

Freeze dryer-FDS

Stoppering freeze Dryer

Stoppering type freeze dryer of OPERON is appropriate for samples which should be sealed into the Vial bottle in a vacuum after drying. It can be simple to use for the small amount of samples less than 10ml x 140pieces

Features and advantages

- It has a wide range of options for various capacities from 24L to 3L and cold trap temperature from -90°C to -55°C.
- It is compatible with any freeze dryer models for experiment of OPERON, and if the user already has OPERON products, it can be used interchangeably with an additional stoppering device.
- The lift device to lift and lower the stoppering device is used conveniently to put or take out samples. (only for 12L – option)
- After drying, it sealed the lid of glass bottle in a vacuum to prevent samples perfectly from moisture and external environment.
- Selected vacuum pump contains automatic Gas Ballasting function, so it releases gas which fills the pump to get better degree of vacuum.
- Embedded vacuum release valve automatically operates to prevent a back flow of contaminated oil and gas in the pump when blackout, cold trap temperature rise or pump operation stop by mishandling.
- It is equipped with automatic protection function for the vacuum pump which makes the vacuum pump operates automatically when the temperature of the cold trap decreases below the certain temperature which the user sets regarding the freezing point of samples and the vacuum pump automatically turns out when the temperature increases over the setting temperature.
- Transparent acryl chamber is safe for the user to see the drying process (option).



[Stoppering Device]



[Flask- 2L/3L]
(Compatible stoppering system : 5ml x 28ea)



[Flask stoppering system]
(ø22mm x 24Vials)



Freeze dryer(Stoppering type) - Lab scale

Model		FDS-12012	FDS-8612	FDS-7012	FDS-12006	FDS-8606	FDS-7006	FDS-12003	FDS-8603	FDS-7003	FDS-5503	
Main Body	Cold Trap Temp	-120°C	-90°C	-70°C	-120°C	-90°C	-70°C	-120°C	-90°C	-70°C	-55°C	
	Cold Trap Capacity(total)	12L ~ 15L			6L ~ 8L			3L ~ 4.5L				
	Dimension (mm)	Drying Chamber	Φ 300 x L330 (Transparent acrylic drying chamber -option)									
		Overall	W850 x D796 x H987				W500 x D646 x H976			W480 x D570 x H480		
	Cold Trap	Φ345 x L380					Φ315 x L300		Φ315 x L180			
	Controller	Auto/Manual start-up controller, Display cold trap temperature & vacuum pressure(2000mTorr~0mTorr) printer set										
	Stoppering System	Clear acrylic lid+3shelves+stoppering device (H:600)										
	Pump Protection System	(Automatic vacuum pump start & Stop control system)										
	Defrost	Auto					Manual					
	Electric	220V/1ph, 60hz/50hz										
Weight	230kg	175kg	175 kg	210kg	135 kg	135 kg	200kg	130kg	130kg	130kg	70 kg	

Options

- Vacuum pump (range): 100LPM ~ 1600LPM
- Manifold (D-type) 8Port ~ 12Port
- Flask
- Vacuum valve + Cap + Adaptor set
- Option for additional shelves
- Device for heating the heat plate (for FDCF, FDU, FDB, FDS)
- Chemical trap
- Oil mist trap
- Activated carbon
- TORCH
- Used as vacuum concentrator (combination type)
- Shell freezer (combination type)
- Drying chamber
- Flask stoppering system (ø 22mm x 24Vials)