

COOLPOWER 4K LT Cold Head

4K Cooling System for R&D, science and new technologies

Cryogenic Cooling Systems

The **COOLPOWER 4K LT** is an advanced refrigerator that enables cryogenic systems work to very low temperatures, 4.2 Kelvin (liquid helium temperature) or even lower than 3 Kelvin.

Based on the Gifford-McMahon principle this technology works in unison with the **COOLPOWER** cold head and **COOLPAK** compressor units to create one of the most advanced cryo cooling systems on the market.

Consisting of 3 modules – the energy efficient helium compressor **COOLPAK 5000e LT** – helium **flexlines** for the closed loop to the cold head, and the **COOLPOWER 4K LT** cold head itself.

The cryo cooling process runs as over the usual 2-stage process and its mechanically driven cold head reduces vibration allowing for use in sensitive applications.



Empowering Research to the 4 Kelvin

Supporting an established range of **COOLPOWER** cold heads, the **COOLPOWER 4K LT** has been developed to bring advanced, precision-made technology to R&D, academia, smaller-scale science research projects and new technologies such as quantum computing. Operating down to temperatures of 2.7 Kelvin our cryo-technology can be applied to a diverse range of processes empowering experimentation and scientific investigative applications.

Precision as standard

Working within reliable, repeatable, and consistent environments is vital to any research process.

The **COOLPOWER 4K LT** brings state-of-the-art technology to all parts of the scientific community.

Compact design

Understanding that lack of space is often a challenge within laboratories our product has been designed with flexibility in mind.

Compact and with variable integration configurations the **COOLPOWER 4K LT**, in combination with the helium compressor **COOLPAK 5000e LT**, is the ideal addition to your cryo cooling system.

Energy efficient

Delivering viable sustainability to all our applications is a requirement for all projects. The **COOLPOWER 4K LT / COOLPAK 5000e LT** have been engineered to optimize energy consumption without compromising on performance.

Easy to use

Simple key-press operation and speed controlled by the Elektronikon unit makes your cryo-cooling system simple to use.

Low maintenance

Replacing the cold heads has been made easy by its simple design.

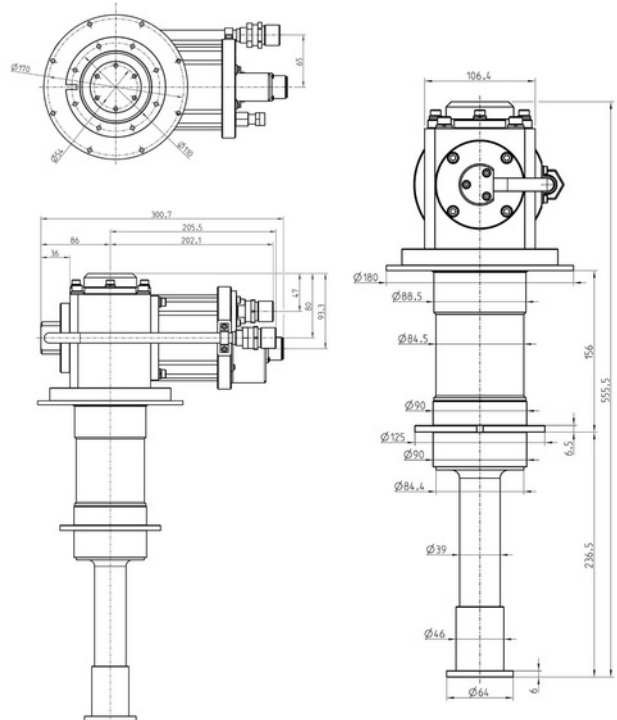
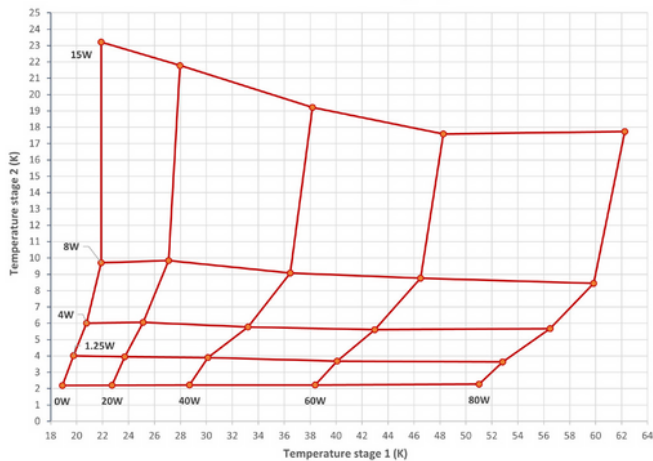
Technical Data

Pumping station	Cooldown time (T2 < 4.2 K [min])	1st stage @ 53 W [K]	2nd stage @ 1.25 W [K]	2nd stage end temperature [K]	Power consumption @ end temperature @ 50 Hz [kW]
Guaranteed value	< 60	43	4,2	<2.7	-
Mean value *	45	41,5	3,8	2,2	6,6
Std. deviation	1,2	1,0	0,1	0,05	0,2
Refrigeration cycle	GM cycle Helium gas				
High and low pressure connectors	1/2 B self-sealing coupling				
Dimensions	See dimensional drawing				
Helium gas pressure (static)	16 bar at 20°C				
Weight	18 kg				
Operating ambient temperature	10 - 35°C				
Relative humidity	20 - 90% (no condensation)				
Allowable magnetic field	< 500 G				
Altitude	< 1000 m				
Rated voltage	200 V AC, 3ph, 50/60 Hz				

*Certain numbers of units from serial production

Dimensional drawings:

COOLPOWER 4K LT - Cooling Map



Ordering Information

4K Cooling System LTe 848004E01LT

Product Description	Order no.
COOLPOWER 4K LT	842004V01LT
COOLPAK 5000e LT	840000E5401LT
High Pressure Helium Flexline DN 20 – 20m	6564902
Low Pressure Helium Flexline DN 20 – 20 m	6564903
Control Cable Compressor – Cold head – 20m	842116V20



Pioneering products. Passionately applied.