



MULTI-MANIFOLD VACUUM FREEZE DRYER

Multi-Manifold Vacuum Freeze Dryer is a preservation technology based on the principle of sublimation. It rapidly freezes materials at low temperatures and, under a controlled vacuum, transforms frozen water molecules directly into vapor. The substance remains in a frozen state throughout the process, ensuring ice crystals are evenly distributed. This method prevents concentration due to dehydration, avoiding issues like foaming or oxidation caused by water vapor.

APPLICATIONS

Freeze-dried products retain a spongy texture, show no shrinkage, rehydrate well, and have minimal water content. When properly packaged, they can be stored and transported at room temperature for extended periods.

A freeze dryer is ideal for applications in biological research, pharmaceuticals, chemical processes, food production, and academic settings.

Freeze drying safeguards heat-sensitive substances, preserves nutritional value, prevents oxidation, and eliminates the need for additives. The resulting product is porous and sponge-like, dissolving quickly and fully when water is added, almost instantly returning to its original form.

Multi-Manifold Vacuum Freeze Dryer

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CYFD-10

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FEATURES

- **Efficient Cooling:** Rapid cooling with a uniformly maintained temperature across the inner wall of the cold trap, enhanced by professional gas diversion technology for superior water capture.
- **Eco-Friendly Refrigeration:** Features a Secop compressor and a single-unit hybrid environmentally friendly refrigeration system.
- **Pre-Freezing Capability:** Includes a cold trap sample pre-freezing function, eliminating the need for ultra-low-temperature refrigerators or liquid nitrogen.
- **User-Friendly Interface:** A 7-inch color LCD touch screen provides an intuitive human-computer interaction experience with a lock screen function. Optional remote control is available via mobile devices and computers.
- **Comprehensive Display:** Shows parameters such as cold trap temperature, vacuum level, sample temperature, and runtime. Simplified operations with misoperation permission management ensure ease of use.
- **Data Management:** Includes viewing, exporting, and deleting functions, with automatic saving of freeze-drying data. Supports USB data export.
- **Versatile Applications:** Compatible with freeze-drying in ampoules, vials, glass flasks, plasma bottles, or trays.
- **Convenient Features:** The cold trap supports independent pre-freezing of samples in the initial stage and includes a one-click defrost function.
- **Maintenance Alerts:** Built-in maintenance reminders help users schedule regular instrument upkeep.
- **Vacuum Monitoring:** A vacuum alarm promptly alerts users if the vacuum level deviates from the norm.
- **Precision Adjustment:** Equipped with a high-precision micro-adjustable vacuum valve.
- **Durable Design:** Comes with a stainless steel anti-corrosion vacuum connecting pipe and a standard KF25 vacuum quick coupling clamp.

TECHNICAL SPECIFICATIONS

Model	CYFD-10 multi-manifold type		CYFD-12 multi-manifold type		CYFD-18 multi-manifold type	
Freeze dried area	0.1 m²		0.12 m²		0.18 m²	
Cold trap temperature	-60 °C (optional -80 °C)					
Catching water volume/batch	4KG				6KG	
Standard vacuum degree	≤ 5 Pa (no-load)					
Ultimate vacuum	0.1 Pa					
Pumping speed	2L/s				4L/s	
Material tray	180mm, 4 layers in total		200mm, 4 layers in total		240mm, 4 layers in total	
Disc spacing	70mm					
Bottled loading number of vials	Vial Φ 12mm: 700 pieces v Φ 16mm: 400 pieces Vial Φ 22mm: 210 pieces		Vial Φ 12mm: 849 pieces v Φ 16mm: 470 pieces Vial Φ 22mm: 252 pieces		Vial Φ 12mm: 1270 pieces v Φ 16mm: 716 pieces Vial Φ 22mm: 379 pieces	
Eggplant shaped flask	100ml*2 150ml*2	250ml*2 500ml*2	100ml*2 150ml*2	250ml*2 500ml*2	100ml*2 150ml*2	250ml*2 500ml*2
Overall power	950W (including vacuum pump)				1100W (including vacuum pump)	
Machine size	520W * 600D * 400H mm		480W * 600D * 770H mm		560W * 560D * 980H mm	
Machine net weight	48KG		63KG		88KG	
Packaging size	740W * 810D * 850H mm		620W * 850D * 920H mm		630W * 670D * 1500H mm	
Total weight with packaging	98KG		140KG		150KG	
Power supply	AC220V 50Hz or 110V/60Hz					
Application environment	Ambient temperature ≤ 35 °C					

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Operating noise of the entire machine	≤55dB		



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