Pilot Freeze Dryer



Introduction

Biobase pilot freeze dryer uses silicone oil circulation heating to ensure the uniformity of the cooling and heating of the shelf. The temperature difference is only 1°C after the temperature balance of the shelf. The temperature of the cold trap can reach – 80°C. Adapted to the samples containing organic solvent and drying and process conditions to explore(Food drug processing, dehydration, soil preparation, etc.).

Features

* Heating and cooling rates up to 1°C/min.
* Powder-coated exterior, aesthetically pleasing with a premium finish.
* The top layer of the shelf is a radiant heating plate, ensuring uniform heat distribution across all samples.
* High-quality shelves and cold trap ensure uniform drying efficiency.
* Stable control system, easy to operate, facilitating process optimization and drying validation.
* Utilizes the same PLC system as industrial freeze dryers, ensuring adequate control and process reproducibility.
* Supports designing, loading, and storing process programs with real-time recording of the freeze-drying process, generating freeze-drying curves, reports, historical logs, and alarms.

Technical Parameters

Model		BK-PFD20T	BK-PFD30T	BK-PFD50T	BK-PFD100T	BK-PFD200T
Type		Stoppering				
Freeze Drying Area		0.2m²	0.3m²	0.5m²	1.15m²	2.2m²
Shelf Temperature		-55~70℃(No-load)				
Cold Trap Temperature		-80℃(No-load)				
Vacuum Degree		≤1Pa(No-load)				
Water Capture Capacity		≥6kg/24h	≥8kg/24h	≥10kg/24h	≥15kg/24h	≥30kg/24h
Cold Trap Volume		14L	20L	40L	40L	122L
Cold Trap Size(Diamater*H)		Φ200*450mm	Φ220*525mm	Φ300*560mm	Φ300*560mm	Φ400*970mm
Drying Chamber Size(W*D*H)		420*490*320mm	480*439*380mm	615*558*508mm	695*761*585mm	626*1090*660mm
Shelf & Tray Size		Shelf: 270*400mm Tray: 265*395*20mm	Shelf: 300*340mm Tray: 295*335*20mm	Shelf: 415*415mm Tray: 410*410*20mm	Shelf: 480*600mm Tray: 475*595*20mm	Shelf: 610*910mm Tray: 605*450*20mm
Qty. of Shelf & Tray		Tray* Radiant plate*1	Tray*3 Radiant plate*1	Tray*3 Radiant plate*1	Tray*4 Radiant plate*1	Tray*4 Radiant plate*1
Sample Loading Capacity(Liquid)		2L	3L	5L	11L	22L
Height Between Trays		100mm	70mm	100mm	100mm	100mm
Tray Temperature Difference		±1℃				
Refrigerant		R404A+R23				
Condenser Cooling Mode		Air cooling				
Defrost Mode		Electric defrosting				
Stoppering Mode		Automatic				
Total Qty. of Vial	Φ22mm	440	654	1050	2460	3888
	Φ16mm	868	1200	2058	4788	7600
	Φ12mm	1554	2187	3705	8624	13400
Vacuum Pump		4L/s	6L/s	8L/s		15L/s
Electric Defrosting Consumption		800W	1000W	1000W	1500W	2000W
Silicone Oil Heating Rods Consumption		800W	1000W	1000W	1600W	4000W
Optional Accessories		Import vacuum pump, vacuum pump anti-return valve, oil mist filtration system, vacuum adjustment device				
Total Consumption		4kW	5.5kW	6.5kW	7.5kW	17kW
Power Supply		AC 220V, 50/60Hz(Single-phase 3-wire)		AC 380V, 50Hz(Three-phase 5-wire)		
External Size(W*D*H)		1135*960*1580mm	1286*960*1750mm	1640*1050*1990mm	1650*960*2014mm	1450*2250*2370mm
Packing Size (W*D*H)	Main Body	1260*1100*1635mm	1390*1150*1800mm	1750*1150*2040mm	1750*1150*2070mm	1550*2350*2420mm
	Vacuum Pump	665*370*450mm	665*400*450mm	750*430*530mm	750*450*600mm	1010*450*710mm
Net Weight		300kg	400kg	800kg	1000kg	1500kg
Gross Weight	Main Body	360kg	482kg	895kg	1098kg	1630kg
	Vacuum Pump	43kg	76kg	95kg	108kg	135kg

Note: The stainless steel exterior can be customized.

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