

# Temperature Control Equipment Manufacturer

A leading global manufacturer with 20+ year experience in research, development & production of temperature control



We offer various types temperature control systems and support customized solutions

- Chillers
- Heater & Chiller Combo Units
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- Heaters
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- Semiconductor Chillers
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Siemens Partner



Explosion-proof Equipment Installation Qualification Certificate



High-tech enterprise



Second prize of 2022 Science and technology Jiangsu Innovation and Entrepreneurship Competition



Gazella Company



Province specialized special new small and medium-sized enterprises



High Quality Development A ward



Boiler Certificate



Industrial Pipeline Installation Certificate



Invention patent

# CHILLER Gas refrigeration LQ Series

The use of gas (non-corrosive) cooling: such as dry compressed air, nitrogen, argon and other normal temperature gas into the LQ series equipment, the gas can reach the target low temperature, supply the demand test components or heat exchangers



Model	LQ-4015 LQ-4015W	LQ-4030 LQ-4030W	LQ-4060 LQ-4060W	LQ-40100 LQ-40100W	LQ-7515 LQ-7515W	LQ-7530 LQ-7530W	LQ-7560 LQ-7560W	LQ-75100 LQ-75100W
Gas flow	15m <sup>3</sup> /h	30m <sup>3</sup> /h	60m <sup>3</sup> /h	100m <sup>3</sup> /h	15m <sup>3</sup> /h	30m <sup>3</sup> /h	60m <sup>3</sup> /h	100m <sup>3</sup> /h
Lowest temperature	-40°C	-40°C	-40°C	-40°C	-75°C	-75°C	-75°C	-75°C
Air inlet & outlet size	ZG3/8	ZG3/8	ZG1/2	DN50	ZG3/8	ZG3/8	ZG1/2	DN50
Control system	Programmable controller and module							
Display and record	7 inch color touch screen, record curve temperature and alarm							
Compressor	Tecumseh, Emerson Copeland							
Process temperature control	The remote target temperature can be controlled by combining the self created model free self built tree algorithm and cascade algorithm							
Dimension cm	54*67*135	55*75*155	65*85*175	75*95*185	54*67*135	55*75*155	65*85*175	75*95*175
Circuit breaker	10A	10A	10A	16A	10A	16A	16A	25A

Model	LQ-A1015W	LQ-A1030W	LQ-A1060W	LQ-A10100W
Gas flow	15m <sup>3</sup> /h	30m <sup>3</sup> /h	60m <sup>3</sup> /h	100m <sup>3</sup> /h
Lowest temperature	-110°C	-110°C	-110°C	-110°C
Heat exchanger material	SUS304 contains small amount of copper			
	ZG3/8	ZG1/2	ZG1	DN50
Control system	Programmable controller and module			
Display and record	7 inch color touch screen, record curve temperature and alarm			
Compressor	Tecumseh, Emerson Copeland			
Process temperature control	The remote target temperature can be controlled by combining the self created model free self built tree algorithm and cascade algorithm			
Dimension cm	75*95*175	80*120*175	100*125*185	115*150*195

1. Rated test conditions: dry bulb temperature: 20 °C; Wet bulb temperature: 16 °C. Inlet water temperature: 20 °C; Outlet temperature: 25 °C
2. The data in this table is for reference only, please focus on the parameters on the unit nameplate.
3. If you need customized special non-standard products, please contact our company.



## CHILLER Gas refrigeration AI Series

- ※ Widely used in high and low temp. testing of semiconductor equipment.
- ※ Electronic equipment high temperature and low temperature thermostat testing cold and heat sources;
- ※ Independent refrigeration circulating air units;
- ※ Can work continuously for a long time, automatic defrost, it will not affect the storage temperature during defrosting;
- ※ Modular design, easy replacement of standby machine;
- ※ Solve the problem of frequent opening and closing, and frosting of evaporation system; Evaporation is not affected during the defrosting;
- ※ It is simple to build a set of high and low temp. constant temp. room.



Model	AI-6535/AI-6535W	AI-8035W	AI-1055W
Temperature range	-65°C ~ 125°C	-80°C ~ 125°C	-105°C ~ 125°C
Control mode	PID Adaptive controller		
Communication protocol	MODBUS RTU Protocol, RS 485 Interface		
Temperature feedback	PT100		
Operation panel	7-inch touch screen, show temp. curve/ EXCEL date output		
Temperature accuracy	±0.05°C ( Steady state outlet temperature )		
Heating power	3.5kw	3.5kw	3.5kw
Cooling capacity	125°C	3.5kw	3.5kw
	0°C	3.5kw	3.5kw
	-20°C	3kw	3.5kw
	-40°C	2.1kw	2.5kw
	-60°C	1kw	2.1kw
	-75°C		1kw
	-95°C		
Circulating air flow	550m³/h	550m³/h	550m³/h
Inlet and outlet air interface	DN125	DN125	DN125
Compressor	Emerson Copeland scroll flexible compressor		
Safety protection	Self-diagnosis function; Phase sequence protection. freezer overload protection; high pressure switch. overload relay. thermal protection device.		
Defrosting device	There are installed defrosting device and condensate drain inside		
Continuous running	Running continuously		
Timing operation	Can set timed start and stop time		
Refrigerant	R404A R23	R404A R508B	R404A R23 R14
Water-cooled	1200L/H 1.5bar~4bar	1600L/H 1.5bar~4bar	2600L/H 1.5bar~4bar
Dimension cm	55*100*175	55*100*175	70*100*175
Weight	280kg	300kg	360kg
Shell material	Cold rolled sheet spray coating REL 7035		

# CHILLER Gas refrigeration AES Series

The jet flow high and low temperature impact tester provides precise and rapid ambient temperature for chips, modules, integrated circuit boards, electronic components, etc. It is an indispensable instrument for electrical performance test, failure analysis and reliability evaluation of products.

**Compared to the traditional thermostat, there are several features:**

- ※ Temperature range :-120°C~300°C
- ※ The rising and cooling rate is very fast, 150°C~-55°C < 10 seconds
- ※ Maximum atmospheric discharge :30m<sup>3</sup>/h
- ※ Real-time monitoring of the measured IC real temperature, closed-loop feedback, real-time adjustment of gas temperature
- ※ Controllable rise and fall time, programmed operation, manual touch, remote control
- ※ Test conditions: ambient temperature 20°C, 30m<sup>3</sup>/h, 5Bar, compressed air or ammonia gas
- ※ The 100m<sup>3</sup>/h gas flow rapid impact tester can be customized to meet the requirements of large test power



Model	AES-4535 AES-4535W	AES-6035 AES-6035W	AES-8035 AES-8035W	AES-A1035W	AES-A1235W
Temperature range	-40°C ~ 225°C	-60°C ~ 225°C	-80°C ~ 225°C	-100°C ~ 225°C	-120°C ~ 225°C
Temperature accuracy	±0.1°C ( Steady state outlet temperature )				
Air requirements	Air filter < 5um air oil content < 0.1um air temp and humidity : 5°C-32°C 0-50%RH				
Air treatment capacity	10m <sup>3</sup> /h-30m <sup>3</sup> /h Pressure 5bar-7.6bar				
Throttling method	Electronic expansion valve				
Controller	PLC Controller				
Display and record	The pressure of the refrigeration system is realized by a pointer pressure gauge, and the pressure of the circulation system is detected by a pressure sensor and displayed on the touch screen.				
Main components	Danfoss drying filter, Casto solenoid valve, Danfoss pressure controller, EBM fan ( air-cooled ), Danfoss / Emerson oil separator, SMC filter, Emerson electronic expansion valve, Johnson pressure sensor				
Compressor	Tecumseh, Dorin				
High temp cooling	Possess high-temperature 225°C direct cooling technology to meet the target and quickly cool down during high-temperature operation.				
Process control	The remote target temperature can be controlled by combining the self created model free self built tree algorithm and cascade algorithm				
Dimension cm	54*69*132	54*69*132	54*69*132	80*120*175	100*150*185

# CHILLER Gas refrigeration AET Series

Compressed air enters the gas rapid temperature change testing machine, which is equipped with a dryer. The gas is pre dried to a dew point temperature of -70 Celsius or below, and then cooled, heated, and controlled to output stable flow, pressure, and constant temperature gas. The temperature of the target object is controlled (such as various temperature control chucks, chamber environments, heat support plates, material shuttles, chambers, electronic components, etc.), and the temperature of the process can be controlled according to the temperature sensor on the remote chuck, and the temperature of the output gas can be automatically adjusted.



Model	AET-4025 AET-4025C	AET-4050 AET-4050C	AET-4095W AET-4095WC	AET-7025 AET-7025C	AET-7050W AET-7050WC	AET-7095 AET-7095WC
Temperature range	-40°C ~ 250°C	-40°C ~ 250°C	-40°C ~ 250°C	-75°C ~ 250°C	-75°C ~ 250°C	-75°C ~ 250°C
Temperature accuracy	Gas outlet temperature $\pm 0.1$ °C, remote process temperature precision $\pm 0.5$ °C Optional gas temperature for mouth making and process target temperature					
Upgrade temp rate	The temperature rise and fall rate of the gas outlet of the equipment is greater than 30 °C/min, and gradient temperature rise and fall can be performed					
Air requirements	Air filter < 5um, air oil content < 0.1um, air temperature and humidity: 5 °C -32 °C 0-50% RH pressure 4bar~8bar					
Air handing	22m³/h	50m³/h	95m³/h	22m³/h	50m³/h	95m³/h
Throttling method	Refrigeration system adopts electronic expansion valve throttling to precisely control the cooling capacity					
Controller	PLC programmable controller, standard support for ModbusRTU protocol, RS485 interface, Optional other communication protocols					
Display Records	7-inch color touch screen, display gas temperature, pressure, flow rate, refrigeration system pressure and temperature					
Process temp control	The remote target temperature can be controlled by combining the self created model free self built tree algorithm and cascade algorithm					
Dimension cm	43*46*112	52*57*132	60*63*160	54*69*112	65*85*132	75*95*160
Remarks	The suffix W represents water cooling The suffix c represents gas recycling					

# CHILLER Direct cooling temp control unit ZLJ Series

The refrigerant in the refrigeration system is directly output and evaporated into the target control element (heat exchanger) for heat exchange, so as to cool the target control object. The heat exchange capacity is higher than that of the fluid (gas) transported into the heat exchanger, which is especially suitable for the application of the heat exchanger with a small heat exchange area, but a large heat exchange. It can also be used as a gas trap, the refrigerant is directly evaporated into the trap, and the gas in the space is rapidly captured through the condensation effect on the surface of the trap.



Model	ZLJ-41 ZLJ-41W	ZLJ-43 ZLJ-43W	ZLJ-46 ZLJ-46W
Temp range	-40°C ~ -15°C		
Temp control accuracy	±1°C ( Steady state outlet temperature )		
Cooling capacity@-35°C	0.5kw	1.6kw	3.2kw
High temp cooling	With high temp. 150°Cdirect cooling technology, to meet the goal of rapid cooling in high temp. operation		
Refrigerant	R404A Optional R507C R448		
Dimension cm	32*40*60	80*70*60	45*70*135
Circuit breaker	6A	6A	16A

Model	ZLJ-81.0 ZLJ-81.0W	ZLJ-83 ZLJ-83W	ZLJ-86 ZLJ-86W
Temp range	-80°C ~ -50°C		
Temp control accuracy	±1°C ( Steady state outlet temperature )		
Cooling capacity@-70°C	0.4kw	1.3kw	2.5kw
Refrigerant	R404A/R508B		
High temp cooling	With high temp. 150°Cdirect cooling technology, to meet the goal of rapid cooling in high temp. operation		
Dimension cm	32*63*65	95*100*80	55*100*175
Circuit breaker	10A	16A	25A

Model	SLJ-3W	SLJ-4W	SLJ-6W	SLJ-11W
Temp range	-150°C ~ -110°C			
Cooling capacity@-120°C	3kw	4kw	6kw	11kw
Cooling capacity@-135°C	2.5kw	3.3kw	5kw	9kw
Refrigerant	LNEYA -150 mixed refrigerant			
Dimension cm	75*75*175	75*75*175	95*100*205	130*200*350
Circuit breaker	40A	55A	65A	100A



## CHILLER Direct cooling temp control unit

# Rapid temp change temp control chuck

The product enables rapid temperature changes and precise temperature control. The system itself comes with a chiller to avoid the consumption of liquid nitrogen, carbon dioxide, etc. Each system contains a chuck and a cold and heat control unit.

The system provides an open flat surface working platform, rapid rise and fall, constant temperature control, used in RF devices and high-density power device testing (IGBTs and MOSFETs), can also be used in laboratory flat plate rapid cooling (plasma, biological products, batteries), etc

The direct refrigerant evaporation method is used inside the plate, which greatly improves the heat transfer efficiency and improves the heat transfer power per unit area of the plate compared with the liquid cooling method.



Model	MD-708	MD-712	MDL-708
Temp. range	-75°C ~ 225°C		
Temp. control accuracy	±0.5°C ( Steady state outlet temperature )		
Plate temp. uniformity	±1°C		
Flatness of the plate	±15um		
Plate size	200mm diameter disc	300mm diameter disc	150mm*200mm
Host and card connection cable	2.5m(Other lengths can be customized )		
Flat surface treatment	Nickel plating (Optional gold plating)		
Heating	-60°C to +25°C: 2 min , 0°C to +25°C: 2 min , +25°C to +220°C: 6 min		
Cooling	220°C to +25°C: 2 min , +25°C to -60°C: 6 min		
Control system	PLC controller, heating feedforward PID fuzzy algorithm, cooling electronic expansion valve PID regulation control cooling capacity		
Display and record	7 inch color touch screen, record curve temperature and alarm		
Communication	Ethernet interface , TCP/IP protocol		
Compressor	Tecumseh		
Equipment dimension c m	55*65*37	55*65*37	55*65*37