

## *FD-30L Bulk Production Freeze Dryer (lyophilizer)*



FD-30L is a commercial and industrial Freeze Dryer for processing material bulk production, meeting FDA and cGMP requirements. It can be used for bio-pharmaceutical, biological, chemical, solvent, tissue bank design and production under GMP. Available shelf area 29.8sq.m, 11 shelves, 99 trays and ice capacity 400L in 24hrs, Final vacuum <math><1\text{Pa}</math>.

### **Technical Features:**

1. Modular system with integrated structure, plug electric and water could work.
2. AISI304 as main material, drying chamber, shelf and material tray, meet FDA standard, AISI316L optional for rigorous requirement.
3. Double stage Piston compressor system could cool ice condenser to  $-80^{\circ}\text{C}$  and shelves to  $-50^{\circ}\text{C}$ .
4. Exclusive shelves inner structure, a higher energy efficient and temperature balance system, During sublimation period, shelf temperature could be programmed from  $-50^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$  with accuracy of  $\pm 1^{\circ}\text{C}$ .
5. Leybold or Edwards vacuum system, final vacuum  $<1\text{Pa}$ .
6. Pneumatic system for valves quick open/close.
7. Lyophilization machine Vapor guidance technology and ice condenser design, strong guarantee ice condenser icing efficient and capacity.
8. 30% power saving technology.
9. LYO-CONTROL combine PLC+Touch Screen+PC control system.
10. Top stoppering, CIP, SIP optional.

**Technical Parameters:**

<b>Models</b>	<b>FD-30L (TP, CIP, SIP optional)</b>
Useable trays area	29.8sq.m
Ice capacity	400kgs
Shelves number	11+1
Shelf size	1500*1800mm
Shelf spacing	80mm
Material tray size	500*600*20mm
Material trays	99pcs
Shelf temperature	-50°C to +70°C
Ice Condenser temperature	-80°C
Vacuum degree	<1Pa
Power install	90kwh
Install size	7000*2500*3000mm
Vials capacity	φ22 >65000pcs