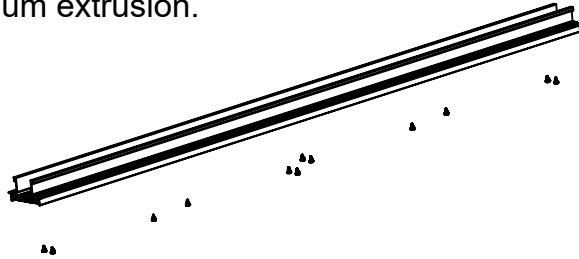
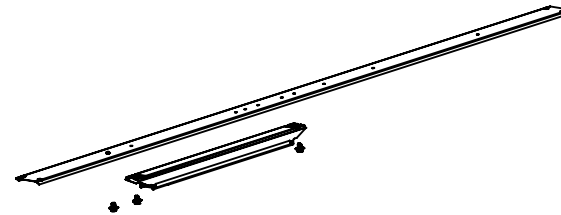


Assembly of the PROTUBE breaks down into 6 basic stages.
Detailed explanations of how and why following on each corresponding page.

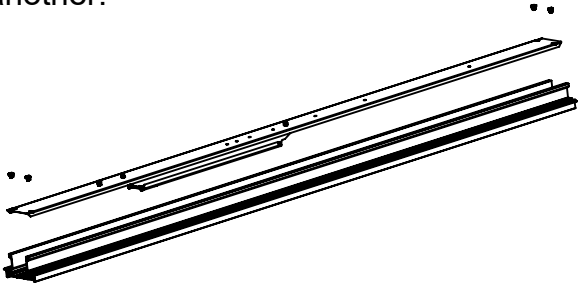
- ① Attach the LED boards to the aluminum extrusion.



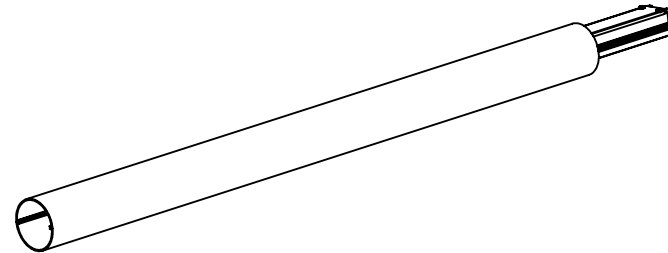
- ② Attach the driver to the driver cover.



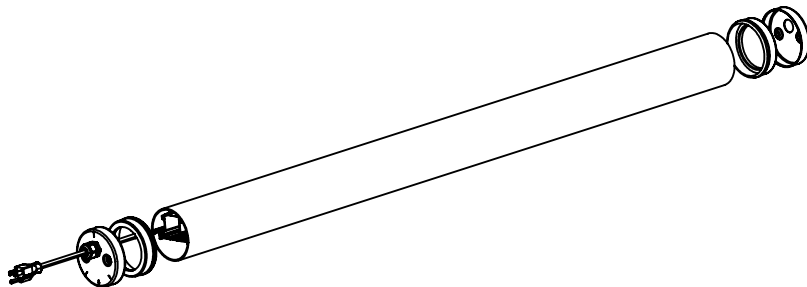
- ③ Combine the previous two assemblies to one another.



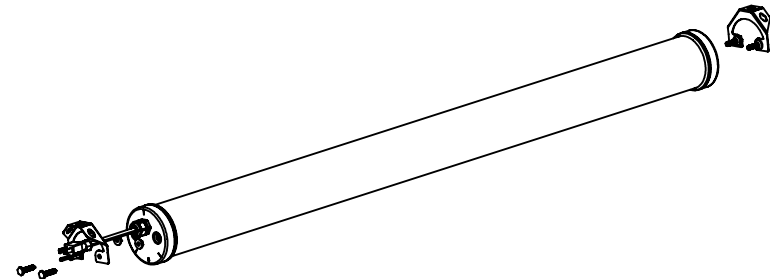
- ④ Slide the full internal assembly into the housing extrusion.



- ⑤ Press the endcaps and ring gaskets into place.



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

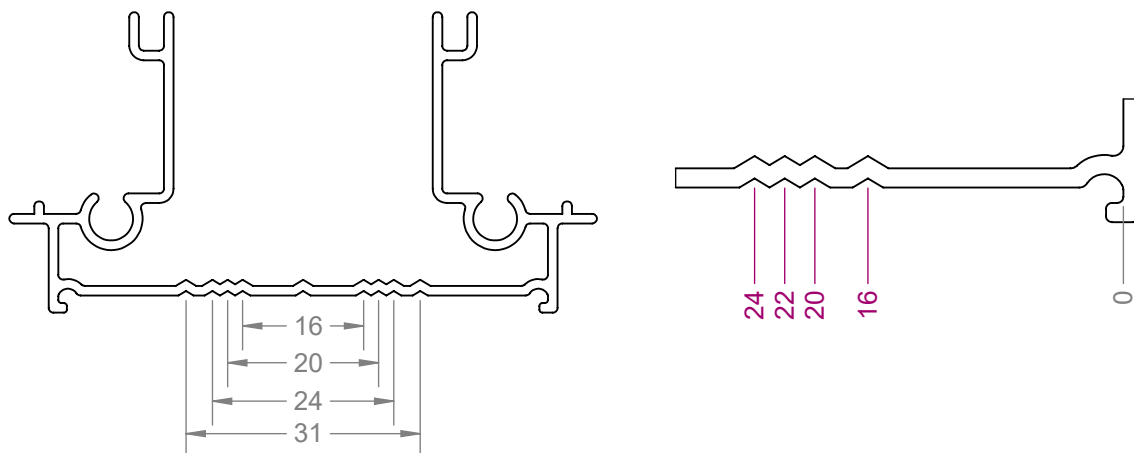


- ⑦ 8ft Alternative Construction.

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.

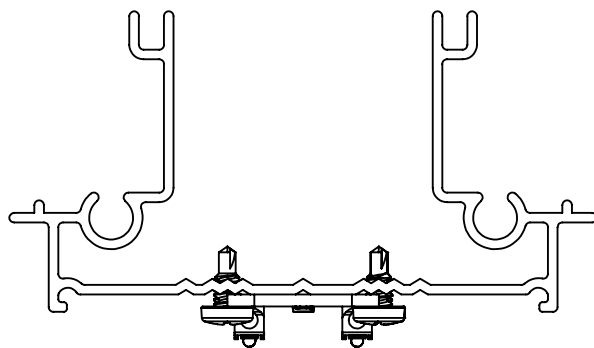
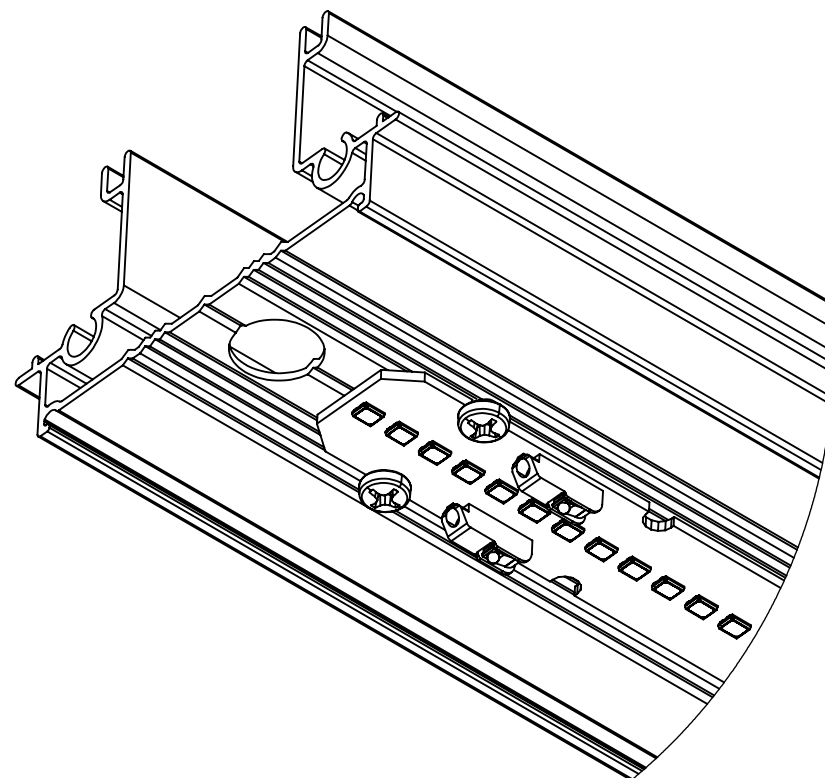


Unless special ordered, the aluminum extrusion comes with one 0.500" hole on just one end. Orientate the LED board so the initial input is next to this hole.

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

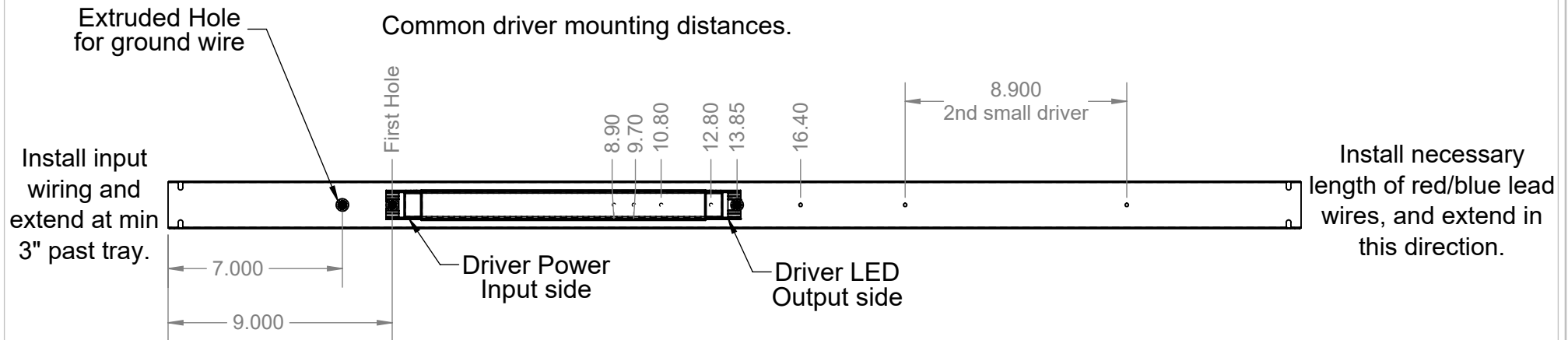
Centering jigs can be made to help line up, center, and distance the boards properly. Details of templates to create a jig available on the last page.

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



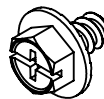
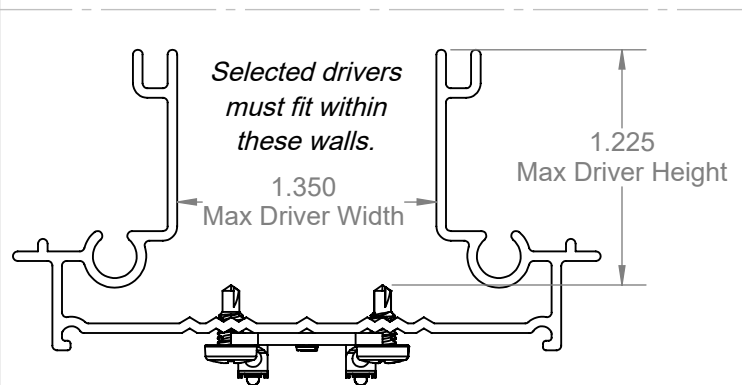
ASSEMBLY GUIDE

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.

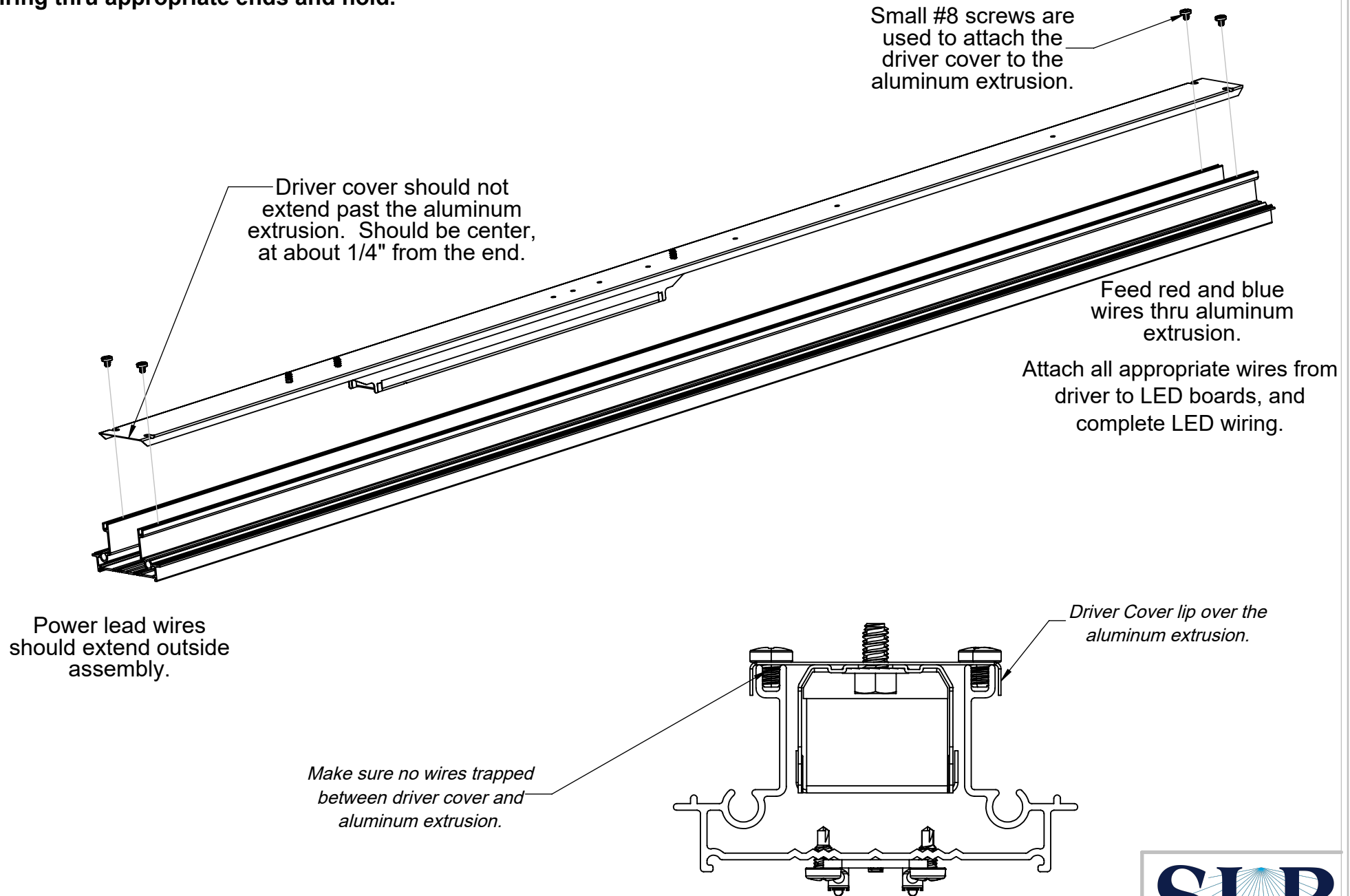
In most instances, only one driver will be used due to the wattage ratings of the PROTUBE. Rare instances, to get higher allowable ambient temperatures, two drivers running at a lower current might be used. Typically these drivers have smaller foot prints. Mounting holes for a second driver are opposite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

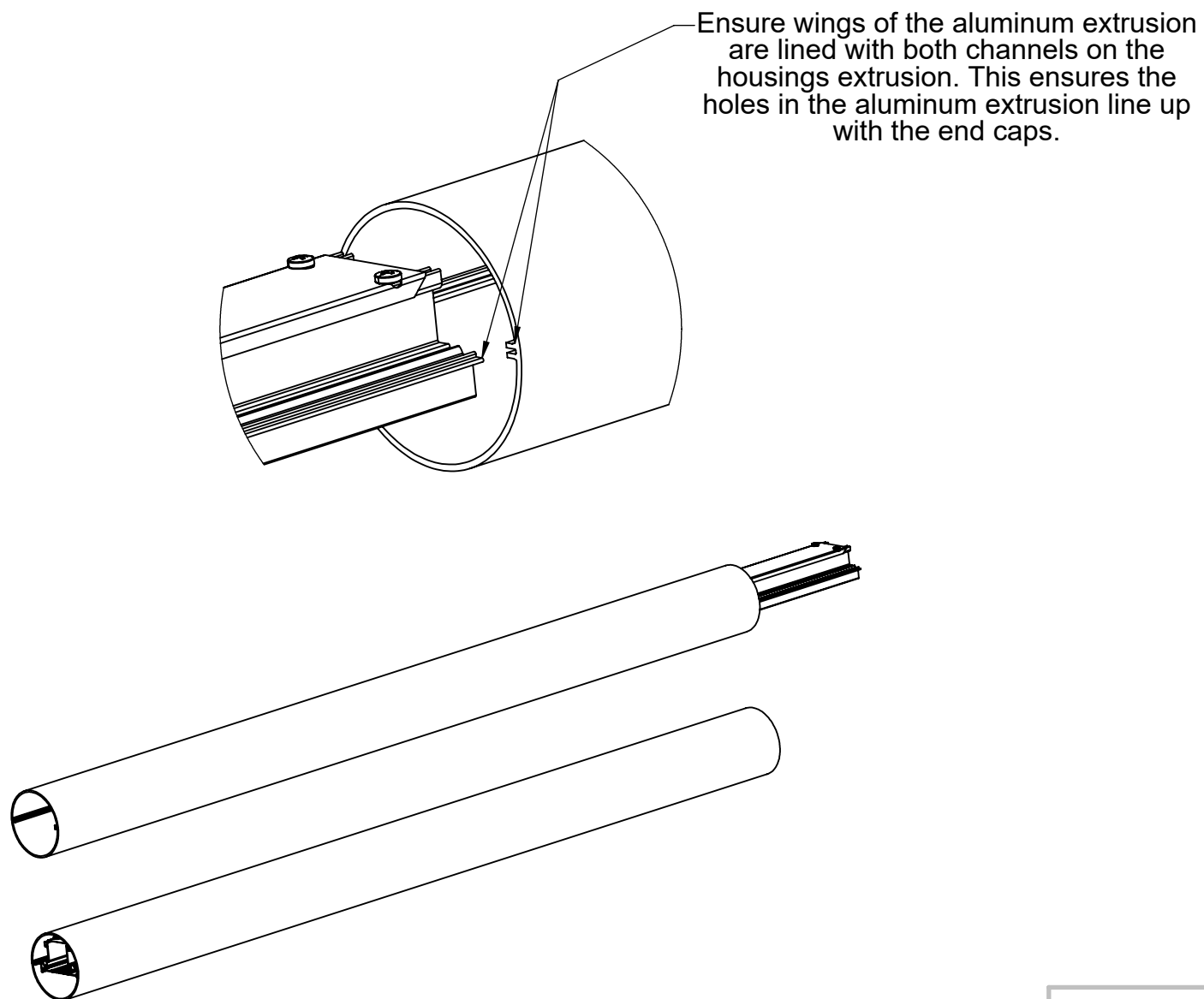
ASSEMBLY GUIDE

Stage 3 assembly the cover tray and led assemblies together. Feed wiring thru appropriate ends and hold.



ASSEMBLY GUIDE

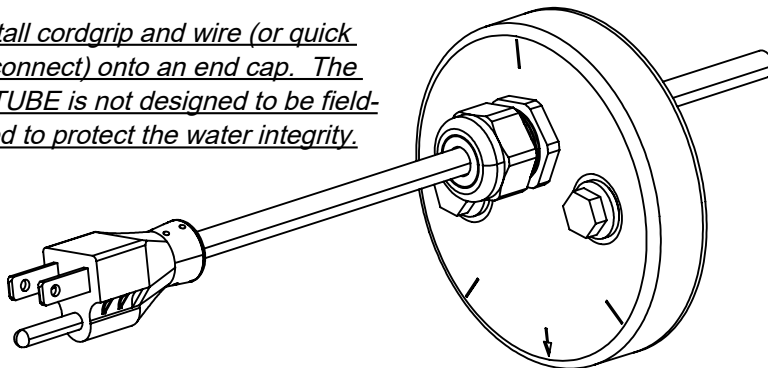
Stage 4, slide the LED assembly into the housing extrusion.



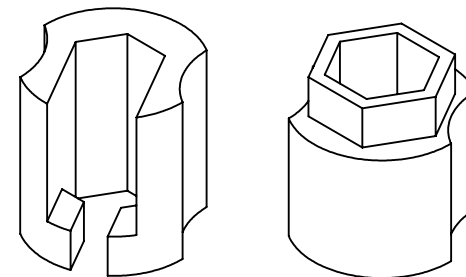
ASSEMBLY GUIDE

Stage 5A, Prepare the input wire end cap, and place the ring gaskets.

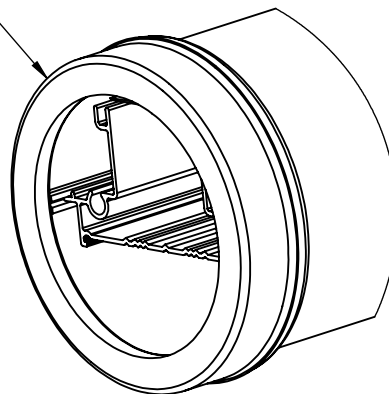
Install cordgrip and wire (or quick disconnect) onto an end cap. The PROTUBE is not designed to be field-wired to protect the water integrity.



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.



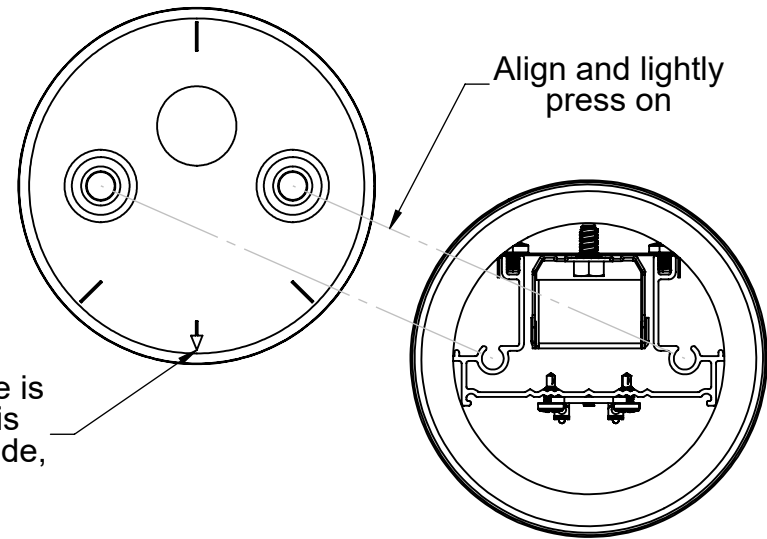
DO NOT THINK THE RING GASKET CAN GO INTO THE END CAP AND THEN ONTO THE EXTRUSION. YOU WILL BE REFERRERED BACK TO THIS NOTE.

ASSEMBLY GUIDE

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

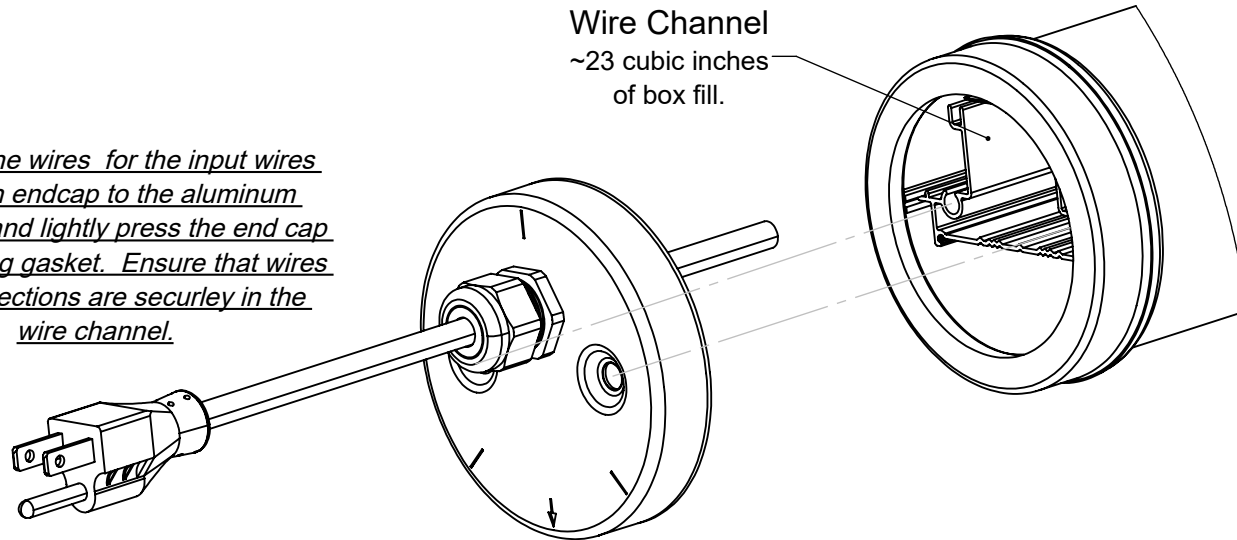
- When putting on the end cap, **align the two attachment holes on the end cap with the two screw channels on the aluminum extrusion.**
- **Lightly press the end cap onto the ring gasket.** The end cap will be difficult to rotate when seated on the ring gasket, so make sure to take the extra second to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

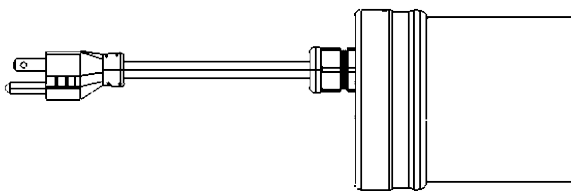
Wire Channel
~23 cubic inches
of box fill.



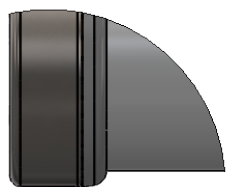
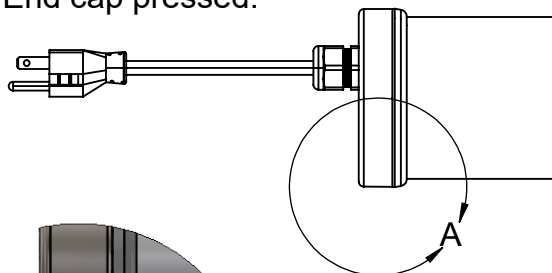
ASSEMBLY GUIDE

Stage 5C, press the end caps into place.

End cap lightly pressed on for alignment.

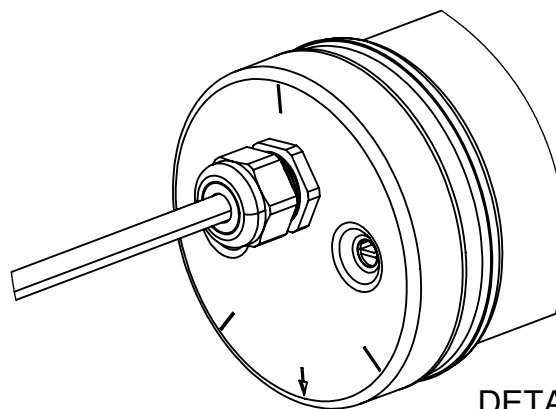
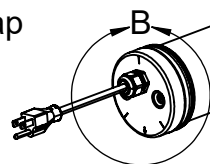


End cap pressed.

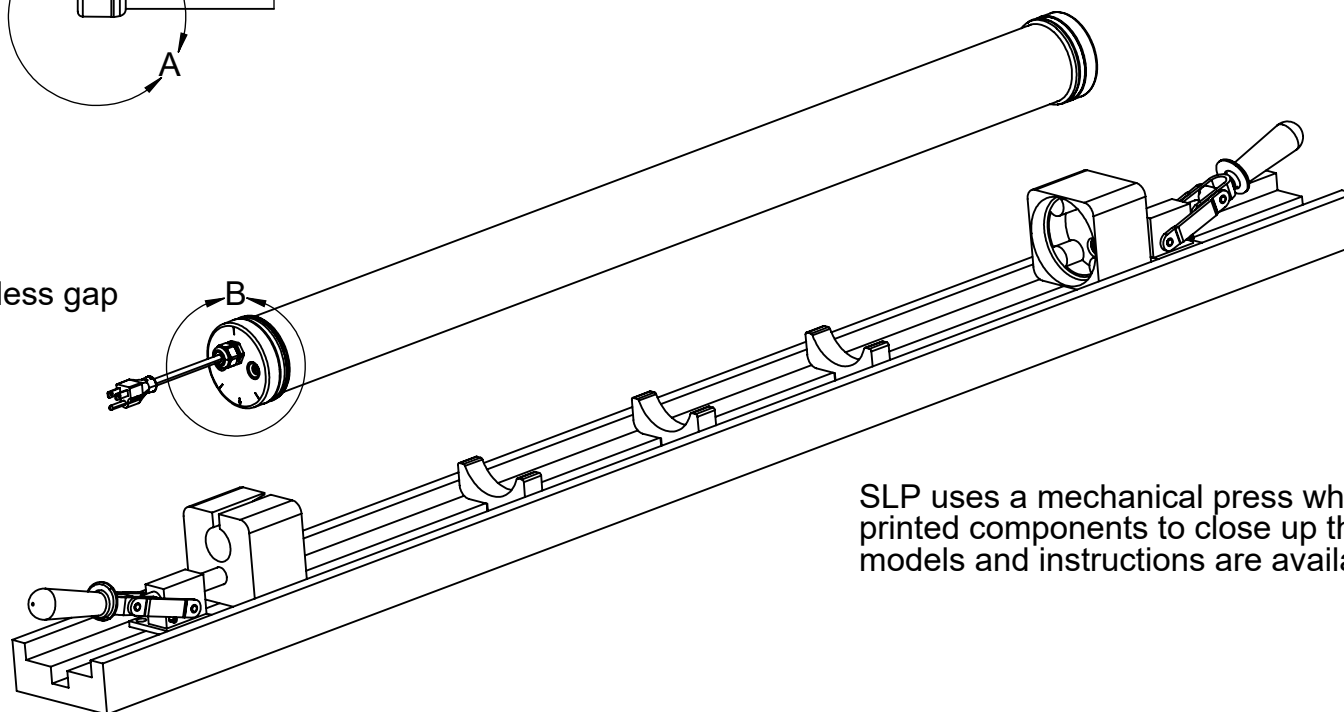


DETAIL A
SCALE 1 : 2

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

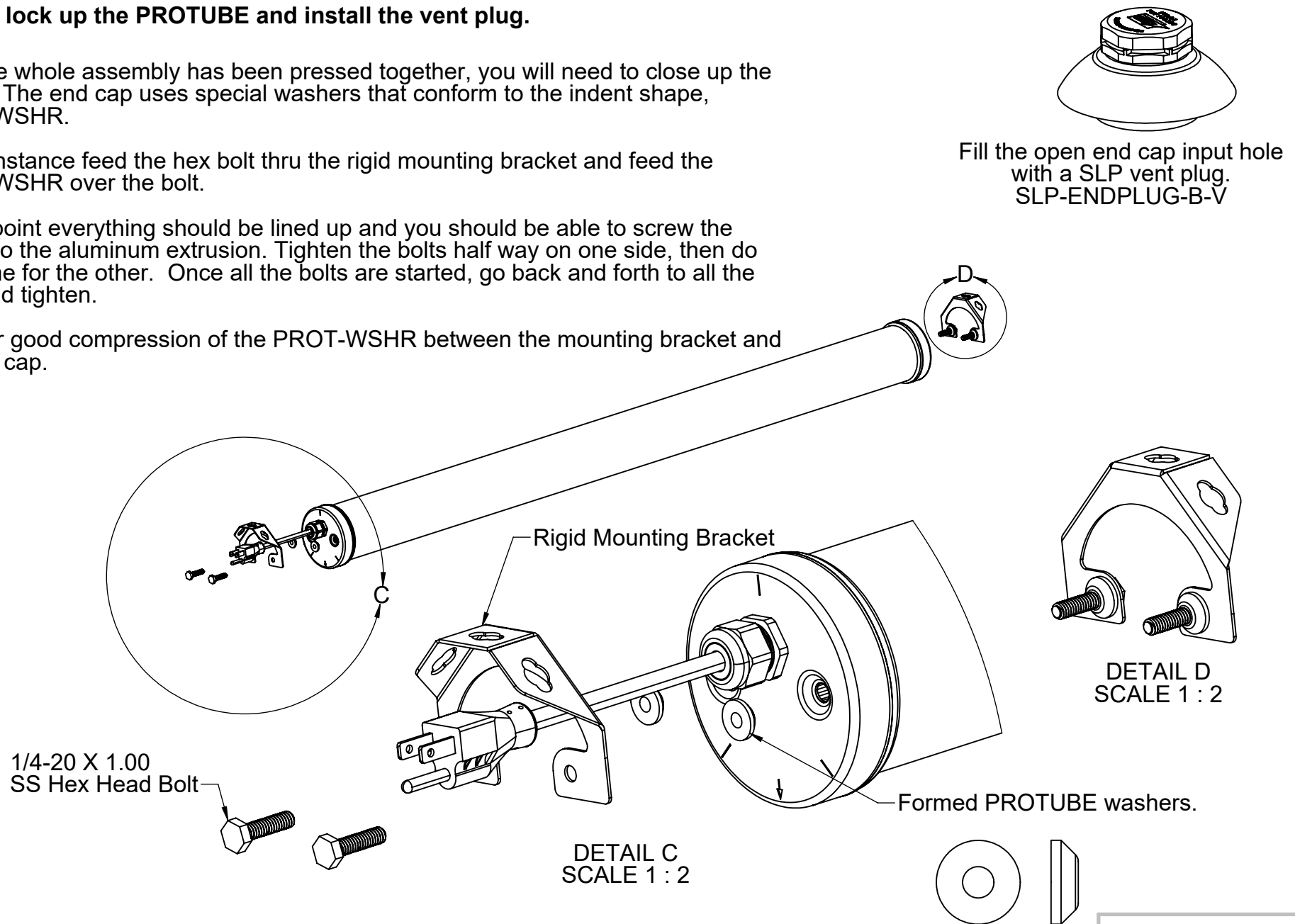
Stage 6, lock up the PROTUBE and install the vent plug.

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 half way 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.



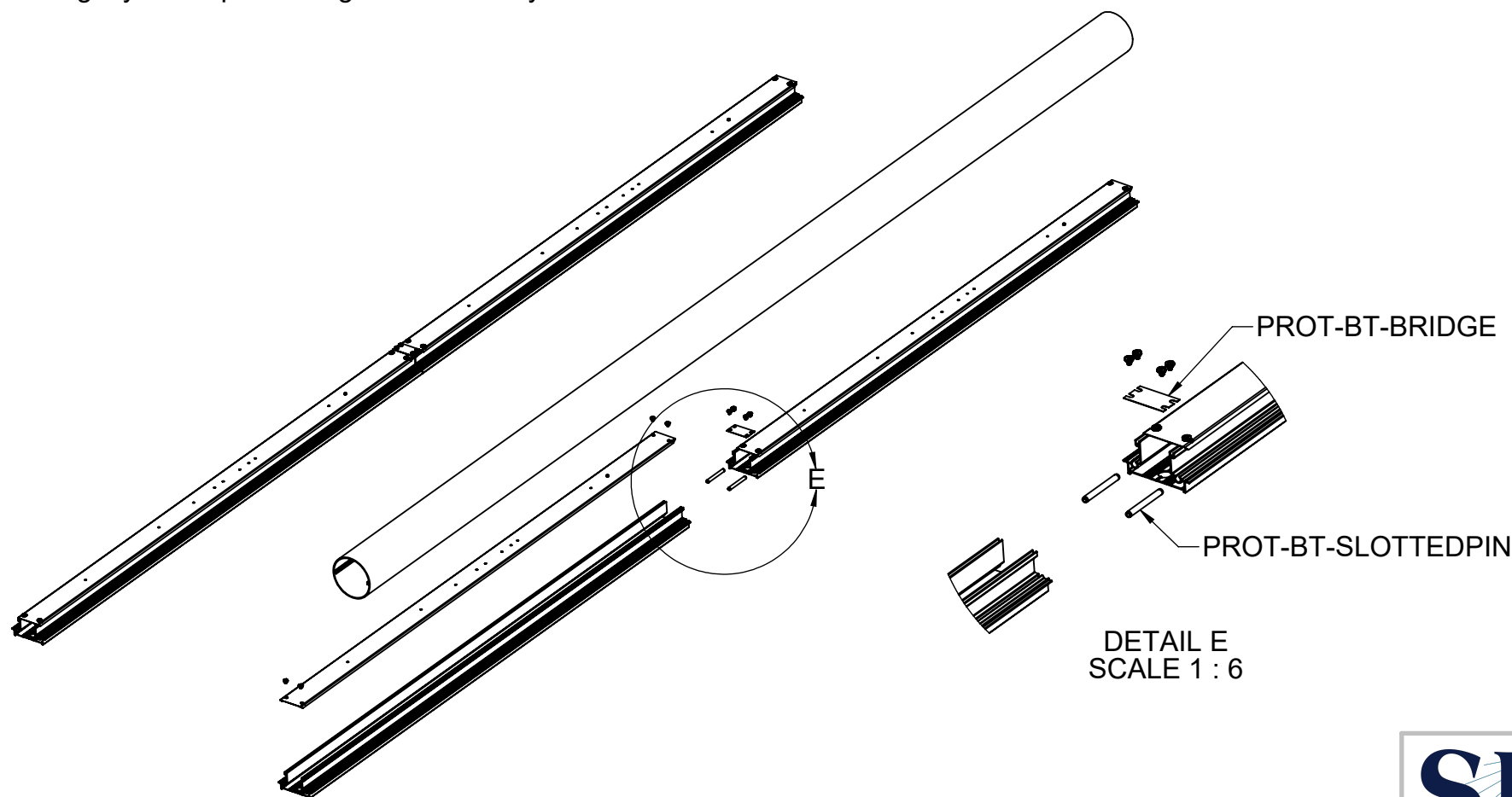
ASSEMBLY GUIDE

Stage 7, 8ft alternative assembly instruction.

An 8ft ProTUBE requires the assembly of two 4ft units. The 4ft aluminum board trays are first pinned together with two PROT-BT-SLOTTEDPINS. These pins are approximately 2" long in length. On the first tray, you insert the slotted pins half way into the extrusion where the bolts would typically be installed. Then line up the second board tray extrusion and press them together.

Once these are together, there is a second step, where we add a mechanical bridge to the driver channel portion of the extrusions. Use four of the short philips head screws to attach this bridge to the assembly. This is to help with any tension the slotted pins might receive. PROT-BT-BRIDGE.

When the driver trays are installed, butt the end of the driver tray as close to the bridge as possible. It is acceptable to even slightly overlap the bridge if necessary.



ASSEMBLY GUIDE