



PILOT-SCALE FREEZE DRYER BFR1E2 (BFFT-405)

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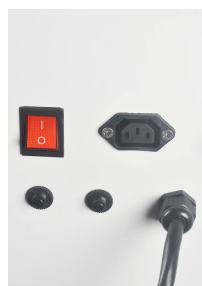
PILOT FREEZE DRYER



SPECIFICATIONS

Model	BFR1E2
Old Model	BFFT-405
Shelf Specification	
-Shelf size (mm)	300 x 400 (Top stopper type 250 x 450)
-No. of Shelves	2 + 1
-Shelf Temperature Control (°C)	-50 °C to 60 °C
-Lowest Shelf temperature (50/60 Hz, °C)	≤ -50 °C
-Temperature Control Accuracy	±0.5 °C
-Shelf Temperature Cooling rate (20 to -40 °C)	≤ 60 min
-Shelves Temperature uniformity (°C)	±1 °C
-Shelves distance	60 mm
-Material of Shelves	SS304 (SS316 optional)
-Vials load capacity (Ø16 mm)	900 pcs (Top stopper type is 840)
-Vials load capacity (Ø22 mm)	468 pcs (Top stopper type is 440)
Condenser specification	
-Condenser Lowest Temperature (°C)	≤ -65 °C
-Condenser Temperature Cooling rate (20 to -40 °C)	≤ 30 min
-Ice capacity in 24 h (L)	2 L
-Max ice condenser (L)	2 L
-Condenser surface	-
-Condenser structure	Stainless Coils
Refrigeration System	
-Compressor	1 pc Tecumseh / Embraco
-Compressor power	1.5 HP
-Cooling	Air cooling
-Shelves Cooling	Silicon oil recycling (5cs)
-Condenser cooling	Direct cooling
Vacuum System	
-Vacuum Gauge	ZJ54T
-Optional CM gauge	CM-Pirani pressure difference to determine freeze-drying end point

-Lowest Pressure	< 1 Pa
-Vacuum control range	1 to 50 Pa
-Vacuum Control mode	Gas permeation: solenoid valve + micro valve; automatic program control
-Vacuum pump	DRV 10 (10 m³/h) with Mist Filter
Recycling/Heating & Control	
-Recycling pump	SJ stainless magnetic pump
-Heater	0.2 kW x2 (one main and one backup)
-Heater protection	Over heater protector
-Top stopper system (optional)	For loading vials
Control system	
-PLC	PLC
-Touch display	7 inch touch display
-Control	Auto / Semi Auto / Manually
Machine Equipment	
-Rated power	Required 2.6 kW (50/60 Hz, 220-240 V)
-Machine structure	Integrated (vacuum pump inside the machine)
-Size (mm)	(Approx) W880 x D700 x H1220 (vacuum pump inside)
-Weight (kg)	(Approx) 260 kg
Alt Name	Pilot Freeze Dryer



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