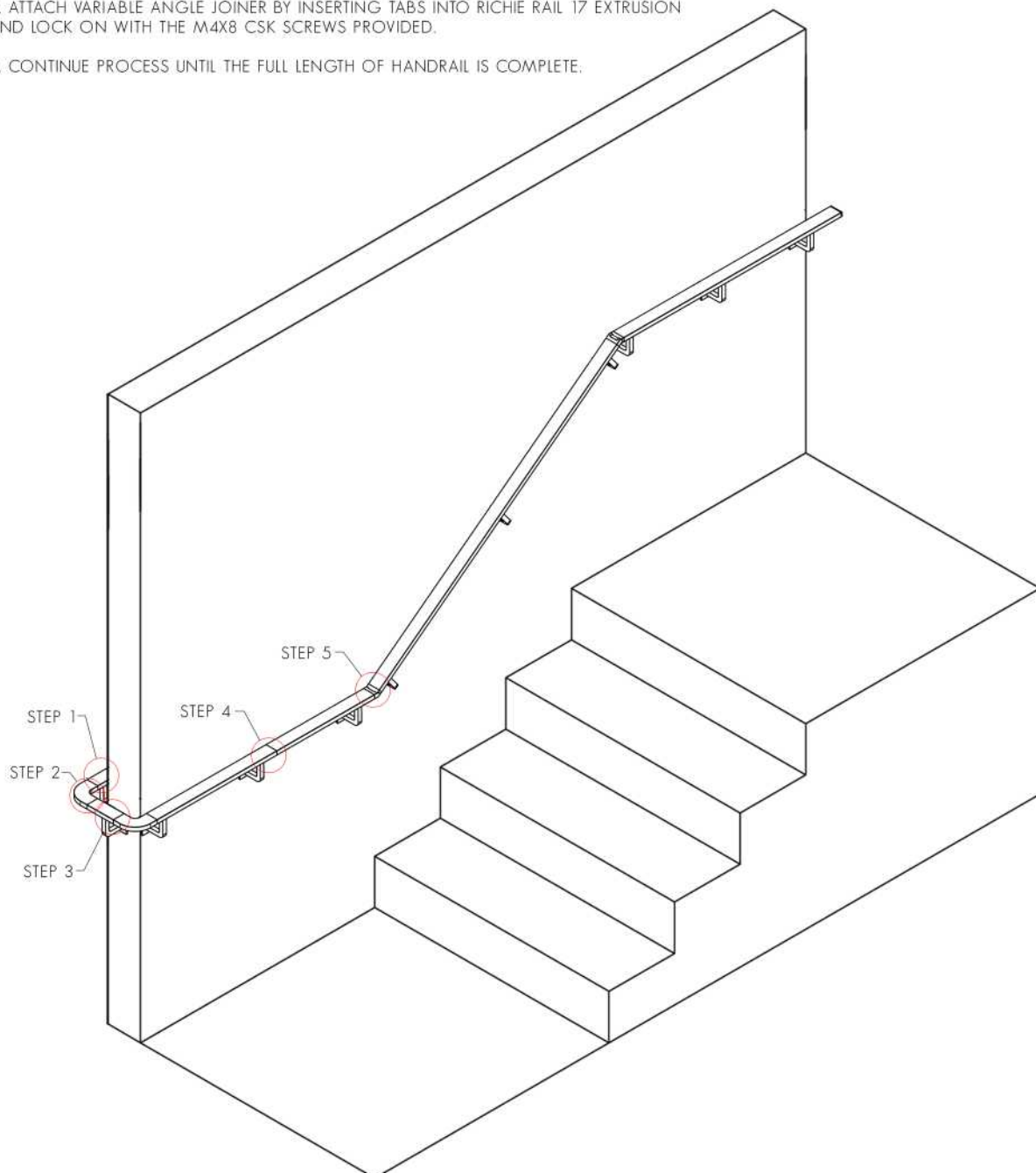
2. ATTACH 90° BEND BY INSERTING TABS INTO RICHIE RAIL 17 EXTRUSION AND LOCKING ON WITH THE M4X8 CSK SCREWS PROVIDED.

3. CUT THE NEXT LENGTH OF EXTRUSION AND ATTACH NEXT 90° BEND.

4. THE NEXT LENGTH OF HANDRAIL IN THE EXAMPLE REQUIRES A JOIN. MEASURE THE TOTAL LENGTH REQUIRED, THEN CUT THE TWO LENGTHS OF HANDRAIL, ENSURING THAT THE JOIN IS NO MORE THAN 50MM FROM A WALL BRACKET. SEE FIG. 4 ON PAGE 5 FOR LOCATION OF JOINERS.

5. ATTACH VARIABLE ANGLE JOINER BY INSERTING TABS INTO RICHIE RAIL 17 EXTRUSION AND LOCK ON WITH THE M4X8 CSK SCREWS PROVIDED.

6. CONTINUE PROCESS UNTIL THE FULL LENGTH OF HANDRAIL IS COMPLETE.





## 5 INSTALL END CAPS & LED STRIP

1. WHERE THERE ARE JOINS, LOCK TOGETHER ONTO JOINERS WITH GRUB SCREWS (SEE FIG. 4).
2. FEED LED STRIP CABLE THROUGH HOLE OR GAP IN DIFFUSER.
3. **IMPORTANT:** BEFORE MOUNTING LED STRIP, CLEAN EXTRUSION USING AN ALCOHOL BASED CLEANER.
4. REMOVE BACKING FROM LED STRIP TO EXPOSE STICKY SURFACE. LAY LED STRIP INTO EXTRUSION.
5. CLIP DIFFUSERS INTO EXTRUSION, ENSURING A FIRM CONNECTION (SEE FIG. 5).
6. CLIP ALUMINIUM LIDS INTO PLACES (IF USING - SEE FIG. 5).
7. PUSH END CAPS INTO EXTRUSION AND LOCK INTO PLACE USING M4X8 CSK SCREWS.

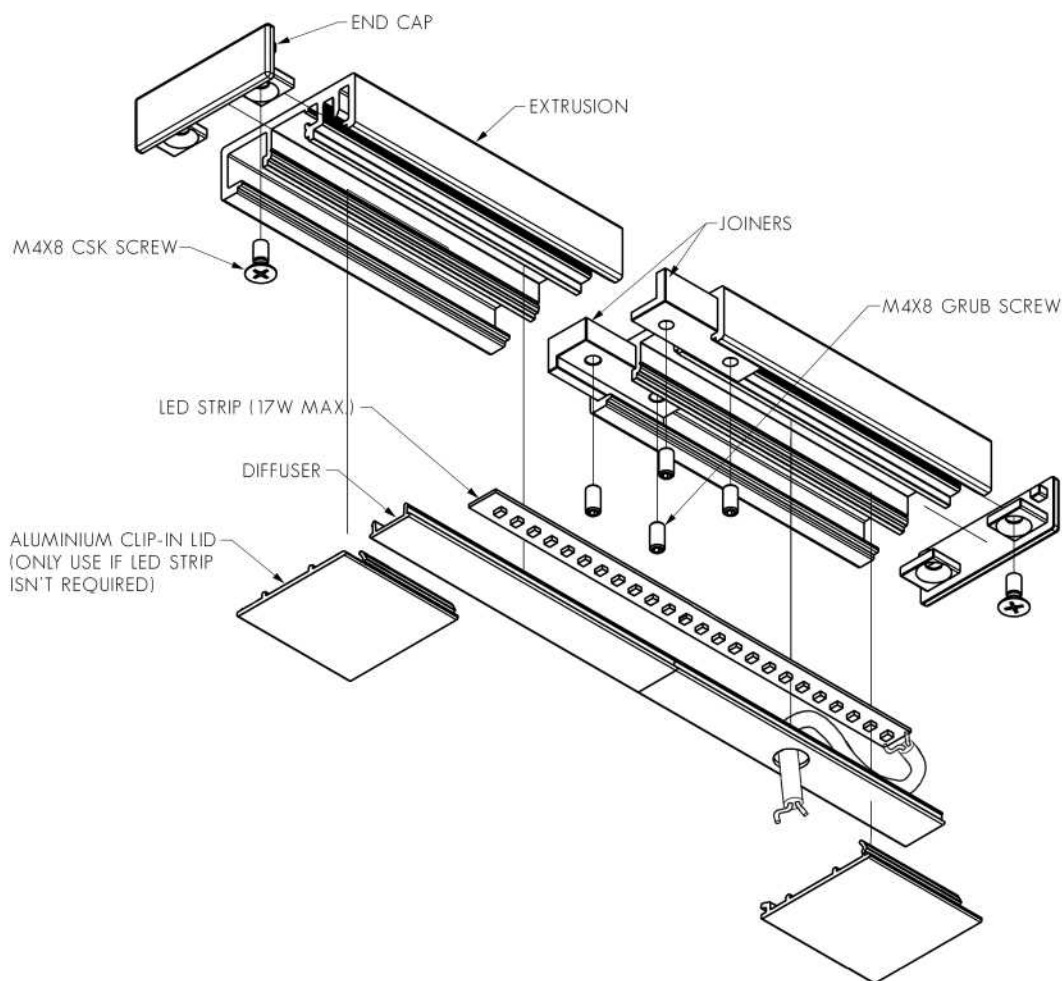


FIG. 4 - ENSURE JOINERS ARE LOCKED TOGETHER TIGHTLY

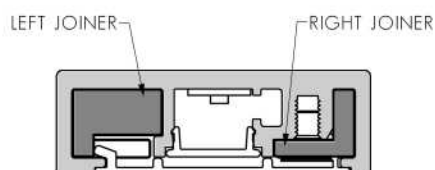
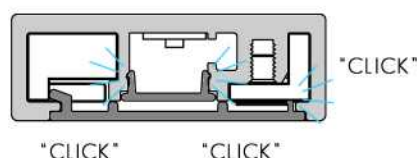


FIG. 5 - ENSURE DIFFUSER & LID ARE MOUNTED SECURELY



## 6 INSTALL EXTRUSION ON TO WALL BRACKETS

1. MAKE ELECTRICAL CONNECTION - SOLDER AND SHRINK LOW VOLTAGE CABLES TOGETHER AND PUSH INTO WALL BRACKET.
2. AFFIX RICHIE RAIL 17 EXTRUSION TO WALL BRACKETS USING M4X12 CSK SCREWS PROVIDED. ENSURE THEY ARE TIGHT. SEE FIG. 6.

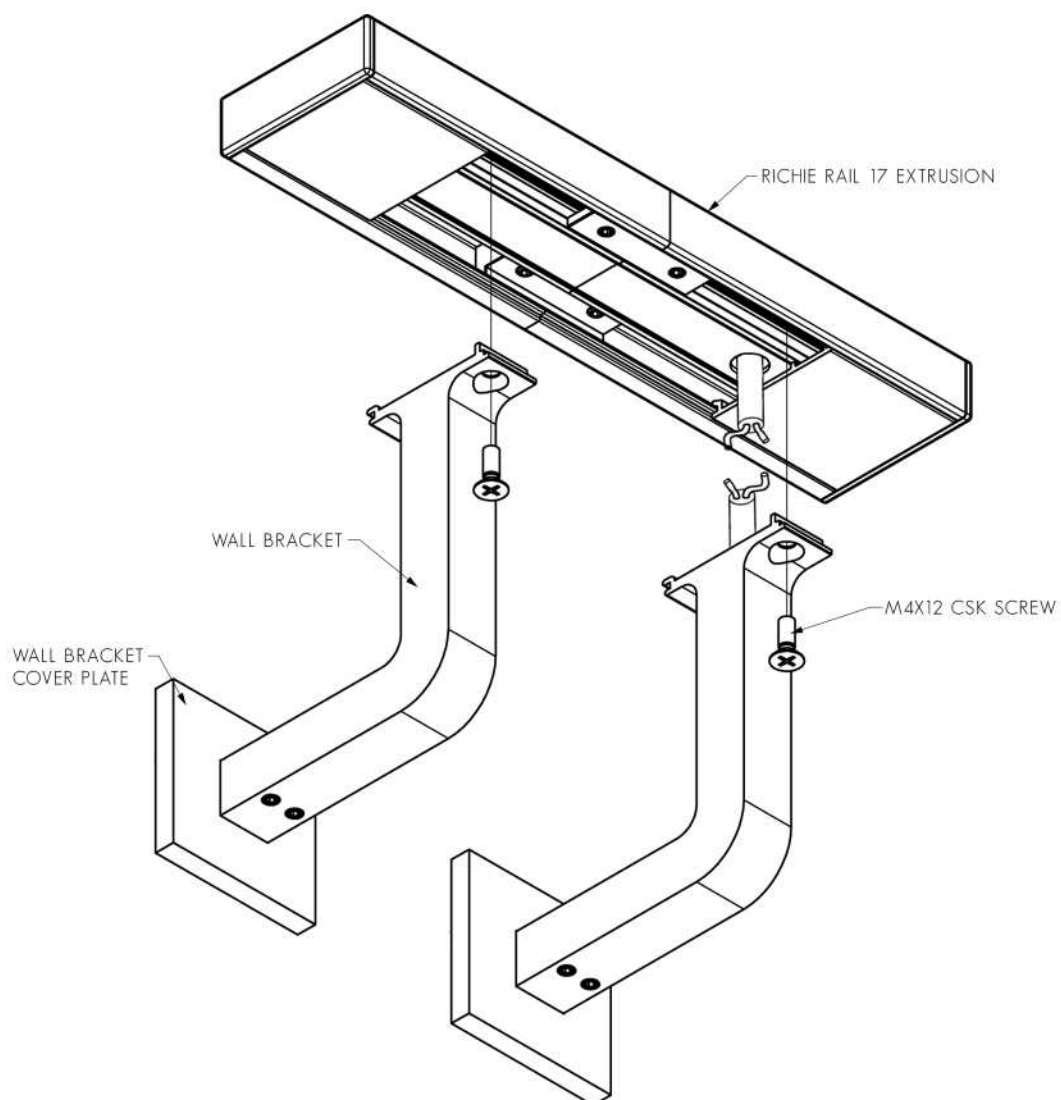


FIG. 6 - ENSURE WALL BRACKETS ARE SECURED TIGHTLY

