



Freeze Dryer

/ Laboratory and Processing Equipment

- Laboratory Scale



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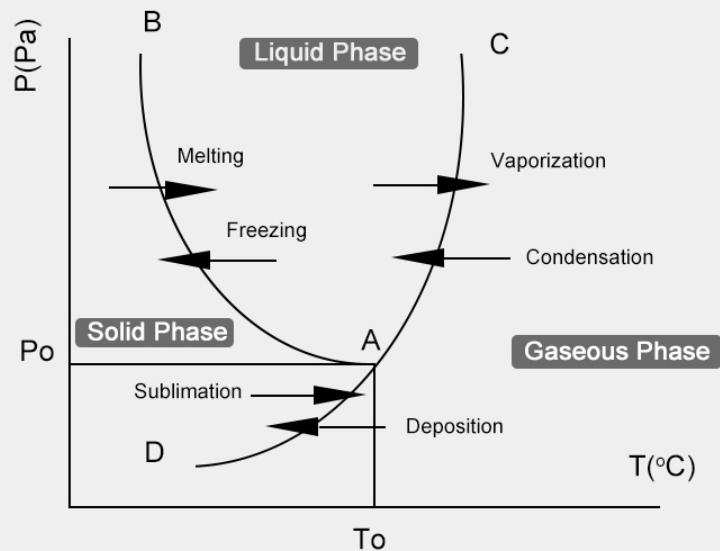
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PRODUCT USAGE

1.1 In the field of biological laboratories, freeze-drying technology is mainly used for the production of drugs such as serum, plasma, vaccines, enzymes, antibiotics, and hormones.

1.2 Used biochemical, immunological and bacteriological inspection drugs.

1.3 Used for long-term Apreservation of blood, bacteria, arteries, bones, skin, cornea, nerve tissue and various organs, etc.



Principle Schematic (Water)

2 Freeze dryer is a low temperature dehydration machine that involves freezing the product, lowering pressure, then removing the ice by sublimation. Because of the low temperature used in processing, the quality of the rehydrated product is excellent, and the original shape of the product is maintained.

PRODUCT STRUCTURE

Take Model D as an example



• PROCESS

Prefreezing



Sublimation (Under vacuum)



Desorption

MAIN FEATURES

1. Desktop and compact design, small footprint and easy to move.
2. Efficient protection for the vacuum pump, starting after reaching the pre-set temperature.
3. Digital LCD touch screen, recording the temperature of cold trap and samples as well as the vacuum degree. Data can be exported.
4. Entire stainless steel cold trap, with in-set condensing coil, exceling in capturing the water vapor.
5. Equipped with inflation valves, which can be filled with dry nitrogen or inert gas.
6. Single working time and total running time can both be recorded simultaneously.
7. Anti-corrosion glass cover with high transparency, boosting the convenience of delivering sample by opening window on the top.
8. Quick one-press-starting button, incredibly enhancing the easy accessibility to defrost(eletrical defrost type works by the environmental radiation and temperature).



PRODUCT DESIGNATION FORMAT

FD P 1 E - 1 B

FD is freeze dryer for short.

This letter stands for the scale.

L: lab scale.

P: pilot scale.

I: industrial scale.

This number stands for the freezing temperature.

1: -50°C

2: -80°C

This letter stands for the heating type.

L: Liquid heating

R: Radiation heating

E: Electricity heating

This letter stands for the chamber

A: Standard chamber

B: Stoppering chamber

C: Standard chamber with manifolds

D: Stoppering chamber with manifolds

E: T-frame chamber with manifolds

This number stands for the drying area.

0: T-frame type.

1: 0.1 m².

2: 0.2 m².

3: 0.3 m².

4: 0.4 m².

5: 0.5 m².

10: 1 m².



PRODUCT PARAMETERS



A > Main Parameters

Model	FDL1R-1A	FDL2R-1A
Final Condenser Temperature	≤-50°C	≤-80°C
Dimension (mm)	400*620*400	480*620*880
Unit Weight	36Kg	85Kg
Power	220V; 50Hz; 900W	220V; 50HZ; 1500W
Vacuum Degree	< 10Pa	< 10Pa
Ice Condenser Capacity	3Kg	3Kg
Cold Trap Dimension(mm)	Φ240*150	Φ240*260
Cold Trap Volume	6L	11L
Dry Area		0.12m ²

*Dimensions and weight do not include drying chamber, only for the host.

PRODUCT PARAMETERS



Stoppering chamber

B > Main Parameters

Model	FDL1R-1B	FDL2R-1B
Final Condenser Temperature	≤-50°C	≤-80°C
Dimension (mm)	400*620*400	480*620*880
Unit Weight	36Kg	85Kg
Power	220V; 50Hz; 900W	220V; 50HZ; 1500W
Vacuum Degree	< 10Pa	< 10Pa
Ice Condenser Capacity	3Kg	3Kg
Cold Trap Dimension(mm)	Φ240*150	Φ240*260
Cold Trap Volume	6L	11L
Dry Area	0.12m ²	

*Dimensions and weight do not include drying chamber, only for the host.



Standard chamber
with 8 port manifolds

C > Main Parameters

Model	FDL1R-1C	FDL2R-1C
Final Condenser Temperature	≤-50°C	≤-80°C
Dimension (mm)	400*620*400	480*620*880
Unit Weight	36Kg	85Kg
Power	220V; 50Hz; 900W	220V; 50HZ; 1500W
Vacuum Degree	< 10Pa	< 10Pa
Ice Condenser Capacity	3Kg	3Kg
Cold Trap Dimension(mm)	Φ240*150	Φ240*260
Cold Trap Volume	6L	11L
Dry Area	0.12m ²	

*Dimensions and weight do not include drying chamber, only for the host.

PRODUCT PARAMETERS



Standard stoppering chamber with 8 port manifolds

D > Main Parameters

Model	FDL1R-1D	FDL2R-1D
Final Condenser Temperature	≤-50°C	≤-80°C
Dimension (mm)	400*620*400	480*620*880
Unit Weight	36Kg	85Kg
Power	220V; 50Hz; 900W	220V; 50HZ; 1500W
Vacuum Degree	< 10Pa	< 10Pa
Ice Condenser Capacity	3Kg	3Kg
Cold Trap Dimension(mm)	Φ240*150	Φ240*260
Cold Trap Volume	6L	11L
Dry Area	0.12m ²	

*Dimensions and weight do not include drying chamber, only for the host.



T-frame with 8 port manifolds

E > Main Parameters

Model	FDL1R-0E	FDL2R-0E
Final Condenser Temperature	≤-50°C	≤-80°C
Dimension (mm)	400*620*400	480*620*880
Unit Weight	36Kg	85Kg
Power	220V; 50Hz; 900W	220V; 50HZ; 1500W
Vacuum Degree	< 10Pa	< 10Pa
Ice Condenser Capacity	3Kg	3Kg
Cold Trap Dimension(mm)	Φ240*150	Φ240*260
Cold Trap Volume	6L	11L

*Dimensions and weight do not include drying chamber, only for the host.

PRODUCT CONFIGURATIONS AND FUNCTIONS

Product configuration and function for A B C D E		≤-50°C	≤-80°C	
Configuration	Vacuum Pump	•	•	
	Mist(oil&water) Separator	•	•	
	Anti Oil Return Device	○	○	
	Chamber Type (Choose one among ABCDE)	A(Standard Chamber)	○	○
		B(Stoppering Chamber)	○	○
		C(Standard Chamber with 8 Port Manifold)	○	○
D(Standard Stoppering Chamber with 8 Port Manifold)		○	○	
E(T-Frame with 8 Port Manifold)	○	○		
Function	PLC Touch Sreen	•	•	
	USB Data Interface	•	•	
	Inflatable Valve for Inert Gas	•	•	
	Thermal radiation defrost	•	•	
	Sheleves Heating	—	—	
	Sheleves Refrigeration	—	—	
Remark : • : Standard configuration ; ○ : Optional ; — : None				



PACKING LIST

- Frezze dryer (1 set); vacuum pump (1 set);
- Mist (oil&water) separator (1 set);
- Glass cover (1 set);
- Stainless steel framework (1 set);
- Stainless steel sample plates (4 sets);
- Vacuum hose (1 set);
- Vacuum pump oil [4 bottles (1L each) per package].

Vacuum pump

