



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

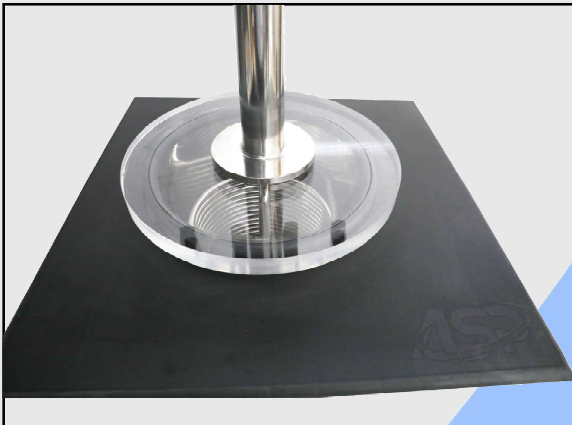
HMI DISPLAY 4" & 7" for User Friendly operations with auto/manual operation cycle feature.

High performance Oil Vacuum Pump



Leybold Oil Vacuum 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.

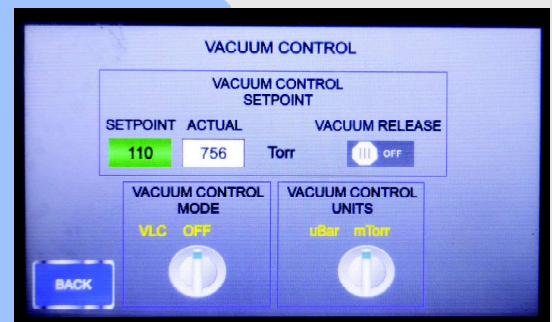


Ice Condensing Visibility

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.



| DATA LOG | | | | |
|------------------|-----------|------------|---------|----------|
| Time | CONDENSER | INTERSTAGE | AMBIENT | V.mTORR |
| 06-04-2024 13.13 | 19.6 | 22.3 | 24.7 | 738253.9 |
| 06-04-2024 13.15 | 19.9 | 22.4 | 25.5 | 743931.1 |
| 06-04-2024 13.16 | 20.0 | 22.6 | 26.4 | 738094.2 |
| 06-04-2024 13.17 | 20.1 | 22.7 | 26.8 | 746348.2 |
| 06-04-2024 13.18 | 20.2 | 22.7 | 26.0 | 750436.8 |
| 06-04-2024 13.19 | 20.3 | 22.8 | 25.7 | 745543.8 |
| 06-04-2024 13.20 | 20.4 | 23.2 | 25.5 | 743894.3 |
| 06-04-2024 13.21 | 20.4 | 23.4 | 25.3 | 740520.6 |
| 06-04-2024 13.22 | 20.5 | 23.4 | 25.3 | 752210.1 |
| 06-04-2024 13.23 | 20.5 | 23.4 | 25.3 | 738547.1 |
| 06-04-2024 13.24 | 20.6 | 23.5 | 25.2 | 736989.7 |
| 06-04-2024 13.25 | 20.5 | 23.5 | 25.1 | 750752.6 |

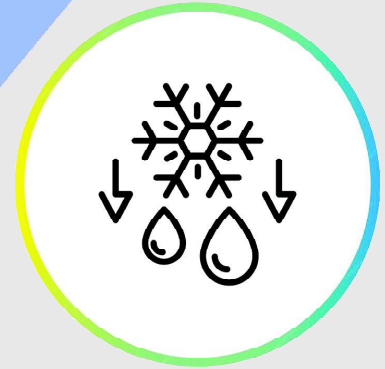
TIME INTERVAL MIN.

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.



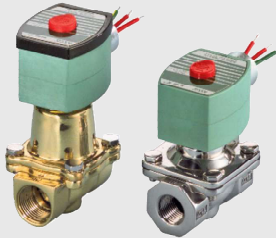
Kathwada GIDC

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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 Separator



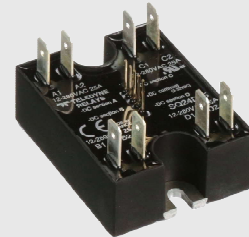
MKS Pirani Vacuum Gauge



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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