

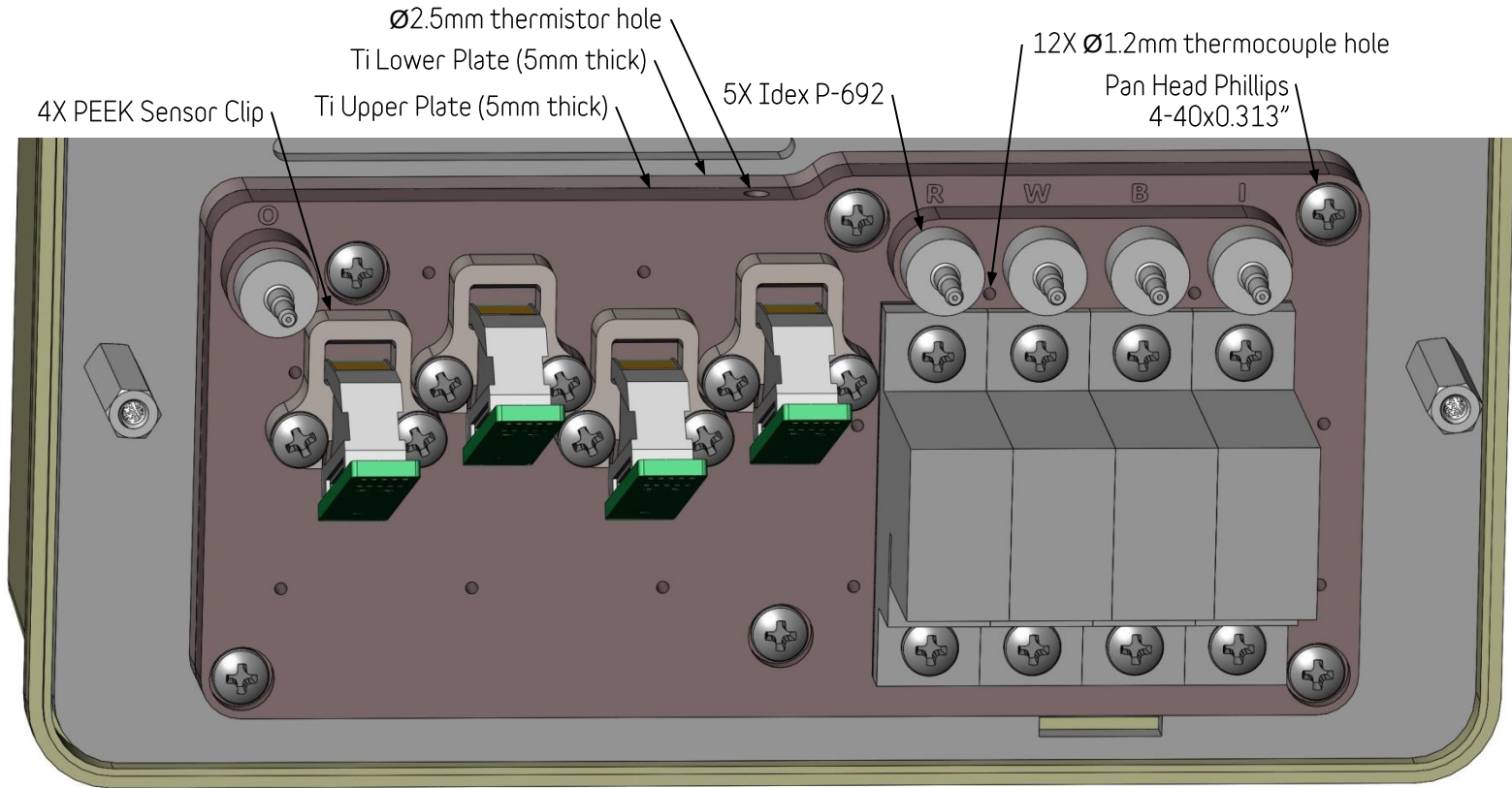


Manifold CAD 2

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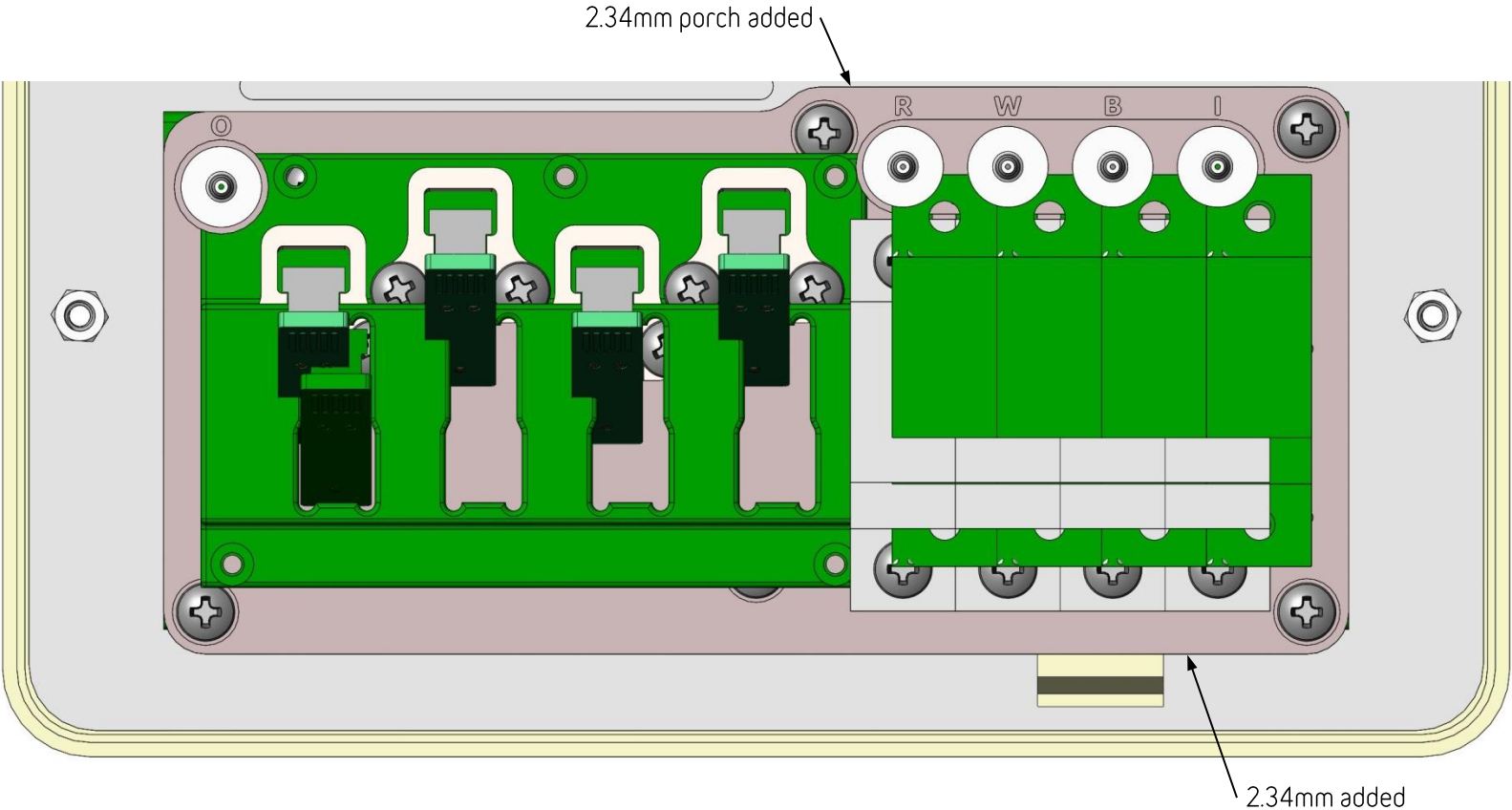
January 8th, 2021

Top View



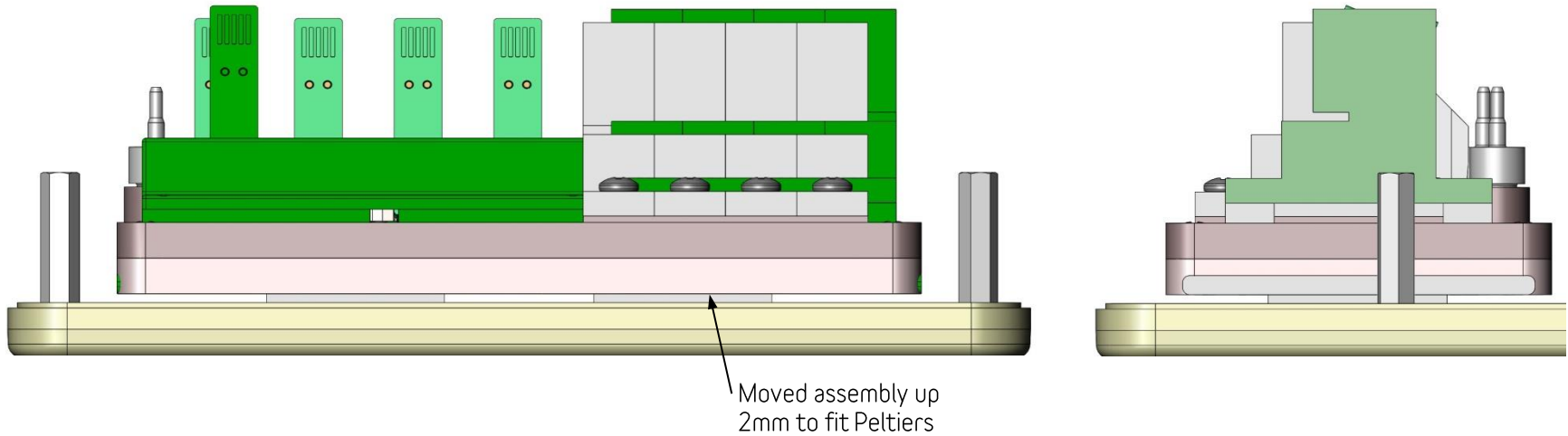
Manifold CAD 2

Top View vs. MBARI Manifold

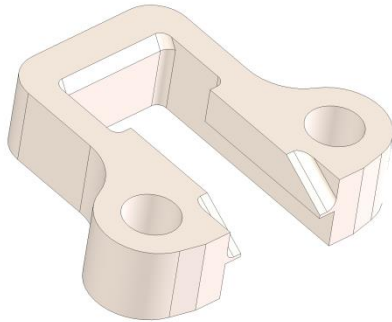


Manifold CAD 2

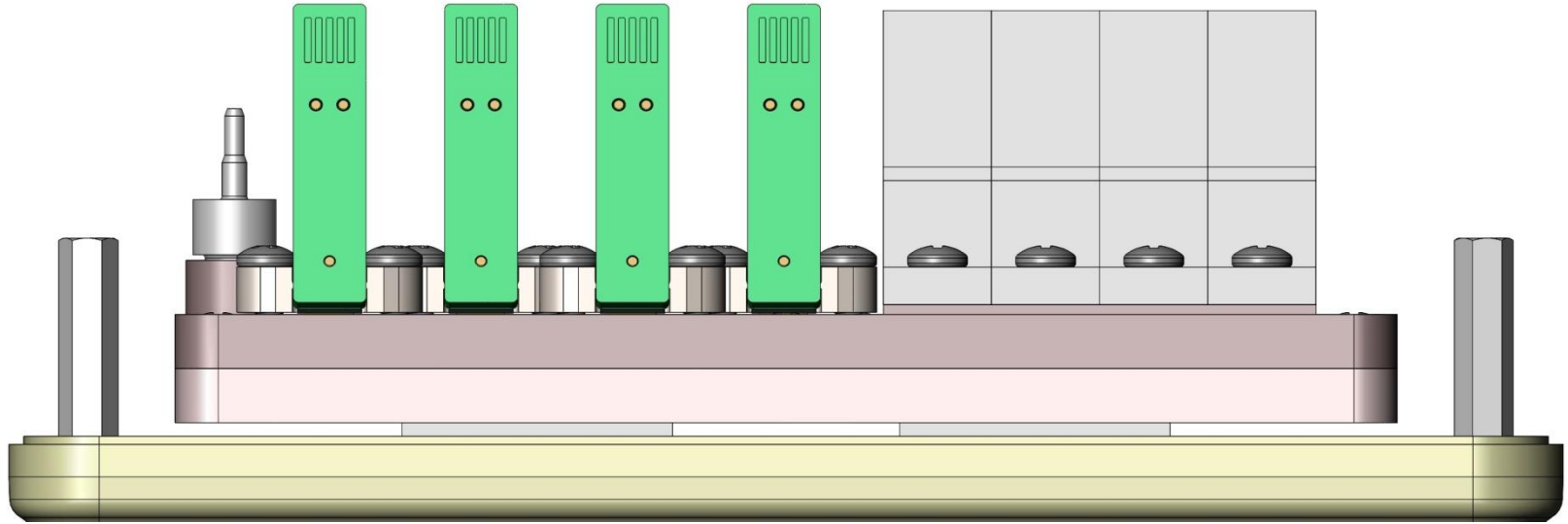
Front and Right View vs. MBARI Manifold



- Sensors and Valves are ~1.8mm lower than MBARI manifold, Lower + Upper Plate thickness 11.8 → 10mm

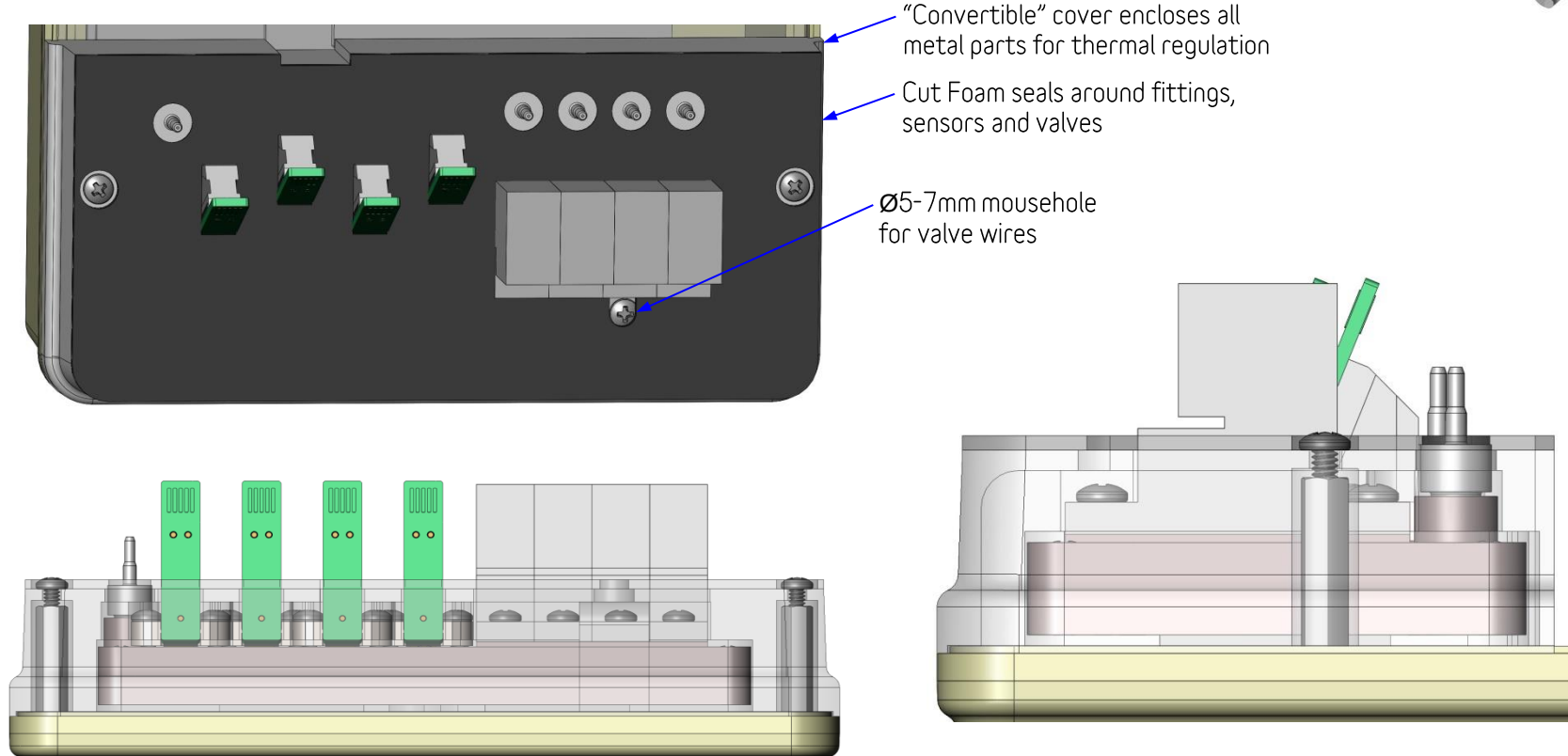


- 3D printed Sensor Clip assemblies as intended





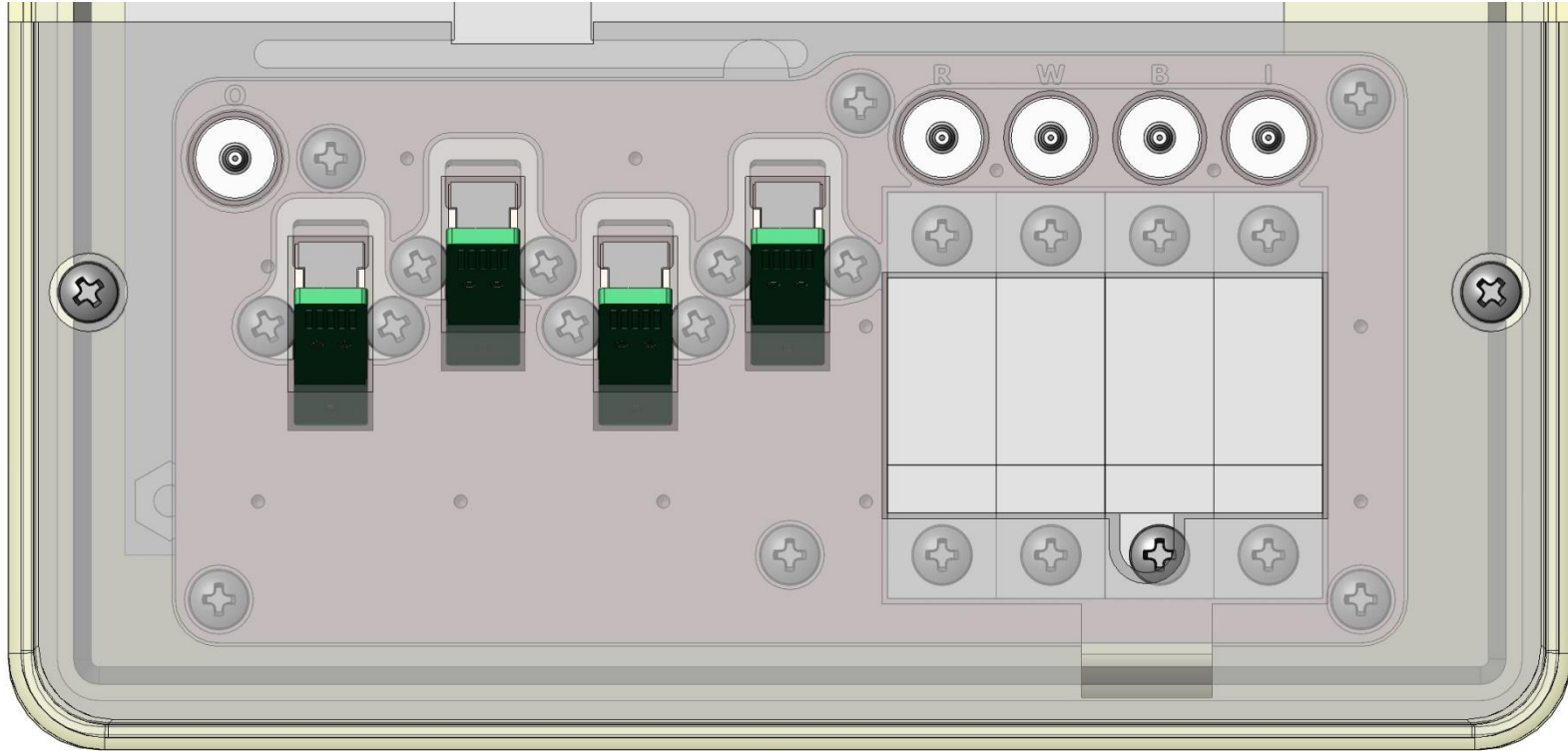
"Convertible" Cover and Cut Foam



- Thick-walled, sparse build FDM "Convertible" cover insulates all temperature-controlled metal parts
- Cut Foam seals around protruding components and valve wires to minimize warm air leakage

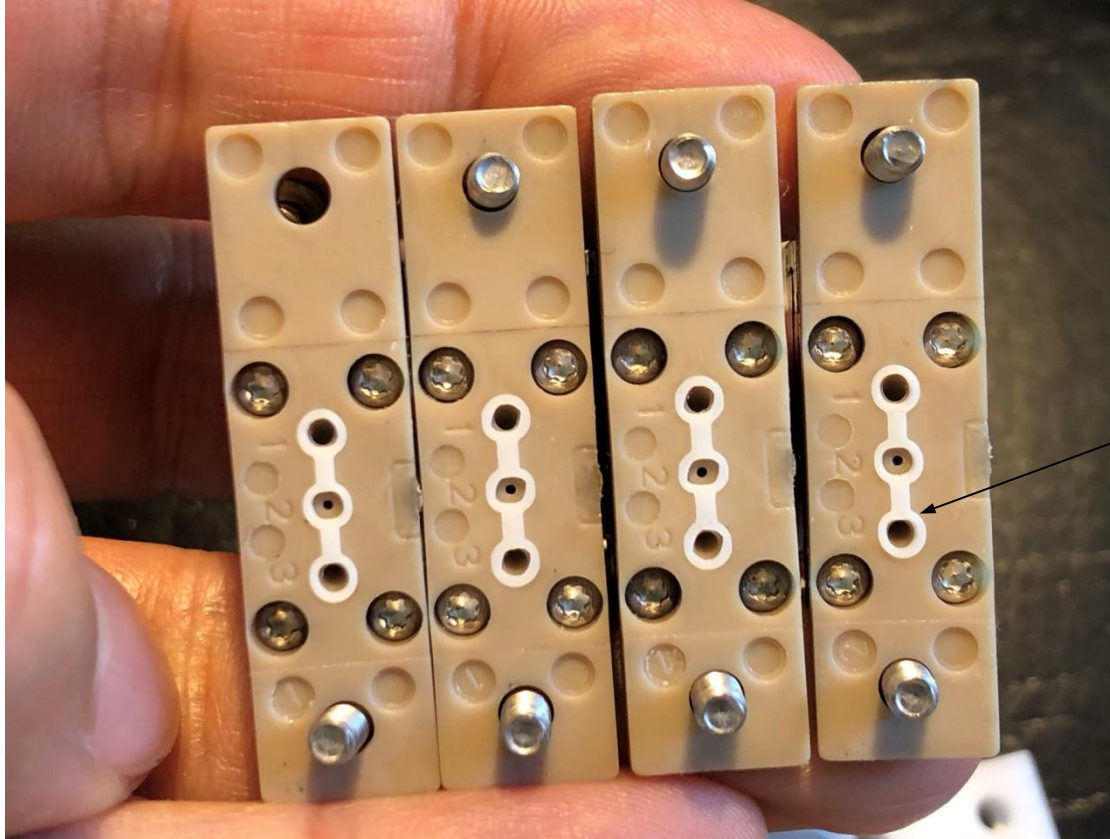
Manifold CAD 2

"Convertible" Cover and Cut Foam (Transparent)

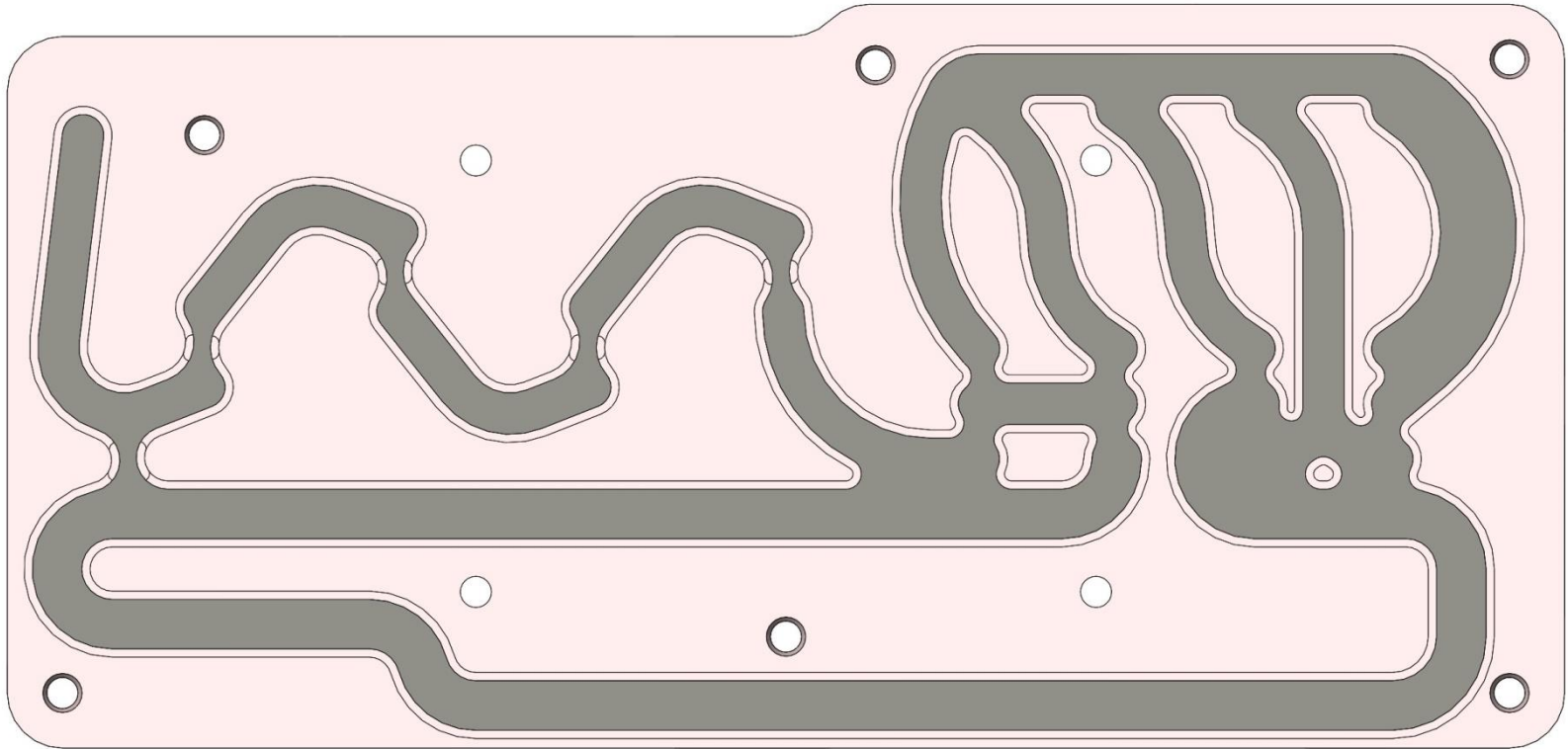


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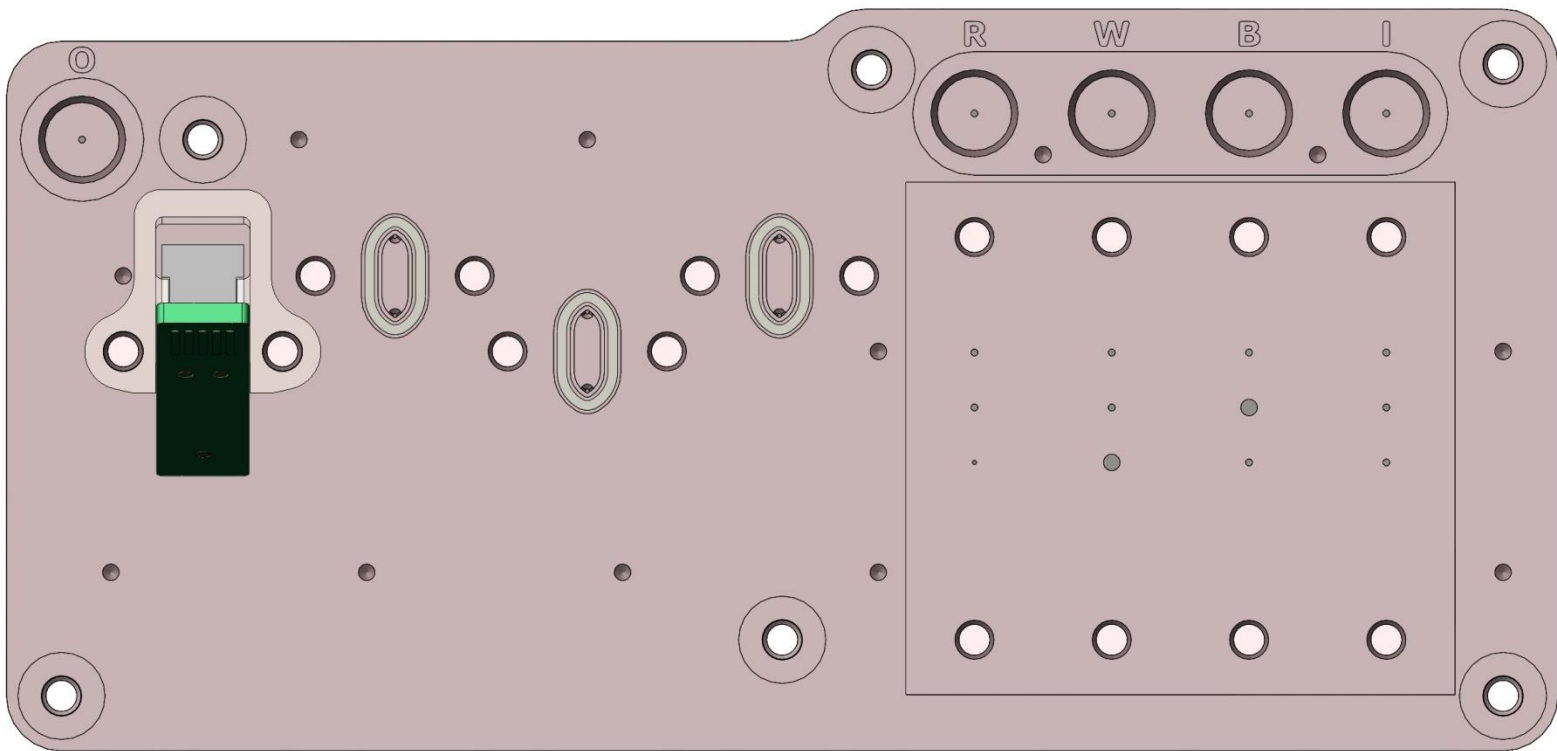
ASCO Valve Seal

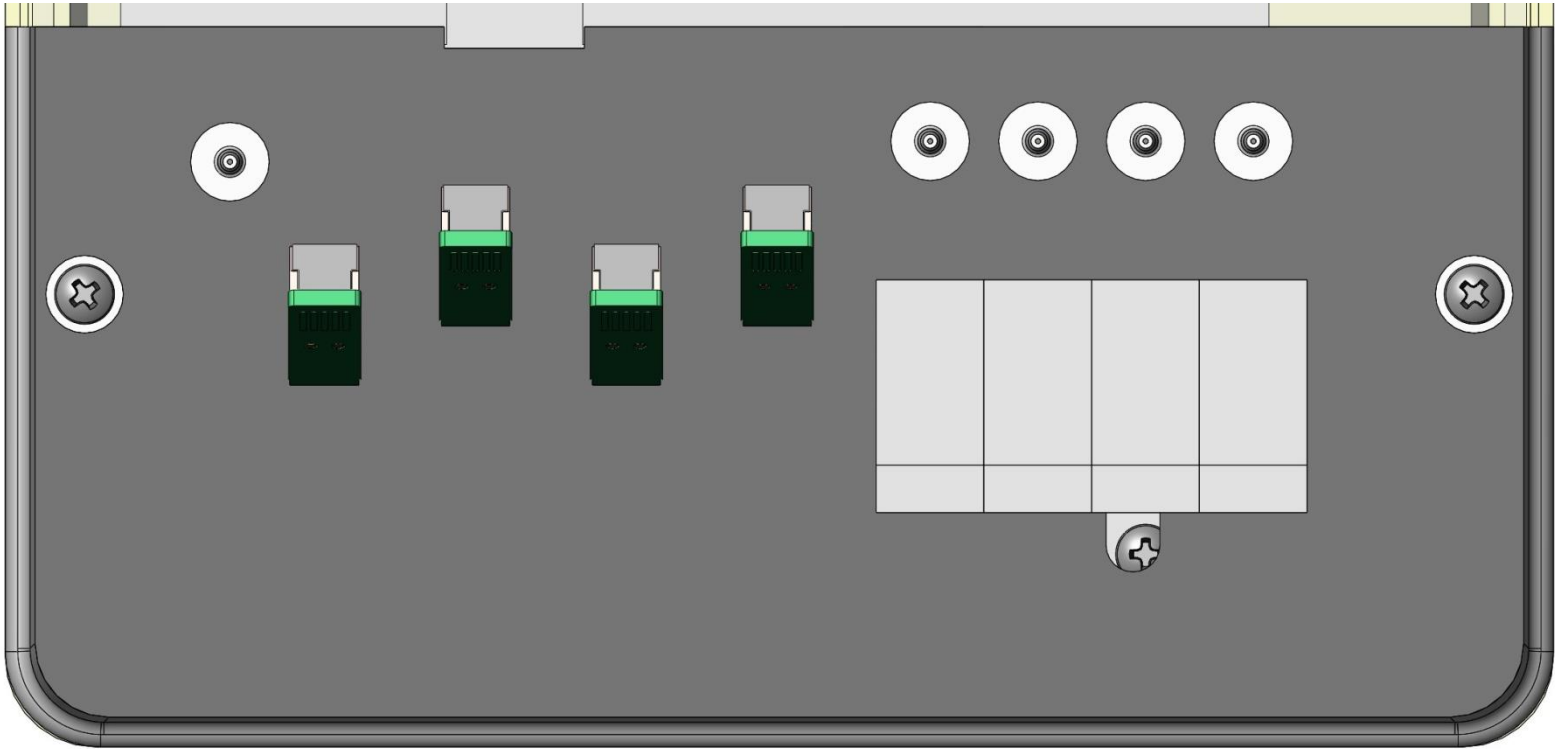


Manufacturer's Valve seal



- Shore 40A EPDM measured by Bill (.0300", .0295", .0295", .0300"), average thickness 0.756mm
 - 0.6mm gland achieves 21% compression (Apple Rubber recommends 18-32% for static seals, 1 bar is very low pressure)
 - Light compression will avoid excessive extruding of the soft seal into the channel

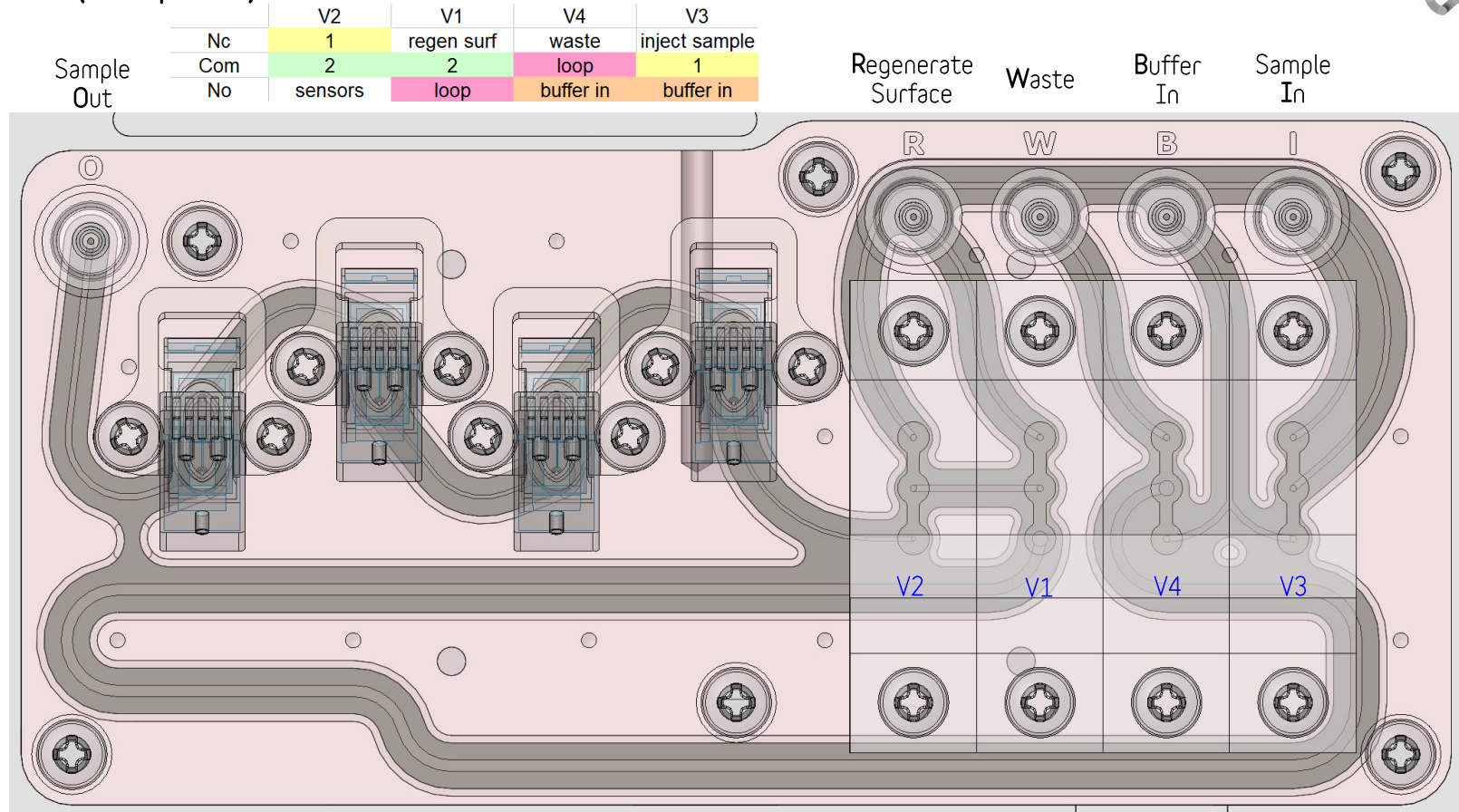




Manifold CAD 2



Top View (Transparent)



- Sample loop is 226mm long x 0.9mm x ~1.5mm = 305 mm³
 - 1.6mm deep channel less seal extrusion guesstimated to be ~1.5mm

