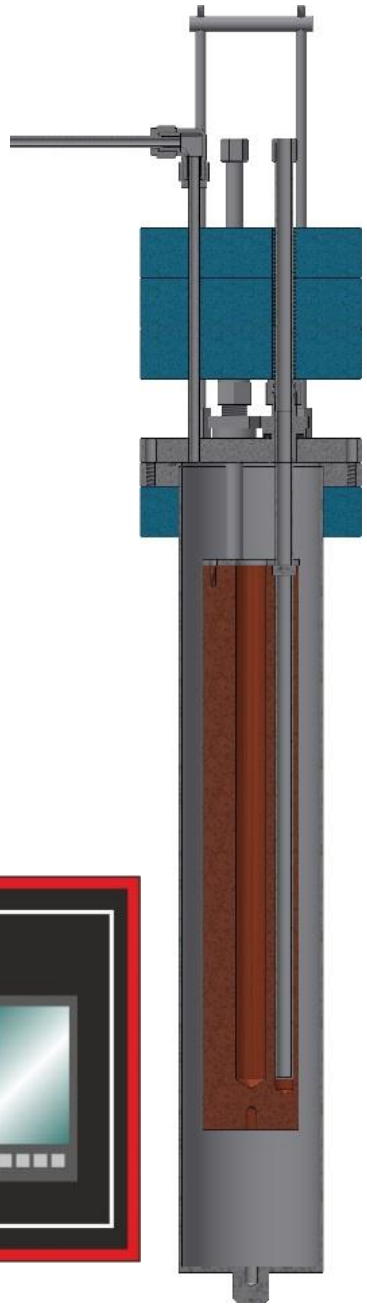
# Cryostat Model 459

**-180°C to – 80°C**

Can be set to any temperature in the range of -80 to -180°C

Includes external temperature controller

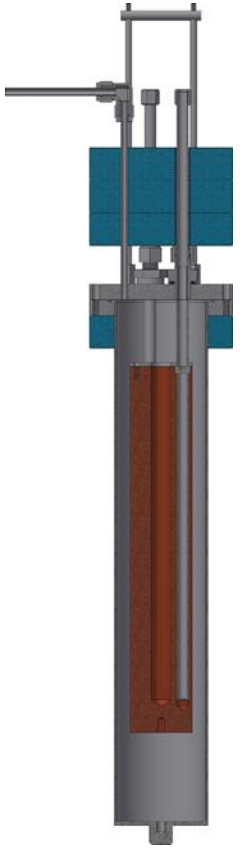



# Cryostat Model 459

The Model 459 assembly sits inside a LN container

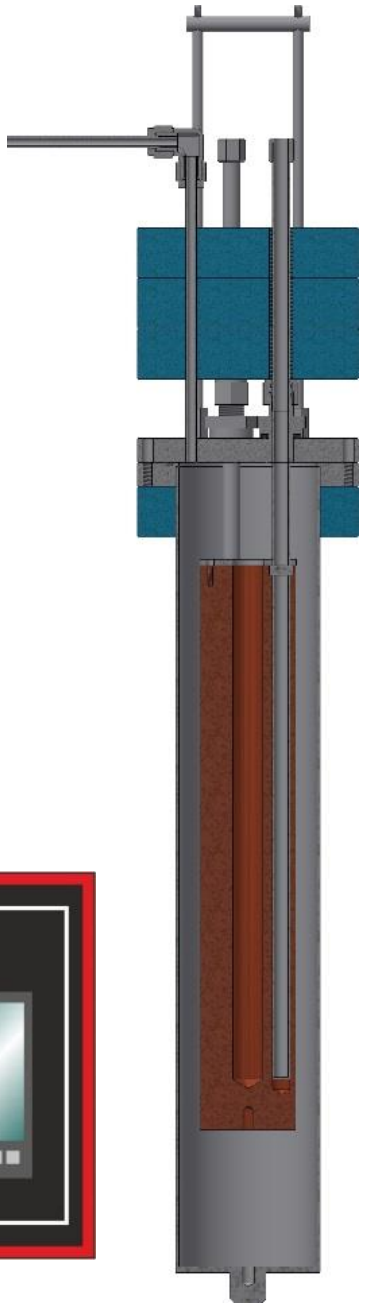
This should be ordered separately, part number 459-01-03


Optional Container for Cryostat



# Cryostat Model 459

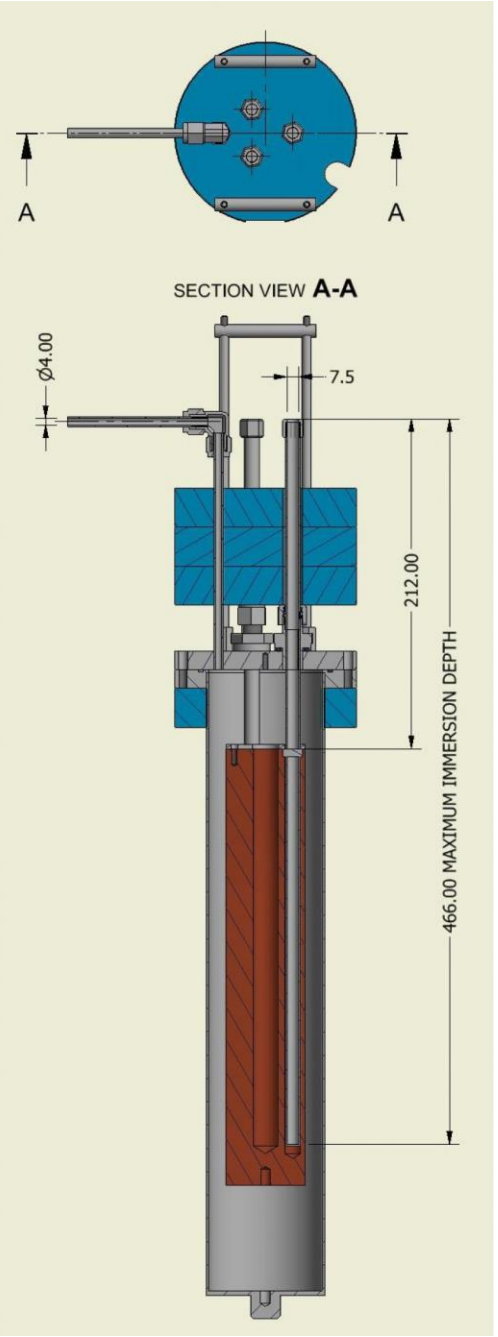
- A stainless steel housing comprising a closed end tube attached by six bolts, to a flange and having an ‘o’ seal has been built
- The housing contains a large copper equalising block drilled to accept three thermometers i.e. one standard and two units under test.
- In the central axis of the copper block is a heater and a platinum resistance thermometer. The heater and thermometer wires are attached to a Lemo socket in the flange which in turn is connected via a multi-core cable to a controller

# Cryostat Model 459

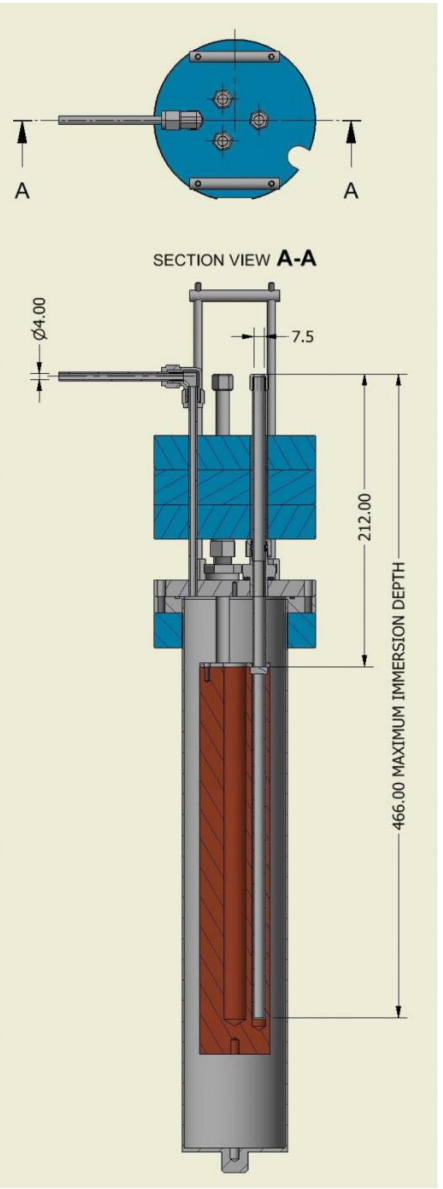
- The copper block is designed to accept long stem SPRTs
- The are three x 7.5mm pockets
- Immersion Depth 466mm

Because the Cryostat will be running below the dew point, moisture will accumulate and then freeze around the wells and can seal the thermometers in the wells. Teflon seals are provided to lightly clamp the thermometers and prevent moisture condensing inside the wells



# Cryostat Model 459

- Once the desired temperature is achieved a vacuum can be pulled so  conductivity within the Cryostat is minimised giving less gradients in the equalising block
- The vacuum flange also allows the assembly to be vacuumed and then back filled with dry nitrogen. This eliminates any moisture and improves thermal conductivity
- There are options for a both a mechanical and electric vacuum pump



# Why Choose Model 459

Commercial liquid baths are limited to -80°C

This product fills the gap between Liquid Nitrogen Comparators and Liquid Baths

Suited for SPRT Calibration

- High Stability
- Avoids need for hazardous liquids

| Typical Stability | | | | |
|---|---|---|---|---|
| | | 30mins | | 120mins |
| | | | | |
| -80°C | | +/-0.003 | | +/-0.006 |
| -180°C | | +/-0.006 | | +/-0.006 |