



# Advance Biotech Solutions India Pvt. Ltd.

(Advance Technologies, Effective Solutions)



(An ISO 9001:2015 Certified Company)



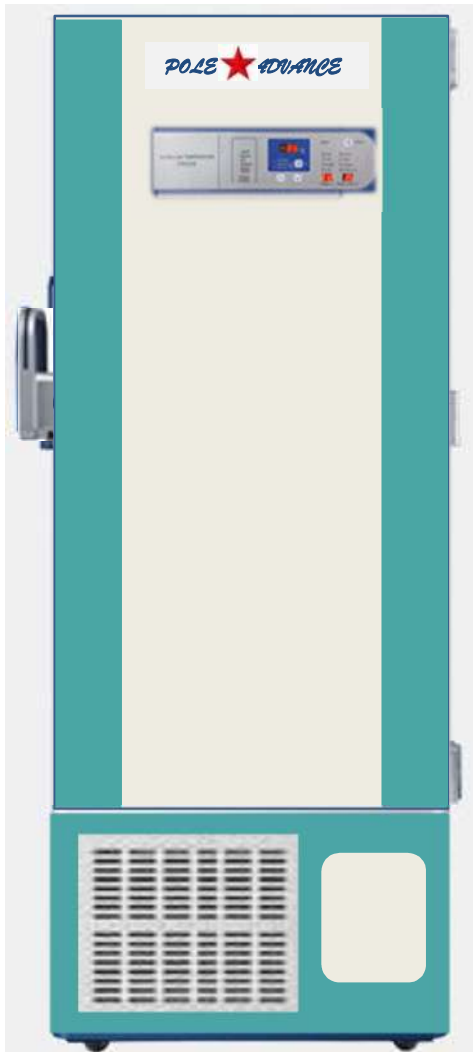
# POLE★ADVANCE

## 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.

## Low noise level

- Specialized refrigeration system design using whisper quiet fan and compressors.
- Freezer chassis designed to absorb vibration and sound.
- Noise level

## 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.
- 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 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



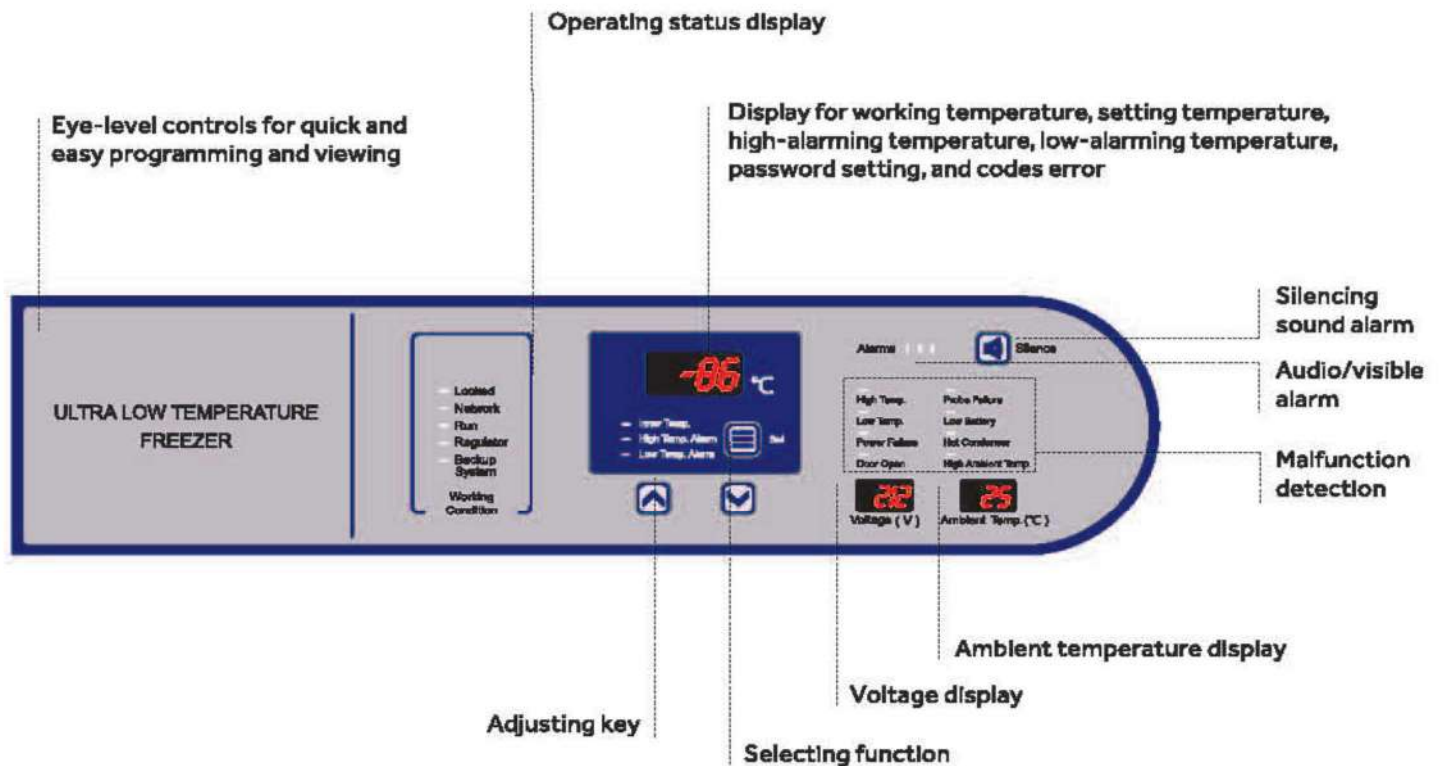
### German EBM condenser fan, intelligent on and off power saving system





EBRACO compressor of 1 H.P each under cascade cooling system .

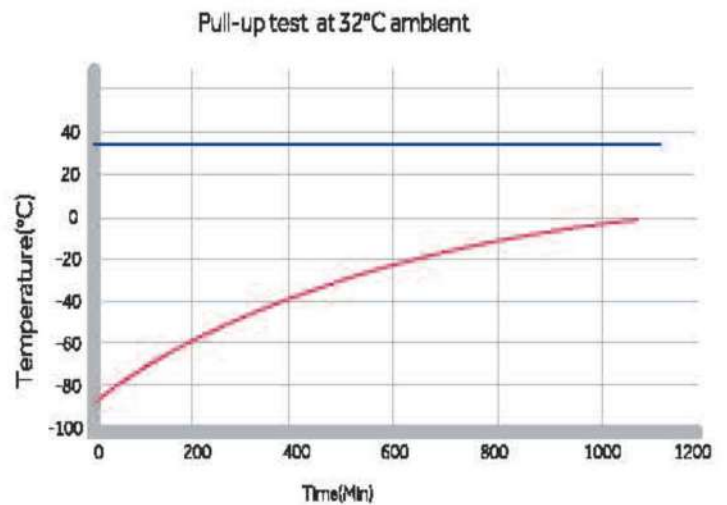
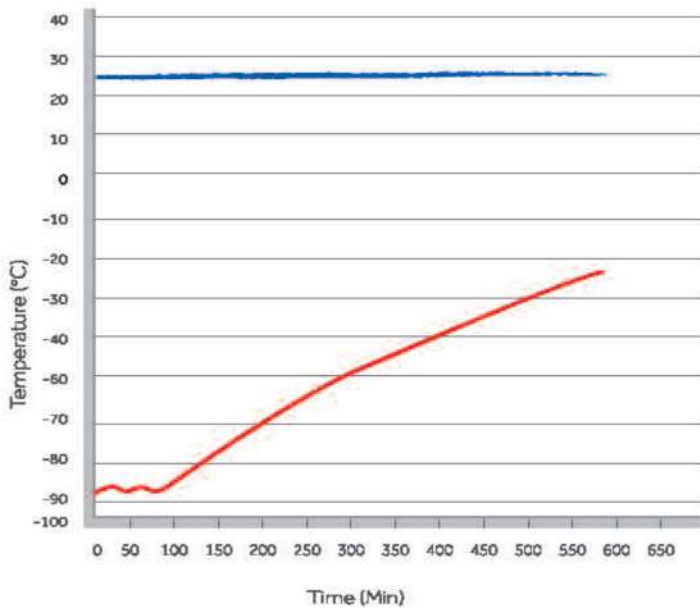
## FEATURES AND BENEFITS



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"> <li>Main cabinet temperature control sensor fails</li> <li>Condenser sensor fails</li> <li>Ambient sensor fails</li> <li>Heat exchanger sensor fails</li> <li>Heat exchanger temperature fails</li> </ul>
Low Battery	Battery capacity runs low or battery switch is not turned on
Hot Condenser	<ul style="list-style-type: none"> <li>Condensers filter element is clogged</li> <li>Ambient temperature is too high</li> </ul>
High Ambient Temperature	Ambient temperature exceeds 32°C

## Latest Insulation Technology

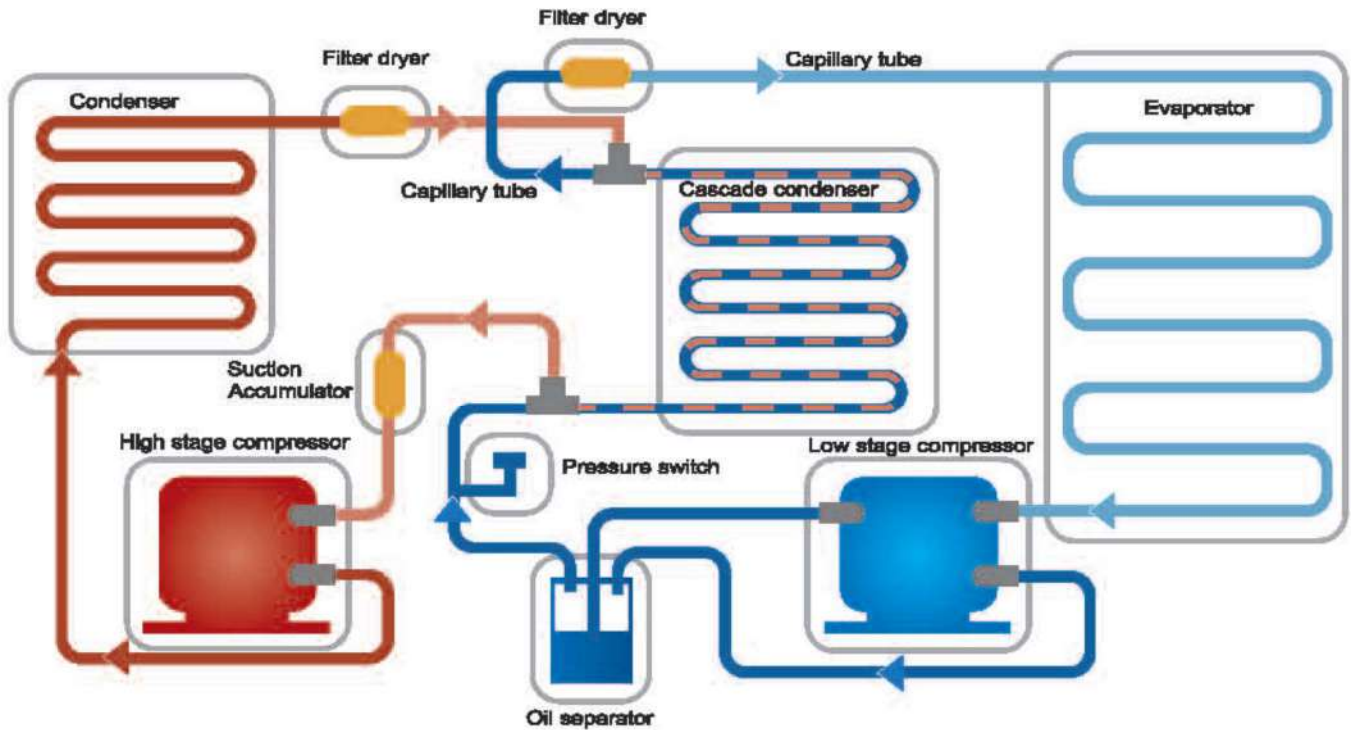
- Made up of 150 mm compressed polyurethane foam (PUF) Insulation
- Thick (High density) Insulation minimize heat load of the cabinet.
- Provides stable storage temperature.
- Energy Efficient due to blockage of convective heat transfer.
- Saves valuable floor space in laboratory due to slim design.
- Offers large storage space.
- Pull up / Warm-up time from  $-80^{\circ}\text{C}$  to  $-50^{\circ}\text{C}$  more than 16 hours at  $25^{\circ}\text{C}$  ambient temperature.
- Pull down time from ambient to  $-86^{\circ}\text{C}$  is less than 3.5 hours at  $25^{\circ}\text{C}$  ambient temperature.











## Optional Accessories

- Touch Panel Control
- Stainless Steel Fixed type rack.
- Stainless Steel Drawer Type rack
- $\text{CO}_2$  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

## ▼ Heat exchange circulation system of ultra low temperature freezer



	<p>▼ <b>Filter</b></p> <p>Filter for refrigerant to protect system from the water and other entering</p>
	<p>▼ <b>Capillary tube for high stage</b></p> <p>High temperature refrigerants flow into the evaporator from the Capillary tube</p>
	<p>▼ <b>Capillary tube for low stage</b></p> <p>Low temperature refrigerants flow into the evaporator from the Capillary tube</p>
	<p>▼ <b>High stage condenser</b></p> <p>Extra-large air cooled condenser dissipates product heat content efficiently.</p>
	<p>▼ <b>Low stage Evaporator</b></p> <p>The close contact design between the evaporating tube and the inner cabinet increases the heat conducting efficiency</p>
	<p>▼ <b>Ultra low noise compressor</b></p> <p>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>▼ <b>Heat exchanger system</b></p> <p>Heat exchanger between the high and low temperature stage in the system</p>
	<p>▼ <b>Temprite oil separator</b></p> <p>Temprite oil separator can effectively separate oil and water so as to improve the refrigeration performance</p>



## Specification of 4/5 Inner Door Model

Model	PSA-86SDU425	PSA-86SDU575	PSA-86SDU675	PSA-86SDU775	PSA-86SDU825
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	3-4/4-5				
Defrost Mode	Manual				
Refrigerant	HC				
Noise (dB)	51				
Cooling performance	-80 (°C)				
Temperature Uniformity	±2° (°C)				
Temperature Range (°C)	-50 ~ -86				
Controller	Microprocessor				
Display	LED/LCD Touch				
Power Supply (V/ Hz)	220~230/50				
Power (W)	700	800	800	900	950
Electrical Current (A)	6.5	7	7	8	8.5
Power Consumption	7.5 kw/day	8.5 kw/day	9 kw/day	9 kw/day	9 kw/day
Average Heat Output	1071 BTU/h	1152 BTU/h	1152 BTU/h	1260 BTU/h	1260 BTU/h
Capacity (Net/ Gross) L	425/425	575/575	675/675	775/775	825/850
Net/ Gross Weight (approx.) kg	270/320	320/360	350/380	390/410	410/430
Interior Dimension (W x D x H) in Inches	24 x 24 x 50	24 x 25 x 52	28 x 28 x 52	30 x 32 x 52	31 x 33 x 52
Exterior Dimension (W x D x H) in Inches	38 X 36 X 75	38 X 36 X 78	40 X 40 X 78	42 X 42 X 78	43 X 43 X 78
<b>ALARM CONDITIONS</b>					
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
Test Hole	Available	Available	Available	Available	Available
USB Data logging Port	Available	Available	Available	Available	Available
Certification	CE	CE	CE	CE	CE



## **ADVANCE BIOTECH SOLUTIONS INDIA PRIVATE LIMITED**

(ADVANCE TECHNOLOGIES, EFFECTIVE SOLUTIONS)

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