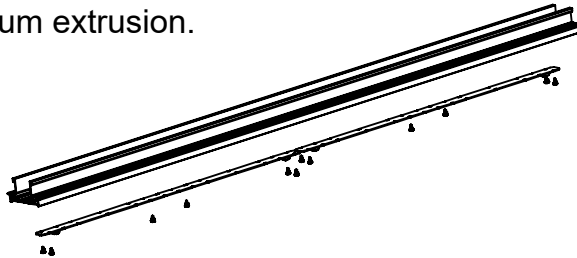
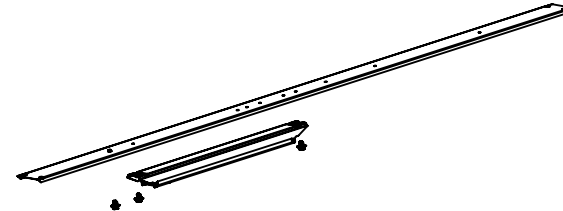


Assembly of the PROTUBE breaks down into 6 basic stages.  
Detailed explanations of how and why following on each corresponding page.

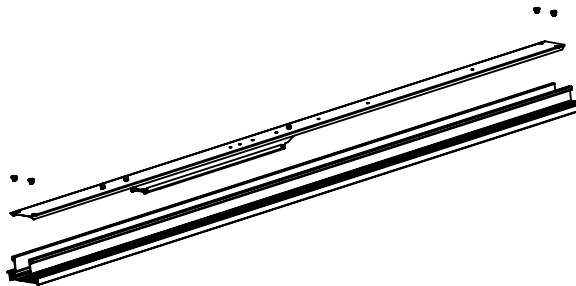
- ① Attach the LED boards to the aluminum extrusion.



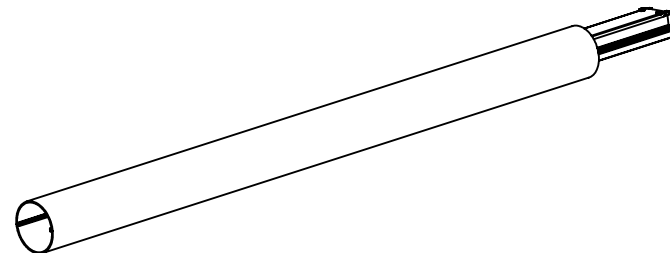
- ② Attach the driver to the driver cover.



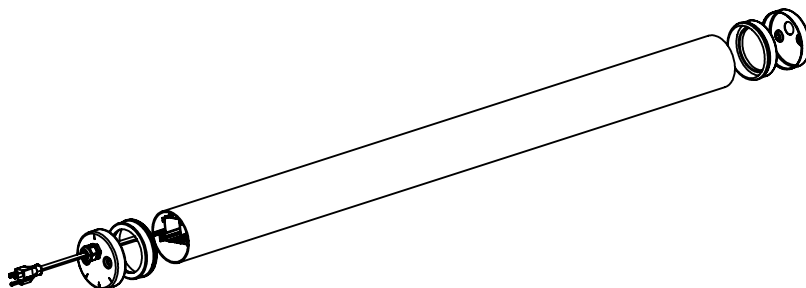
- ③ Combine the previous two assemblies to one another.



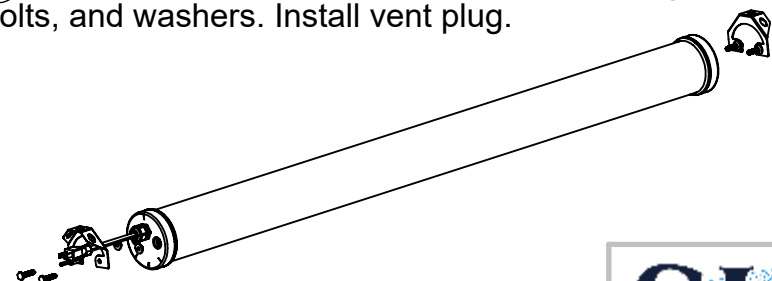
- ④ Slide the full internal assembly into the housing extrusion.



- ⑤ Press the end caps and ring gaskets into place.



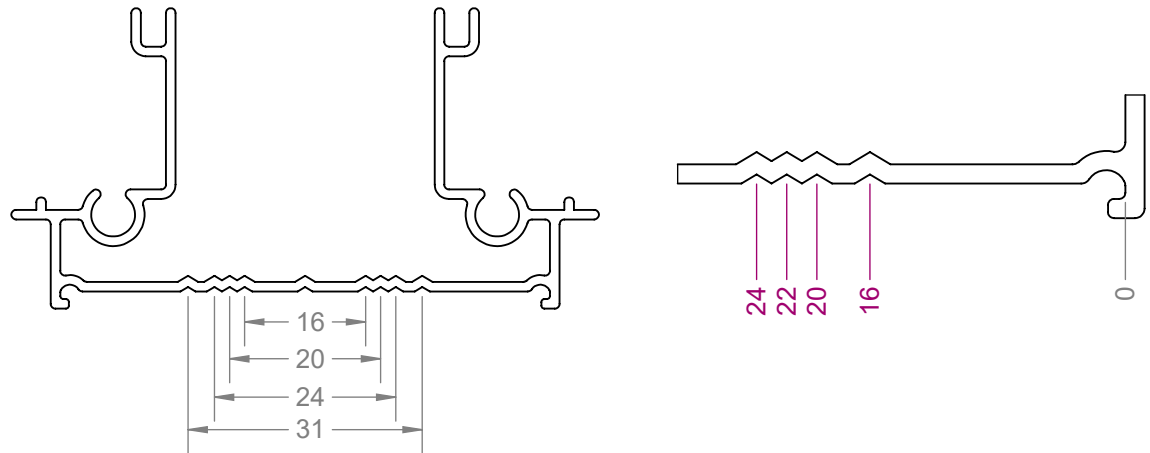
- ⑥ Lock up the PROTUBE with proper mounting, bolts, and washers. Install vent plug.



## ASSEMBLY GUIDE

## Stage 1 is attaching the LED boards to the aluminum extrusion.

The aluminum extrusion was designed to mount various board widths as both a single row option, or as a dual row option with utilizing the overhang on the outside of the board face.

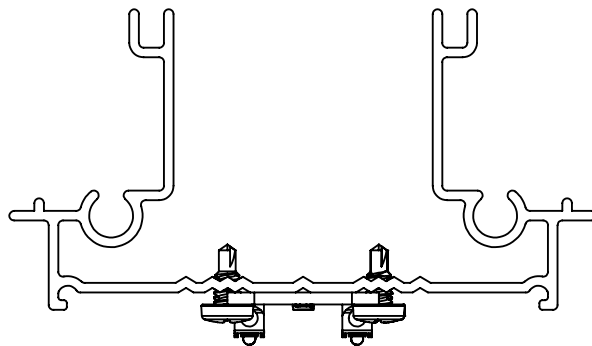
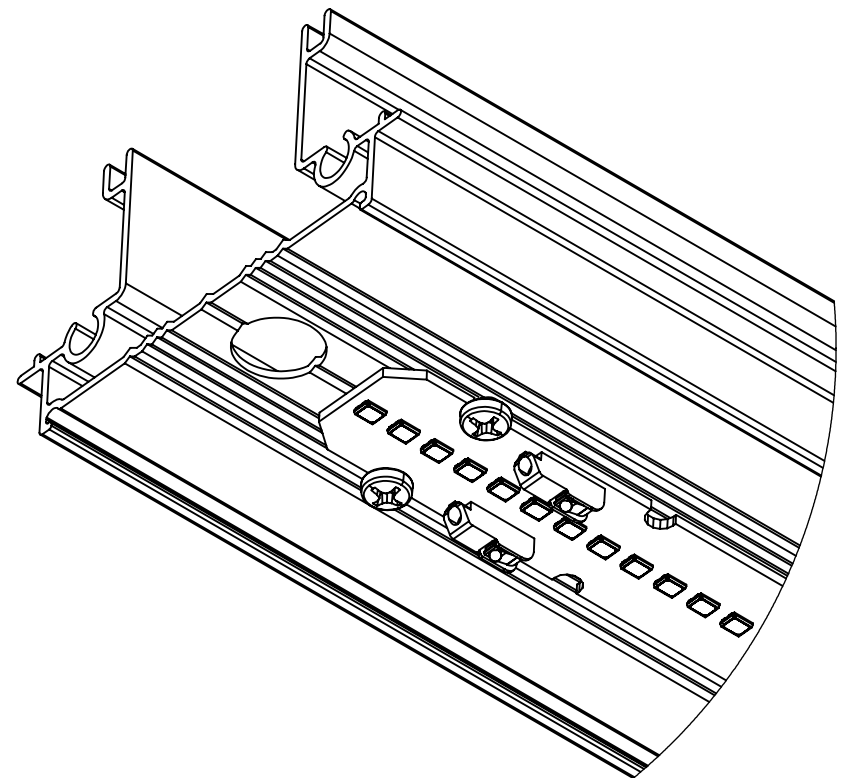


Unless special ordered, the aluminum extrusion comes with one 0.500" hole on just one end. Orientate the LED board so the initial input is next to this hole.

The optimal distance of the LED board from the end of the extrusion is 1.00" to minimize light loss from the end caps, while also supplying room for the wiring hole.

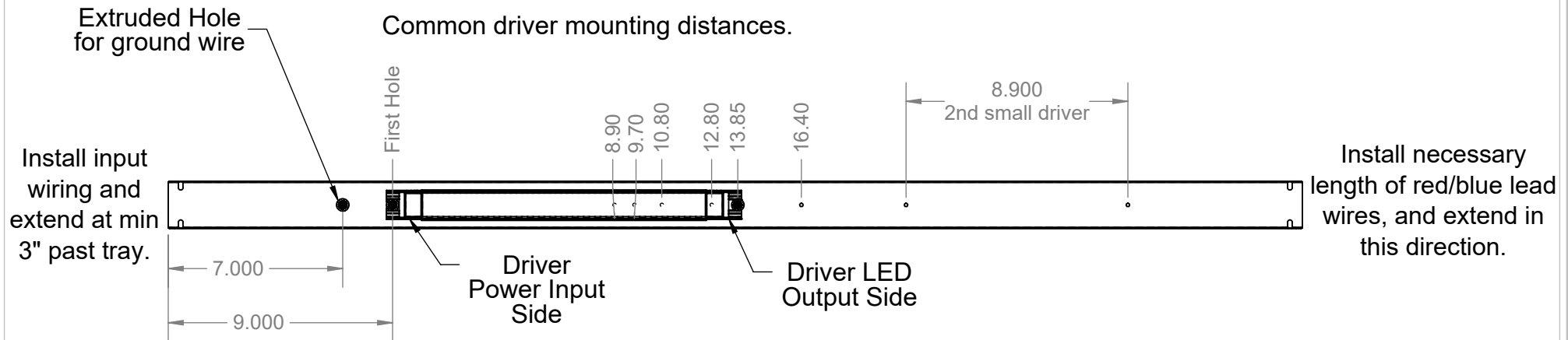
Centering jigs can be made to help line up, center, and distance the boards properly. Details of templates to create a jig is available on the last page.

The thickness of the aluminum allows for boards to be easily attached using the self-drilling screws offered by SLP.



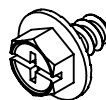
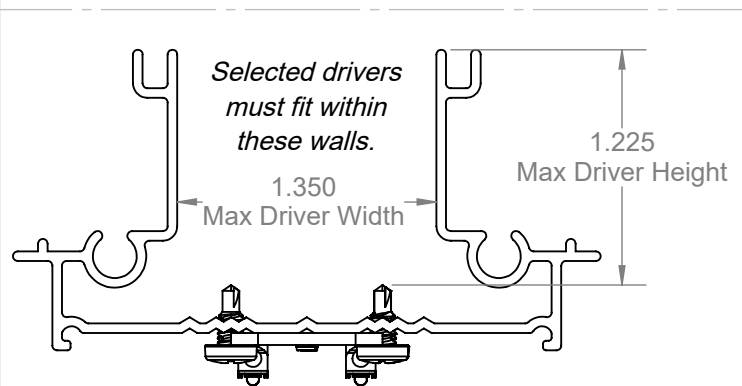
## ASSEMBLY GUIDE

**Stage 2 is mounting the driver or drivers to the driver cover, and installing necessary wiring leads.**



The layout of the driver cover was designed so that the "Power Input" side of the driver is orientated towards the extruded ground hole. This allows there to be plenty of space for the input wires and connections, around 23 cubic inches of box fill.

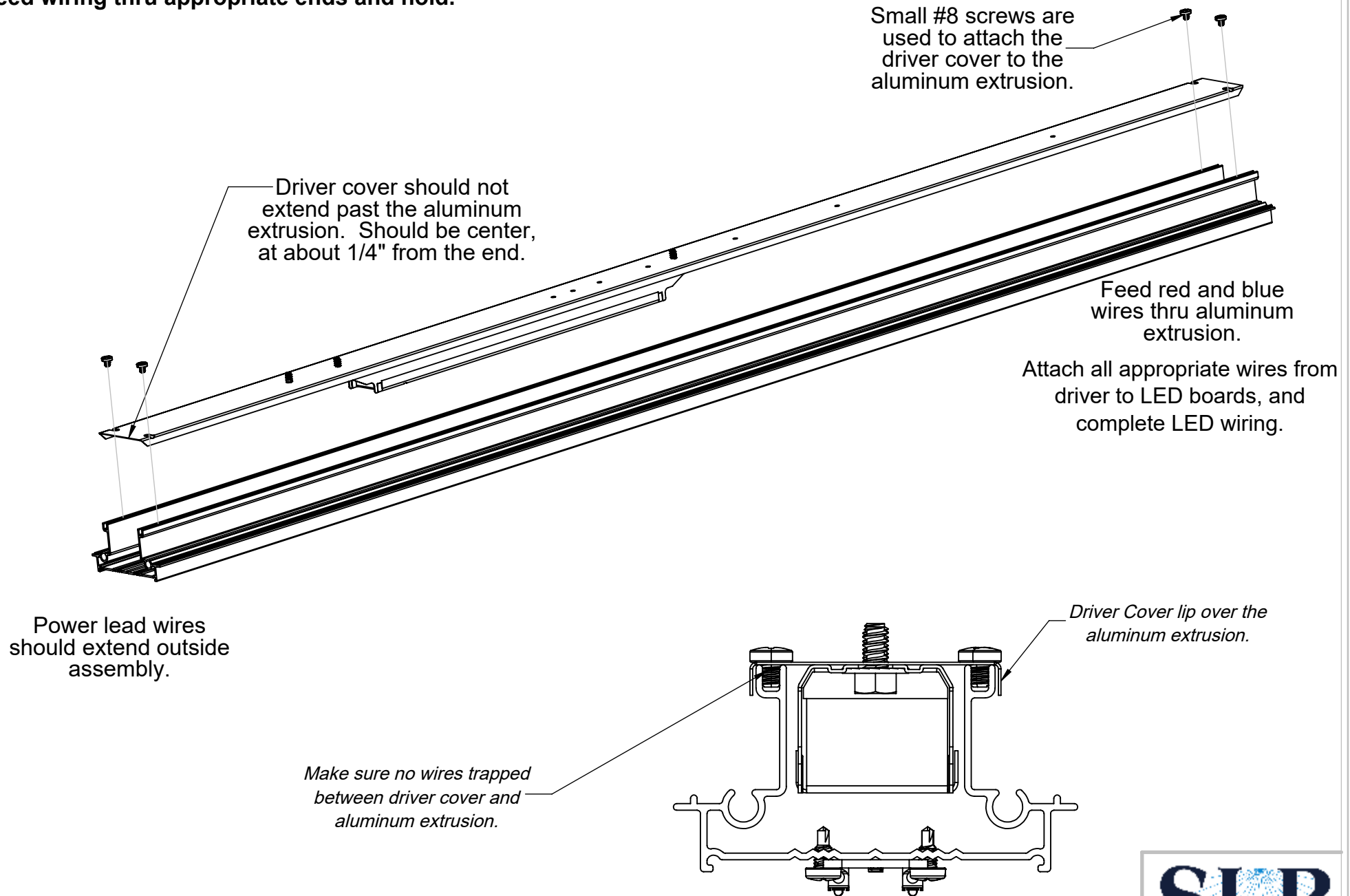
In most instances, only one driver will be used due to the wattage ratings of the PROTUBE. Rare instances, to get higher allowable ambient temperatures, two drivers running at a lower current might be used. Typically these drivers have smaller footprints. Mounting holes for a second driver are opposite the extruded hole.



The holes in the driver cover are designed to work the **SLP-SCRW-UGT**, SLP's universal gear tray screw. The screw offers a large diameter shoulder that is also serrated to lock down most drivers.

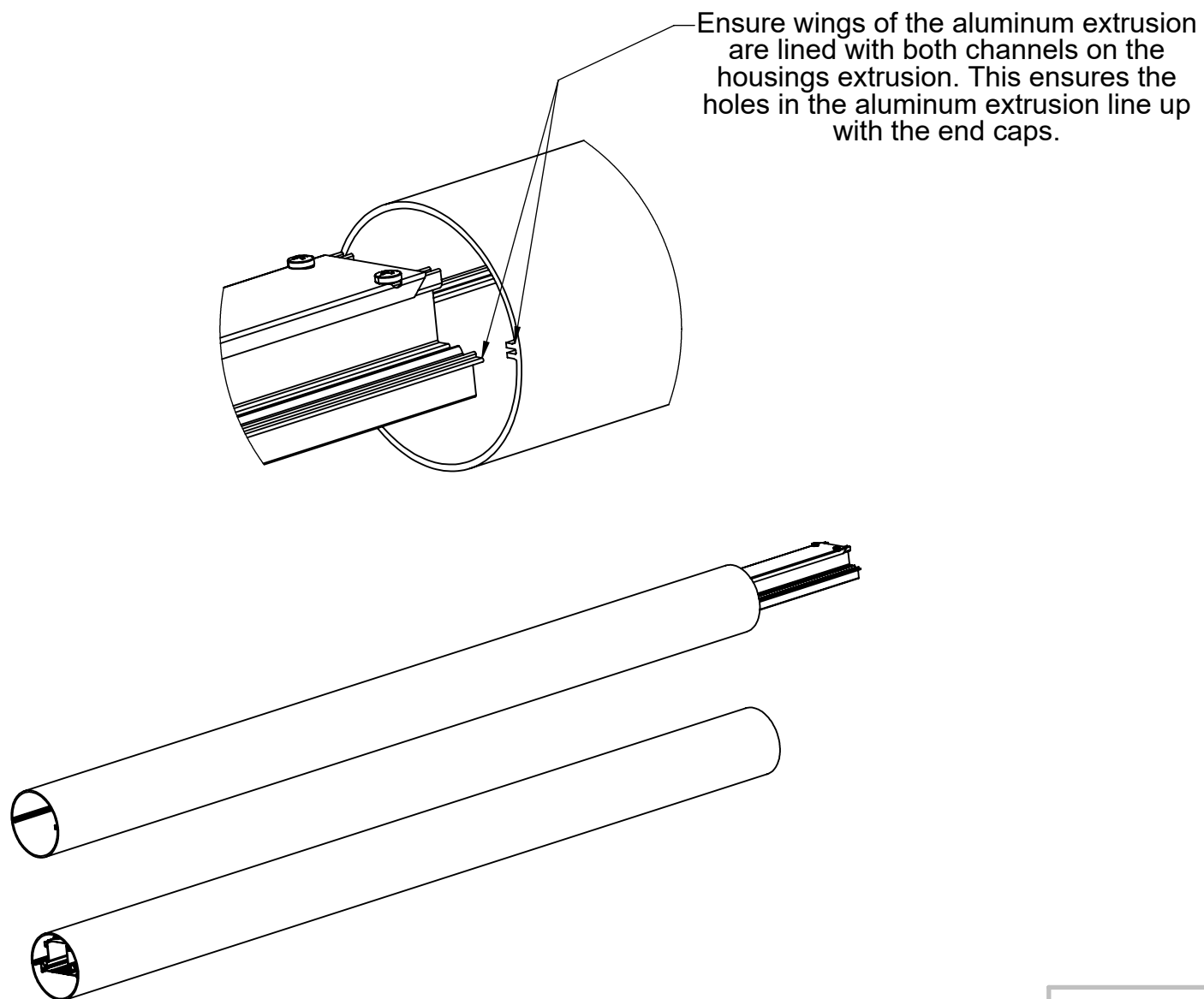
## ASSEMBLY GUIDE

**Stage 3 is assembly of the cover tray and LED assemblies together.  
Feed wiring thru appropriate ends and hold.**



## ASSEMBLY GUIDE

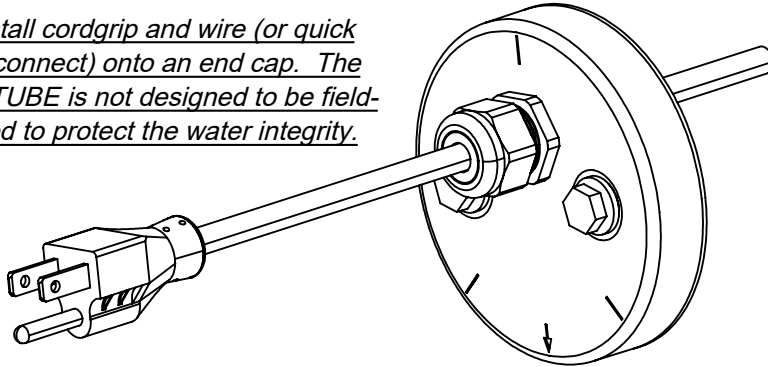
**Stage 4 is slide the LED assembly into the housing extrusion.**



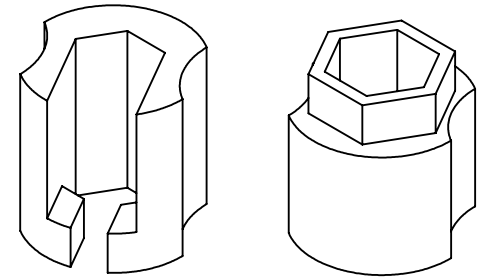
## **ASSEMBLY GUIDE**

**Stage 5A is prepare the input wire end cap, and place the ring gaskets.**

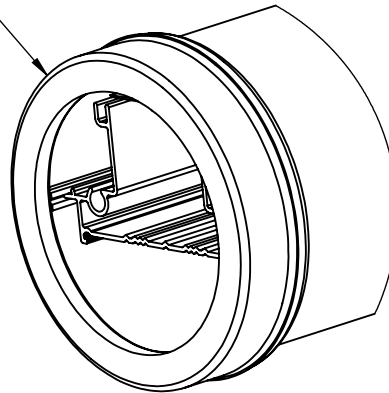
Install cordgrip and wire (or quick disconnect) onto an end cap. The PROTUBE is not designed to be field-wired to protect the water integrity.



Feel free to reach out to SLP for 3D Print files for a set up tools to make it easier to tighten Heyco cord grips.



Seat the ring gaskets onto the extruded housing so that it sits flush with the face.



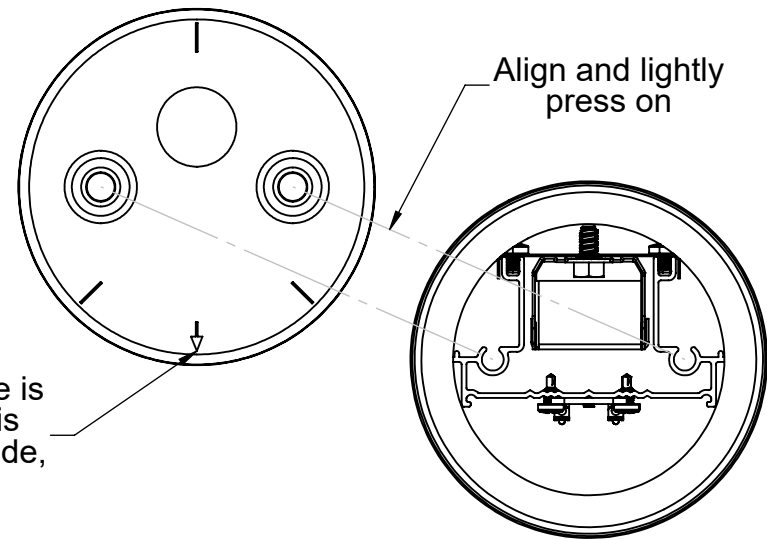
DO NOT THINK THE RING GASKET CAN GO INTO THE END CAP AND THEN ONTO THE EXTRUSION. YOU WILL BE REFERRERD BACK TO THIS NOTE.

## ASSEMBLY GUIDE

Stage 5B is align the end caps and lightly press on.

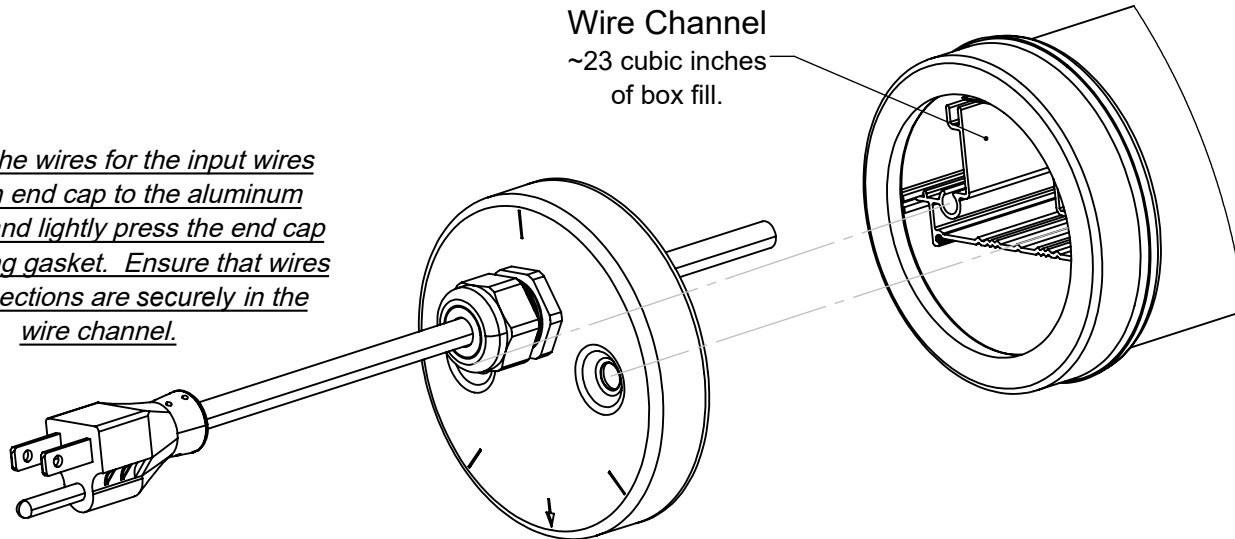
- When putting on the end cap, **align the two attachment holes on the end cap with the two screw channels on the aluminum extrusion.**
- **Lightly press the end cap onto the ring gasket.** The end cap will be difficult to rotate when seated on the ring gasket, so make sure to take the extra second to properly align.

Arrow notates fixture is pointed down. This should be on LED side, not driver side.



Connect the wires for the input wires and align end cap to the aluminum extrusion, and lightly press the end cap onto the ring gasket. Ensure that wires and connections are securely in the wire channel.

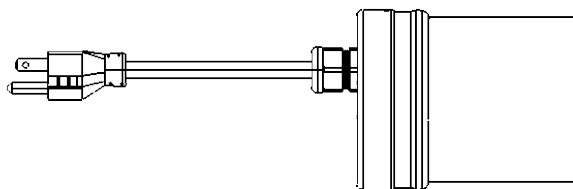
Wire Channel  
~23 cubic inches  
of box fill.



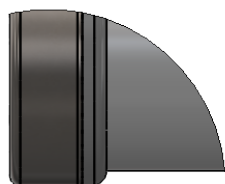
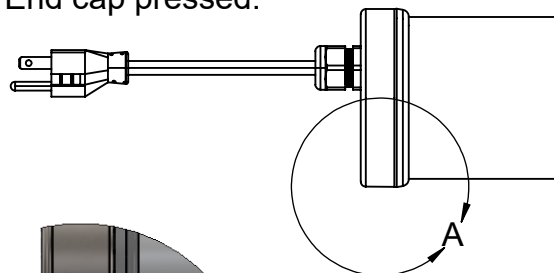
## ASSEMBLY GUIDE

Stage 5C is press the end caps into place.

End cap lightly pressed on for alignment.

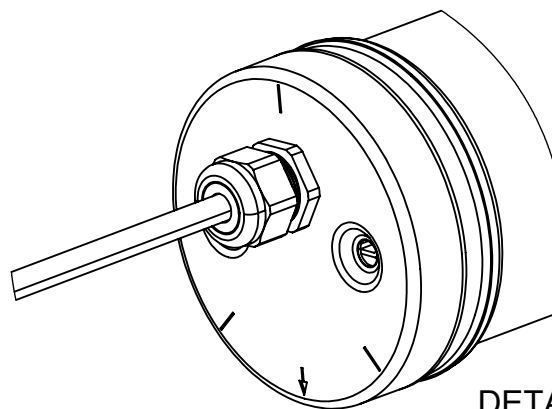


End cap pressed.

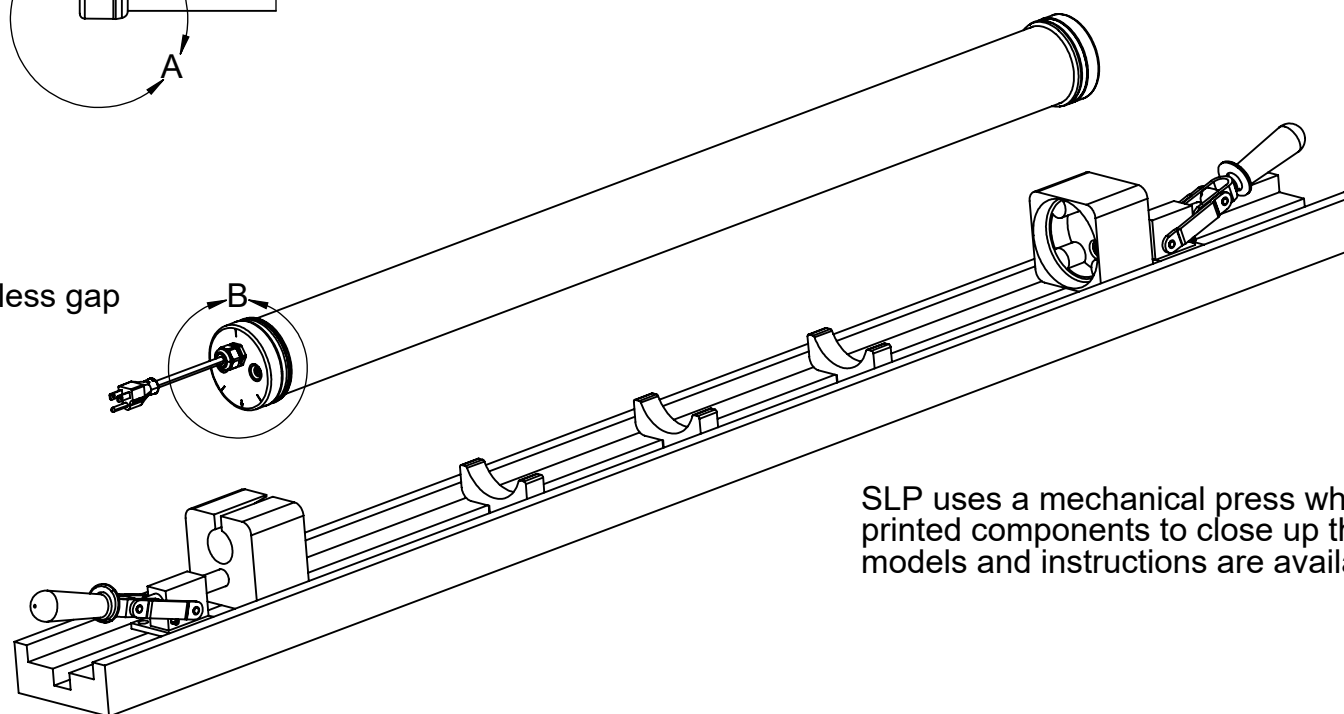


DETAIL A  
SCALE 1 : 2

seamless gap



DETAIL B  
SCALE 1 : 2



SLP uses a mechanical press which uses some 3D printed components to close up the fixture. CAD models and instructions are available to copy.

## ASSEMBLY GUIDE



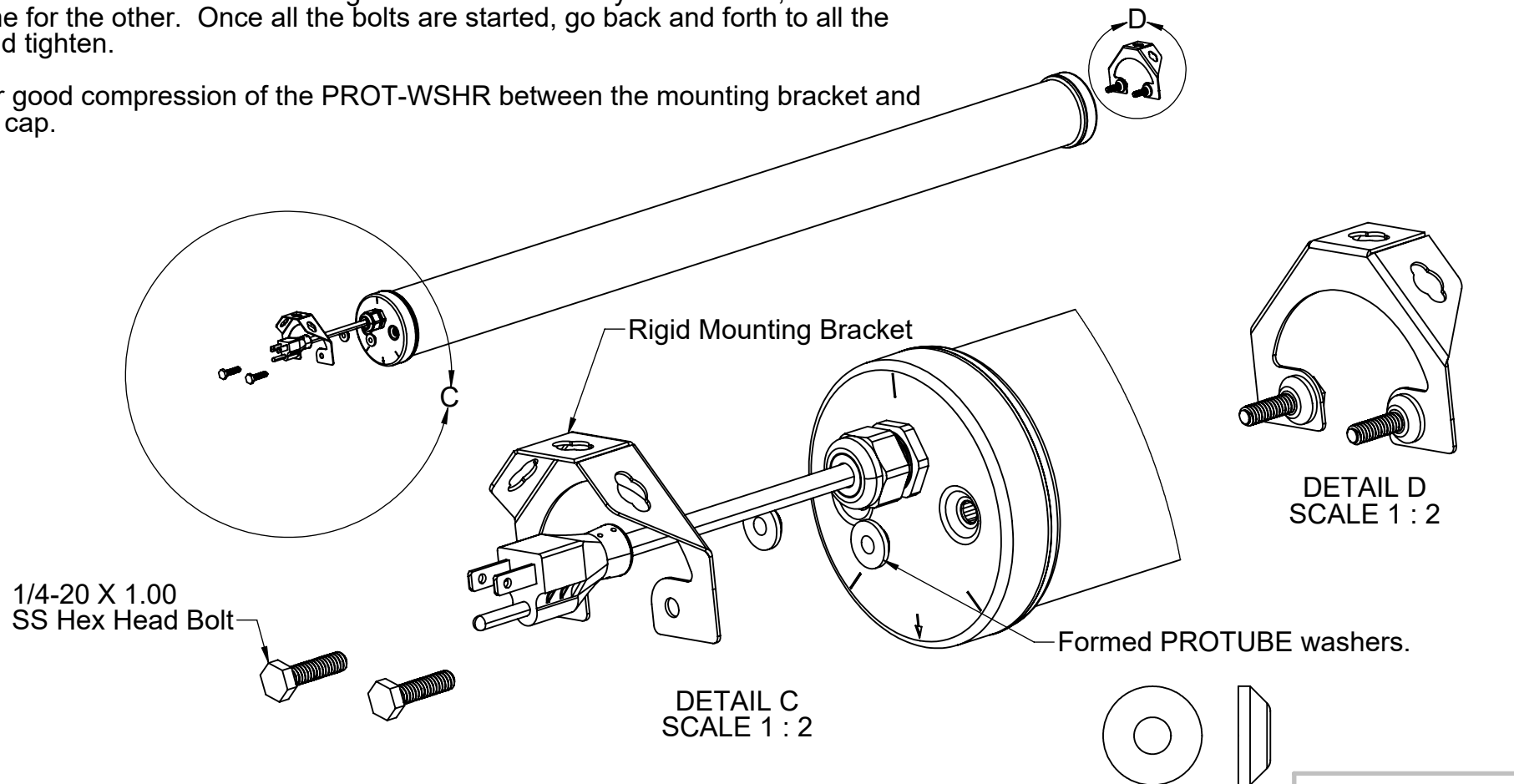
**Stage 6 is lock up the PROTUBE and install the vent plug.**

After the whole assembly has been pressed together, you will need to close up the fixture. The end cap uses special washers that conform to the indent shape, PROT-WSHR.

In this instance feed the hex bolt thru the rigid mounting bracket and feed the PROT-WSHR over the bolt.

At this point everything should be lined up and you should be able to screw the bolts into the aluminum extrusion. Tighten the bolts halfway on one side, then do the same for the other. Once all the bolts are started, go back and forth to all the bolts and tighten.

Look for good compression of the PROT-WSHR between the mounting bracket and the end cap.



# ASSEMBLY GUIDE