

SuperZero Cryogenic Product Catalog |



SUPPORT YOUR RESEARCH
WITH AN AFFORDABLE
CRYOCOOLING TECHNOLOGY

* Free trial use available. Please contact sales person for details.

Contact Information

Ms. Zhuan Yang

Email: zyang@superzero.ca

Alt-email: zhuan_yang@hotmail.com

Cell: +1 (416) 807 4698

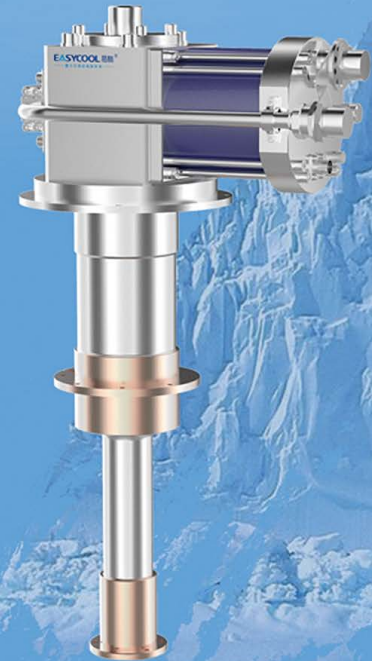
Website: www.superzero.ca

Leading Technologies

- Gas phase shifting cryogenic technology
- Nano-scale filtration channel oil separation technology
- Gas purification, separation, condensation, recovery technology
- Ultra-low vibration, precise temperature control, ultra-low temperature cryostat technology
- Large-scale cryogenic cold box, valve box integration
- Multi-channel composite pipe technology

» KDE415SA

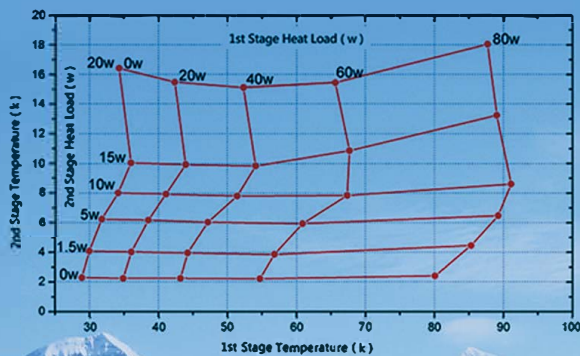
SPECIFICATION	Coldhead Type	KDE415SA	
	Lowest Temperature	< 3.5K	
	Cooling Capacity (50Hz)	First Stage	Second Stage
		35W @ 50K	1.5W @ 4.2K
	Cooldown Time (2nd stage)	< 60min(4.2K)	
	Weight	Coldhead	Compressor
		19 kg	118 kg
	Compressor Type	KDC6000V	
	Power Consumption(50Hz)	Steady	Cooldown
		6.5kW	7.2kW
	Cooling Type	Water	
	Cooling Water Requirement	> 7 L/min	
Standard Flexline	20A×20m		
Maintenance Interval	18 months		



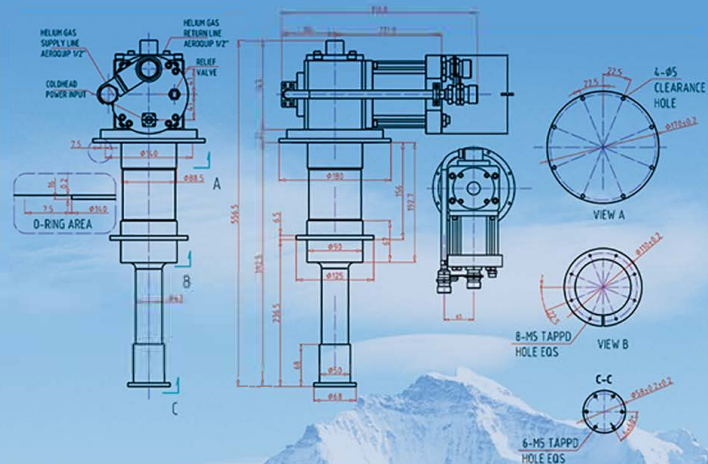
ENVIRONMENTAL REQUIREMENT

Item	Operating	Storage
Ambient Temperature	4-40 °C	-20-65 °C
Relative Humidity	30%-70%	10%-90%(Requiring No-condensing)
Ambient atmospheric pressure	70kPa~110kPa	20kPa~110kPa

TYPICAL LOAD MAP(50HZ)



OUTLINE DRAWING



KDE412SA ←

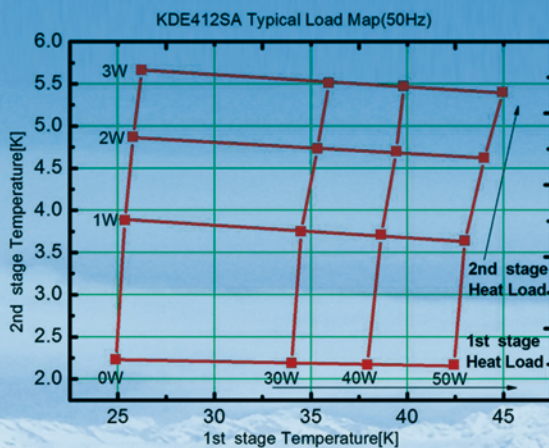


SPECIFICATION	KDE412SA		
	Lowest Temperature	< 3.5K	
	Cooling Capacity (50Hz)	First Stage	Second Stage
		40W @ 45K	1.25W @ 4.2K
	Cooldown Time (2nd stage)	< 60min(4.2K)	
	Weight	Coldhead	Compressor
		18.5 kg	118 kg
	Compressor Type	KDC6000V	
	Power Consumption(50Hz)	Steady	Cooldown
		6.5kW	7.2kW
	Cooling Type	Water	
	Cooling Water Requirement	> 7 L/min	
Standard Flexline	20A×20m		
Maintenance Interval	18 months		

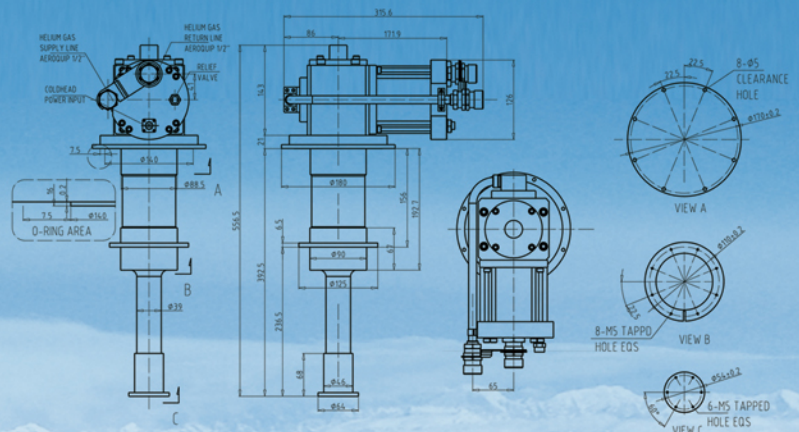
ENVIRONMENTAL REQUIREMENT

Item	Operating	Storage
Ambient Temperature	4-40 °C	-20-65 °C
Relative Humidity	30%-70%	10%-90%(Requiring No-condensing)
Ambient atmospheric pressure	70kPa~110kPa	20kPa~110kPa

TYPICAL LOAD MAP(50HZ)

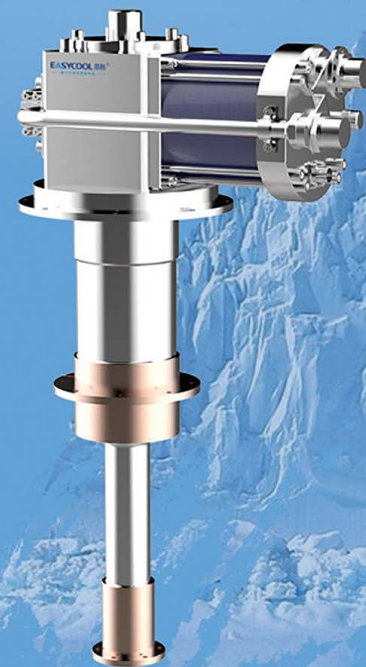


OUTLINE DRAWING



» KDE410SA

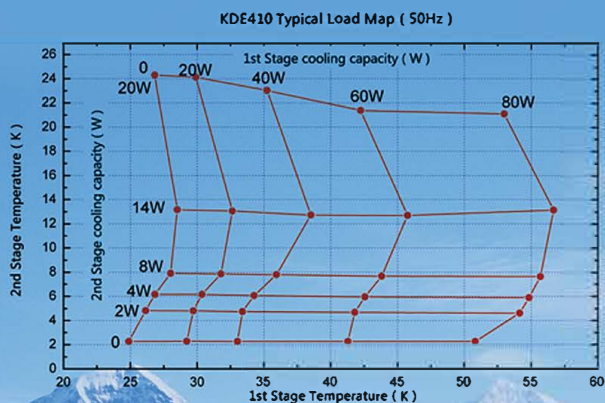
SPECIFICATION	Coldhead Type	KDE410SA	
	Lowest Temperature	< 3.5K	
	Cooling Capacity (50Hz)	First Stage	Second Stage
		40W @ 45K	1.0W @ 4.2K
	Cooldown Time (2nd stage)	< 60min(4.2K)	
	Weight	Coldhead	Compressor
		18.5 kg	118 kg
	Compressor Type	KDC6000V	
	Power Consumption(50Hz)	Steady	Cooldown
		6.5kW	7.2kW
	Cooling Type	Water	
	Cooling Water Requirement	> 7 L/min	
Standard Flexline	20A×20m		
Maintenance Interval	18 months		



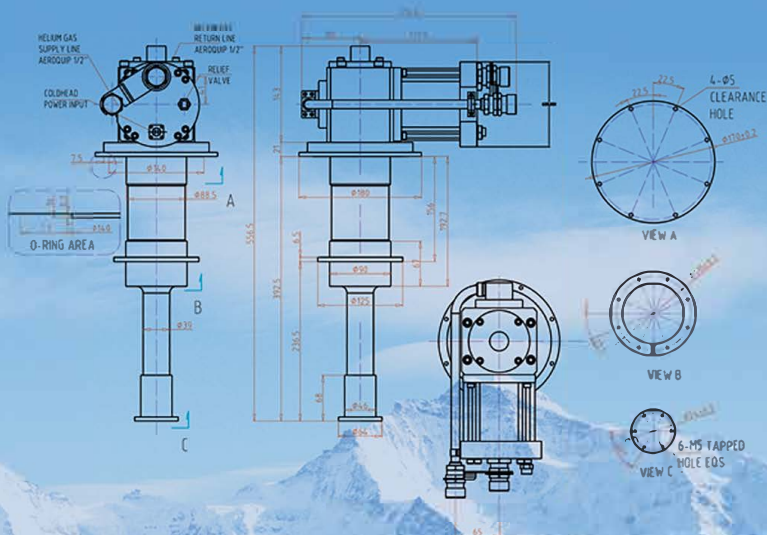
ENVIRONMENTAL REQUIREMENT

Item	Operating	Storage
Ambient Temperature	4-40 °C	-20-65 °C
Relative Humidity	30%-70%	10%-90%(Requiring No-condensing)
Ambient atmospheric pressure	70kPa~110kPa	20kPa~110kPa

TYPICAL LOAD MAP(50HZ)



OUTLINE DRAWING



KDE401SA <<

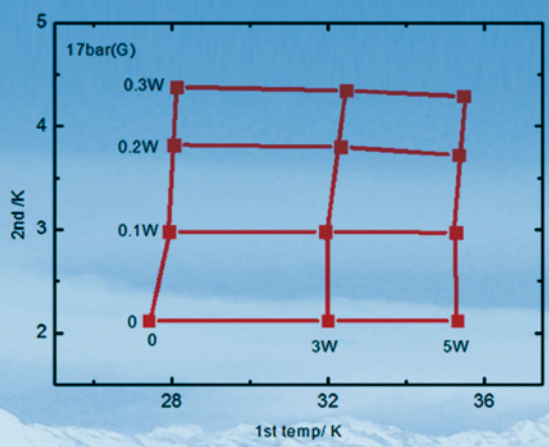


SPECIFICATION	Coldhead Type	KDE401SA	
	Lowest Temperature	< 2.5K	
	Cooling Capacity (50Hz)	First Stage	Second Stage
		3W @ 45K	0.25W @ 4.2K
	Cooldown Time (2nd stage)	< 120min(4.2K)	
	Weight	Coldhead	Compressor
		8.9 kg	86 kg
	Compressor Type	KDC2000F	
	Power Consumption(50Hz)	Steady	Cooldown
		3.2kW	3.5kW
	Cooling Type	Air	
	Cooling Water Requirement	1800Nm ³ /hr	
Standard Flexline	15A×10m		
Maintenance Interval	18 months		

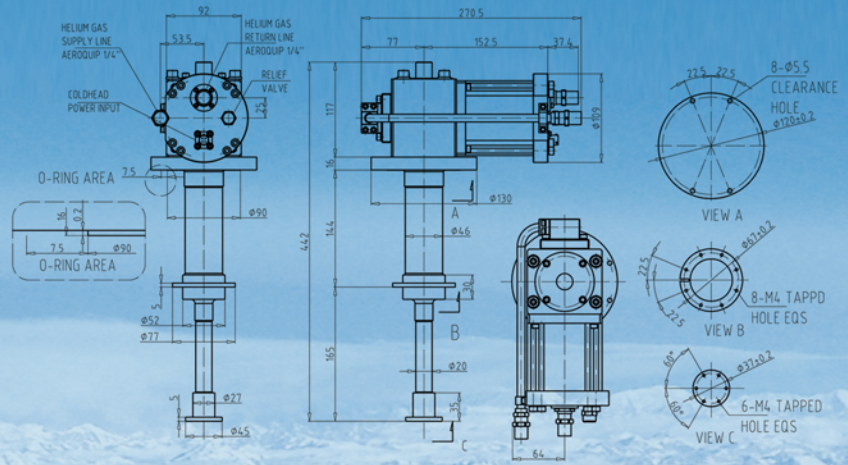
ENVIRONMENTAL REQUIREMENT

Item	Operating	Storage
Ambient Temperature	4-40 °C	-20-65 °C
Relative Humidity	30%-70%	10%-90%(Requiring No-condensing)
Ambient atmospheric pressure	70kPa~110kPa	20kPa~110kPa

TYPICAL LOAD MAP(50HZ)

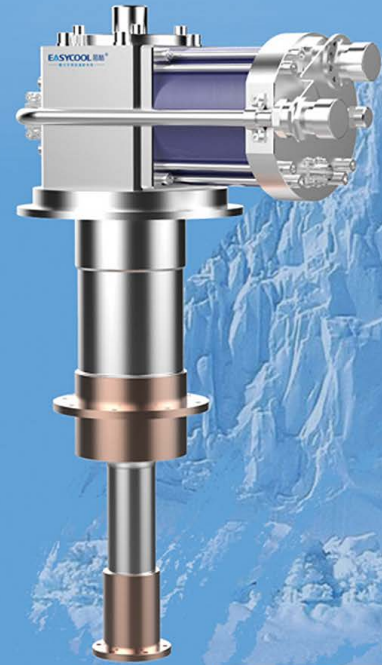


OUTLINE DRAWING



» KDE210SA

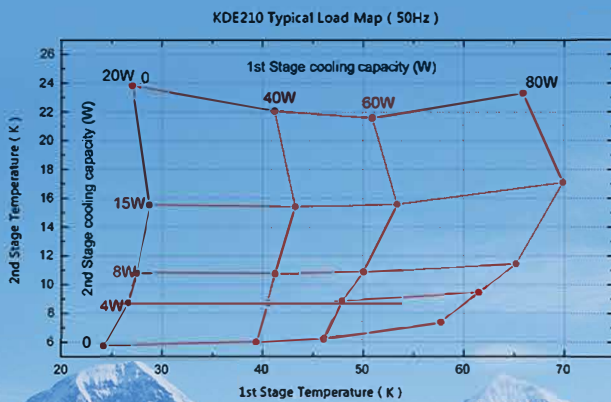
SPECIFICATION	Coldhead Type	KDE210SA	
	Lowest Temperature	< 10K	
	Cooling Capacity (50Hz)	First Stage	Second Stage
		40W @ 45K	5W @ 10K
	Cooldown Time (2nd stage)	< 60min(10K)	
	Weight	Coldhead	Compressor
		17.8 kg	118 kg
	Compressor Type	KDC6000V	
	Power Consumption(50Hz)	Steady	Cooldown
		6.5kW	7.2kW
	Cooling Type	Water	
	Cooling Water Requirement	> 7 L/min	
Standard Flexline	20A×20m		
Maintenance Interval	18 months		



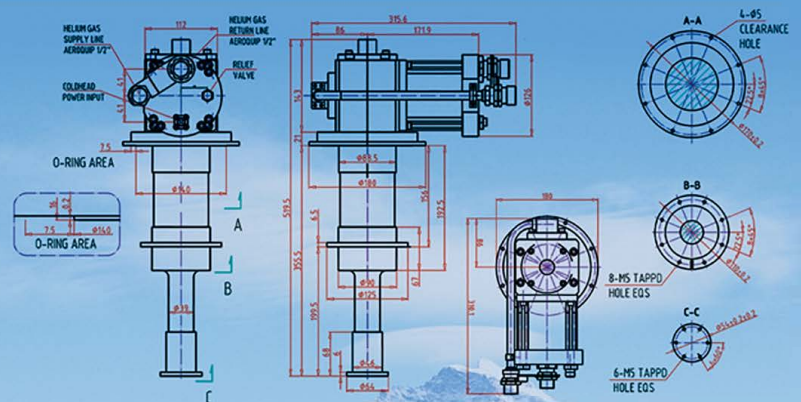
ENVIRONMENTAL REQUIREMENT

Item	Operating	Storage
Ambient Temperature	4-40 °C	-20-65 °C
Relative Humidity	30%-70%	10%-90%(Requiring No-condensing)
Ambient atmospheric pressure	70kPa~110kPa	20kPa~110kPa

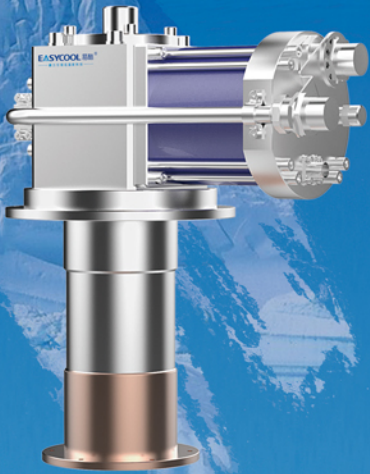
TYPICAL LOAD MAP(50HZ)



OUTLINE DRAWING



KDE400SA <<

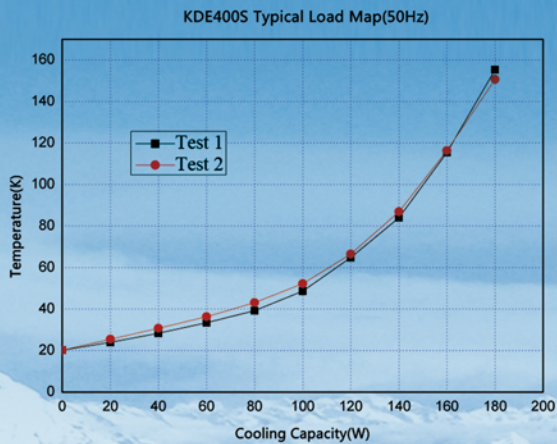


SPECIFICATION	Coldhead Type	KDE400SA		
	Lowest Temperature	< 30K		
	Cooling Capacity (50Hz)	First Stage	/	
		54W @ 40K	/	
	Cooldown Time (2nd stage)	< 40min(30K)		
	Weight	Coldhead	Compressor	
		16.8 kg	118 kg	
	Compressor Type	KDC6000V		
	Power Consumption(50Hz)	Steady	Cooldown	
		6.5kW	7.2kW	
	Cooling Type	Water		
	Cooling Water Requirement	> 7 L/min		
Standard Flexline	20A×20m			
Maintenance Interval	18 months			

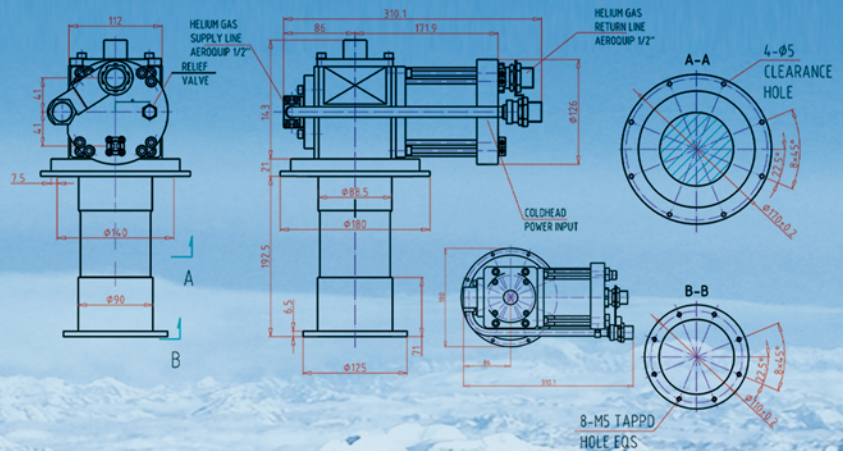
ENVIRONMENTAL REQUIREMENT

Item	Operating	Storage
Ambient Temperature	4-40 °C	-20-65 °C
Relative Humidity	30%-70%	10%-90%(Requiring No-condensing)
Ambient atmospheric pressure	70kPa~110kPa	20kPa~110kPa

TYPICAL LOAD MAP(50HZ)



OUTLINE DRAWING



» KDE400SX

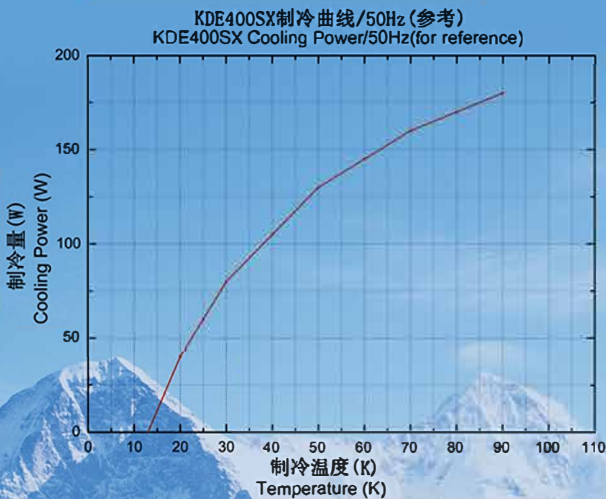
SPECIFICATION	Coldhead Type	KDE400SX		
	Lowest Temperature	< 14K		
	Cooling Capacity (50Hz)	First Stage	/	
		40W @ 20K	/	
	Cooldown Time (2nd stage)	< 60min(20K)		
	Weight	Coldhead	Compressor	
		25 kg	118 kg	
	Compressor Type	KDC6000		
	Power Consumption(50Hz)	Steady	Cooldown	
		6.5kW	7.2kW	
	Cooling Type	Water		
	Cooling Water Requirement	> 7 L/min		
Standard Flexline	20A×20m			
Maintenance Interval	18 months			



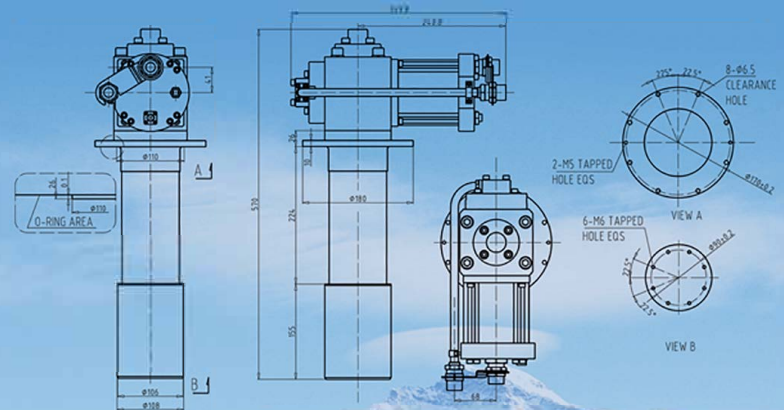
ENVIRONMENTAL REQUIREMENT

Item	Operating	Storage
Ambient Temperature	4-40 °C	-20-65 °C
Relative Humidity	30%-70%	10%-90%(Requiring No-condensing)
Ambient atmospheric pressure	70kPa~110kPa	20kPa~110kPa

TYPICAL LOAD MAP(50Hz)



OUTLINE DRAWING



KDC6000V



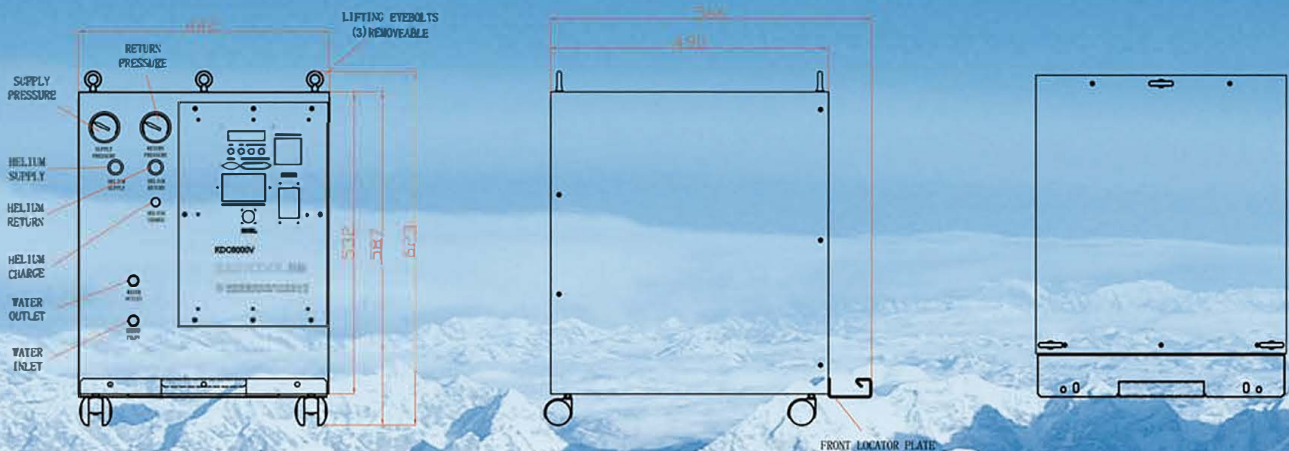
SPECIFICATION

Compressor Type	KDC6000V	
Electrical Power	380,400V@50Hz 3P 480V@60Hz 3P	
Helium Purity Requirement	>99.999%	
Cooling Type	Water	
Water Flow	7L~10L/min (28°C)	
Cooling Water Temperature	Inlet	Out
	5~25°C	<44°C
Power Consumption(50Hz)	Steady	Cooldown
	6.5kW	7.2kW
Pressure Range(Operating)	Supply	Return
	16.6~23bar	2.8~6.9bar
Ambient Temperature	Operating	Storage
	4~40°C	-20~65°C
Standard Flexline	20A×20m	
Maintenance Interval	36 months	
Weight	118kg	

ENVIRONMENTAL REQUIREMENT

Item	Operating	Storage
Ambient Temperature	4-40 °C	-20-65 °C
Relative Humidity	30%-70%	10%-90%(Requiring No-condensing)
Ambient atmospheric pressure	70kPa~110kPa	20kPa~110kPa

OUTLINE DRAWING



» KDC2000F

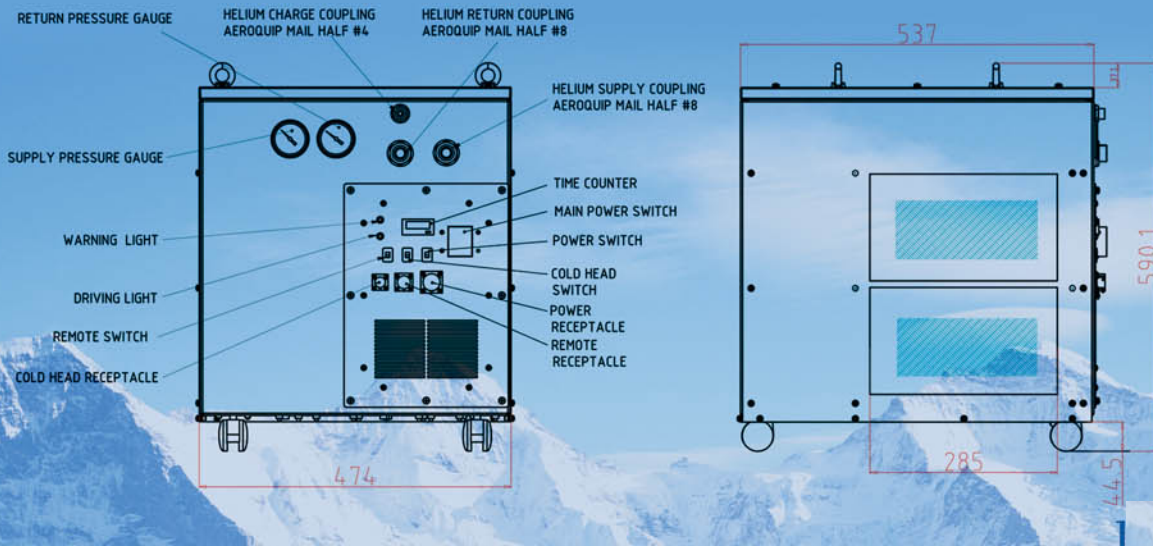
SPECIFICATION	Compressor Type	KDC2000F	
	Electrical Power	220V@50Hz 1P	
	Helium Purity Requirement	>99.999%	
	Cooling Type	Air	
	Air Flow	1800Nm ³ /hr	
	Power Consumption(50Hz)	Steady	Cooldown
		3.2kW	3.5kW
	Pressure Range(Operating)	Supply	Return
		16~23bar	2.5~8bar
	Ambient Temperature	Operating	Storage
		4~30℃	-20~65℃
	Standard Flexline	15A×10m	
Maintenance Interval	36 months		
Weight	86kg		



ENVIRONMENTAL REQUIREMENT

Item	Operating	Storage
Ambient Temperature	4-40 ℃	-20-65 ℃
Relative Humidity	30%-70%	10%-90%(Requiring No-condensing)
Ambient atmospheric pressure	70kPa~110kPa	20kPa~110kPa

OUTLINE DRAWING





Gas Recovery, Purification and Liquefaction System

The chemical reaction of noble gas is very difficult and it is colorless and odorless. Due to the special nature, noble gas is indispensable in some application areas, especially the high purity noble gas is needed by more and more industries nowadays. Because of this, the price of this kind of gas is going higher continuously, so its recovery and re-purification is very meaningful. However, most of equipment for the noble gas recovery and re-purification depend on import. PRIDE Cryogenics uses the purification principle of low-temperature condensation, curing and adsorption to get high purity gas (purity > 99.999%) according to the difference condensation point, freezing point of different gas and the nature of the adsorption agent's ability will be greatly enhanced, can also be liquefied storage. This kind of system also can be customized and auto-control designed by our company, and it is no need for personnel on duty and easy to use.

Purification capacity	Liquefaction rate
5-20Nm ³ /h	15~100L/d



CAN BE CUSTOMIZED ACCORDING TO CUSTOMERS' REQUIREMENTS

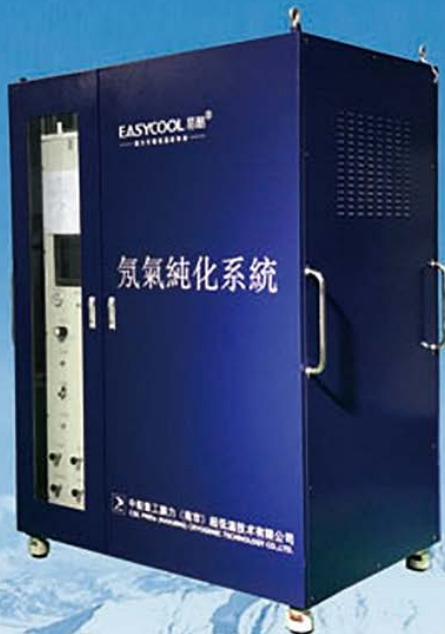
EASYCOOL

» Helium Purifier - Cold Source is GM Cryocooler

SPECIFICATION	Dimension	0.8 × 1.1 × 2.1m
	Purity Requirements for Inlet Helium	>90%
	Handling Capacity	10Nm ³ /h
	Working Pressure	2.5~5MPa
	Purity of Outlet Helium	>99.999%
	Purification Time	>12h
	Regeneration Time	<6h
	Power Consumption	9KW
	Number of GM Coolers	1
	Features	Automatic Control

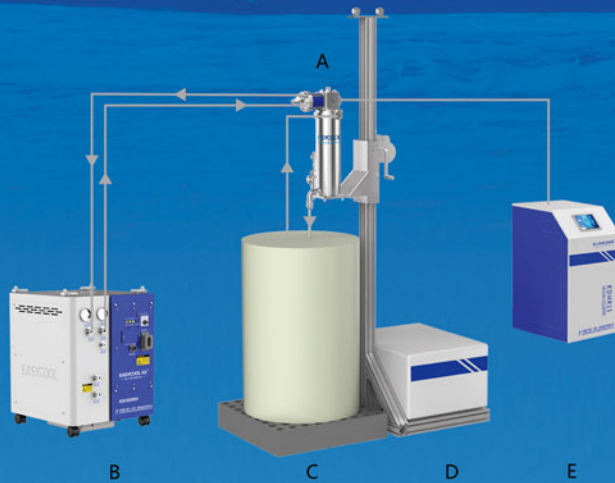


Neon Purifier - Cold Source is GM Cryocooler «



SPECIFICATION	Dimension	1.1 × 1.6 × 2.2m
	Purity Requirements for Inlet Neon	>80%
	Handling Capacity	2Nm ³ /h
	Working Pressure	1~2MPa
	Purity of Outlet Neon	>99.999%
	Purification Time	>12h
	Regeneration Time	<12h
	Power Consumption	20KW
	Number of GM Coolers	2
	Features	Automatic Control

KDHR15 Helium Reliquefier <<



- A : Liquefier Coldbox
- B : KDC6000V Compressor
- C : Customer's Device(PPMS)
- D : Lifting Frame
- E : Control Unit

SPECIFICATION	Liquefaction rate	15L/d@1psi
	Vibration index	±2 μm
	Compressor power supply	3 phase 380V (50Hz) or 3 phase 480V (60Hz)
	Control unit power supply	Single phase 110~240V (50~60Hz)
	Cooling water	Inlet temperature 5~25°C; Flow rate 7~10L/min; Pressure<8bar
	Helium purity requirement	>99.999%
	Cool down time (to full load liquefaction)	<3.5h
	Liquid helium infusion line	Material: SUS304, O.D: 9.5 mm, Length: 550mm (can be customized)
	Dimension(Cold box)	φ400×685mm (not include infusion tube)
	Dimension(Control unit)	<600×600×1500mm
	Features	The whole system is non-magnetic and has good electrical insulation from the customer equipment.
	Components	One KDE415SA-KDC6000V GM Cryocooler, one cold box, lifting frame, two sets 20A*20M helium lines, Control unit, pipes, valves and parts kit

Application site



Reference

- Tsinghua University
- Peking University
- Institute of Physics, Chinese Academy of Sciences

» Movable Helium Liquefier KDHRR20M

This movable helium liquefier KDHRR20M integrates the GM Cold head, Dewar and Compressor into one Cabinet. The liquefier's area is about 1.2 square meters, and its height is about 2 meters. The liquefier is PLC fully automatic control, and can be moved to the right position conveniently because the joints of the helium gas inlet, cooling water inlet/outlet, power supply port are all quick fitting. Meanwhile, UPS has been installed into the liquefier to supply power during the move.



SPECIFICATION	Size	1850*1150*2300mm
	Weight	≈820kg
	Cooling water	7~10L/min@28°C
	Energy consumption	cool down state : 8KW Liquefy state: 6.5KW
	Liquefy rate	20L/day(4PSI) 24L/day(8PSI)
	Feature	Movable, auto control, can liquefy the pure helium gas either from cylinder or experimental equipment
	Helium gas	Gas supply from high-pressure cylinder (Pressure: 2~40bar) Gas supply from helium recovery equipment(Pressure: 0~10PSI)
Gas purity: >99.999%		
Inlet temperature: -20°C~40°C		

I-Liquefier20/40 Compact Movable Helium Liquefier

I-Liquefier20/ I-Liquefier40 Compact Movable Helium Liquefier has a typical feature that the cold head inserts into the Dewar directly. The Helium compressor and the liquefier is integrated together and be skid-mounted into a small dimension, which is movable in the state of power-on. The liquid helium can be transferred into the customer's device directly, no need a transportation Dewar so that the liquid helium consumption is avoided.

SPECIFICATION	I-Liquefier20	Helium Liquefy rate	20L/day
		Dimension	1600*700*1500mm (compressor included)
		Weight	330kg
		Quantity of cryocooler	1set
		Dewar	150L
		Power supply of GM cryocooler	3PH AC380V 50Hz Cooling down: 7.2Kw Operation: 6.5Kw
		Cooling water	Inlet temperature 5~25°C, flow rate7~9 L/min, pressure<8bar
	I-Liquefier40	Helium Liquefy rate	40L/day
		Dimension	1650*760*1735mm (compressor included)
		Weight	480kg
		Quantity of cryocooler	2sets
		Dewar	200L
		Power supply of GM cryocooler	3PH AC380V 50Hz Cooling down: 14.4Kw Operation: 13Kw
		Cooling water	Inlet temperature 5~25°C, flow rate14~18L/min, pressure<8bar
	other requirements	Coldhead	KDE415SA
Compressor		KDC6000V	
Cooling time		<4h	
Power supply of control unit		Single PH AC110V—240V 50~60Hz (Power consumption <1KW)	
Helium requirement		purity: >99.999% Inlet temperature: -20°C~40°C	



» Movable Helium Liquefier KDHRR40

SPECIFICATION	Liquefy rate	36L/day(5PSI)、40L/day(10PSI)
	Dimension	1850*1150*2300
	Weight	≈1000kg
	Coldhead	KDE415SA
	Compressor	KDC6000V
	Quantity of cryocooler	2 sets
	Dewar	250L(can be selected according to customer requirements)
	Cool down time to liquid generation	<4h
	Power supply of GM cryocooler	3PH AC380V 50Hz (Power consumption: 14~16KW)/ 3PH AC380V 60Hz (Power consumption: 14~16KW)
	Power supply of control unit	Single PH AC110V—240V 50~60Hz (Power consumption <1KW)
	Cooling water	Inlet temperature 5~25°C, flow rate 14~18 L/min, pressure <8bar; Pure water
	Helium gas	Gas supply from high-pressure cylinder (Pressure: 2~40bar) Gas supply from helium recovery equipment(Pressure: 0~10PSI) Gas purity: >99.999% Inlet temperature: -20°C~40°C



Movable Helium Liquefier KDHRR60 <<

SPECIFICATION	Liquefy rate	54L/day(5PSI)、60L/day(10PSI)
	Dimension	1850*1150*2300
	Weight	≈1380kg
	Coldhead	KDE415SA
	Compressor	KDC6000V
	Quantity of cryocooler	3 sets
	Dewar	250L(can be selected according to customer requirements)
	Cool down time to liquid generation	<4h
	Power supply of GM cryocooler	3PH AC380V 50Hz (Power consumption: 21~24KW)/ 3PH AC380V 60Hz (Power consumption: 21~24KW)
	Power supply of control unit	Single PH AC110V—240V 50~60Hz (Power consumption <1KW)
	Cooling water	Inlet temperature 5~25°C, flow rate 21~27 L/min, pressure <8bar; Pure water
	Helium gas	Gas supply from high-pressure cylinder (Pressure: 2~40bar)
Gas supply from helium recovery equipment (Pressure: 0~10PSI)		
Gas purity: >99.999%		
	Inlet temperature: -20°C~40°C	



» Helium Liquefier KDHRR80

SPECIFICATION	Liquefy rate	72L/day(5PSI)、80L/day(10PSI)
	Dimension	2010*1230*2600
	Weight	≈1600kg
	Coldhead	KDE415SA
	Compressor	KDC6000V
	Quantity of cryocooler	4 sets
	Dewar	500L(can be selected according to customer requirements)
	Cool down time to liquid generation	<4h
	Power supply of GM cryocooler	3PH AC380V 50Hz (Power consumption: 28~32KW)/ 3PH AC380V 60Hz (Power consumption: 28~32KW)
	Power supply of control unit	Single PH AC110V—240V 50~60Hz (Power consumption<1KW)
	Cooling water	Inlet temperature 5~25℃, flow rate 28~36 L/min, pressure<8bar; Pure water
	Helium gas	Gas supply from high-pressure cylinder (Pressure: 2~40bar)
Gas supply from helium recovery equipment(Pressure: 0~10PSI)		
Gas purity: >99.999%		
Inlet temperature: -20℃~40℃		



Helium Liquefier KDHRR100 <<

SPECIFICATION	Liquefy rate	90L/day(5PSI)、100L/day(10PSI)
	Dimension	2010*1230*2600
	Weight	≈1800kg
	Coldhead	KDE415SA
	Compressor	KDC6000V
	Quantity of cryocooler	5 sets
	Dewar	1000L(can be selected according to customer requirements)
	Cool down time to liquid generation	<4h
	Power supply of GM cryocooler	3PH AC380V 50Hz (Power consumption: 35~40KW)/ 3PH AC380V 60Hz (Power consumption: 35~40KW)
	Power supply of control unit	Single PH AC110V—240V 50~60Hz (Power consumption <1KW)
	Cooling water	Inlet temperature 5~25°C, flow rate 28~36 L/min, pressure <8bar; Pure water
	Helium gas	Gas supply from high-pressure cylinder (Pressure: 2~40bar)
Gas supply from helium recovery equipment(Pressure: 0~10PSI)		
Gas purity: >99.999%		
	Inlet temperature: -20°C~40°C	

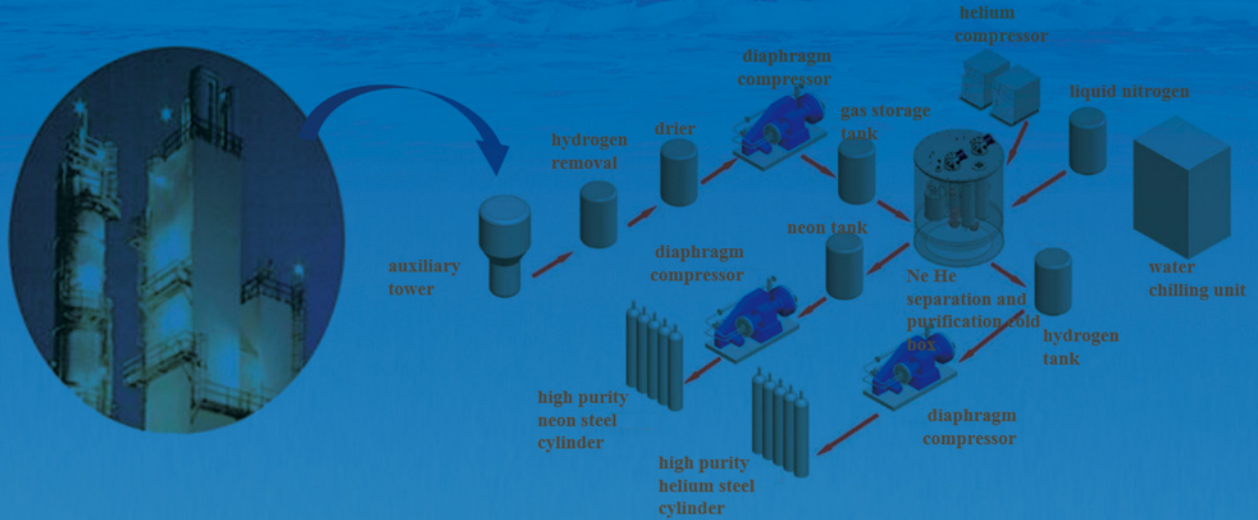


» Helium Liquefier KDHRR200

SPECIFICATION	Helium Liquefy rate	200L/day
	Dimension	10200*460*800mm(main engine, infusion tube excluded)
		1720*2300*2740mm(whole machine)
	Weight	593kg(main engine)
		1660kg(whole machine, compressor excluded)
	Coldhead	KDE415SA
	Compressor	KDC6000V
	Quantity of cryocooler	10 sets
	Dewar	1000L
	Coing time	<4h
	Power supply of GM cryocooler	3PH AC380V 50Hz Cooling down: 72Kw Operation: 65Kw
	Power supply of control unit	Single PH AC110V—240V 50~60Hz (Power consumption<1KW)
	Cooling water	Inlet temperature 5~25°C, flow rate14~18L/min, pressure<8bar
	Helium requirement	purity: >99.999%
Inlet temperature: -20°C~40°C		



Neon - Helium Refining Unit



Item	Raw gas Content	Product Gas Parameter
N ₂ (V/V%)	12	—
Ne(V/V%)	56	>99.999
He(V/V%)	29	>99.999
H ₂ (V/V%)	3	—
Pressure(bar)	5	—
Flow(Nm ³ /h)	20	—





CRYOSTATS

CSIC Pride (Nanjing) Cryogenic Technology Co., Ltd will spare no efforts to provide our customers with various customized cryogenic solutions, such as cryogenic systems which take cryocoolers, liquid nitrogen or liquid helium as cold source. We can meet our customers' kinds of requirements, including 300K to 1.2K temperature demand, vibration requirements less than 10nm, temperature fluctuation less than $\pm 1\text{mK}$, etc. We also can provide solutions to meet the demand of special shape structure, bigger work space, observation window and filter.

Temperature	Vibration	Temperature fluctuation
1.2K-800K	< 10nm	$\pm 1\text{mK}$

CAN BE CUSTOMIZED ACCORDING TO CUSTOMERS' REQUIREMENTS

EASYCOOL

26/27

PRIDE LEADING
NEW CRYOGENICS
TECHNOLOGIES

Cryostat used in Superconducting Single Photon Detection System



The ultra-low temperature cryostat (Limit temperature $<2.3\text{K}$) used in superconducting single photon detection system(SNSPD) is a standard and technically mature product of our company, which has been applied in quantum communication successfully. The SNSPD system using this cryostat has an apparent advantage over traditional semiconductor (APD, PMT) detection technology in detection performance (Including detection efficiency and dark count, etc.).



SPECIFICATION	Limit Temperature	$<2.3\text{K}$
	Temperature stability	$\pm 5\text{ mK}$
	Number of SMA channels	4/6/9
	Fiber-optic interface	FC / PC multi-mode fiber
	Signal interface	SMA
	Leakage rate	$<5 \times 10^{-9}\text{Pa}\cdot\text{m}^3 / \text{s} @ 300\text{K}$

TYPICAL APPLICATIONS

- Shanghai Institute of Microsystem And Information Technology, Chinese Academy of Sciences
- Nanjing University
- University of Science and Technology of China
- Changchun University of Science and Technology、
- Tsinghua University,etc.

» Ultra-low Vibration Cryostat

To create an ultra-low vibration environment, Pride Cryogenic uses the helium gas as heat transfer medium, make the KDE415SA GM Cryocooler completely isolated from the sample to avoid vibration transfer to the sample holder. By using this technology, we realize the nanoscale ultra-low vibration control.

SPECIFICATION	Vibration of sample position	±30nm
	Limited temperature	4.2K
	Temperature fluctuation	±3mK
	Helium consumption	0
	Sample position	Under the cryostat
	Sample test	Through the observation window
	Number of sample lead	16pin(optional)
	Number of optical window	2(Can be increased)
	Shape of vacuum hood	Cylindrical(or customized)



CONFIGURATION	KDE415SA Coldhead	1set
	KDC6000V Helium Compressor	1set
	20A*20m Flexible Gas Line	2sets
	Temperature control unit	1set
	Stainless steel vacuum hood	1set
	Oxygen-free radiation shield	1set
	High purity quartz glass	2 pieces
	Sample connection plug	1set of 16-pin lead

TYPICAL APPLICATIONS

- Micro-photoluminescence
- Micro-Raman
- Micro-spectroscopy
- Micro-FTIR
- Quantum dots
- Low vibration optical experiment
- Magneto-optic Kerr

1.5K GM+JT cryocooler <<

This cryostat takes GM Cryocooler as its cold source and uses JT Throttling technology and Evacuation decompression technique. It can realize < 1.5K ultra-low temperature and have a little helium consumption and short cooling down time features.



FEATURES	Quickly cool down to 1.5K
	Quickly sample changed
	Optional superconducting magnet field
	Low vibration
	Customized
	Application in optical/superconducting/cryogenic material



SPECIFICATION	Standard Specification	Optional Specification
	4K GM Cryocooler System	Vacuum System
	JT System	Control System
	Helium Circulation System, liquid Helium pool	Chiller
	Vacuum Chamber	Interface
	Radiation-proof Screen	Number of optical windows and materials
	Cooling component, Sample Holder	Supporting Structure
	16-pin Sample Lead	Vacuum Chamber
	Temp. Control System	Sample Holder
	Vacuum Valve Block	Vacuum Chamber
	16-pin Sample Lead	

TYPICAL APPLICATIONS

- Cryogenic optical test
- Cryogenic detector
- Cryogenic materials property test
- MRI magnet

» Cryostat - Optical Type

Using GM Cryocooler as cold resource to cool down the sample, The main components of the cryostat include GM Cryocooler, vacuum can, radiation shield and sample holder. By configuring different types of vacuum cover and related equipment, the cooling requirements of many samples for cryogenic test can be realized. At the same time, the cryostat of this type optical can cooperate with precision displacement platform to carry out three-dimensional high precision and large quantity of the whole structure. The positioning accuracy of the process can reach up to 0.01mm by measuring the location of different positions of the sample.



SPECIFICATION	Model type	PDCS04	PDCS10	PDCS77
	Temperature range	4-373K	8-373K	30-373K
	Temp Accuracy	±0.05K	±0.05K	±0.05K
	Vacuum degree	5×10^{-4} Pa	5×10^{-4} Pa	5×10^{-4} Pa

TYPICAL APPLICATIONS

- Ultraviolet / IR spectroscopic low temperature experiment
- Raman spectroscopy experiment electroluminescence
- photoluminescence
- Conductivity Holzer test
- Neutron scattering neutron diffraction
- Terahertz

