



Small Scale Production Freeze Dryer

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Small Scale Production Freeze Dryer LSFD-A1 Series

The vacuum freeze dryers are suitable for small scale production & pilot studies in research & development. These freeze dryers are equipped with organic glass observation window to observe the whole process. With 15 kg per 24 hours condensing rate they are used to freeze dry high potency products that require containment in addition to those for biological, biotechnology and biopharmaceutical industry. In these freeze dryers the pre-freezing & drying process are completed on shelf with temperature accuracy of $\pm 1^{\circ}\text{C}$. Equipped with graphic LCD display with a clear layout to observe the drying curves.

Features

- ❄ Organic glass observation window to observe the whole process
 - ❄ PLC controlled, freeze-drying curve is programmable
 - ❄ 32 groups program can be stored, each program can be set up 36 segments
 - ❄ Pre-freezing and drying process are completed on shelf
 - ❄ The temperature accuracy of shelf is $\pm 1^{\circ}\text{C}$
 - ❄ Silicon oil fills hollow shelves, with most uniform shelf temperature, consistent and repeatable drying
 - ❄ Graphic LCD display with a clear layout showing the drying curves
 - ❄ Stainless steel construction of condenser, operation panel and shelves
 - ❄ Features nitrogen valve and eutectic test device (optional)
 - ❄ USB-port for optional monitoring of freeze drying parameters
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Applications

Small scale production freeze dryers are used to freeze solid or liquid in vials, ampoules or syringes, also for freeze drying high value products, such as vaccines, antibiotics, hormones, biologicals, cytostatic, active ingredients, reactive.

Pilot Freeze Dryer

Specifications

| Model No | LSFD-A10 | LSFD-A11 |
|-----------------------------------|--|---------------------|
| Type | Standard type | Top press type |
| Condenser Capacity | 15Kg/24h | |
| Condenser Temperature | Min. $\leq -70^{\circ}\text{C}$ | |
| Vacuum Degree | $<10\text{Pa}$ | |
| Freeze-Drying Area | 1.0m ² | 1.152m ² |
| Bulk Capacity | 10L/ 10mm thickness | 11L, 10mm thickness |
| Dimension | 360x480x15mm | 480x600x20mm |
| Shelves | 6+1, 70mm spacing | 4+1, 100mm spacing |
| Temperature of Shelf | $-50\sim+70^{\circ}\text{C}$ | |
| Voltage Supply | 220V, 50Hz | |
| Cooling | Air, draughty, ambient temperature $\leq 25^{\circ}\text{C}$ | |
| Heating | Silicon oil heating | Silicon oil heating |
| Defrosting | Electric defrosting | |
| Dimensions of base unit | 1020x860x1620mm | 1330x1310x2200mm |
| Vials Capacity $\Phi 12\text{mm}$ | 7920 | 8400 |
| Vials Capacity $\Phi 16\text{mm}$ | 4092 | 4706 |
| Vials Capacity $\Phi 22\text{mm}$ | 2112 | 2428 |
| Weight | 500Kg | 950Kg |
| Power supply | 6500W | 7000W |



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