

A-Cell – Electrolyser test cell

Overview & assembly manual

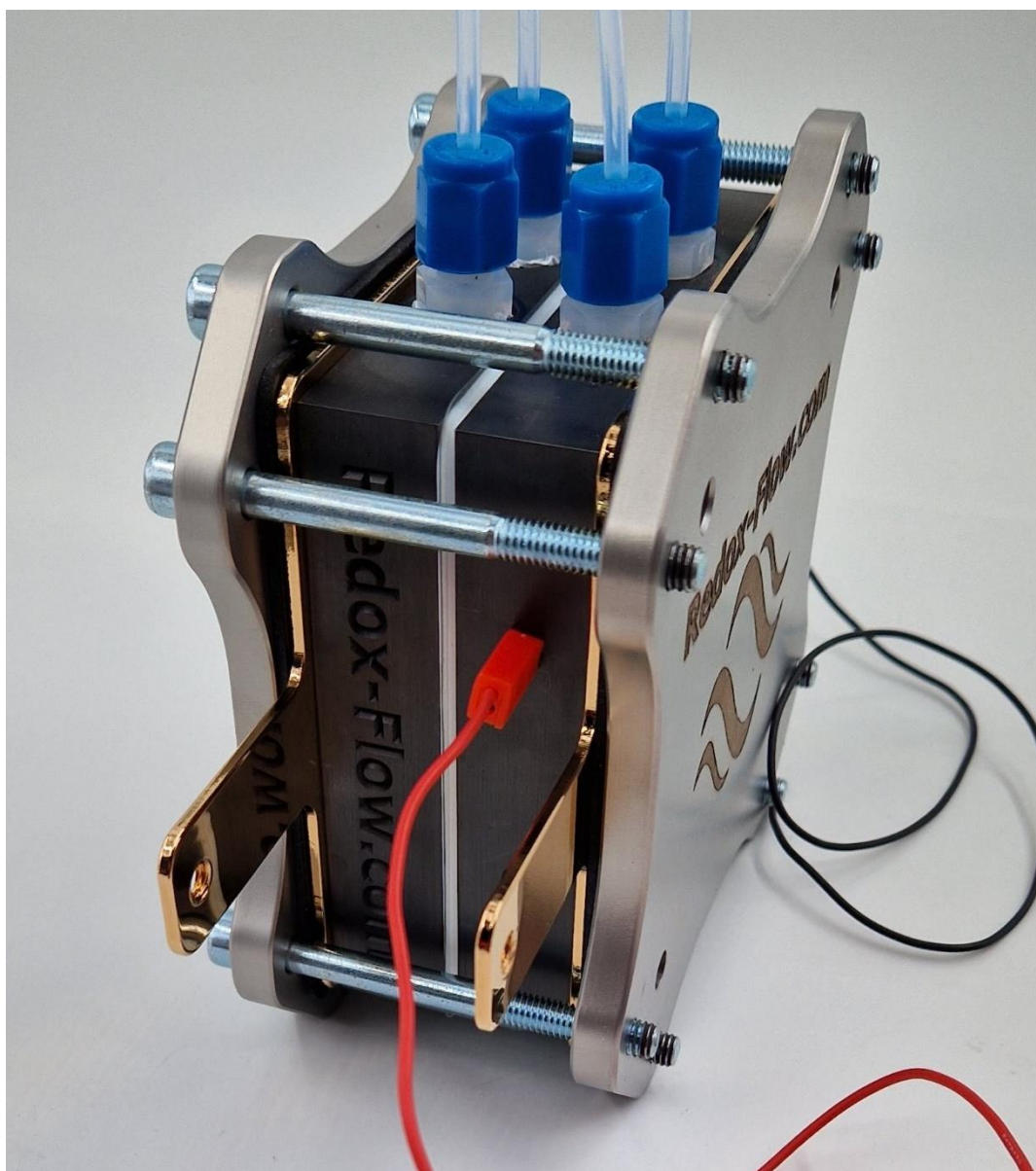


Notes

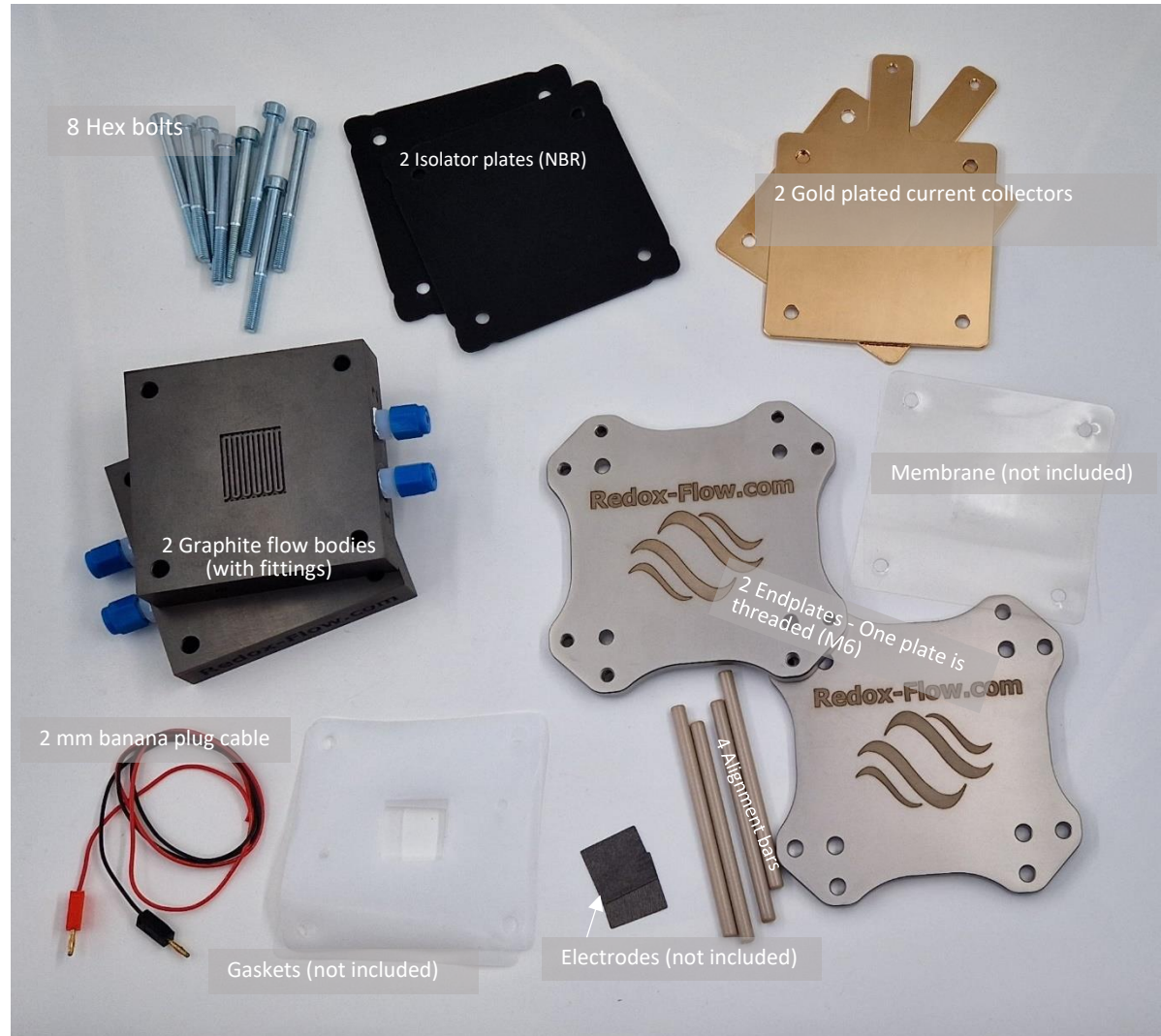
This flow battery test cell is intended for research purposes only and can be assembled in several ways.

There is no warranty on performance, corrosion, or lifetime on the items. It is purely for research purposes.

Version 2.0 – May 5, 2024

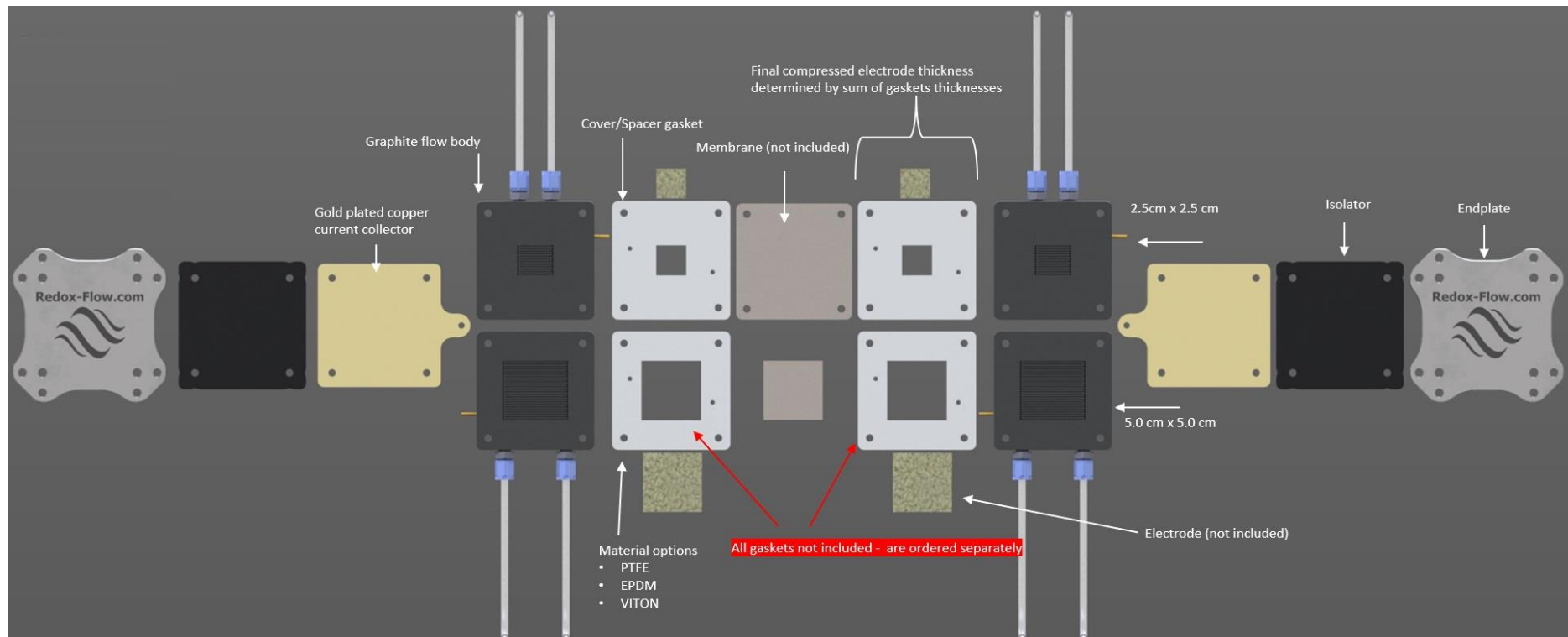


Overview of included components



Overview of variants

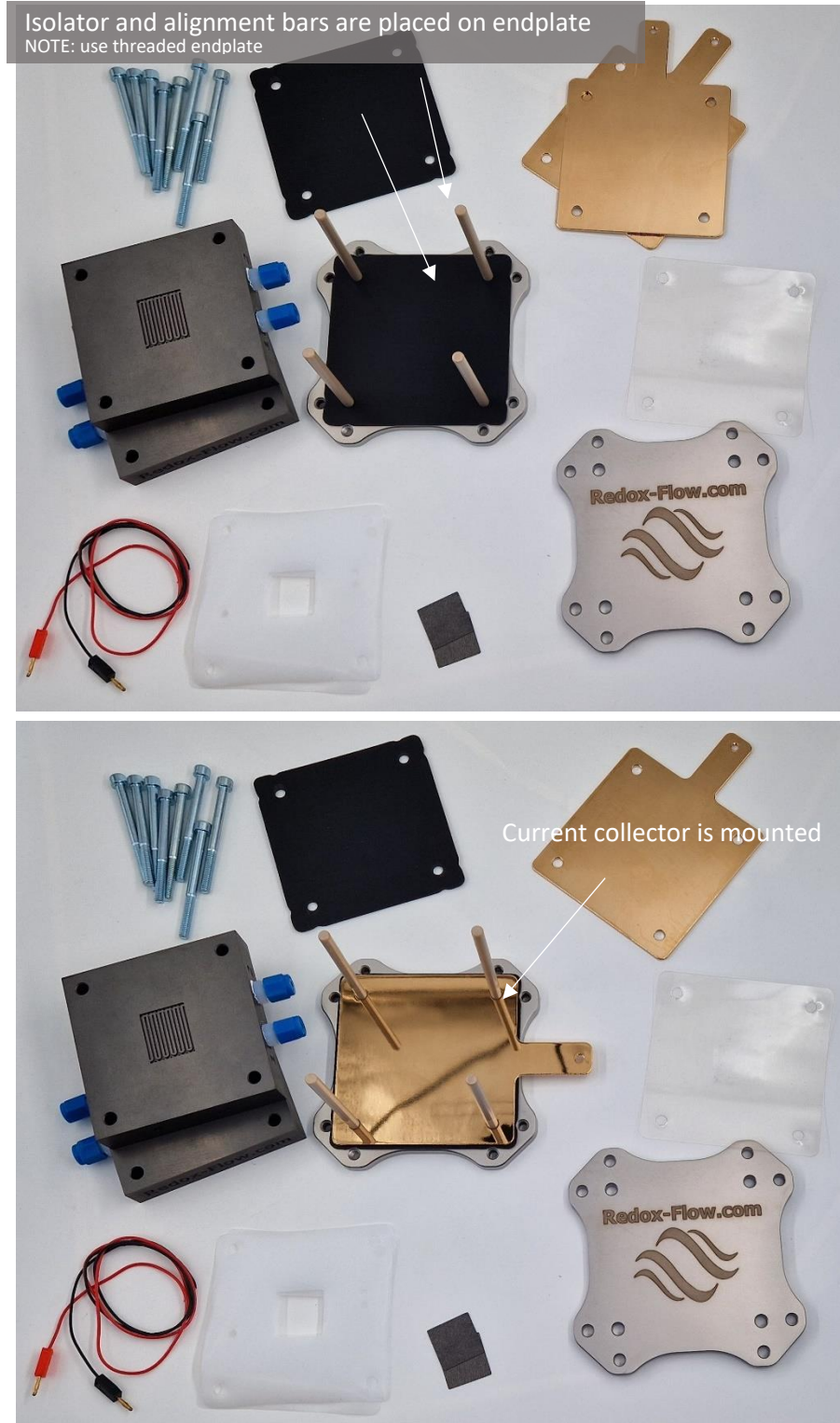
Overview of variants with. Assembly is from left to right – top shows 2.5cm x 2.5cm while bottom shows 5cm x 5cm assembly.

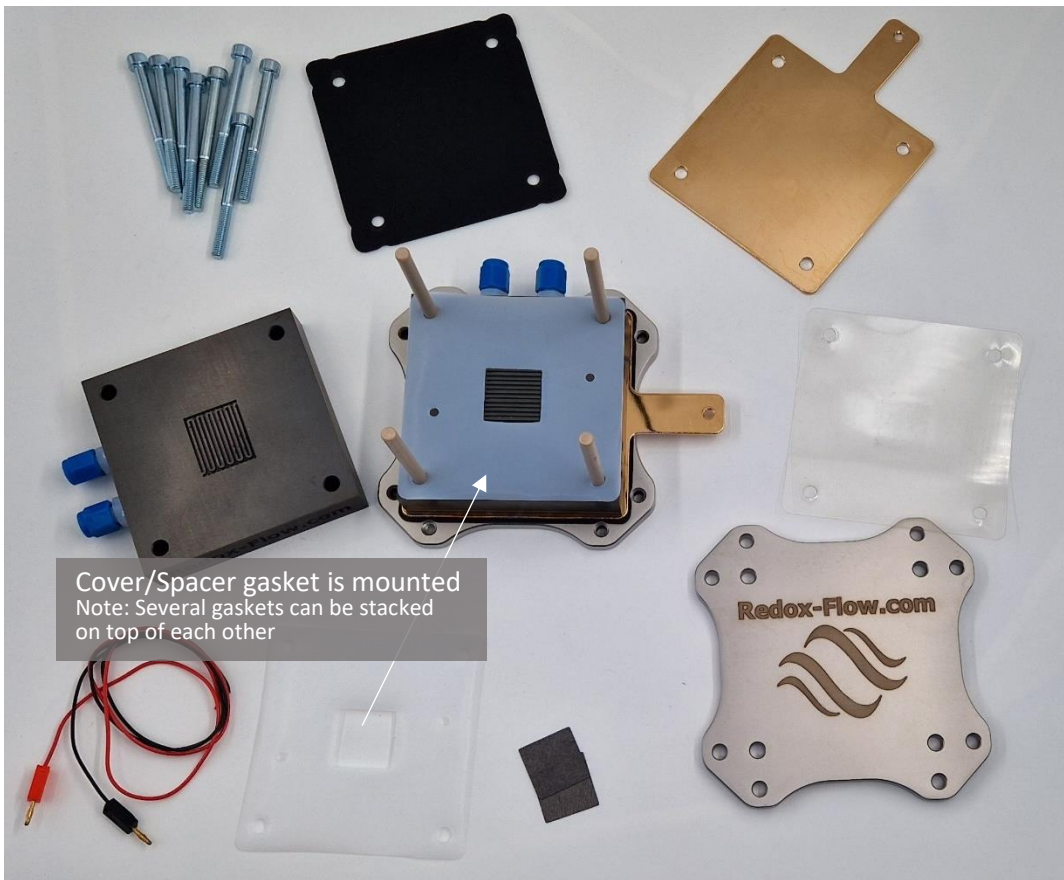
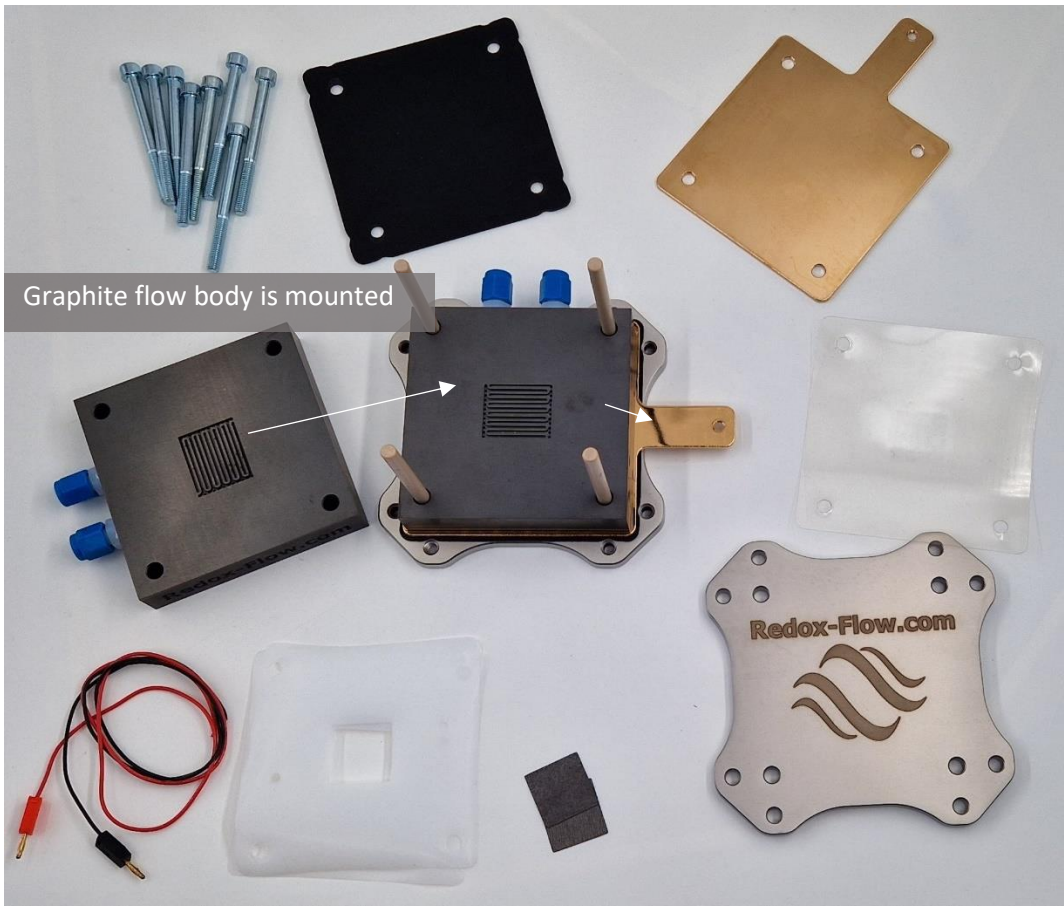


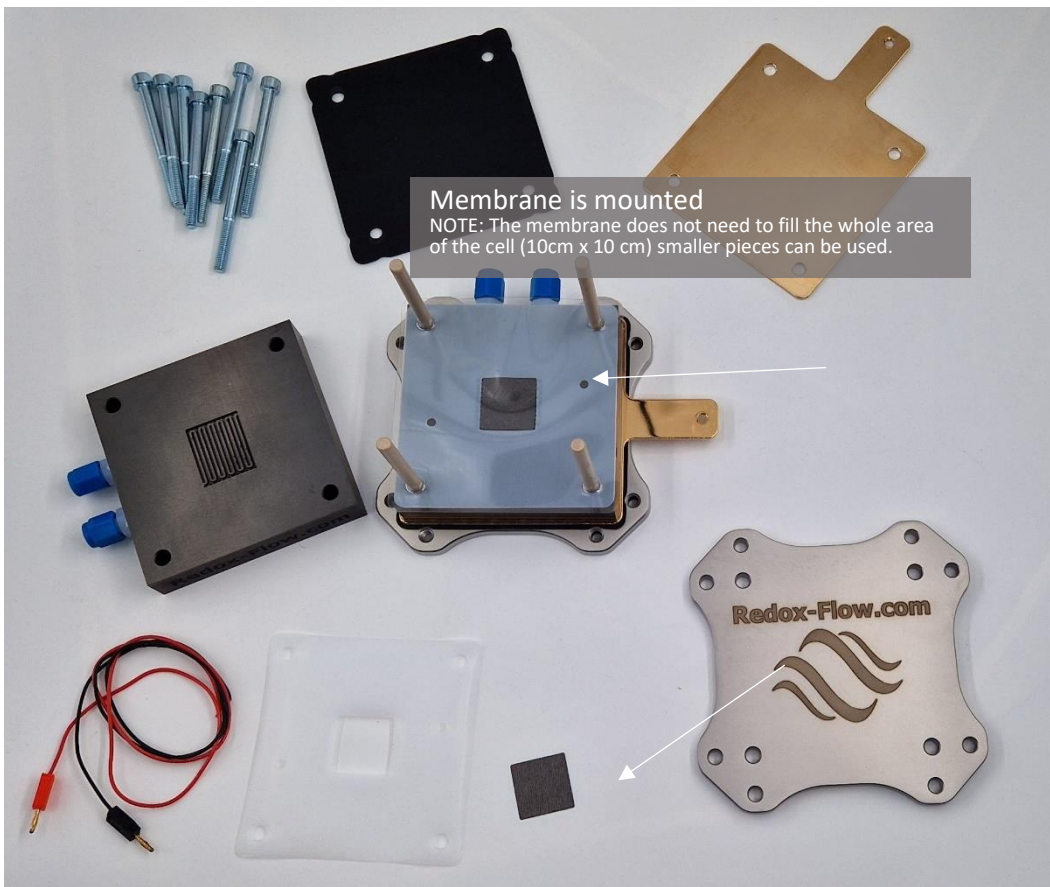
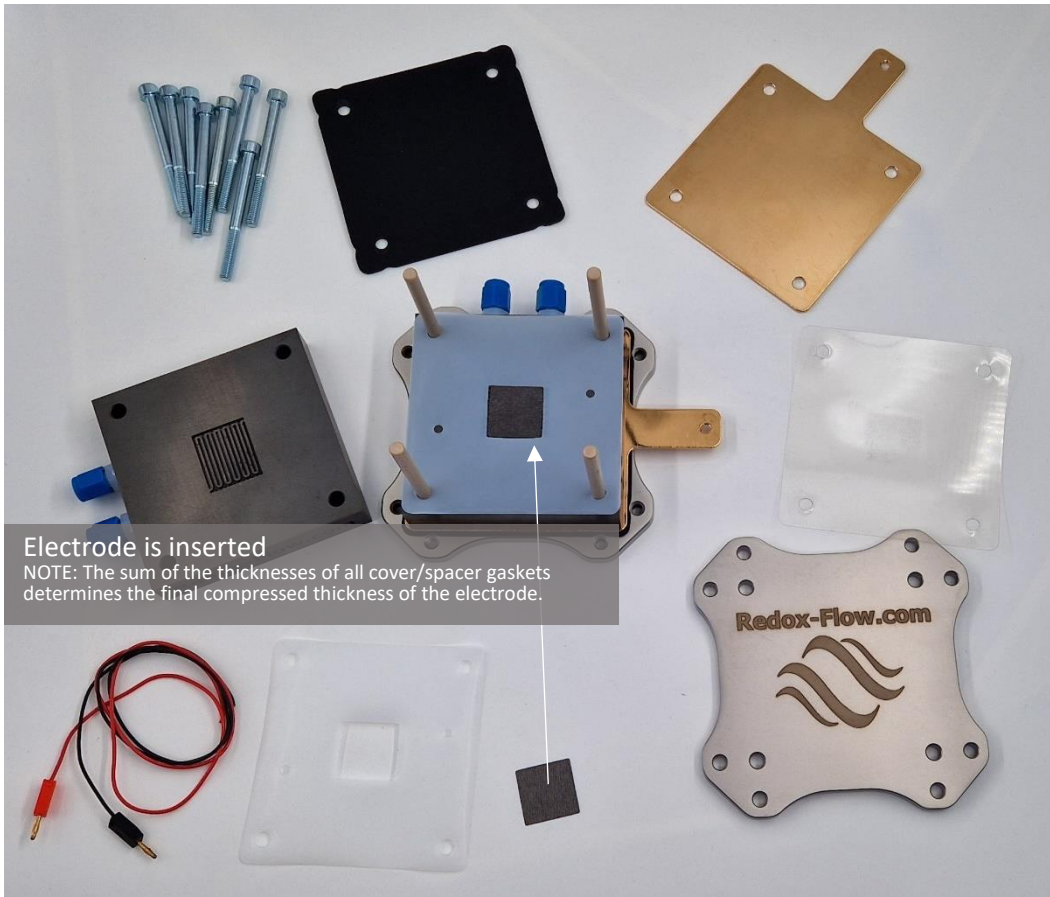
Assembly

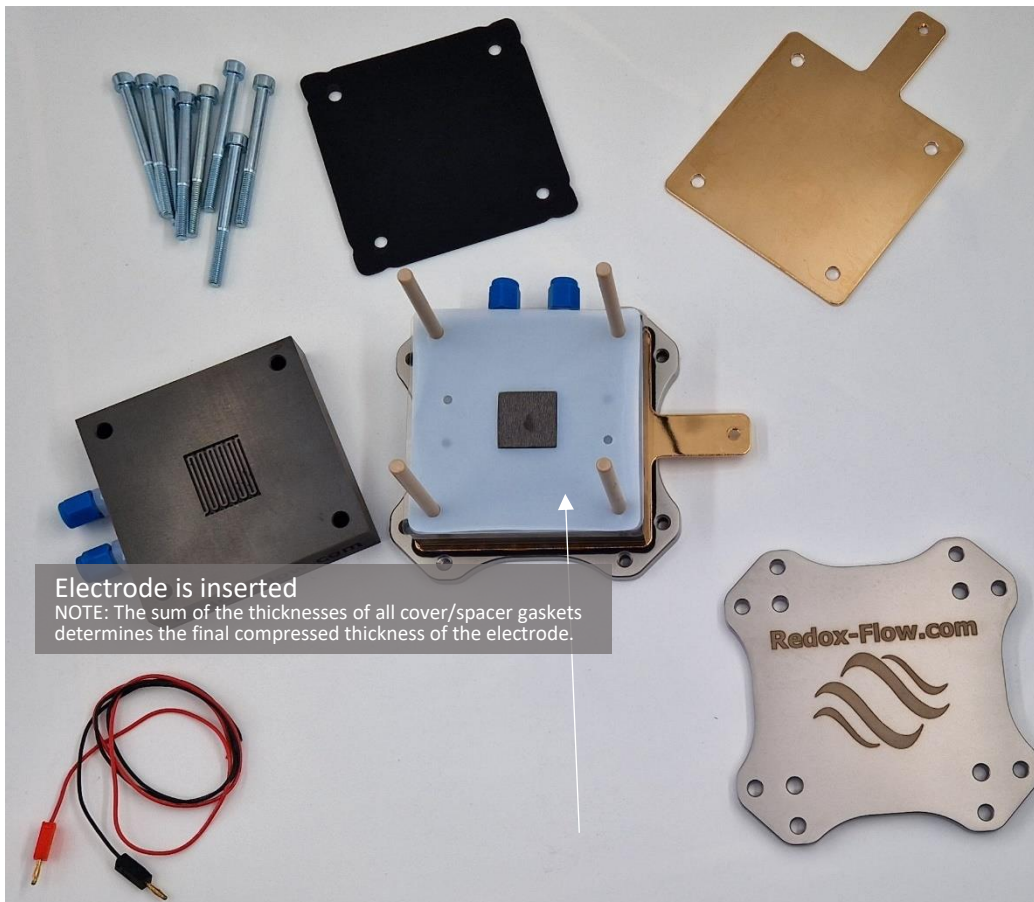
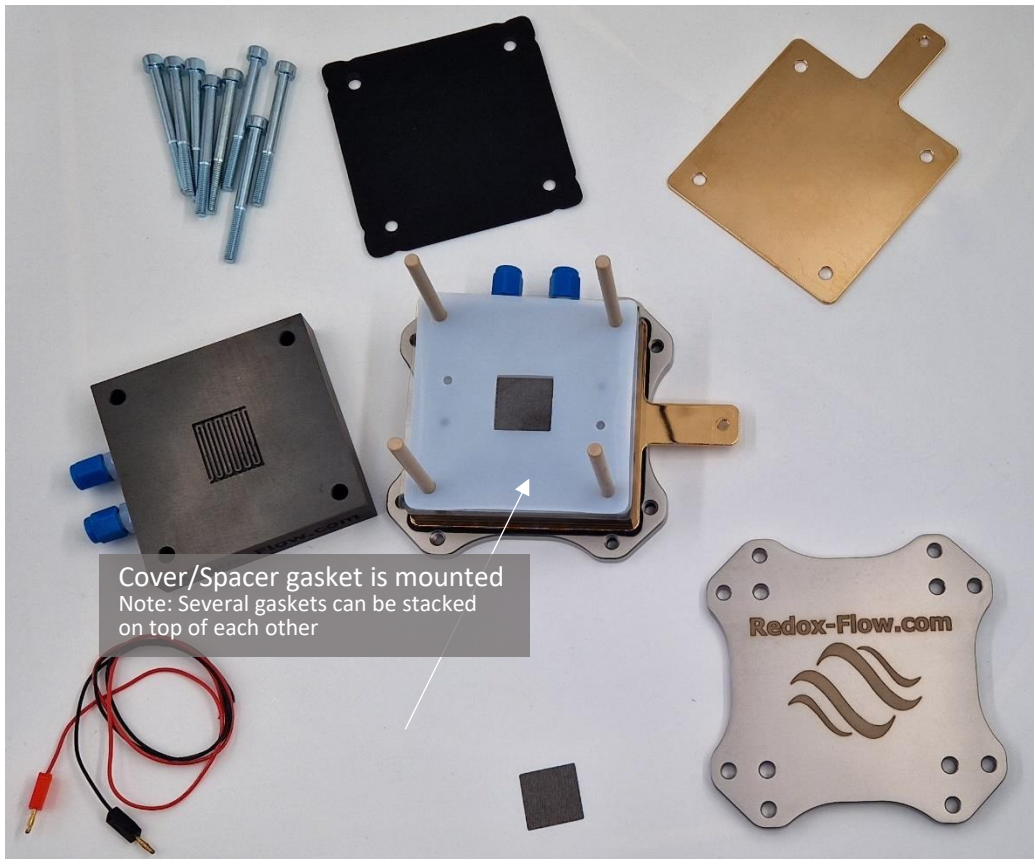
The following is an example on a 2.5cm x 2.5cm cell.

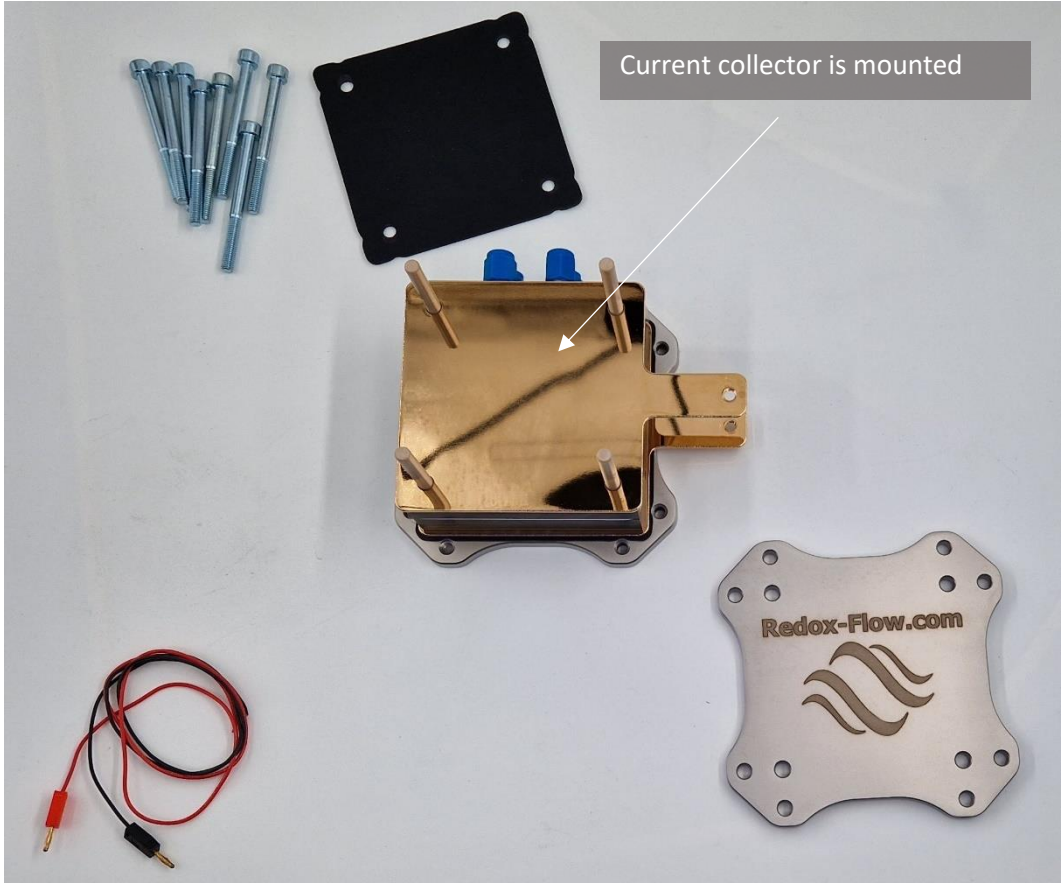
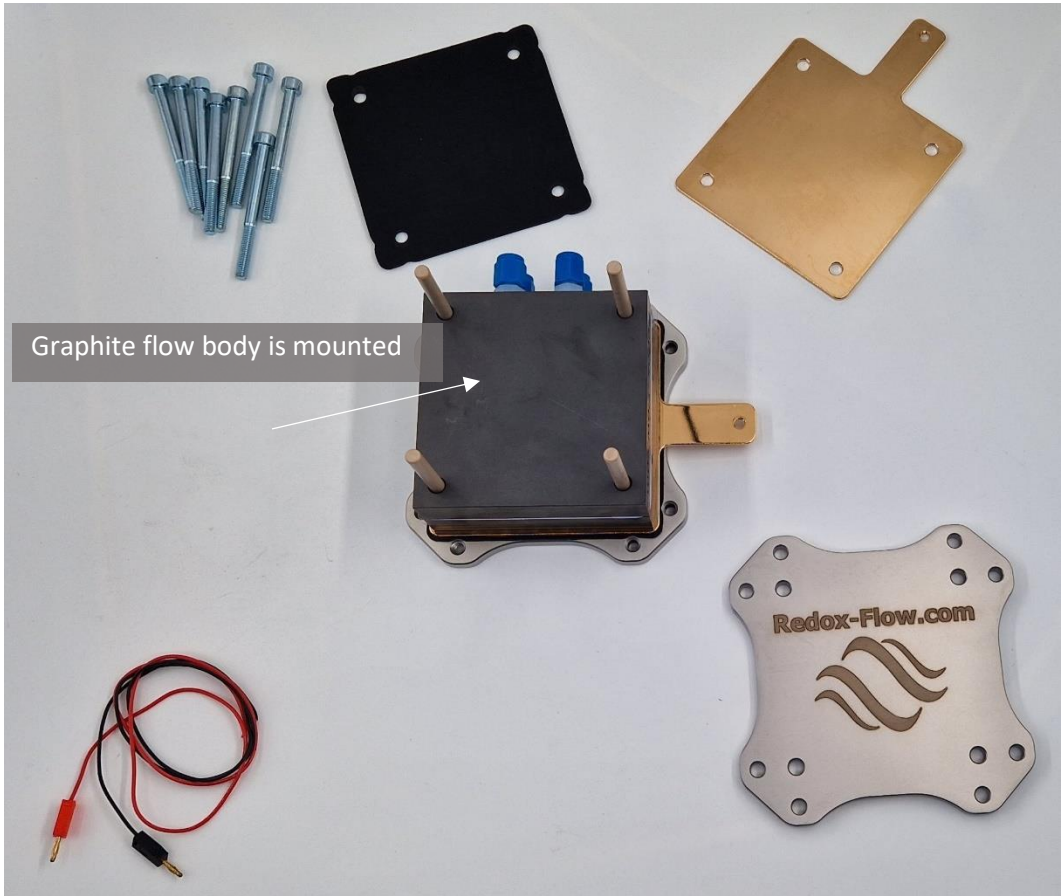
NOTE: The order of assembly does not strictly need to follow this assembly manual. Depending on use and experience it can be done in different order.

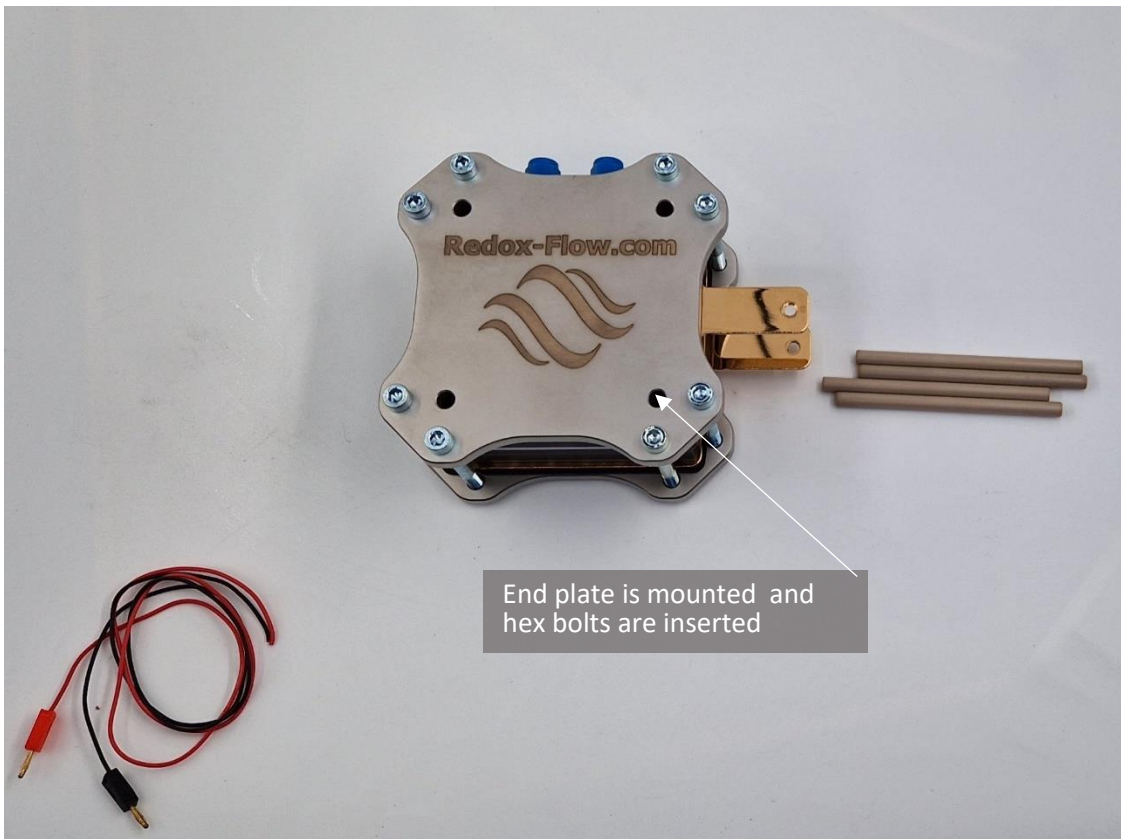
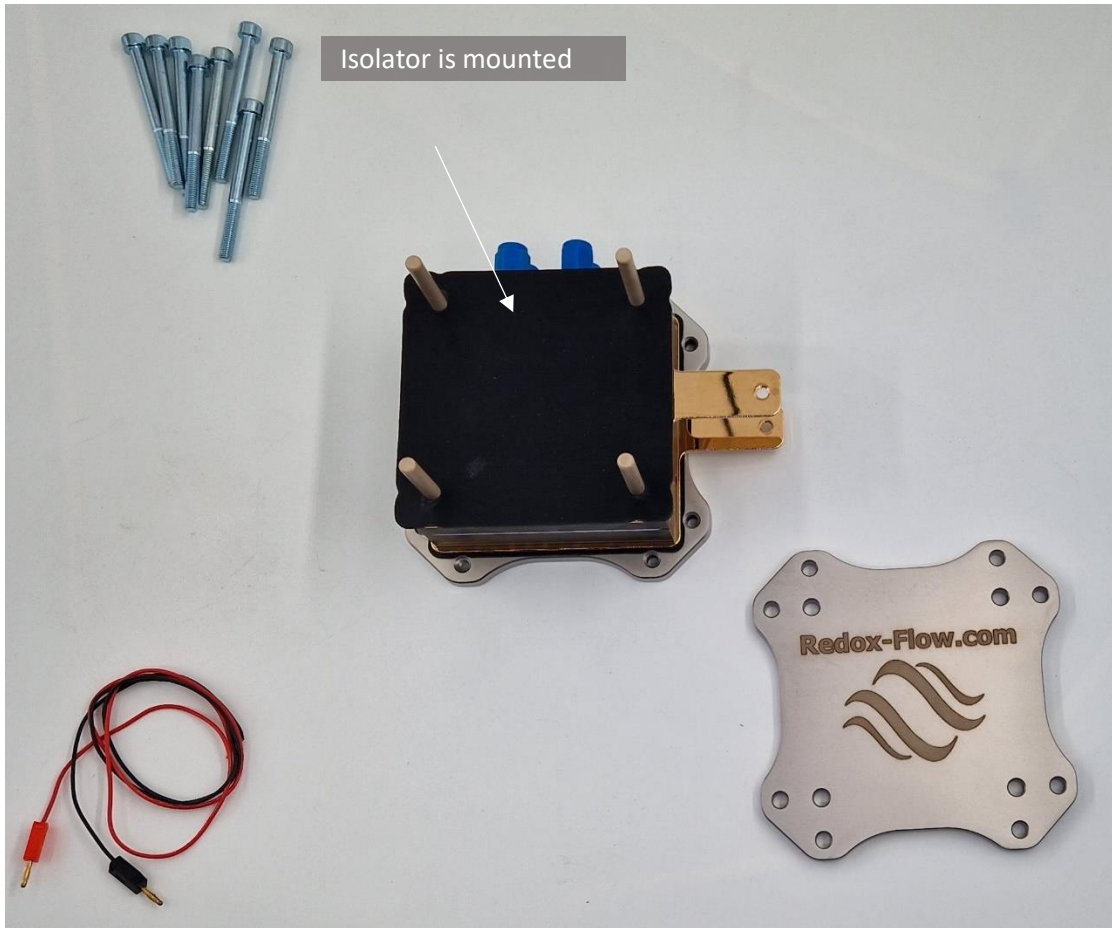


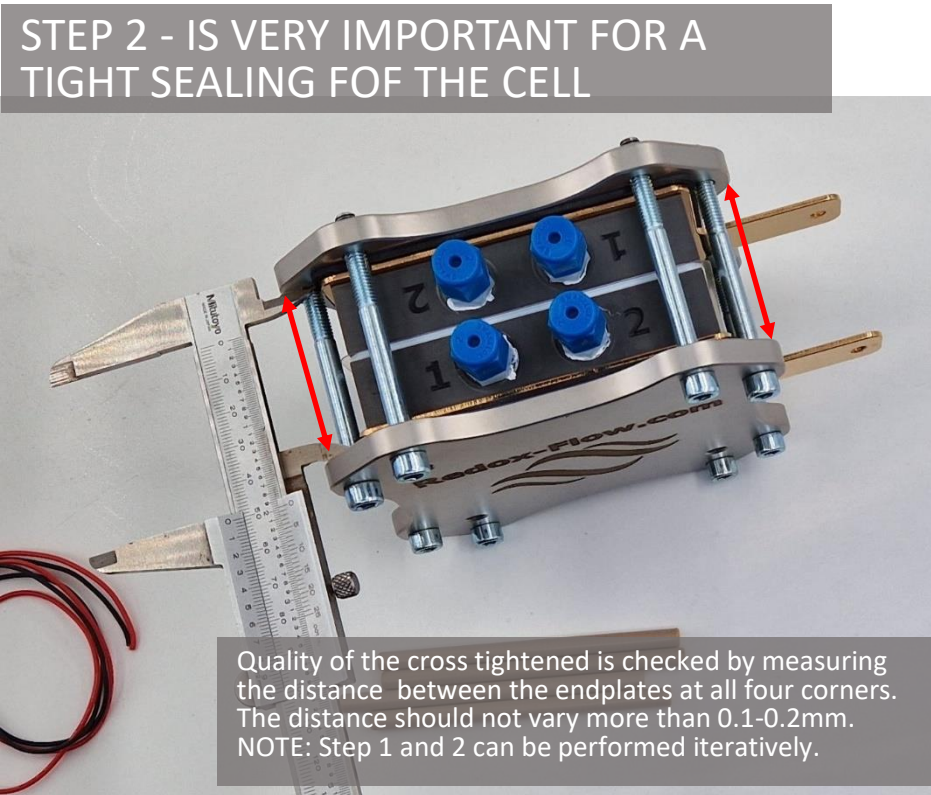






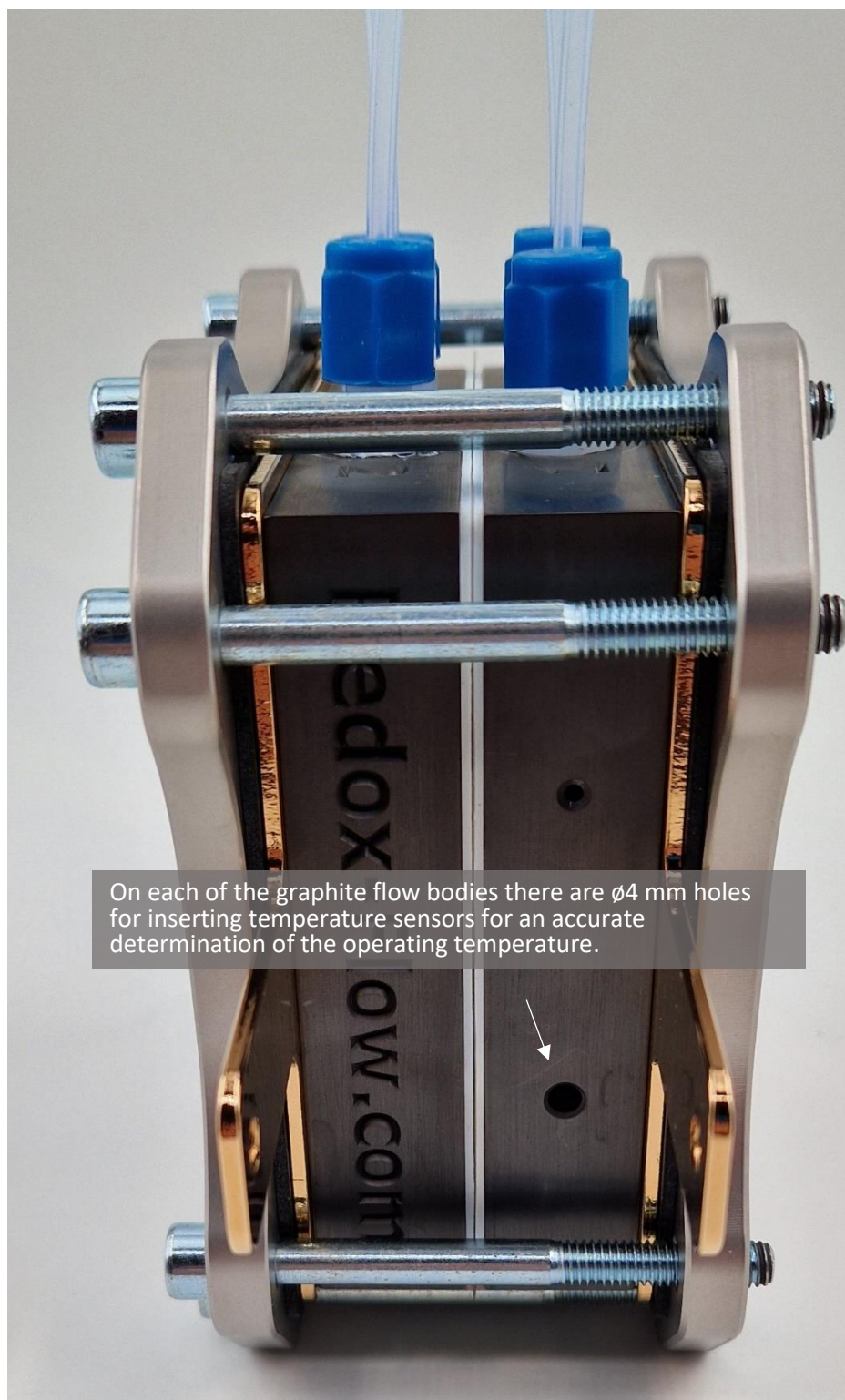






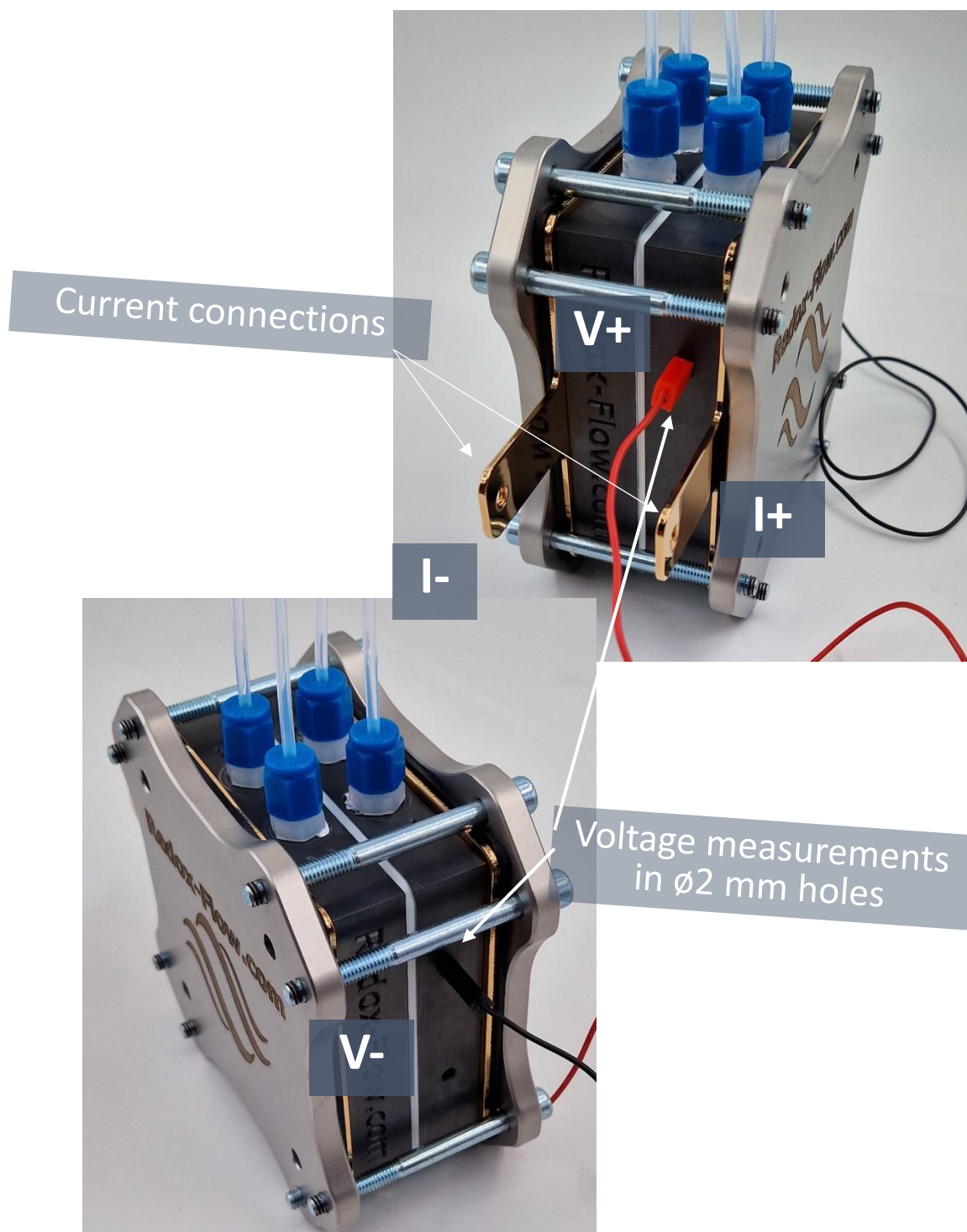
NOTE: If very thin electrodes/gaskets or only hard PTFE gaskets are used, sealing may be more difficult. Here tiny amounts of silicon based sealing grease can be applied to the gaskets. After applying the sealing grease to the gaskets, wipe it off with a dust free or lens cloth

Application notes – Temperature sensors



On each of the graphite flow bodies there are $\varnothing 4$ mm holes for inserting temperature sensors for an accurate determination of the operating temperature.

Application notes – Electrical connections



NOTES:

1. If high currents are applied, it is paramount to have good electrical connection to the current collectors through e.g. cable lugs.
2. Voltage can also be measured on current collectors, but will include contact resistance between current collectors and graphite body.