



Cryocare Maintenance



Information on recommended Cryocooler Service Intervals for your reliequifying Quantum Design systems



This document outlines the recommended service for your Quantum Design reliequifying systems.

Quantum Design UK and Ireland has introduced new maintenance pricing for the coldhead, compressor and pumps in reliequifying systems.

By ensuring that the cryocooler components and pumps are in optimal condition, this maintenance helps to ensure the optimal operation of your system to allow precise temperature control and prevent loss of liquid helium.

Systems covered:

- Quantum Design MPMS3 Evercool
- Quantum Design PPMS Dynacool
- Quantum Design PPMS Evercool II
- ATL80/160 Helium Liquefiers
- MPMS and PPMS EverCool I
- PPMS Reliquefier

Recommended Cryocare service intervals for your reliquefying systems:

System	Coldhead	Adsorber	Pumps
PPMS DynaCool	20,000-30,000 hrs *	20,000 hrs **	30,000 hrs
MPMS3 EverCool	20,000-30,000 hrs *	20,000 hrs **	30,000 hrs
PPMS EverCool II	20,000 hrs	30,000 hrs	30,000 hrs
ATL80/160	10,000 hrs	30,000 hrs	n/a
MPMS / PPMS EverCool	20,000 hrs	20,000 hrs	20,000 hrs
PPMS Reliquefier	20,000-30,000 hrs	20,000 hrs	30,000 hrs

* Complete coldhead replacement for Cryomech systems, replacement of remote valve for SHI systems

** For Cryomech systems only, an adsorber change is needed, for SHI systems, both the adsorber and in-line filter must be changed

- During normal operation moving parts in the coldhead wear, leading to a degradation in performance of the cryocooler until it no longer provides sufficient cooling power to liquefy helium
- Helium compressors require regular maintenance in the form of adsorber exchanges - the adsorber is the last line of defence keeping oil vapours from the compressor from contaminating the coldhead
- Quantum Design recommends exchanging the coldhead and adsorber on your system at regular intervals (outlined above) to ensure this does not happen
- The scroll pump that circulates helium through the cooling circuit of some Quantum Design systems is a key part of ensuring stable temperature control and the ability of the system to operate over its full temperature range
- Quantum Design recommend replacing the circulation pump on systems at regular intervals as over time the bearings in the pump can wear and degrade performance.

Pricing Available On Request

If your system is in need of CryoCare service, please contact your local Quantum Design UK and Ireland Service Engineer for a quotation. This will include the cost of parts (coldhead, adsorber, or pumps) and a service visit to install the new components.

For Service support quotations or general enquiries, please contact:

Dr Jordan Thompson
Quantum Design UK and Ireland Service Engineer
E-mail: service@qd-uki.co.uk
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General Conditions:

- Working days as defined by UK work law
- Contract Law:** All contracts are deemed to have been made in the UK and shall be governed in all respects by UK law and the UK Courts shall have jurisdiction to settle any disputes that may arise out of or in connection with any contract. This contract only applies to systems delivered and installed by Quantum Design UK and Ireland

Coldhead and Compressor Service Intervals

System Component	Recommended Maximum Service Life (hrs)
PPMS + MPMS EverCool II	
RDK415 Coldhead	20,000
Sumitomo F70 Adsorber	30,000
Sumitomo CSW-71D Adsorber	20,000
Sumitomo CNA-61D Adsorber	20,000
PPMS Evercool 2	
RDK415 Coldhead	20,000-30,000
Quantum Design HLC4500 and HAC4500 adsorber	30,000
MPMS3 Evercool and PPMS Dynacool	
Cryomech PT410 Coldhead	20,000 (could run much longer)
Cryomech Compressor Adsorber	20,000
Sumitomo Remote Valve + Gas Cleaning	20,000
Sumitomo F70 Adsorber	30,000
Sumitomo inline filter	20,000
PPMS Reliquefier	
Cryomech PT410 Coldhead	20,000 (could run much longer)
Cryomech Compressor Adsorber	20,000
Pumps	
Agilent SH110	20,000-30,000
Agilent IDP-7	Unknown
Agilent IDP-3	Not expected to need service
Edwards NXDS 10IR	40,000
Diaphragm Pump Rebuild	20,000-30,000
ATL 160	
RDK 415 Coldhead	10,000
Sumitomo CNA-61D Adsorber	20,000
Sumitomo F70 Adsorber	30,000
ATL 80	
RDK 408 Coldhead	10,000
Sumitomo FA-40 Adsorber	30,000