

FREEZE DRYER

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Quality Instruments, Lifetime Care



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**Professional service
provider in the global laboratory field**

ANTECH GROUP INC.



Company Profile

ANTECH Group is committed to offering high quality laboratory instruments and medical products while matching to the unique needs of customer. Our dedication is to provide quality instruments with lifetime care.

Antech Group sets its production facilities in 5 cities. The product lines include:

Cold storage - Cryogenic freezer, ULT freezer, deep freezer, pharmacy refrigerator, blood bank refrigerator, vaccine refrigerator and cold room

Cryogenic storage - liquid nitrogen freezer, liquid nitrogen container and Dewar vessel

Clean air product - biological safety cabinet, laminar flow cabinet (clean bench), air shower, sample booth, fan filter unit and clean room

Scientific instrument - fermenter, bio-reactor, freeze dryer, glassware washer, incubator

Medical equipment & consumable - washer disinfector and plasma sterilizer

In accordance to our unique business philosophy, we always remind ourselves to avoid any short-sighted activities and to focus on long-term success and growth.

We Antech team treat our customers as long-term partners & life-time friends. We are very clear that any of our success comes and will come from satisfaction of our partners and customers. "Quality instruments, lifetime care" is commitment to our partners, as well as to ourselves.



Application

The freeze-dryer has been exclusively designed for the freeze-drying of solid or liquid products in ampoules, vials or dishes.

The freeze-dryer is suitable for freeze-drying solid substances and aqueous solutions (e.g. bacteria and virus cultures, blood plasma, serum fractions, antibodies, sera, vaccines and pharmaceutical products such as chloramphenicol, streptomycin, vitamins, ferments and plant extracts for biochemical tests).

The freeze dryer is mainly used in industries such as biomedicine, chemical industry, food and environmental testing.



Freeze dryer introduction



Control system

The freezer dryer fits with LCD touch screen and Android system which can display sample temperature, cold trap temperature, vacuum rate, and freeze dryer working condition in real time. Programmable freeze drying process can be switched to manual controlled at any time. The tilted design touch panel is easy for reading and operation. USB port enable user download the data



Ice condenser chamber

The ice condenser chamber can pre-frozen the products to -55°C, it also captures the gaseous water into ice and collect them in ice trap.

#304 stainless steel chamber is for durable use and easy cleaning.

Optional ice condenser temperature to -80°C
Optional electrical heater in chamber for quick defrost, convenient for next cycle use.



Refrigerant System

Pre-frozen process: The powerful refrigerant system enable samples to be frozen in the low temperature of -60°C (@ambient temperature 20°C) and -55°C (@ ambient temperature 32°C).

PT-100 sensor is used to measure samples temperature in real time, which is convenient for checking.

During pre-freezing phase, it takes 30 minutes pulling temperature from 32°C down to -55°C (empty load)



Vacuum system

Reliable and high performance vacuum pump is used in the vacuum drying process, the vacuum pressure rate affects the drying results.

Vacuum-drying process: the whole process of freeze drying can be monitored and checked.



Connections

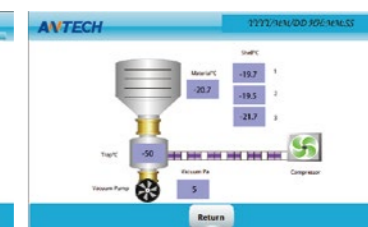
Water drainage and Gas inlet are the same port, it is for ice condenser water melting and draining out. It is also the air flow inlet after the freeze-drying finished. International standard vacuum hose port is easy for installation.

Intelligent Control System

The Lyolab series freeze dryer is Android system PLC controller with large LCD touch screen. The intuitive user interface for controlling freeze drying processes.

It combines functionality and practical utility:

- Clearly arranged graphic display
- Display of important process parameters
- Vacuum Pump start and stop
- Refrigerant system start display
- Drying process program
- Important data record
- Android system PLC controller with 5" LCD



Optional Accessories

- 1, Multi-manifold bottle hanging device
- 2, Ampoule tube freeze-drying rack
- 3, Stainless steel cart
- 4, 26-place manifold bottle hanging shelf
- 5, Vacuum pump
- 6, Oil mist filter for vacuum pump



Penicillin bottle Loading Quantity

	Model	LyoLab 10B	LyoLab 10BH	LyoLab 10S	LyoLab 10SH	LyoLab 25B	LyoLab 25BH	LyoLab 25S	LyoLab 25SH
Penicillin bottle	(φ22mm)	212	212	106	106	388	388	291	291
	(φ16mm)	404	404	202	202	756	756	567	567
	(φ12mm)	920	690	1320	990				

Bench Top Freeze Dryer

	Model	LyoLab 10B	LyoLab 10BH	LyoLab 10S	LyoLab 10SH
Feature	Drying Chamber type	Bulk	Bulk	Stoppering	Stoppering
	Ice Condenser capacity	3Kg/24h			
	Final condenser temperature	≤-60°C			
	Effective shelf area	0.1m ³		0.5m ³	
Shelf	Shelf layers	4		2	
	Shelf tray dimension	Diameter Φ210 mm Φ180			
	Shelf heater	N/A	Yes	N/A	Yes
	Shelf heating range	N/A	-40°C~+50°C	N/A	-40°C~+50°C
	Height between shelves	50mm	45mm	50mm	45mm
Refrigerant system	Refrigerant gas	Mixed CFC free, HCFC-free			
	Number of compressors	1			
	Cold trap cooling rate	20°C to -40°C≤30min (no load)			
Control System	Controller	5 Inch color touch screen controller with LyoWise operation system			
	Freeze-drying Process	Non programable	User Programable	Non programable	User Programable
	Data Storage	Yes			
	USB port	Yes			
	RS232 port	Yes			
	Auto defrost	Yes			
Power	Voltage	Yes			
	Current	φ200mm*H20mm			
	Total power	Main unit 5A			
Vacuum pump	Vacuum pump	1250W	1400W	1250W	1400W
	Vacuum degree	≤5Pa (no load)			
	Vacuum pumping rate	from standard atmospheric pressure to 10Pa≤10min (no load)			
	Vacuum rate	2L/s			
Main unit	Vacuum leakage	3x10 ⁻² pa L/S			
	Material	304			
	Condenser trap material	SUS304			
	Sensor type	PT100			
	Material sensor	±4			
	External dimensions (L×W×H)	610*610*460mm			
	Weight	90kg			

Floor-Standing Freeze Dryer

	Model	LyoLab 25B	LyoLab 25BH	LyoLab 25S	LyoLab 25SH
Feature	Drying Chamber type	Bulk	Bulk	Stoppering	Stoppering
	Ice Condenser capacity	6Kg/24h			
	Final condenser temperature	≤-60°C			
	Effective shelf area	0.25m ³		0.19m ³	
Shelf	Shelf layers	4		3	
	Shelf tray dimension	Diameter Φ300 mm			
	Shelf heater	N/A	Yes	N/A	Yes
	Shelf heating range	N/A	-40°C~+50°C	N/A	-40°C~+50°C
	Height between shelves	70mm	70mm	70mm	70mm
Refrigerant system	Refrigerant gas	Mixed CFC free, HCFC-free			
	Number of compressors	1			
	Cold trap cooling rate	20°C to -40°C≤30min (no load)			
Control System	Controller	5 Inch color touch screen controller with LyoWise operation system			
	Freeze-drying Process	Non programable	User Programable	Non programable	User Programable
	Data Storage	Yes			
	USB port	Yes			
	RS232 port	Yes			
	Auto defrost	Yes			
Power	Voltage	Yes			
	Current	φ200mm*H20mm			
	Total power	Main unit 5A			
Vacuum pump	Vacuum pump	2150W	2300W	2150W	2300W
	Vacuum degree	≤5Pa (no load)			
	Vacuum pumping rate	from standard atmospheric pressure to 10Pa≤10min (no load)			
	Vacuum rate	2L/s			
Main unit	Vacuum leakage	3x10 ⁻² pa L/S			
	Material	304			
	Condenser trap material	SUS304			
	Sensor type	PT100			
	Material sensor	±4			
	External dimensions (L×W×H)	640*540*845mm			
	Weight	127kg			