



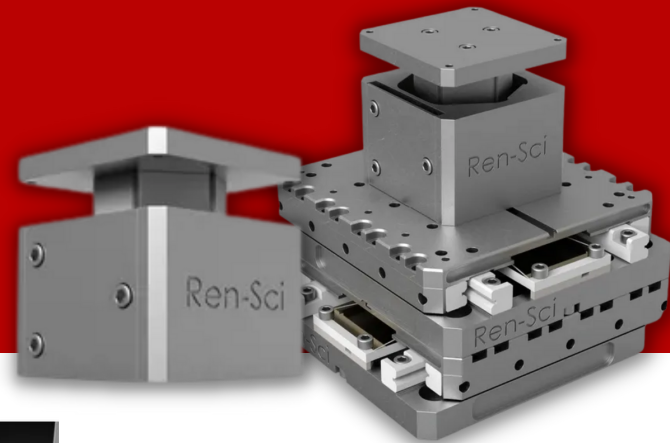
Quantum Design
UK AND IRELAND

Cryogenic Instrumentation



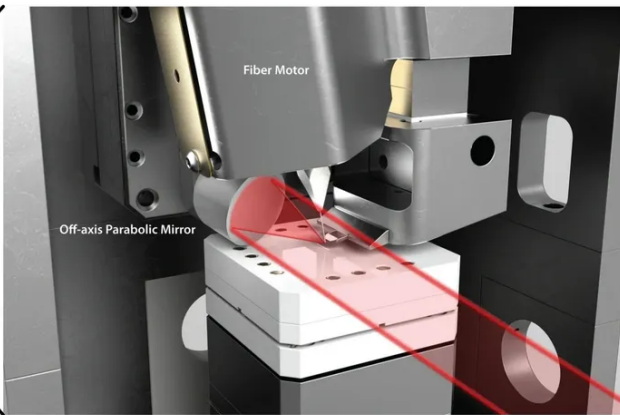
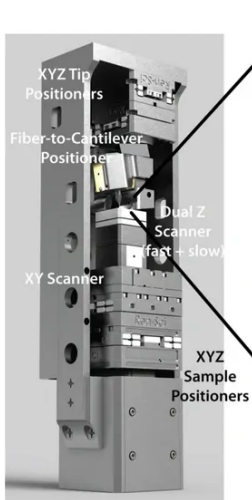
News

Renaissance Scientific Joins the QDUKI Portfolio



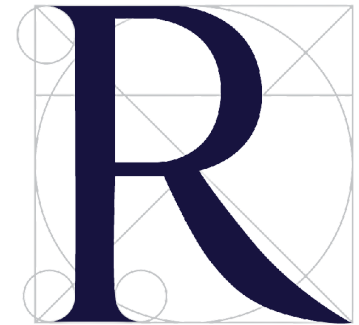
**Cryogenic
Nanopositioning
Stages**

[learn more](#)



[learn more](#)

Cryo AFM



RENAISSANCE
SCIENTIFIC



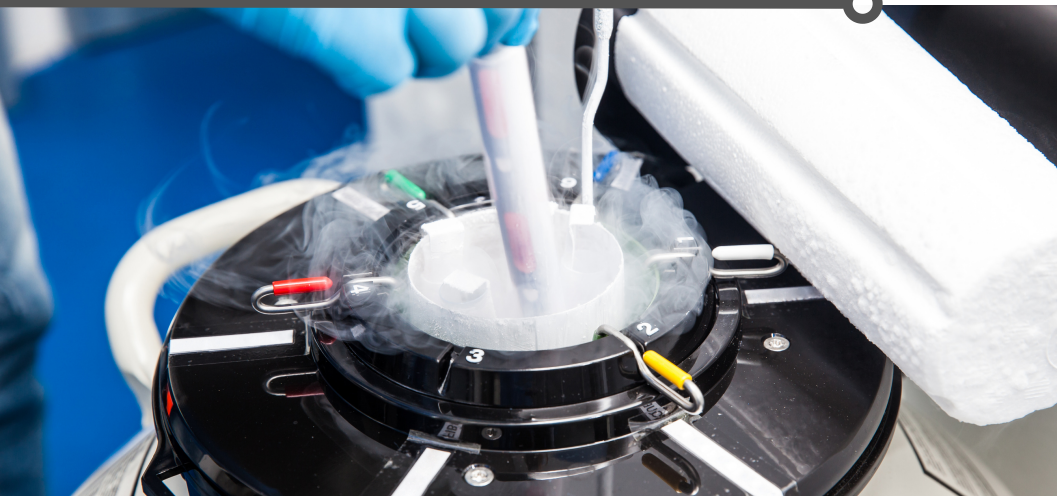
"We are really excited to be working with Renaissance Scientific. Their range of cryogenic products will give our customers a great amount of choice when designing their next low temperature experiments."

Dr. Luke Nicholls, Technical Sales Engineer, QDUKI

Interested in becoming a
principal for QDUKI?

We are always looking to add to our expanding high-end instrumentation portfolio. If you would like to put forward your products for consideration, please contact our Technical Sales Director, Shayz Ikram shayz@qd-uki.co.uk or call (01372) 377882

About QDUKI



Quantum Design UK and Ireland (QDUKI) offers components and systems used in materials science, imaging, spectroscopy, photonics, nanotechnology, and life science research. QDUKI possesses a deep understanding of the needs of researchers exploring next-generation technologies.

The partnerships between QDUKI and Lake Shore, Montana Instruments, NanOsc and now Renaissance Scientific, combine the knowledge and application expertise of these industry leaders in scientific measurement, characterisation, and test to deliver best-in-class solutions to the research community.

We'd be happy to chat with you about your applications and areas of research. If you would like to find out more, please do not hesitate to get in touch with our dedicated technical experts here at QDUKI.

Contents

- 2 Wet and Dry Cryostats
- 3 Magnetic Cryostats
- 4 Low Temperature Characterisation
- 5 Applications
- 6 Service and Support
- 7 Testimonials



see the full product range on our website

The Team



DR. SHAYZ IKRAM

Technical Director



DR. SATYAM LADVA

Technical Product Manager



DR. LUKE NICHOLLS

Technical Sales Engineer

contact

Tel: +44 (0)1372 378822
Email: info@qd-uki.co.uk
Quantum Design UK and Ireland Ltd, 1 Mole
Business Park, Leatherhead, Surrey KT22 7BA
www.qd-uki.co.uk



Quantum Design
UK AND IRELAND

Dry, Wet and Optical Cryostats

Lake Shore Cryotronics



environment by JANIS

1.5 K Continuous Closed Cycle Refrigerator Cryostat



- Cryogen-free continuous closed cycle refrigerator achieving liquid Helium performance
- 21.5 K to 300 K (450 K optional) with ~9hr cool time to 1.5 K
- Turnkey, push button operation including sample temperature adjustment

[learn more](#)

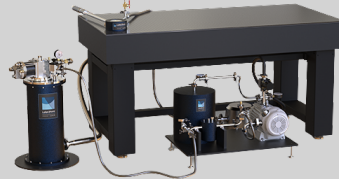
4 K Cryocoolers and 10 K Cryocoolers



- Cryogen-free continuous closed cycle refrigerator achieving liquid Helium performance
- 4 K - 15 K minimum temperature performance range

[learn more](#)

Recirculating Gas Coolers



- Cryocoolers with 1 W, 1.2 W, 1.5 W or 2 W cooling at 4.2 K available
- All the flexibility and convenience of a continuous flow cryostat without liquid helium
- Integrated gas handling system

[learn more](#)

VNF and VPF Series Cryostat Systems



- Sample measured in either flowing vapour or vacuum
- The most versatile liquid nitrogen systems, at a budget, for irregular samples and ease of use

[learn more](#)

Montana Instruments

MONTANA INSTRUMENTS[®]
COLD SCIENCE MADE SIMPLE



CryoCore®

Jump-start your quantum materials research

- Fully configured system on a budget
- <4.9 K - 350 K
- Sample Temperature Stability (P-P): <100 mk

[learn more](#)



CryoAdvance™

Meet the flagship configurable workhorse cryostat

- 50/100/200 mm sample spaces
- Turn-key cryo solution with options for Cryo-Optic, Magneto-Optic and positioner options available
- <3.2 K - 350 K

[learn more](#)

Quantum Design Quantum Design UK AND IRELAND

OptiCool®

7 Tesla Magneto Optical Cryostat

- 7 Tesla Magneto Optical Cryostat
- 1.7 K - 350 K
- Large experimental volume - 89 mm (diameter) x 84 mm (height)
- Spectral thermography options

[learn more](#)

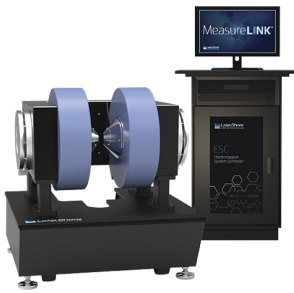
Testimonial

“Integrating the **OptiCool** into my research program will allow for accessing experimental phase space in complex materials that simply wasn't available to my group in the past. Innovative products advance science and the OptiCool certainly meets this standard.”

**Prof. Richard Averitt | University of California
Physics Department**

Materials Property Characterisation Systems

Electromagnet based systems



Electromagnet Systems (MCS-EMP)

Platforms that quickly adapt to material characterisation applications



[learn more](#)

- Fields to 3.26 T over a wide temperature range
- Rapid, repeatable temperature option exchange
- A single hardware configuration for all temperatures, fields, and magnetic moments



Model 8600 Series VSM

For advanced magnetic material characterisation



[learn more](#)

- Combines high sensitivity (15 nemu) and rapid measurement speed (10 ms/pt) in a simple-to-operate system
- High stability— $\pm 0.05\%$ per day
- Fields to 3.62 T

COMING SOON



[join our mailing list](#)

Watch out for our Magnetic Products Brochure

Have you seen our Temperature Products Brochure?

[download](#)



Materials Property Characterisation Systems

Superconducting magnet based systems



VersaLab™
Measurement
System
3 Tesla cryogen-free physical
property measurement system



- Material characterisation up to 3 Tesla
- 50 – 400 K
- Freedom from liquid cryogenes

[learn more](#)



Quantum Design
MPMS3
Magnetometer
Cryogen free Physical Property
Measurement System



- All-in-one Hall Measurement Instrument which automatically selects optimal excitation, measurement levels and executes measurement steps
- Up to 100× faster for low mobility materials
- Use with any type of magnet

[learn more](#)



Quantum
Design PPMS®
DynaCool™
Cryogen free Physical Property
Measurement System



- Temperature range of 1.8 K – 400 K
- Standby mode conserves power while requiring only a short recovery time
- 9 tesla and 14 tesla magnets available

[learn more](#)

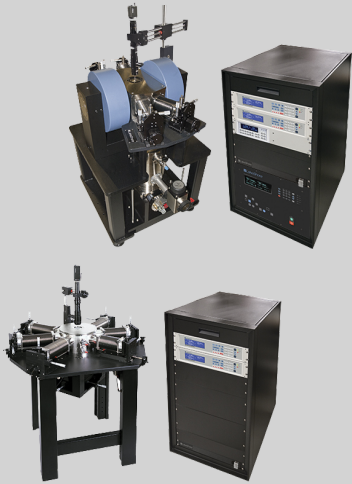


“The MPMS 3 system is an ideal system for material discovery research, as a high throughput of samples can be measured quickly and easily at room temperature, with those of interest being investigated further over a wide temperature and magnetic field range. The option of ac susceptibility, as well as sample rotation allows for a complete study of these new magnetic materials. **”**

**Prof. Nicola Morley | University of Sheffield
Materials Physics Department**

[read the full case study](#)

Related Low Temperature Systems



Cryogenic Probe Stations

Reliably characterise materials as a function of variable temperature



- DC, RF, and microwave probe choices
- Horizontal and vertical field configurations
- Cryogen-free models available
- 1.6 K to 675 K

[learn more](#)



STVP-200 NMR Cryostat

NMR Cryostat for NMR Spectroscopy



environment by JANIS

- <2 to 325 K
- 2.5 in sample space
- 89 mm bore magnet
- Customised solutions are also available and can include smaller outer diameter to fit small-bore magnets, or increased sample chamber diameter to accept larger probes

[learn more](#)



SVT-300T Non-Optical Tubular Cryostat

Increased liquid helium efficiency in a tubular tail design



environment by JANIS

- Features a Model 8CNDT Dewar with 5 L LHe capacity
- Tubular tail assembly
- Adjustable Dewar mounting flange
- Plus all standard system components and options for the SVT

[learn more](#)



ST-300T Non-Optical Tubular Cryostat

Designed for experiments with limited space



environment by JANIS

- <2 to 325 K (500 K, >700 K optional)
- Compact tubular vacuum shroud (1.5 in O.D.)
- One (1) 10-pin electrical feedthrough
- 6 ft superinsulated cryogen transfer line

[learn more](#)



Model 643 Electromagnet Power Supply

A linear, bipolar current source providing true 4-quadrant output

[learn more](#)



- Eliminating the need for external switching or operator intervention to reverse current polarity.
- Supplies $\pm 70\text{ A}/\pm 35\text{ V}$ to a nominal 0.5 W, 0.5 H load and output can be modulated from an external source to frequencies up to 0.17 Hz at $\pm 70\text{ A}$.



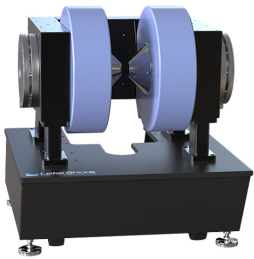
M91 FastHall™ Measurement Controller

A new approach to Hall measurement

[learn more](#)



- Up to 100× faster for low mobility materials
- Use with any type of magnet
- Add state-of-the-art Hall measurement capability to any lab



EM-7V Electromagnets

Transform your electromagnet into a modular characterisation system

[learn more](#)



- Indexed pole gap settings (ExactGAP™) allow repeatable air gap changes without having to re-calibrate between changes for EM-V series
- Integrated teslameter for closed loop field control for MCS-EMP
- Removable pole caps facilitate variable pole face configurations and easy pole cap exchange



CryoFMR Spectrometer

Coplanar Waveguide
Ferromagnetic Resonance



[learn more](#)

- 10-350 K temperature range
- 2-18 GHz frequency range
- AC field modulation via Helmholtz coils
- Includes Hall sensor assembly
- Coplanar waveguide with coaxial cables



Helium Liquefiers

NexGen & ATL Liquefiers and Purifiers

[learn more](#)

- Portable Liquefiers for easy transfers
- Liquefies at 1 PSIG so helium is ready when you need it
- Liquefaction Rate: 25 - 35+ litres/day (typical)*

**Liquefaction rates vary based on transfer frequency, input helium quality and pressure.*

Testimonial

”

We use Quantum Design's **ATL160** helium liquefier at Cardiff University's brain and research image centre (CUBRIC) to reclaim helium boil off from our MEG scanner. The ATL160 provides us with a fast and efficient performance which saves us time and money that would otherwise be spent on purchasing extra helium. The system requires very minimal maintenance and has been very reliable for the past 4 years I have been using it. When Quantum Design are called upon for servicing and technical advice, they have always been excellent to deal with and provided great support. The ATL160 plays a vital role in our research here at CUBRIC and is a system we rely on and trust.

**Paul Raikes | University of Cardiff
Senior Technician, CUBRIC**

Testimonials

" Researchers in the Department of Physics at University of York are looking forward to working with the Quantum Design **Versalab** system. "The system expands our suite of instrumentation, adding a new low temperature physics research capability. We found the QDUKI Sales and Service team very responsive and everything has been dealt with very efficiently and professionally."

Dr. Stuart Cavill | University of York
Deputy Co-ordinator of the Condensed Matter Research Group



MPMS[®] 3



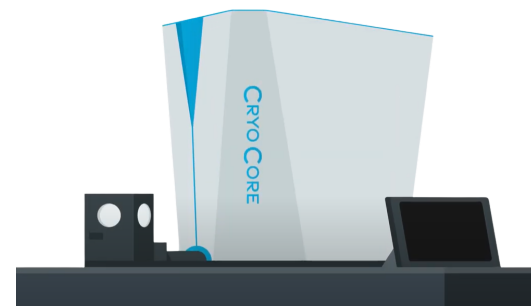
" The **MPMS3** is by far the best magnetometer on the market. It is a sizable upgrade on previous MPMS models and it allows quicker, more accurate measurements, while its cryogen-free operation slashes running cost to a mere fraction of the older systems. And it is generally much easier to use. In my case, I often work on materials where the magnetism is extremely weak. The MPMS 3 provides a much more accurate determination of the magnetic properties for these kind of materials. "

Dr. Otto Mustonen | University of Sheffield
Postdoctoral Research Associate

" I'm happy to report that my lab received and set up the **CryoCore** yesterday! I was very happy that the sample space got to 5K in about 3 hours, it's quiet, and the installation could not have been easier. "

Dr. Hugh Churchill | University of Arkansas
Department of Physics

CryoCore[®]



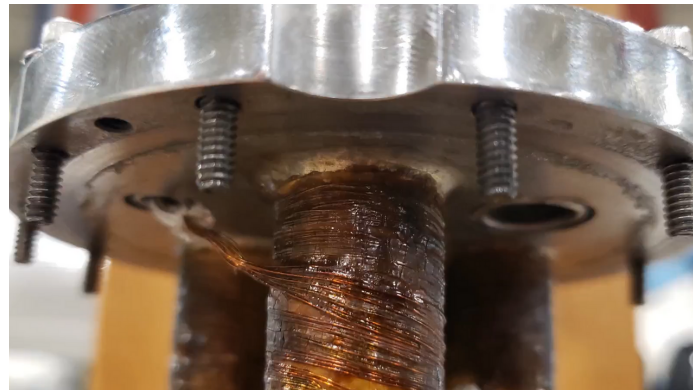
MONTANA INSTRUMENTS

Service and Support



Team Experience

With over 40+ years of cryogenic manufacturing and distribution experience, QDUKI aim to provide our customers with the most up to date, detailed and accurate information about the different cryogenic systems available through the words of our experienced, well trained and knowledgeable product and service team.



Supplier Experience

QDUKI works very closely with our suppliers (*some of the most well recognised and reliable brands in the market*) to introduce the best global technology into the UK and Irish cryogenic market and to provide our customers with even greater service and knowledge support.



Calibration

All calibration requests are arranged and delivered by QDUKI.

Sensor Lead Extension

Lead extensions can be provided on all Lake Shore sensors upon request.



Upcoming Events / Webinars

We keep updated pages on our website detailing upcoming in-person events and webinars that we are hosting or our partners are.

Please check the pages and sign up to our mailing list to be the first to hear about these and other information, white papers, product updates and training.

[learn more](#)

Key Application Areas

- [Heat Capacity](#)
- [Thermal Transport](#)
- [Electrical Transport](#)
- [FMR](#)
- [Dilution Refrigeration](#)
- [Dilatometry](#)
- [Quantum Computing](#)
- [Quantum Research](#)
- [AC Susceptibility](#)
- [Nanomagnetism](#)
- [Raman / FTIR Spectroscopy](#)
- [Quantum Optics](#)
- [Spintronics](#)
- [Quantum Networking](#)

contact

Tel: +44 (0)1372 378822

Email: info@qd-uki.co.uk

Quantum Design UK and
Ireland Ltd, 1 Mole Business
Park, Leatherhead, Surrey
KT22 7BA

www.qd-uki.co.uk



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