

Advance Biotech Solutions India Pvt. Ltd.

(Advance Technologies, Effective Solutions)



(An ISO 9001:2015 Certified Company)



POLE ★ ADVANCE

ULT FREEZER (-80°) SINGLE DOOR

ABSIPL IS A MARKET LEADER IN REFRIGERATION TECHNOLOGY. ABSIPL REPRESENTING MARKET WITH WIDEST RANGE OF DEEP FREEZER BY THEIR OEM MANUFACTURED REFRIGERATION SYSTEM AND EVAPORATORS. THIS PRODUCT IS DESIGNED TO STORE VACCINES, BLOOD PLASMA, BIOLOGICAL MATERIALS. APPLICATIONS COULD BE FOUND IN THE ELECTRONIC AND CHEMICAL LABORATORIES EPIDEMIC PREVENTION, HOSPITALS, ANIMAL HUSBANDRY BLOOD BANKS AND RESEARCH INSTITUTES. IT CAN BE USE FOR PRODUCTS WHICH REQUIRE STRICT STORAGE CONDITIONS SUCH AS VIRUSES, PATHOGENS, RED BLOOD CELLS, WHITE BLOOD CELLS, SKIN, BONES, BACTERIA, SEMEN, BIOLOGICAL PRODUCTS, OCEAN PRODUCTS, ELECTRONIC DEVICES AND SPECIAL MATERIALS. SUITABLE FOR LONG TERMS STORAGE, MEETING THE COLD STORAGE REQUIREMENTS FOUND IN HOSPITALS, DISEASE CONTROL AND PREVENTION CENTERS, SCIENTIFIC RESEARCH INSTITUTIONS BIOMEDICAL ENGINEERING INSTITUTE, AGRICULTURE/ FISHERY COMPANIES AS WELL AS THE ELECTRONICS AND CHEMICAL INDUSTRY.



Note: Product appearance and specifications are subject to change without notice



Field Proven reliability

- Single door design more convenient to be used by different users.
- Unique insulated inner door design for separate storage compartments to minimize frost buildup inside the chamber.
- Vacuum Relief port for easier and frequent door opening.
- Specialized control system design for a well-balanced operation of cascade refrigeration system.
- Uses CFC/HCFC Free Hydro Carbon (Natural) Refrigerant for faster temperature recovery.
- Unique technology 2 cascade system if one compressor failed then other compressor maintain -80°C for infinite period.

Low noise level

- Specialized refrigeration system design using whisper quiet fan and compressors.
- Freezer chassis designed to absorb vibration and sound.
- Noise level less than 49 – 51 dBa.

Safety

- Malfunction alarms including high and low temperature, Power Failure, Sensor errors, Clean-filter Hot Condenser.
- Capable of producing two types of alarm outputs: audible buzzer and visible flashing light multiple built-in system protection code for controls, user settable delay to start voltage compensation system and protection against extreme high voltages.
- Door ajar feature standard on all single door upright models.

Energy saving

- Unique door seal design for the minimum loss of cold temperature during a door opening.
- Polyurethane insulation panels to minimize cabinet heat gain and to improve temperature stability.
- Patented cabinet insulation system design for optimal performance of cold storage temperature and minimal frost build up.
- Unique design of independent insulated inner door systems for independent access of storage space to provide the maximum protection of stored samples.
- Power management system with low voltage surge protection and buck/boost.
- Heat Output (220-240V) 300-500 W.

Installation & Application

- Wide range operating voltage system from 185V to 260 V designed to allow units installed in areas with poor voltage condition.
- Suitable for 10°C to 32°C ambient temperature can also perform in high ambient 40-45°C .
- Input voltage and ambient temperature shown simultaneously for ease of monitoring environmental conditions
- Robust door latch designed for secure door closing.
- Compact casters for ease of maneuvering.

Key design features

- Microprocessor controlled system designed for controllable range of -50°C to -86°C /-40°C to -86°C settable in 1°C increment.
- Temperature Uniformity $\pm 2^{\circ}\text{C}$
- Energy consumption 4.5 KW/24 hours up to 9 KW/24 hours depending on ambient operating condition and size of ULT Freezer.
- Uses CFC/ HCFC Free Natural Hydrocarbon/ HC Refrigerant for optimal cooling with less energy consumption.
- Energy efficient and sealed cascade refrigeration system with pull down time of less than 3.5 hrs.
- Large LED/LCD display for cabinet temperature, set temperature.
- Settable high temperature and low temperature alarms
- Automatic clean-filter alarm and sensor error alert
- Adjustable storage shelf height



4/5 Individual Inner Doors

- 4/5 individual inner doors can be opened independently to minimize frost buildup inside the chamber.
- Unique door seal design for the minimum loss of cold temperature during a door opening.
- Compatibility with existing racking system from competitors.
- Stainless steel handle to ensure proper strength for door latching.



Excellent Doors Seals

- Total of five gaskets to safeguard the freezer temperature, including four seals for the exterior door, one for each inner door



Pressure Equalization Port/ Vacuum Relief Port

- Allows frequent door opening of ULT Freezer.



Circular- chart Recorder (Optional)

- Front-mounted.
- For independent temperature monitoring



Two port holes for ease of temperature monitoring

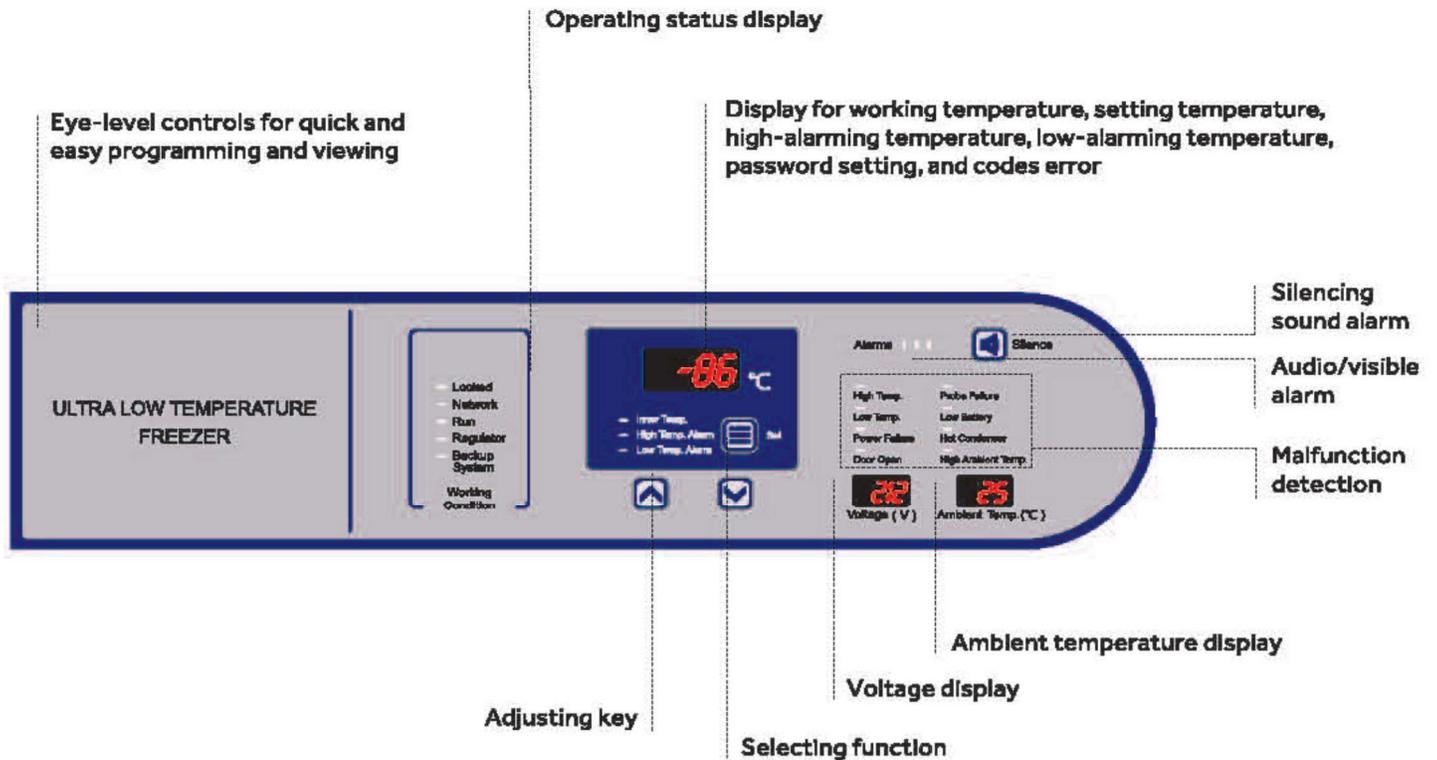


German EBM condenser fan, intelligent on and off power saving system



EBRACO compressor of 1 H.P each under cascade cooling system as standard and optionally available frequency controlled, variable frequency drive variable speed inverter compressor.

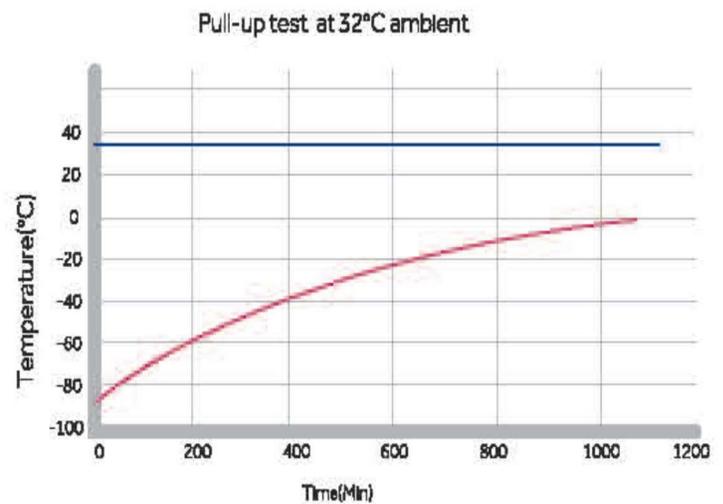
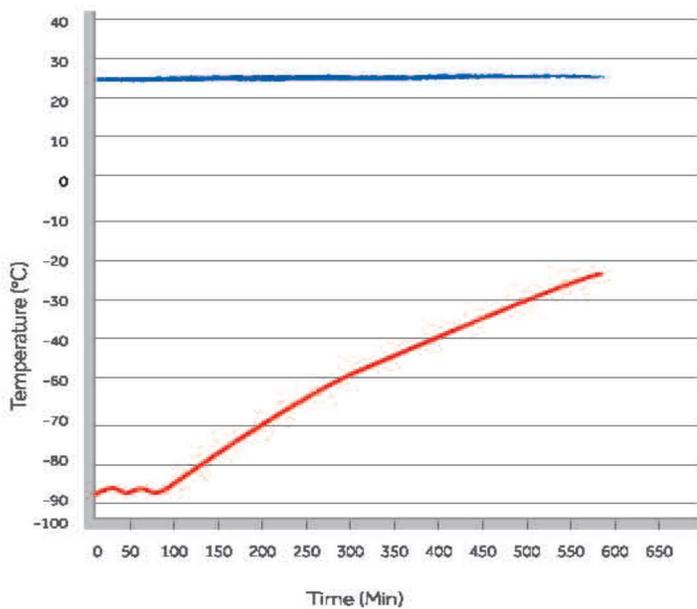
FEATURES AND BENEFITS



Alarm	Alarm Triggering Condition
High Temperature	Temperature reaches the warm alarm limit.
Low Temperature	Temperature reaches the low alarm limit.
Power Failure	Equipment loses power
Door Open	Door open period exceeds 5 mins
Probe Failure	<ul style="list-style-type: none"> ▶ Main cabinet temperature control sensor fails ▶ Condenser sensor fails ▶ Ambient sensor fails ▶ Heat exchanger sensor fails ▶ Heat exchanger temperature falls
Low Battery	Battery capacity runs low or battery switch is not turned on.
Hot Condenser	<ul style="list-style-type: none"> ▶ Condensers filter element is clogged ▶ Ambient temperature is too high
High Ambient Temperature	Ambient temperature exceeds 32°C

Latest Insulation Technology

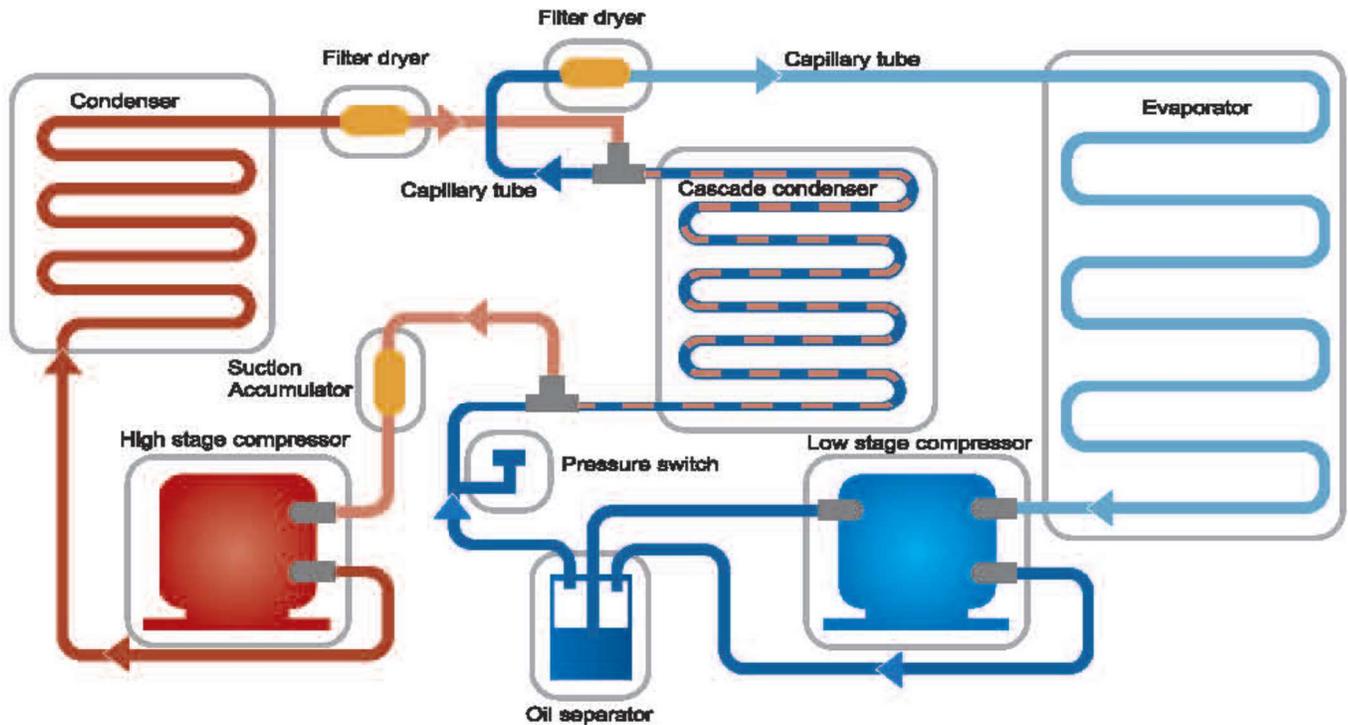
- Made up of 150 mm compressed polyurethane foam (PUF) Insulation/ VIP Vacuum insulation Panel.
- Thick (High density) Insulation minimize heat load of the cabinet.
- Provides stable storage temperature.
- Energy Efficient due to blockage of convective heat transfer.
- Saves valuable floor space in laboratory due to slim design.
- Offers large storage space.
- Pull up / Warm-up time from -80°C to -50°C more than 24-30 hours at 25°C ambient temperature.
- Pull down time from ambient to -86°C is less than 3.5 hours at 25°C ambient temperature.



Optional Accessories

- Touch Panel Control
- Stainless Steel Fixed type rack.
- Stainless Steel Drawer Type rack
- CO₂ Emergency cooling back-up system
- USB Port to download data
- Cardboard Boxes with divider.
- Inkless Circular 7-days Chart Recorder
- Wireless Data monitoring and control system for remote monitoring and control
- Wireless data logging with 21CFR
- Inventory Management System
- RFID Access
- Safety Gloves, Goggles.
- Servo/ Automatic Stabilizer.

Heat exchange circulation system of ultra low temperature freezer



	<p>▼ Filter Filter for refrigerant to protect system from the water and other entering</p>
	<p>▼ Capillary tube for high stage High temperature refrigerants flow into the evaporator from the Capillary tube</p>
	<p>▼ Capillary tube for low stage Low temperature refrigerants flow into the evaporator from the Capillary tube</p>
	<p>▼ High stage condenser Extra-large air cooled condenser dissipates product heat content efficiently.</p>
	<p>▼ Low stage Evaporator The close contact design between the evaporating tube and the inner cabinet increases the heat conducting efficiency</p>
	<p>▼ Ultra low noise compressor Compressor provides reliable performance with ultra low noise Specially designed low stage evaporator yields excellent temperature uniformity and recovery after loading and door opening. Both high and low stage compressors are industrial grade hermetically sealed compressor designed for low temperature application. Sound level is extremely low.</p>
	<p>▼ Heat exchanger system Heat exchanger between the high and low temperature stage in the system</p>
	<p>▼ Temprite oil separator Temprite oil separator can effectively separate oil and water so as to improve the refrigeration performance</p>

Specification of Touch Screen Model

Model	PSA-86SDU350	PSA-86SDU425	PSA-86SDU500	PSA-86SDU600	PSA-86SDU700
Cabinet Type	Vertical	Vertical	Vertical	Vertical	Vertical
Climate Class	N	N	N	N	N
Cooling Type	Direct Cooling				
Exterior / Interior	Powder Coated / Stainless Steel 304				
SS Shelves / Inner Door	3-4-5				
Defrost Mode	Manual				
Refrigerant	HC (R290/ R170)				
Noise (dB)	50				
Cooling performance	-80 (°C)				
Temperature Uniformity	±2° (°C)				
Temperature Range (°C)	-40~-86				
Controller	Microprocessor				
Display	Touch Screen				
Power Supply (V/ Hz)	220~230/50				
Power (W)	700	800	800	900	950
Electrical Current (A)	6	7	7	7	7.5
Power Consumption	6.5 kw/day	7.5 kw/day	8 kw/day	8.5 kw/day	8.5 kw/day
Average Heat Output	1071 BTU/h	1152 BTU/h	1152 BTU/h	1260 BTU/h	1260 BTU/h
Capacity (Net/ Gross) L	350/365	425/450	500/525	600/625	700/725
Net/ Gross Weight (approx.) kg	170/190	200/215	260/280	290/310	330/350
Interior Dimension (W x D x H) in mm	620*515*920	460*720* 1310	460*720* 1310	590*720* 1310	740*720* 1310
Exterior Dimension (W x D x H) in Inches	955*875* 1620	790*1100* 1950	790*1100* 1950	920*1100* 1950	1070*1100* *1950
ALARM CONDITIONS					
High/ Low Temperature	Yes	Yes	Yes	Yes	Yes
Hot Condenser	Yes	Yes	Yes	Yes	Yes
Power Failure	Yes	Yes	Yes	Yes	Yes
High/Low Voltage	Yes	Yes	Yes	Yes	Yes
Sensor Error	Yes	Yes	Yes	Yes	Yes
Low Battery	Yes	Yes	Yes	Yes	Yes
High/ Ambient Temp.	Yes	Yes	Yes	Yes	Yes
Door open	Yes	Yes	Yes	Yes	Yes
RS485 Port	Yes	Yes	Yes	Yes	Yes
Test Hole	Available	Available	Available	Available	Available
USB Data logging Port	Available	Available	Available	Available	Available
Certification	CE/FDA/RoHS	CE/FDA/RoHS	CE/FDA/RoHS	CE/FDA/RoHS	CE/FDA/RoHS

Specification of Touch Screen Model

Model	PSA-86SDU775	PSA-86SDU825	PSA-86SDU950	PSA-86SDU1100
Cabinet Type	Vertical	Vertical	Vertical	Vertical
Climate Class	N	N	N	N
Cooling Type	Direct Cooling			
Exterior / Interior	Powder Coated / Stainless Steel 304			
SS Shelves / Inner Door	3-4-5			
Defrost Mode	Manual			
Refrigerant	HC (R290/ R170)			
Noise (dB)	50			
Cooling performance	-80 (°C)			
Temperature Uniformity	±2° (°C)			
Temperature Range (°C)	-40~-86			
Controller	Microprocessor			
Display	Touch Screen			
Power Supply (V/ Hz)	220~230/50			
Power (W)	1000	1050	1100	1100
Electrical Current (A)	8	8	8	8.5
Power Consumption	8.5 kw/day	8.5 kw/day	9 kw/day	9.5 kw/day
Average Heat Output	1280 BTU/h	1280 BTU/h	1280 BTU/h	1310 BTU/h
Capacity (Net/ Gross) L	775/810	825/860	950/1000	1100/1150
Net/ Gross Weight (approx.) kg	350/360	370/380	390/410	420/450
Interior Dimension (W x D x H) in mm	1020*825*1258	1050*900*1350	1070*900*1350	1100*950*1350
Exterior Dimension (W x D x H) in Inches	1360*1070*1960	1360*1170*1960	1360*1170*1960	1360*1200*1960
ALARM CONDITIONS				
High/ Low Temperature	Yes	Yes	Yes	Yes
Hot Condenser	Yes	Yes	Yes	Yes
Power Failure	Yes	Yes	Yes	Yes
High/Low Voltage	Yes	Yes	Yes	Yes
Sensor Error	Yes	Yes	Yes	Yes
Low Battery	Yes	Yes	Yes	Yes
High/ Ambient Temp.	Yes	Yes	Yes	Yes
Door open	Yes	Yes	Yes	Yes
RS485 Port	Yes	Yes	Yes	Yes
Test Hole	Available	Available	Available	Available
USB Data logging Port	Available	Available	Available	Available
Certification	CE/FDA/RoHS	CE/FDA/RoHS	CE/FDA	CE

Specification of 2 Independent Cascade Model

Model	PSA-86SDU575	PSA-86SDU775	PSA-86DDU950
Cabinet Type	Vertical	Vertical	Vertical
Climate Class	N	N	N
Cooling Type	Direct Cooling		
Exterior / Interior	Powder Coated / Stainless Steel 304		
SS Shelves / Inner Door	3-4		3-2
Defrost Mode	Manual		
Refrigerant	HC (R290/ R170)		
Noise (dB)	46		
Cooling performance	-80 (°C)		
Temperature Uniformity	±2° (°C)		
Temperature Range (°C)	-40~-86		
Controller	Microprocessor		
Display	10-inch Touch Screen LCD		
Power Supply (V/ Hz)	220~230/50		
Power (W)	1200	1200	1300
Electrical Current (A)	7	7	8
Power Consumption	11 kw/day	13 kw/day	15 kw/day
Average Heat Output	1071 BTU/h	1152 BTU/h	1152 BTU/h
Capacity (Net/ Gross) L	575/600	775/800	950/960
Net/ Gross Weight (approx.) kg	270/320	320/360	350/380
Interior Dimension (W x D x H) in mm	920*1100*1350	1070*1100*1350	1100*1170*1350
Exterior Dimension (W x D x H) in mm	1005*1244*1960	1155*1244*1960	1400*1250*1960
ALARM CONDITIONS			
High/ Low Temperature	Yes	Yes	Yes
Hot Condenser	Yes	Yes	Yes
Power Failure	Yes	Yes	Yes
High/Low Voltage	Yes	Yes	Yes
Sensor Error	Yes	Yes	Yes
Low Battery	Yes	Yes	Yes
High/ Ambient Temp.	Yes	Yes	Yes
Door open	Yes	Yes	Yes
Test Hole	Available	Available	Available
USB Data logging Port	Available	Available	Available
Certification	CE/FDA/RoHS	CE/FDA/RoHS	CE/FDA/RoHS



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