

# Freeze Dryer

## Laboratory Freeze Dryer

### Introduction

The lab series freeze dryer is suitable for freeze drying test of laboratory biomedical samples. Widely used in drugs, biological products, chemical and food industries. On the heat-sensitive substances such as antibiotics, vaccines, blood products, hormones and other biological tissue enzymes, freeze-drying technology is applied.

### Features

1. LCD touch screen.
2. With historical data inquiry function.
3. With USB interface to export the data.
4. Large capacity ice condenser trap and without coil inside.
5. With cascade refrigeration technology.
6. Pre-freezing shelf can be used as guide barrel to speed up the drying rate.
7. Ice condenser trap and operation panel are made by stainless steel.
8. Drying chamber is transparent which is visual and safe.
9. Shelves are stainless steel, which can be adjustable per the requirements.

### Accessories



Standard Chamber



Stoppering Chamber



Standard Stoppering Chamber with 8 Port Manifold



Standard Chamber with 8 Port Manifold



Vacuum pump (standard)



LCD Touch Screen for BK-FD10/12 series



LCD Touch Screen for BK-FD18 series



Wide mouth flask (optional)

## Pilot Freeze Dryer

### Introduction

Biobase vacuum freeze dryer (square cabinet) is suitable for laboratory samples of freeze drying test, and a small amount of production.

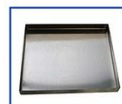
### Features

1. Pre-freezing, drying in-situ, easy to operate, good drying effect.
2. Inflatable (discharge) valve adopts safety diaphragm valve, which can be connected to inert gas source, and is filled with inert gas after drying to extend the shelf life of the material.
3. Freeze-drying curve optimization control technology, which can control the cooling rate during the pre-freezing stage, and control the heating rate of the sample and the vacuum value of the current stage in the sublimation and analytical drying stages.
4. 7-inch true color touch screen.
5. Can save hundreds of process recipes, each group contains 50 temperature control sections to improve process optimization rate.
6. Intelligent data recording system, real-time recording and display of cold trap temperature curve, sample temperature curve, vacuum degree curve, export data can be browsed and printed by computer and various operations to facilitate process optimization and drying effect verification.
7. Flexible manual + automatic control mode, manual mode used for groping process, automatic mode used for batch production.
8. Real-time alarm display and historical alarm query function for fault diagnosis and equipment maintenance.
9. User level and password can be set and decentralized for operation management.

### Accessories



Compressor



Tray



Clamp

## Tabletop Freeze Dryer



### Technical Parameters

Model	BK-FD10S	BK-FD10P	BK-FD10T	BK-FD10PT
Type	Standard chamber	Standard chamber with 8 port manifold	Stoppering chamber	Stoppering chamber with 8 port manifold
Freeze Drying Area	0.12m <sup>2</sup>		0.09m <sup>2</sup>	
Tray	4 pcs		3 pcs	
Height Between Trays	50mm		68mm	
Cold Trap Temperature	≤-60°C			
Cold Trap Capacity	9.5L			
Cold Trap Size (Diameter*H)	Φ215*260mm			
Vacuum Degree	<10Pa			
Water Capture Capacity	3kg/24h			
Tray Size (D*H)	Φ200*20mm		Φ180*20mm	
Freeze Drying Time	24h			
Loading Capacity/Shelf (Liquid)	0.3L			
Total Loading Capacity (Liquid)			0.9L	
Drying Chamber Size (Diameter*H)	Φ260*310mm		Φ260*450mm	
Total Qty. Of Vial Φ22	260		195	
Total Qty. Of Vial Φ16	480		360	
Total Qty. Of Vial Φ12	920		690	
Refrigerant	R600a+R290+R23			
Cooling System	Air cooling			
Power Consumption	1.3KW			
Power Supply	AC220V, 50/60Hz(single phase); 110V, 60Hz(single phase)			
Standard Accessory	Vacuum pump 2L/S, 8m <sup>3</sup> /h (for all models) Conical-mouth flask 500ml*8 pcs (only for model BK-FD10P/PT)			
Optional Function & Accessory	Conical-mouth flask and wide-mouth flask (for BK-FD10P/PT) Import vacuum pump			
External Size (W*D*H)	582*541*374/684mm		582*541*374/824mm	
Package Size (W*D*H) mm/	Main Body	690*660*600 (60kg)		690*660*600 (80kg)
	Drying Chamber	340*340*460 (10kg)	390*390*670 (15kg)	
Gross Weight	Vacuum Pump	590*380*220 (22kg)		