

Freeze Dryer

Laboratory Freeze Dryer

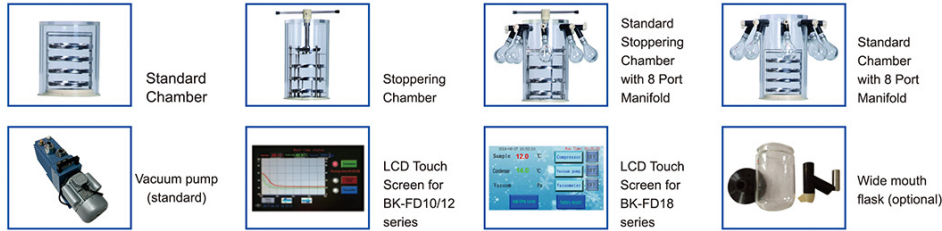
Introduction

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



Pilot Freeze Dryer

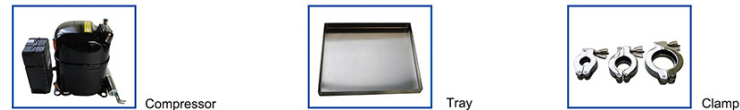
Introduction

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



Tabletop Freeze Dryer



Technical Parameters

Model	BK-FD10S	BK-FD10P	BK-FD10T	BK-FD10PT
Type	Standard chamber	Standard chamber with 8 port manifold	Stopping chamber	Stopping chamber with 8 port manifold
Freeze Drying Area	0.12m ²		0.09m ²	
Tray	4/6(Optional)pcs		3pcs	
Height Between Trays	76/50mm		70mm	
Cold Trap Temperature	-60℃			
Cold Trap Capacity	6.9L			
Cold Trap Size (Diameter*H)	Φ215*190mm			
Vacuum Degree	<10Pa			
Water Capture Capacity	3kg/24h			
Tray Size (D*H)	Φ200*20mm		Φ200*20mm	
Freeze Drying Time	24h			
Loading Capacity/Shelf (Liquid)	0.3L			
Total Loading Capacity (Liquid)	1.2L		0.9L	
Drying Chamber Size (Diameter*H)	Lower circle φ260mm Upper circle φ240mm Height 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	0.9KW			
Power Supply	AC220V, 50/60Hz(single phase); 110V, 60Hz(single phase)			
Standard Accessory	Vacuum pump 2L/S, 8m ³ /h, Material tray, Material rack, PC cover (for all models) Conical-mouth flask 500ml*8 pcs, Switch valve*8 pcs (only for model BK-FD10P/PT)			
Optional Function & Accessory	Electric defrost function, Nitrogen gas filling valve, Oil mist filter (for all models) 800ml Wide-mouth flask (for BK-FD10P/PT)			
External Size (W*D*H)	600*560*374/820mm		600*560*374/880mm	
Package Size Main Body	670*700*560 (80kg)			
(W*D*H) mm/ Drying Chamber	620*400*400 (15kg)			
Gross Weight Vacuum Pump	570*360*240 (22kg)			

Vertical Freeze Dryer



BK-FD12S

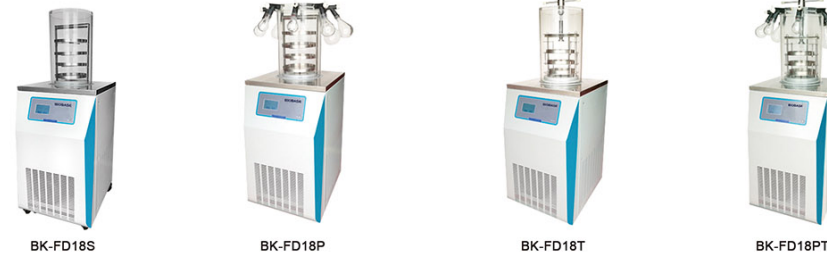
BK-FD12P

BK-FD12T

BK-FD12PT

Technical Parameters

Model	BK-FD12S(-60/-80)	BK-FD12P(-60/-80)	BK-FD12T(-60/-80)	BK-FD12PT(-60/-80)
Type	Standard chamber	Standard chamber with 8 port manifold	Stoppering chamber	Stoppering chamber with 8 port manifold
Freeze Drying Area	0.12/0.18m ²		0.09m ²	
Tray	4/6(Optional)pcs		3pcs	
Height Between Trays	76/50mm		70mm	
Cold Trap Temperature	≤-60°C/-80°C(Optional)			
Cold Trap Capacity	9.3L			
Cold Trap Size(Dr*H)	Φ217*250mm			
Vacuum Degree	<10Pa			
Water Capture Capacity	4kg/24h			
Tray Size (D*H)	Φ200*20mm			
Freeze Drying Time	24h			
Loading Capacity/Shelf(Liquid)	0.3L			
Total Loading Capacity(Liquid)	1.2/1.8L		0.9L	
Drying Chamber Size(D*H)	Lower circle φ260mm Upper circle φ240mm Height 450mm			
Can Load Vials Qty	Φ22mm	260	195	
	Φ16mm	480	360	
	Φ12mm	920	690	
Refrigerant	R600a+R290+R23			
Cooling System	Air cooling			
Consumption	-60°C: 0.9kW -80°C: 1.5Kw (Option)			
Power Supply	220V/50Hz,60Hz (single phase);110V/60Hz (single phase, only for -60°C)			
Standard Accessory	-60°C Cold trap, Vacuum pump 2L/S, 8m ³ /h, Material tray, Material rack, PC cover (for all models) Conical-mouth flask 500ml*8 pcs, Switch valve*8 pcs (only for model BK-FD12P/PT)			
Optional Function & Accessory	-80°C Cold trap, Electric defrost function, Nitrogen gas filling valve, Oil mist filter (for all models) 800ml Wide-mouth flask (for BK-FD12P/PT)			
External Size(W*D*H)	480*620*920/1370mm			
Package Size	Main Body	730*600*1180mm (80kg)		
	Drying Chamber	620*400*400mm (15kg)		
Gross Weight	Vacuum Pump	570*360*240 (22kg)		



BK-FD18S

BK-FD18P

BK-FD18T

BK-FD18PT

Technical Parameters

BK-FD18S(-55/-80)	BK-FD18P(-55/-80)	BK-FD18T(-55/-80)	BK-FD18PT(-55/-80)
Standard chamber	Standard chamber with 8 port manifold	Stoppering chamber	Stoppering chamber with 8 port manifold
0.18m ²		0.09m ²	
4 pcs		3 pcs	
70mm			
≤-56°C/-80°C(Optional)			
23L			
Φ270*400mm			
<5 Pa			
6kg/24h			
Φ240*18mm		Φ200*18mm	
18-36h			
0.45L		0.3L	
1.8L		0.9L	
Φ300*445mm	Φ300*465mm	Φ300*540mm	Φ300*570mm
-		183	
-		345	
-		615	
R600a+R23			
Air cooling			
-56°C: 1.4kW, -80°C: 2.1.kW		-56°C: 1.4kW, -80°C: 2.1.kW	
AC220V, 50/60Hz(single phase), 110V, 60Hz(single phase)			
-56°C Cold trap ,Vacuum pump 4L/S, 14.4m ³ /h, Material rack, Material tray (for all models)			
Flasks 100mlx2, 250mlx2, 500mlx2, 1000mlx2 (only for model BK-FD18P/PT)			
-80°C, -110°C Cold trap, Anti-reverse oil stop valve, Oil mist filter, Import vacuum pump (for all models)			
Conical-mouth flask and wide-mouth flask (for BK-FD18P/PT)			
630*580*970/1415mm	630*580*970/1435mm	630*580*970/1510mm	630*580*970/1810mm
790*690*1200mm (148kg)			
420*420*560/mm (14kg)		430*430*660mm (26kg)	
620*370*450 (32kg)			

Pilot Freeze Dryer



BK-FD20S



BK-FD20T



BK-FD30S



BK-FD30T



BK-FD50S



BK-FD50T



BK-FD100S



BK-FD100T

Technical Parameters

Model	BK-FD20S(Standard)	BK-FD20T(Stoppering)	BK-FD30S(Standard)	BK-FD30T(Stoppering)
Freeze Drying Area	0.3m ²	0.2m ²	0.4m ²	0.3m ²
Shelf Temperature	-50°C~+70°C(no-loading)			
Cold Trap Temperature	<75°C(no-loading)			
Vacuum Degree	≤5 Pa(no-loading)			
Water Capture Capacity	≥6		≥8	
Cold Trap Volume	14L		/	26L
Cold Trap Size (Diameter*H)	Φ200*460mm		/	Φ320*520mm
Drying Chamber Size (W*D*H)	330*325*470mm		340*500*420mm	480*380*540mm
Shelf & Tray Size(W*D*H)	Shelf: 400*270*18mm Tray: 395*265*25mm		Shelf: 300*340*18mm Tray: 295*335*25mm	
Qty. Of Shelf & Tray	Shelf: 3+1, Tray: 3		Shelf: 2+1, Tray: 2	Shelf: 4+1, Tray: 4
Sample Loading Capacity (Liquid)	3L		2L	4L
Height Between Trays	70mm		50mm	70mm
Tray Temperature Difference	±1°C			
Refrigerant	R404A + R23			
Condenser Cooling Mode	Air cooling			
Defrost Mode	Electric defrosting		Natural defrosting (option electric defrosting)	Electric defrosting
Stoppering Mode	/		manual	automatic
Total Qty. Of Vial	Φ22mm	/	440	/
	Φ16mm	/	868	/
	Φ12mm	/	1554	/
Vacuum Pump	4L/S(14.4m ³ /h)		6L/S(22m ³ /h)	6L/S(22m ³ /h)
Electric Defrosting Consumption	800W		/	1000W
Silicone Oil Heating Rods Consumption	800W		1000W	1000W
Hydraulic Pressure Station Consumption	/		500W	1000W
Total Consumption	3KW		3KW	5.5KW
Power Supply	AC220V, 50Hz/60Hz (single phase)			
Main Body Weight	300kg		400kg	
External Size(W*D*H) mm	840*750*1580mm		920*780*1350mm	1260*850*1420mm
Package Size(W*D*H)mm	Main Body	980*860*1720 mm /400kg	980*860*1720 mm /470kg	1100*980*1570mm /450kg
Gross Weight	Vacuum Pump	950*420*500mm (37kg)		790*300*470mm (52kg)

Optional: Import vacuum pump, Vacuum pump anti-return valve, Eutectic point tester, Oil mist filtration system, Vacuum adjustment device

Technical Parameters

Model	BK-FD50S(Standard)	BK-FD50T(Stoppering)	BK-FD100S(Standard)	BK-FD100T(Stoppering)
Freeze Drying Area	0.7m ²	0.5m ²	1.04m ²	1.15m ²
Shelf Temperature	-50°C~+70°C(no-loading)			
Cold Trap Temperature	<75°C(no-loading)			
Vacuum Degree	≤5 Pa(no-loading)			
Water Capture Capacity	≥10kg		≥15kg	
Cold Trap Volume	/		70L	/
Cold Trap Size (Diameter*H)	/		Φ400*560mm	/
Drying Chamber Size (W*D*H)	410*510 *590 mm		620*510*580mm	410*580*520mm
Shelf & Tray Size(W*D*H)	Shelf:480*360*18mm Tray: 475*355*25mm		Shelf:410*410*18mm Tray: 405*405*25mm	Shelf:480*360*18mm Tray: 475*355*25mm
Qty. Of Shelf & Tray	Shelf: 4+1, Tray: 4		Shelf: 3+1, Tray: 3	Shelf: 6+1, Tray: 6
Sample Loading Capacity (Liquid)	7L		5L	10L
Height Between Trays	70mm		/	100mm
Tray Temperature Difference	±1°C			
Refrigerant	R404A + R23			
Condenser Cooling Mode	Air cooling			
Defrost Mode	Natural defrosting (option electric defrosting)		Electric defrosting	Electric defrosting
Stoppering Mode	/		automatic	automatic
Total Qty. Of Vial	/		1050	/
	/		2058	/
	/		3075	/
Vacuum Pump	8L/S(29m ³ /h)		15L/S(54m ³ /h)	
Electric Defrosting Consumption	/		1000W	1500W
Silicone Oil Heating Rods Consumption	1000W		1000W	1600W
Hydraulic Pressure Station Consumption	/		1000W	1500W
Total Consumption	5.5KW		6.5KW	7.5KW
Power Supply	AC380V, 50Hz/60Hz (three phase) BK-FD50S:AC220V, 50Hz/60Hz (single phase)			
Main Body Weight	600kg		800kg	700kg
External Size(W*D*H) mm	1000*850*1420mm		1490*850*1620mm	1170*830*1665mm
Package Size(W*D*H)mm	1130*980*1620mm /565kg		1600*1040*2040mm /800kg	1320*990*1855mm /900kg
Gross Weight	790*330*445mm (73kg)		830*370*600mm (88kg)	785*455*300mm (95kg)

Optional: Import vacuum pump, Vacuum pump anti-return valve, Eutectic point tester, Oil mist filtration system, Vacuum adjustment device