

Lyophilizer Freeze dryer

Main Application

- Drying samples such as protein
- Drying of food sample for analysis
- For other applications which requires lyophilization

Features

Available of nitrogen gas purge and output signal of recorder for vacuum

When vacuum is released, it can make it filled up with N₂ (nitrogen) gas etc. instead of air (nozzle ϕ 6mm).When connecting cylinder, it becomes entry speed of about 1 L/min and below 0.1MPa pressure.

Designed to minimize influence by sample contamination.

A trap chamber or pipes are all made of stainless and connected each other with vacuum hoses free from dusts.

Perfect cold trapping of sublimated moisture.

Direct cooling system which vapor is coagulated and collected on the coil surface in chamber directly which means cooling temperature almost equals to the trapping temperature.

Quick thawing of trapped moisture by hot gas

You can thaw ice in short time by pressing "defrost button" with **hot gas** flowing around the coil. It can thaw ice the portion of dehumidified amount for about 30 minutes.

Refrigeration system deigned

System Refrigerant CFC-Free

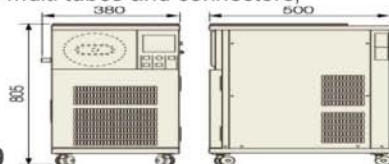
Specification

Model	SESS-250-40
Cooling temperature	-40°C (with no load) (*)
Trap capacity	Approx. 500ml/ time
Chamber volume	Approx. 4L (inner dia. ϕ 160 x 205mm)
Cooler	250W
Vacuum pump	Option (recommend oil vacuum pump with reached vacuum degree below 50Pa(0.007251887 PSI) and displacement volume more than 100L/ min)
Vacuum hose connection diameter	Outer dia. ϕ 22mm (3/8 screw inside, convert to different diameter is available)
Vacuum release	Attached solenoid valve for vacuum release (N ₂ gas charge combination, connection of hose Pisco ϕ 6mm)
Safety device / function	Leakage breaker (+over current)
Dimensions	375 x 420 x 525Hmm
Power Supply	AC230V 6A (main body) AC230V 15A (max. used both pump and chamber)
Product Freezing in Condenser	via 2-position

Option - Vacuum pump make Hindhighvac

Option - Vacuum gauge or Vacuum digital Indication and Microprocessor based Controller with RTD Sensor.

Optional parts-Chambers, multi tubes and connectors,



Dimensions for SESS 250

SRI EASWARI SCIENTIFIC SOLUTION

Old No- 499, New no: 2/20, Plot No - 110A, Srinivasanagar, 2nd cross street, Srinivasapuram, Baraniputhure, Iyyapanthangal,
Near: srinivasa welding shop, Chennai-600 056 INDIA,

SESS 250 -70 ° C Freeze-drying SPECIFICATIONS

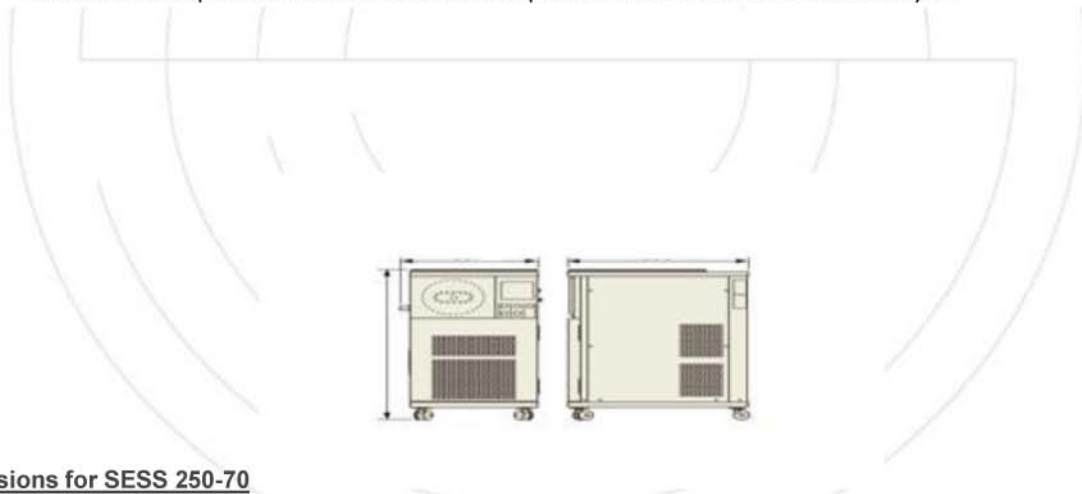
Freeze-drying (also known as Lyophilizer) is a dehydration process typically used to preserve perishable material or make the material more convenient for transport. Freeze-drying works by freezing the material and then reducing the surrounding pressure to allow the frozen water in the material to sublime directly from the solid phase to the gas phase. Freeze Dryers with the Cascade Refrigeration systems reach -70°C and are ideal for freeze drying samples with substances having a minimum melting point

Features:

- Available in two models -40 and -70°C
- Safety cut-off for vacuum pump
- Easy cleanable trap and drying chamber
- Well-arranged ports for convenient placement of flask
- Efficient dual stage rotary vane vacuum pump
- Castor wheels for easy movement

Application:

1. Ideal for Laboratory research and development, small production freeze drying of food, blood plasma storage, pharmaceuticals and tissue culture.
2. Process development with intent to move process to clinical size freeze dryer.



Dimensions for SESS 250-70

SRI EASWARI SCIENTIFIC SOLUTION

Old No- 499, New no: 2/20, Plot No - 110A, Srinivasanagar, 2nd cross street, Srinivasapuram, Baraniputhure, Iyyapanthangal,
Near: srinivasa welding shop, Chennai-600 056 INDIA,

SESS 250 -70 ° C Freeze-drying SPECIFICATIONS

Temperature Range	Available in -70°C				
Display Resolution	0.1°C				
Temperature Controller	Microprocessor based Controller with RTD Sensor(PT-100)				
Refrigeration System	Compressor	Hermetically Sealed Compressor (Cascade system for -70°C)			
	Condenser	Fin & Tube type Air-Cooled Condenser			
	Refrigerant	R404a & R 23 (only for -70°C range)			
Insulation	High Density Polyurethane Insulation (PUF)				
Vacuum Indication	Analog				
Vacuum Level	Up to 0.001mbar				
Vacuum Pump	Hindhivac make Vacuum Pump				
Vacuum Pump Capacity	2 stage direct drive, 100 ltrs/min				
Ports	4 Ports				
	Cold trap Chamber	Length	350mm	Diameter	150mm
	Custom Built sizes are also available on request				
Cabinet Material	Exterior	CRCA with Powder Coated			
	Top Cover	Duly polished 304 grade Stainless Steel			
	Cold Trap Chamber	Duly polished 304 grade Stainless Steel			
	Cold Trap Chamber Lid	Acrylic			
Manual On/Off Controls	Refrigeration and Vacuum				
Castors	Friction free Heavy Duty Castor Wheels with Lock				
Discharging facility for condensed water	Presence of Drain				
Power Source	230V, 50Hz single phase				
Accessories	Pre freezing bath -70°C				
	One set of 250ml conical flask, cork and glass adaptor				
	Manifold with quick seat valve				

Option - Vacuum pump make Hindhivac

Option - Vacuum gauge or Vacuum digital Indication and Microprocessor based Controller with RTD Sensor.

Optional parts-Chambers, multi tubes and connectors,

SRI EASWARI SCIENTIFIC SOLUTION

Old No- 499, New no: 2/20, Plot No - 110A, Srinivasanagar, 2nd cross street, Srinivasapuram, Baraniputhure, Iyyapanthangal,
Near: srinivasa welding shop, Chennai-600 056 INDIA,