

### Closed loop cryogenic system (Model HelioxACV)



Closed loop cryogenic system	Model HelioxACV
Temperature range	with zero heat load and std rad shield $\leq 300\text{mK} - 300\text{K}$ guaranteed $275\text{mK} - 300\text{K}$ expected
Temperature stability	+/- 0.1K on 2 - 300K range +/- 2mK on 0.3 - 2K range
Cooling time from room temperature to base temperature	10 hours typical with no sample on automated cool down process
Regeneration time	1 hr typically
Hold time at base temperature with zero heat load	better than 50 hr under dynamic temperature control
Cooling power at 0.35 K	100 microwatt for more than 6 hr
Electrical connections	24 way constantan twisted pair loom down to sample position
Optical ports	2 optical windows
Sample environment dimensions	Diameter 150 mm Height 100 mm
Thermometers	Generic RuO <sub>2</sub> sensor and Cernox on the He pot Carbon sensor on sorb and other critical control elements
Power	4.5KVA single phase, 220V, 50 Hz
Complectation:	Pulse Tube Cooler refrigerator with air cooled compressor and gas lines