Pharmaceutical Freeze Dryer


BK-PFD5/10/20/30/40MS(Standard)


BK-PFD5/10/20/30/40MT(Stoppering)

Introduction:

Pharmaceutical freeze dryers is a reliable industrial equipment that meets GMP standards. It consists of key components, including the freeze drying chamber, shelves, cold trap, refrigeration, vacuum, circulation, hydraulic, pneumatic, control, CIP, and SIP systems. These components work together for an efficient, stable, and controlled freeze drying process, serving various industrial and laboratory needs.

Application:

Widely used in vaccine, traditional Chinese medicine, biopharmaceutical, biochemical drugs, biological agents, probiotics, extracts, nutritional supplements, diagnostic reagents, blood products and other freeze-dried products manufacturing.

Advantage:

1. The cabinet is processed in one piece, reducing the risk of leakage. The interior structure of the cabinet is simple, without dead corners, making it easy to clean and sterilize.
2. The plate layers are manufactured using patented welding technology, ensuring temperature uniformity and improving heat exchange efficiency.
3. The steam flow guiding device maximizes the effectiveness of the cold trap area. The cold trap coil has a large and even ice formation.
4. The vacuum system is high-performance, with a large exhaust capacity, significantly improving product sublimation and freeze-drying efficiency.
5. The refrigeration system operates independently in a closed loop. The Bitzer refrigeration unit has strong cooling capacity, low energy consumption, and a large reserve of cooling capacity.
6. Advanced PLC and SCADA systems enable operators to easily manage the freeze-drying system and complete complex freeze-drying process cycles.
7. Provide front-end equipment such as filling machines and automatic material handling systems according to customer requirements.
8. Pharmaceutical freeze dryers can be configured with CIP (Clean-in-Place) and SIP (Sterilize-in-Place) options as needed to meet GMP (Good Manufacturing Practices) requirements.
9. Customization available based on user requirements.

Technical Parameters

Model	BK-PFD5MS (Standard)	BK-PFD5MT (Stoppering)	BK-PFD10MS (Standard)	BK-PFD10MT (Stoppering)	BK-PFD20MS (Standard)
Freeze Drying Area(m2)	5.25		10.5		20.2
Vacuum Level(Pa)	≤1				
Cold Trap Temperature(℃)	-75				
Maximum ice capacity(kg/B)	＞100		＞200		＞400
Shelf Temperature Range(℃)	-50~+70				
Shelf Size(W*D*H) (mm)	750*1000*20		990*1520*20		1220*1520*20
Number of Shelf Layers(pcs)	7+1		7+1		7+1
Stoppering Mode	/	automatic	/	automatic	/
Total Qty. Of Vial (φ16mm （2ml))	22540		45360		84942
Dimensions(mm)	4000*1360*2800		5500*1670*2800		6500*1980*2800
Power Supply	AC380V 50Hz				
Overall Power	24kw		46kw		85kw

Model	BK-PFD20MT (Stoppering)	BK-PFD30MS (Standard)	BK-PFD30MT (Stoppering)	BK-PFD40MS (Standard)	BK-PFD40MT (Stoppering)
Freeze Drying Area(m2)	20.2	30		41	
Vacuum Level(Pa)	≤1				
Cold Trap Temperature(℃)	-75				
Maximum ice capacity(kg/B)	＞400	＞600		＞800	
Shelf Temperature Range(℃)	-50~+70				
Shelf Size(W*D*H) (mm)	1220*1520*20	1220*1520*20		1520*1800*20	
Number of Shelf Layers(pcs)	7+1	10+1		15+1	
Stoppering Mode	automatic	/	automatic	/	automatic
Total Qty. Of Vial (φ16mm （2ml))	84942	131967		179955	
Dimensions(mm)	6500*1980*2800	7500*2280*2900		7500*2280*3300	
Power Supply	AC380V 50Hz				
Overall Power	85kw	160kw		180kw	