

Description:

FD-18S heating freeze dryer is a set of floor type equipment, which is suitable for the freeze-dry test and small production of lab samples. The freeze dryer with the programmable control and baggage shelf to heat up, it uses the PID adjustment, precisely controls temperature; the man-machine contact surface uses the large screen liquid crystal screen. By the curve and the data, it provides to the user related freezing and drying advancement and more information at the same time, also it has communication connection on the top machine.

Characteristics:

- PID microprocessor controls;
- Environment-friendly, conform to international standard (CE, ISO);
- LCD touch display include shelves temperature curve, drying curve, vacuum, and condenser temp. Curve, sample temp. Curve, run time, ambient temperature and etc.
- With pre-freezing for samples, Danfoss compressor, widely open condenser, without inner coil;
- Can stored 32 program, each program can be set up 36 segments, correct program data in computing, memorize the drying curve.
- The pre-cooling shelf can be used as draft tube to accelerate drying speed;
- Condenser and panel made of 304 stainless steel, which is corrosion-resistant and easy to clean;
- Transparent bell-cap drying kiln is safe and easy to observe;
- Stainless steel sample shelf, the space among common sample tray can be adjusted;
- Novel design, small size and simple operation;
- For water based samples, -60°C condenser is the perfect choice with effective cost. For samples containing solvents or with low eutectic points, -80 C condenser provides maximum performance.
- For labs that needs quick turn-around, electric heating defrost is optional.
- Nitrogen inflation valve is optional.



Programmable Freeze Dryer, Shelf heating

Technical indices:

Order Id		FD-18S-R	FD-18S-MR	FD-18S-TP	FD-18S-MTP
Type		Common	Multi-manifold	Top-press	multi-manifold Top-press
Condenser Temp.		<-60°C or -80°C(Optional)			
Shelf temperature		-55-60°C			
Vacuum		<10 Pa			
Freeze-dry area		0.18-0.27 M ²			
Condenser capability		6 Kg/24h			
Shelves		Φ240*4 pcs (6pcs is optional) spacing is 80 mm (6PCS is 50mm)		Φ200mm, 3layers	
Vials load (PCS)	Φ12mm	1320		990	
	Φ16mm	480		285	
	Φ22mm	360		270	
Material Capacity		2L (Bulk thickness 10mm)		1.5L (Bulk thickness 10mm)	
Power		220-240V or 110-115V/ 50Hz or 60Hz / 1400 W			
Dimension		640*540*(960+450) mm			
Remark		Model FD-18SA means Automatic type (In-situ freeze-dried)			

Vacuum Pump



Adapter



Quick-release pipe



Small-bore pipe



Oil mist collector

Programmable Freeze Dryer, Shelve heating

Model	2XZ-0.5	2XZ-1	2XZ-2C	2XZ-4C	2XZ-6C	2XZ-8C	2XZ-15C
Pumping Speed: L/S	0.5	1	2	4	6	8	15
Ult. Vacuum Pa	Without gas ballast	$\leq 6 \times 10^{-2}$					
	With gas ballast	≤ 6.5	≤ 1.33				
Speed: r/min(50HZ)	1400						
Power Required: Kw	0.18	0.25	0.37	0.55	0.75	1.1	1.5
Diameter of inlet port: mm	16	16	25	25	40	40	40
Temp. rise of pump oil: °C	$\nless 40$		$\nless 45$		$\nless 45$	$\nless 65$	$\nless 70$
Oil capacity: L	0.60	0.70	0.10	1.2	2.0	3.0	4.0
Overall Dimensions: mm	447	469	514	514	565	650	770
	168	168	168	168	200	240	240
	260	260	282	282	342	430	430
Weight: kg	16	17	20	22	40	60	75

Configuration:

Model	TP	R	MT	MTP	MR
Image					
Description	Manual Stopper	Normal	24 ports Manifold	Manifold Stopper	8 ports Manifold Flask
Freeze Dryer	•	•	•	•	•
Synthetic glass Drum	•	•		•	•
Vacuum pump	•	•	•	•	•
Stopper	•			•	
Manifold Ports			24 ports	8 ports (28/ 32mm) 1000ml, 500ml, 250ml, 100ml	

Optional:

Item No.	Name
FD1001	-80° C Condenser
FD1002	RS232 & Software
FD1003	Heating element for defrost
FD1004	Refrigerant R502, R23 and etc
FD1005	Oil mist filter
FD1007	Additional trays (6pcs)
FD1008	Removable lid for drying drum