

# **FREEZE DRYERS**



ABOUT US: ASP CLIMATE SOLUTIONS, OPERATING AT AHMADABAD IS ONE OF THE LEADING MANUFACTURER AND SERVICE PROVIDERS OF FREEZE DRYERS WITH 10+ YEARS OF TECHNICAL EXPERTISE PROVIDING ADVANCED SOLUTIONS TO FREEZE DRYING NEEDS THROUGH OUR PRODUCTS.

## **TECHNICAL SPECIFICATIONS**

DESCRIPTION	FD6L	FD9L	FD12L	FD25L
Dimensions mm (HWD)	710X610X735	710X610X735	990X610X735	990X610X735
Condenser Volume in L	12	20	20	40
Ice Condensing capacity (24hrs) in L	6	9	12	25
Maximum Condenser Temp. (°C)	-82	-82	-82	-82
Ultimate Vacuum (mTorr)	20	20	20	20
Power Supply	230V AC,50HZ	230V AC,50HZ	230V AC,50HZ	230V AC,50HZ
Power consumption	1200W	1800W	2300W	2700W
Refrigeration Type	Cascade	Cascade	Cascade	Cascade
Refrigerant Type	HFC	HFC	HFC	HFC
Condenser Material	SS316	SS316	SS316	SS316
Cabinet Frame Material	Powder Coated	Powder Coated	Powder Coated	Powder Coated
Manifold Material	SS316	SS316	SS316	SS316
Manifold Vacuum Port	12	12	12/24	12/24
Display Type	4" Digital Touch	4" Digital Touch	7" Digital Touch	7" Digital Touch
Controller Type	PLC Based	PLC Based	PLC Based	PLC Based
Temperature Indications	Digital	Digital	Digital	Digital
Vacuum Indications	Digital	Digital	Digital	Digital
Defrost Type	Automatic	Automatic	Automatic	Automatic
Drain Type	Manual	Manual	Manual	Manual
ADDITIONAL FEATURES				
Inbuilt Data Logging	USB	USB	USB	USB
Data Trends Visibility on HMI	Available	Available	Available	Available
Vacuum Level Control Mode	Available	Available	Available	Available
Vacuum Release Type	Automatic/Manual	Automatic/Manual	Automatic/Manual	Automatic/Manual
Operational Cycles	Manual/Auto	Manual/Auto	Manual/Auto	Manual/Auto
Ambient Temperature Display	Available	Available	Available	Available
Alarms	Visual/Acoustic	Visual/Acoustic	Visual/Acoustic	Visual/Acoustic

NOTE: Higher ice condensing capacities Freeze Dryers can also be available based on request.

#### SALIENT FEATURES OF FREEZE DRYERS



## **HMI Touchscreen Display**

HMI DISPLAY 4" & 7" for User Friendly operations with auto/manual operation cycle feature.



#### High performance Oil Vacuum Pump

Leybold Oil Vaccum Pump with Oil Mist Eliminator for producing ultimate Vacuum necessary for the Freeze Drying. The Pump guarantees high performance with Durability and Reliability.

High Performance Cascade Refrigeration Systems with HFC Refrigerants provides cooled Condenser having ultra Low Temperatures of below -80°C to trap the Sublimed water vapors during Freeze Drying.





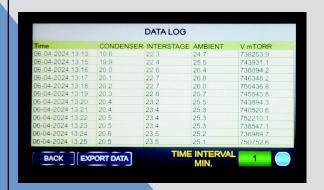
#### **Ice Condensing Visibility**

Acrylic Plate provides the User/operator, a easily visibility of ice formation on Condenser Coil during Freeze Drying and ice melting during defrosting.

#### **Vacuum Control-Advanced**

Vacuum Level Control provides the user/operator to set any Vacuum (50m Torr - 900m Torr) to be maintained during the freeze drying cycle as per their requirements.





## **Cycle Data Export**

Data Export Option via USB Drive corresponding to Date and Time, for easy monitoring of the System Temperatures and Vacuum during each cycle.

## **Auto Defrost Technology**

Auto Defrost: To melt down the ice condensed automatically within minutes, makes the User to prepare for loading the next batch for Freeze Drying Immediately.



## FREEZE DRYER ACCESSORIES



## **SS316 Tree Manifold Ports**

SS 316 Tree Manifold for Connecting Flasks
- 12 Port & 24 Ports





## Glass Flasks & Quick Seal Valves

Glass Flasks for Freeze Drying Samples - 75mL to 1200mL range

Quickseal Valve Adapters for connecting Flasks without disturbing the Vacuum inside the Chamber.



#### Kathwada GIDC

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## FREEZE DRYER SERVICES

- 1. Installation and Commissioning of Freeze Dryers of Lab Scale to Production Scale of any make.
- 2. Reinstallation of Freeze Dryers of Lab Scale to Pilot Scale of any make.
- 3. Annual Maintenance Contracts.
- 4. Comprehensive Maintenance Contracts.
- 5. Spares support for any make Freeze Dryers.
- 6. Calibration of Thermocouples and Vacuum PRESSURE Gauges.





**Vacuum Solenoid Valve** 



**Fluid Pump** 



Temprite Oil Seperator



MKS Pirani Vacuum Gauge



Sporlan Solenoid Valve



**Refrigeration Compressors** 



**Solid State Relay** 



Vacuum Oil



Silicone Heat Transfer Fluid



Vacuum Gauge



Refrigerants R508B, R170, R89, R245FA, R449A, R1150

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