

Freeze Dryer Lyophilizer FD200 General Spec.

Item	Specification	Remark
Model	FD200	CE Marked
Useable trays area	19m ²	
Production Type	Batch Production	
Drying Cycle Time	12~22hrs as per products	
Raw Material Input Capacity	Standard: 200Kgs	MAX: Total water in raw product <300kgs.
Machine Frame	All-include, Plug and Play Delivery.	
	Installed Size: W/1800*L/5500*H/2500mm	
Power install	40Kwh	
Operate Weight	≈8000Kgs	
Voltage	380V/50Hz/3P/5N	
Drying Chamber & Door		
Chamber Material	AISI304	GB150 pressure vessel rated
Wall thickness	6mm	
Inner wall polish	Roughness better than 0.6um	
Chamber Insulation	High density PUF	50~100mm thick.
Door Material	AISI304	
Door Lock	By means of 2 screw latches	
Door hinge location	Left or right side	As per user requirement
Observation Windows	1Pcs	Installed in front door.
Chamber pressure	15Pa ultimate	
Heating Plates & Material Trays		
Plates Size	W/1230*D/1310*T/20mm	
Plates flatness	Better than 1mm/m ²	
Plates Material	AISI304	
Plates polish	Roughness better than 0.6um	
Plates Temperature	-30C ~ +70C	

Item	Specification	Remark
Plates cooling rate	+20C ~ -40C <60min	
Plates heating rate	-40C ~ +20C <60min	
Temperature variance	<+/-1C	
Plates Numbers	13	12 are available for product loading.
Plates intermediate distance	50mm	
Trays Size	610*650*40mm	
Trays Material	AISI304	
Trays Quantity	48Pcs	
Plates temperature sensor	PT-100 A grade	
Raw product temperature sensor	PT-100 A grade	
Condenser		
Condenser material	AISI304	
Condenser location	Backside of drying chamber	
Condenser Insulation	High density PUF	50-100mm thick
Condenser capacity	200kgs in 24hrs cycle	
Condenser Temperature	-35C ~ -45C	By refrigerant direct expand
Cooling rate	RT ~ -40C <30min	
Condenser temperature sensor	PT-100 A grade	
Condenser defrosting	Water spraying + soaking	
Vacuum System		
Pump Type	Oil sealed pump + Roots pump	
Model	V200 + ZJP150	Speed: 180m3/hr + 500m3/hr
Pump quantity	2 sets	
Estimated evacuation time to 1mbar	<30min	
Ultimate Pressure	15Pa	
Vacuum Pipe	Stainless Steel 304	
Anti-suck-back valves	Baffle valves	
Vacuum Gauge	Pirani Type	
Shelves Heating & Heat Transfer Fluid Circulates		
Heat Transfer Fluid	Silicone oil	5cst
Plates Heating	By electric rod	

Item	Specification	Remark
Plates Chilling	Through intermediate heat exchanger	
Fluid Circulation Pipe	AISI304	
Fluid Circulation Pump	Centrifugal pump	
Fluid Reservoir	AISI304	
Refrigeration System		
Compressor Type	Reciprocating semi-hermetic type	
Compressor brand	Bitzer	
Compressor quantity	2 sets	
Refrigerant	R507	
Expansion valve	Danfoss	For plates cooling.
Expansion valve	Danfoss	For condenser cooling.
Magnetic valves	Danfoss	
Oil/Gas separator	FASIKE	
Dry filter	FASIKE	
Pressure Controller	Danfoss	
Refrigerant Pipe	Copper + Stainless Steel	
System Cooling	Water Cooling	
Control System		
Control Type	PLC + Touch Screen	
Working Method	Automatic + Semi-automatic	
PLC	SIEMENS	
Touch Screen	MCGS	
Software	FD-Industrial	
Main electric parts	Schneider + CHNT	
Temperature Sensors	PT-100	