

# ICE

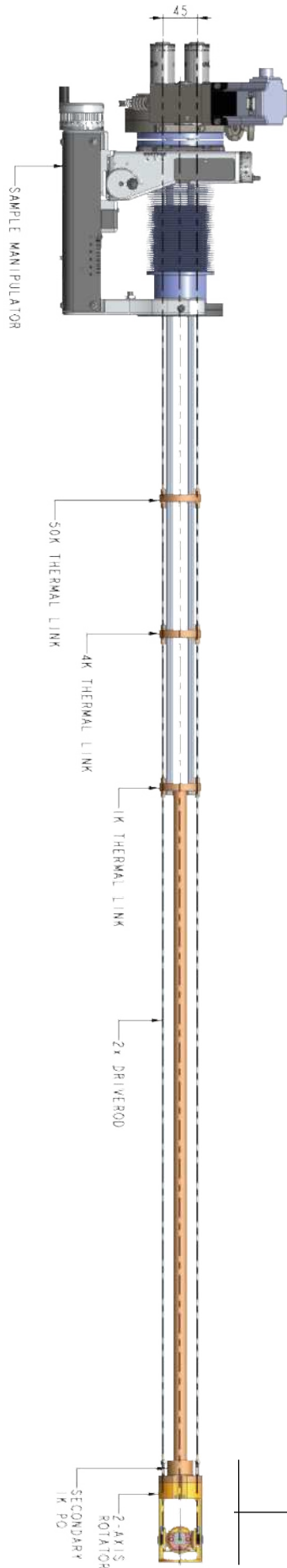
## DRY ICE<sup>1K</sup> ARPES

0.8K to 300K

**The DRY ICE<sup>1K</sup> ARPES is a closed-cycle side loading sample cooling and manipulating system designed for angle-resolved photoemission spectroscopy (ARPES) applications.**

The system has a maximum of 6 axes of precise sample movement and rotation using both automated and manual drives. The design incorporates two 1K pots for improved cooling power direct to the sample, allowing a cooling power of 100mW at 1.6K.





## DRY ICE 1K ARPES

TEMPERATURE RANGE	0.8K – 300K
COOLING POWER	30-50 mW @ 1.0K, 200 mW @1.8k
TEMPERATURE STABILITY	+1mK below 1.5K
SAMPLE ENVIRONMENT	Vacuum
SAMPLE SPACE	Ø30-70mm (Custom Available)
VIBRATION AT SAMPLE	<1µm
COOLDOWN TIME TO BASE	<20 hours
COMPRESSOR	Air or Water-cooled options available
DIAGNOSTIC WIRING	DC, RF and Fibre Optic options available
OPTICAL ACCESS	Up to 5 windows available inc. Sapph, Quartz & Spectrosil
BASE TEMPERATURE	0.8K
TEMPERATURE CONTROLLER	Lakeshore 336
VISUAL ACCESS	Custom X-ray Beam access and Detector set-ups available
AXES OF MOTION	X,Y,Z, Theta, Phi, Omega
PRECISION TOLERANCE WHEN ROTATING	0.3–0.5mm
BAKEOUT	80-120 Celsius

### Dual Axis Rotator

Automated rotation range of 180° about angle  $\theta$  and 100° about angle  $\omega$  with 0.1° of accuracy

360° of rotation about angle  $\phi$  by rotating the sample rod

Software Controlled

Designed with a copper surround and direct copper thermal link to the chip for faster cooling and improved thermalisation