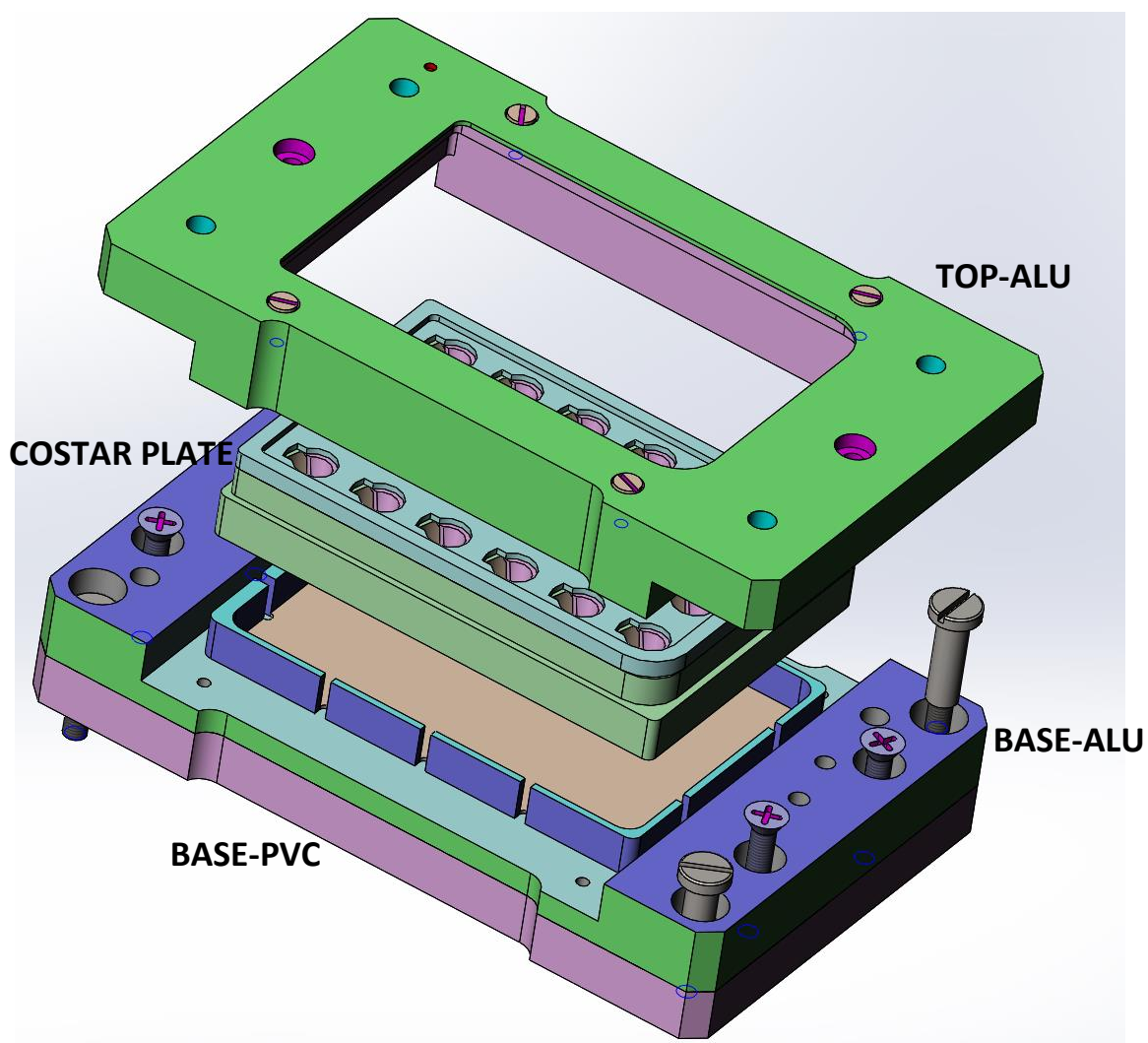
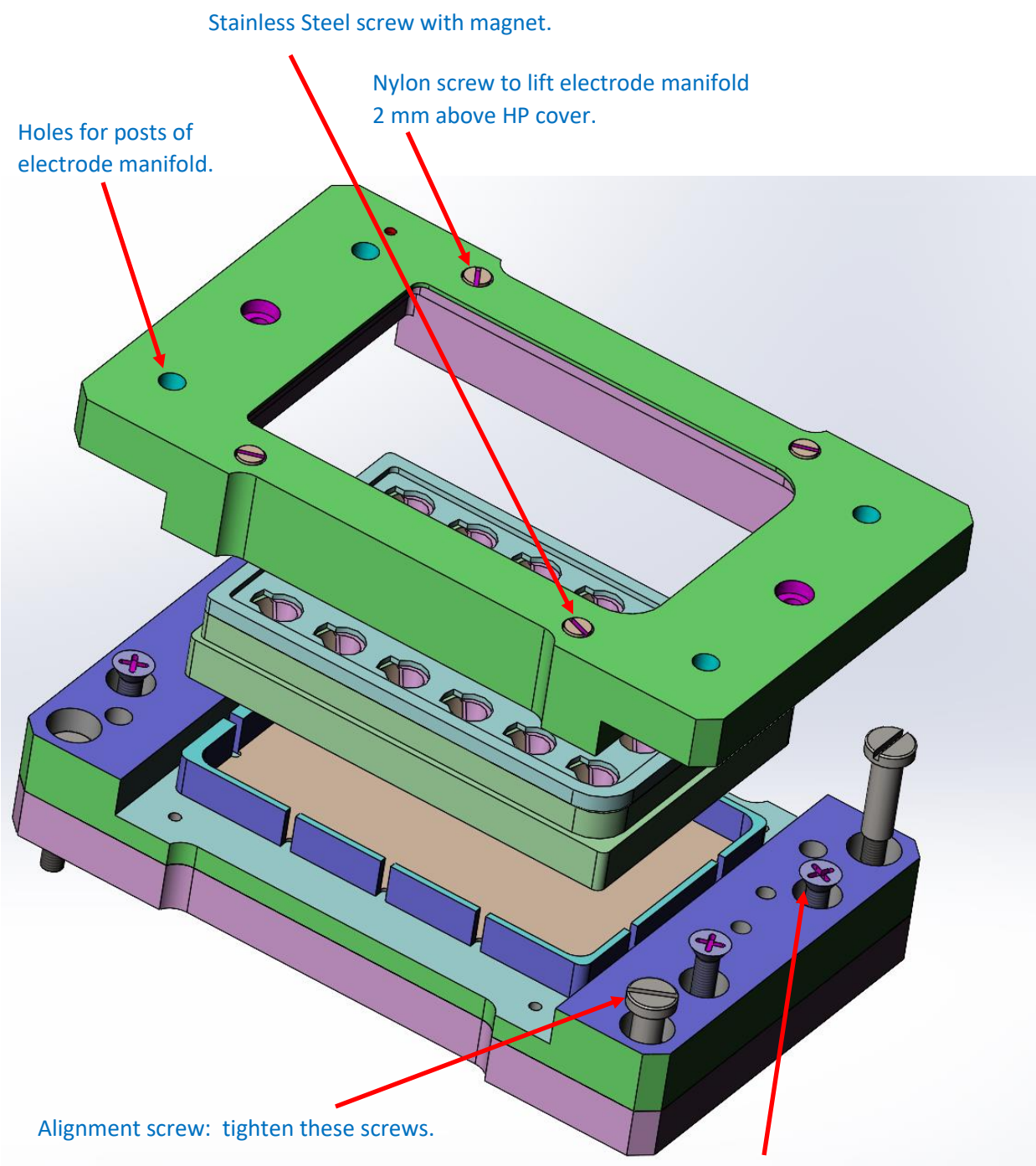


Costar plate holder.

Base has a PVC bottom cover. Inside are heating and temperature sensor connected to external temperature controller. Circuit is powered by 24 VDC. Material: anodized aluminum. The TOP keeps the plate in place and has holes for posts to align the electrode manifold. Pink part of BASE is made of PVC, for thermal isolation of heated aluminum parts from breadboard. The base part can be rigidly attached to the breadboard with crosshead screws, or, enabling small displacements of $\pm 0.5\text{mm}$ with slit screws, enabling smooth positioning of the electrode manifold. Four nylon M4 screws in the cover can be used for keeping a small distance (2 mm) between plate holder and electrode manifold.

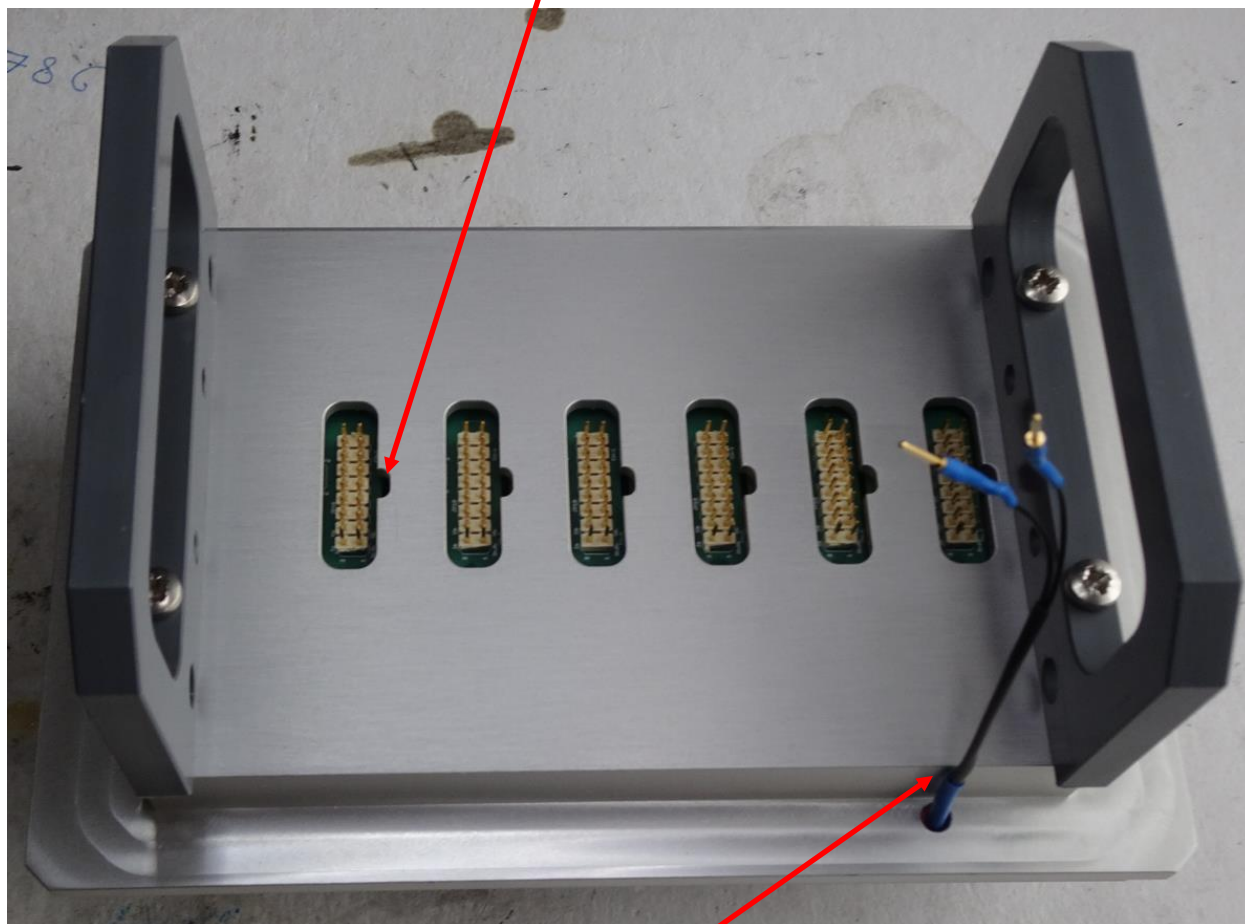


Heated platform for transwell plates Costar-24



Electrode manifold with handles for use in MANUAL mode

Insert connectors of 16 way flat cables in 16 way headers with notch oriented tin slit in cover of manifold.



Reed relay used to sense magnet in HP.
Connect 1mm pins to wire with green
connector that inserts into MTECC INPORT #2

Check electrode tip position.

Turn cover of HP upside down and insert a 24 Costar transwell plate.

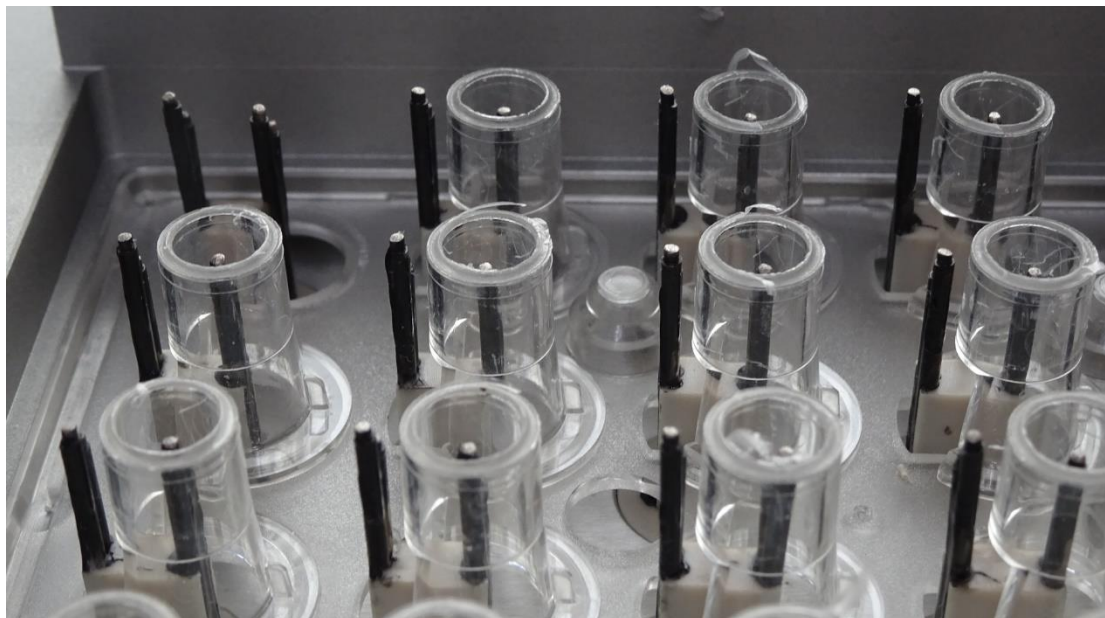


Turn electrode manifold (with handles as on page 5) upside down and place HP cover with Costar transwell plate on the electrode assembly:



Check the position of the tip of the APICAL voltage electrode. The distance between tip of V-electrode and membrane should be at least 1 mm. See next page.

Enlarged view of electrode tips:



Note membranes were removed from Costar wells.