

# Freeze dryer-FDU

## Upright type

### Product features and specifications

- Choosing the wide capacity range from 24L to 3L available
- Choosing the wide temperature range from -90°C to -55°C available
- Powerful freezing performance to start drying within 15minutes ~ 30minutes
- Compact and movable upright type freeze dryer
- Installing manifold type or drying chamber available
- Strong structure frame and impact resistant powder coating finishing
- Filter cover for easy cleaning
- Upright type structure
- Temperature measuring sensor: platinum PT 100Ω(Class A 0.15 grade)
- Equipped with the valve for auto vacuum release to prevent a back flow of contaminated oil or gas



### Control System

- Microprocessor control system
- One touch type automatic operation of freezing & vacuum function
- Buttons for choosing automatic & manual function
- Functions for automatic operating start and automatic setting temperature for stop to prevent the vacuum pump

[Optional Rotor when ordering the model equipped with the concentrator]



### Freeze dryer(Upright type) - Lab scale

Model	Upright-type							
	FDU-8624	FDU-7024	FDU-8612	FDU-7012	FDU-8606	FDU-7006	FDU-8603	FDU-7003
Cold Trap Temp	-90°C	-70°C	-90°C	-70°C	-90°C	-70°C	-90°C	-70°C
Capacity(total)	24L ~ 28L		12L ~ 15L		6L ~ 8L		3L ~ 4.5L	
Dimension	W890 x D846 x H1037		W850 x D796 x H987		W500 x D646 x H976			
Trap Size	Φ345 x L580		Φ 345 x L380		Φ 315 x L300		Φ 315 x L180	
Controller	Auto/Manual start-up controller, Display cold trap, Temperature & vacuum pressure(2000mTorr ~ 0mTorr), printer set							
Pump Protection System	(Automatic vacuum pump start & Stop controller system)							
Defrost	Auto				Manual			
Electric	Capacity necessary for installment AC220V 1ph (50/60Hz)							
Weight	180kg		155kg		115kg		110kg	

### Options

1. Vacuum pump (100LPM ~ 200LPM)
2. Drying chamber (Large)
3. Mini tray or three stage shelf
4. T-TYPE manifold
5. D-TYPE manifold
6. Vacuum valve + Cap + Adaptor
7. Flask (1000ml ~ 150ml)
8. Vacuum oil
9. Vacuum grease
10. Oil mist trap
11. Chemical trap
12. Rotor for vacuum concentration (1.5ml X 210/ 1.5ml X 72/ 15ml X 12/ 50ml X 6/ swing rotor)  
(Concentrator equipped model is available for the large upper plate with 12L capacity)
13. Flask stoppering system (ø22mm x 24Vials)