kiutra

Empowering Innovators with User-Friendly and Sustainable Cryogenics

kiutra, founded in 2018 as a spin-off from the Technical University of Munich, has established itself as a supplier of innovative cryogenic solutions, products and services providing ultra-low temperatures.

We design and build turnkey cryostats for the development, characterization, and testing of quantum systems, as well as for their continuous operation.

Our systems do not require liquid cooling media, such as rare and costly helium-3, making them fast, cost-effective, and scalable - ideal for providing cooling along the whole quantum technology chain.

Find out more at: kiutra.com.

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L-Type Rapid

Super-Fast Characterization at Sub-Kelvin Temperatures

Fast sample cooldown

With the automatic transfer mechanism samples can be cooled to 100 mK in less than 3 hours.

Continuous and cryogen-free operation

Continuous cooling at 300 mK through continuous Adiabatic Demagnetization Refrigeration (cADR).

Compact size and ergonomic operation

Small and largely automated system operates without the need for special expertise.

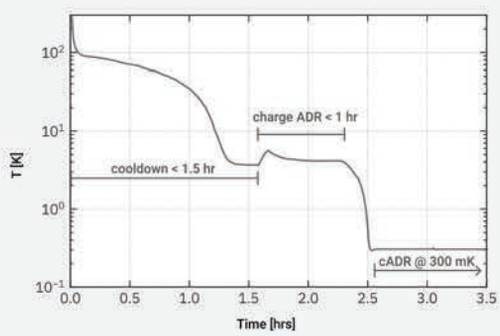
Temperature Range **100 mK - 300 K**

Sample cooldown time **< 3 hours**

Continuous operation above **300 mK**

Maximizing throughput

kiutra's proprietary puck-based sample transfer mechanism allows loading samples into the cryostat in just a couple of minutes without having to warm up the cryostat. After loading, the system automatically cools the sample down to the base temperature in less than 3 hours. Sample removal is just as quick, and within a few minutes the next sample, prepared on a spare puck, can be loaded, resulting in the highest sample turnover for sub-Kelvin studies.



Specs

System size (cm) (w x l x h)	cryostat rack compressor	94 x 94 x 232 60 x 80 x178 45 x 53 x 63	**Temperature stability**	typical while switching stages	< 0.1% or < 0.5 mK < 2%
System weight (kg)	cryostat	< 600	**Cooldown time (hrs)**	cryostat	< 42
Cooling power (µW)	@500 mK @1 K	50 160	**Sample cooldown time (hrs)**	300 K – 4 K 4 K – 0.1 K total 300 K – 100 mK	< 1.5 1.5 < 3
Available sample space (mm)	diameter height	ø 36 100	**Operation time (hrs)**	@100 mK @200 mK	3 5

Options

- **Magnetic shielding** to investigate and operate sensitive quantum electronics
- **5 Tesla sample magnet** smooth bipolar operation to study magnetic properties
- **RF electronics** variety of low-temperature electronics in up to 4 RF lines