

**RESPECTED,
RELIABLE,
RESILIENT**



Lab Refrigerator

Blood Bank Refrigerator

Why Polfrost ?

- Turnkey solutions.
 - Along with business, we also believe in educating, guiding, enlightening & safeguarding our customers.
 - Building trust and relationships, not just building transactions.
 - Committed professionals.
 - End to end solutions.
 - Complete track down and scheduling of orders, right from quoting to commissioning.
 - Own manufacturing setup of 10,000 sq. ft. with in house state of the art sheet metal shop and assembly line.
 - Trusted suppliers for critical components.
 - Vast Experience of 35 years in the refrigeration field.
 - Complete optimization of resources and minimization of cost.
 - In house design team, complemented by a competitive & enthusiastic R&D team.
 - Complete customization according to needs and restrictions of customer.
 - Continuously striving to produce energy efficient products, helping you save energy, hence costs & go green.
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Scientific Refrigerators

Our Laboratory refrigerators find multiple applications across scientific, clinical and industrial fields. That is why we offer specialized utilitarian Scientific Refrigerators to meet these needs. Our machines offer uniform performance at Labs and can be self-contained in indoor locations. We understand the critical nature of our client requirements and end-use. That is why we employ sophisticated CNC machines for achieving highest levels of quality and precision. Polfrost is focused towards delivering cutting-edge local products that are ideal import substitutes.

Controllers Options



Brainy



Indigenous



Genius



Blood Bank Refrigerators Description:

- Operating temperature is fixed at $\pm 4^{\circ}\text{C}$. The temperature is uniformly maintained within the interior cabinet with an accuracy of $\pm 1^{\circ}\text{C}$. Regardless of ambient temperature fluctuations or defrosting time, the temperature is precisely controlled by a PI control & Pt-100 sensor.
- Forced air circulation ensures even temperature distribution throughout the cabinet. The air circulation switches off automatically while the door is open.(Optional).
- Digital temperature readout provides permanent indication of the chamber temperature.
- The built in alarm system with audible and visual warning indicates exceeding of the high & low temperature alarm setting ($\pm 3^{\circ}\text{C}$ and $\pm 7^{\circ}\text{C}$) or power failure. A remote alarm contact allows connection to a central alarm system. Due to large glass door and interior light source. The blood bags are clearly visible.
- The unit features the ultimate door system, glass door, soft self –closing mechanism. Lock to prevent unauthorized access and inner acrylic doors for additional insulation leave nothing to be desired.
- The cooling unit ensures silent operation free from vibration. An important demand for proper storage of cell-containing samples. The background noise is almost unperceptible.
- The inventory system can be varied with shelves to hold storage baskets for blood bags.
- Models can be equipped with drawers for quick access and clear arrangement. Each drawer has divides for 4X7 bags.
- Stainless steel interior cabinet and drawers make the unit easy to clean and to disinfect.
- The unit has been designed constructed in complete accordance with environment demands. The insulation is rigidly foamed –in place using puf.
- The fully automatic defrosting and electric water evaporation allows continuous operation. If required of hygienic reasons thawing water can be drained.
- The independent temperature recorder provides daily recording of the temperature reading for each month. Once fed. Paper lasts for one week/month.

Accessories Consumable / Optionals

Alarm: Alarm system with audible and visual warning operated by a rechargeable battery. To be placed at the unit or on any other place.

Central Alarm: Central alarm for more units with printer for temperature control and printout with monitoring of the alarm points.

PC Adaptability: Temperature control by PC and alarm indication. Serial interface output.

Storage modes: Stainless steel special racks with water repellent card board boxes.

BBR Specifications:

Technical:

1. **Type:** Blood Bank Refrigerator
2. **Cabinet type:** Vertical
3. **Climate class:** Any climatic conditions
4. **Cooling type:** Forced Draft
5. **Refrigerant:** HFC
6. **Noise level:** <50 dBa
7. **Temperature range (°C):** +2°C to +8 °C

Controls:

1. **Controller:** Polfrost Indigenous / Polfrost Brainsy-PLC / Polfrost Genius-PLC / Ion Controls / Sub Zero
2. **Display:** 65536 colour TFT / Monochrome TFT / LED as per controls selected

Electrical data: 1. **Power supply:** 240V / AC / 1PH

Functions:

1. High / Low alarm
2. Remote alarm
3. Hot Condenser ●
4. Voltage Fluctuation alarm ●
5. Power failure
6. Low battery
7. Sensor failure
8. High ambient ●
9. Door ajar

Accessories:

1. **Castor:**
2. **Foot:** Optional
3. **Testing hole:** Optional
4. **No. of shelves / inner doors:** Subject to capacity / Special Requirement
5. **Temperature recorder:**
6. **USB interface:** ●
7. **CO2 backup:** ●
8. **Racks & boxes:** ●

Voltage Stabilizer

Certificates: CE, ISO 9001, 14001, 13485.

[● =Optional]

	PF - R - 90L	PF - R - 165L	Pf - R - 300L
Operating temperature	+4°C	+4°C	+4°C
Capacity	90L	165L	300L
Storage Capacity (350ml bags) min	40/50	100/120	200/240
Wire shelves	3	5	6
Stainless steel plate (if required additional)	1	1	-
Drawers (Optional)	-	-	-
Noise level	44 dBA	50 dBA	50 dBA
Power consumption	1.5A	1.7A	2A
Power supply	230V/50Hz	230V/50Hz	230V/50Hz
Exterior dimensions (cm)	121 x 51 x 36	136 x 51 x 46	162 x 65 x 56
Interior dimensions (cm)	85 x 45 x 30	100 x 45 x 40	118 x 59 x 50

Range: • 90 ltrs • 165 ltrs • 300 ltrs • 450 ltrs • 550 ltrs

- ◆ Cool and cold room solutions for larger storage needs. ◆ For blood components:
- ◆ Centrifuge ◆ Plasma Freezers ◆ Platelet agitator-Incubator ◆ Blood bag - Scale and Tube sealer
- ◆ Thawing thermostat 4°C to 37°C / Cryobath -30°C to 4°C ◆ Portable Refrigerator

Lab Refrigerators Description:

Polfrost Refrigerators are extremely versatile machines, offering an ideal solution Easily adaptable for Pathlabs / Skin Banks / Reagents cooling and hospital applications with complete customisation options for accessories.

- **High Efficiency** – Designed for maximum efficiency in the real world, where 99% of the cooling season is spent at off-design conditions.
- **Lowest possible Sound Levels** – Real time sound levels as low as 50 dBA.
- **Control Center** – Ensures optimum performance and easy operation.

Polfrost Lab Refrigerators provide uniform cooling for all path lab applications that require cooling of tested and untested blood. Lab Refrigerators are completely self-contained and are designed for indoor installation. Each unit includes hermetic scroll compressors, a liquid evaporator, air cooled condenser, and a user-friendly, Microcomputer Control Center mounted on a rugged steel base.

- **High Efficiency** – Industry-leading design and off-design efficiencies.
- **Low Operating Costs** – Rugged design for low maintenance costs and a long design life.

Main Features:

- Operating temperature is variable from +2°C to +15°C. The temperature is uniformly maintained within the interior cabinet with an accuracy of $\pm 1^\circ\text{C}$. Regardless of ambient temperature fluctuations or defrosting time, the temperature is precisely controlled by a PI control & Pt-100 sensor.
 - Forced air circulation ensures even temperature distribution throughout the cabinet. The air circulation switches off automatically while the door is open.(Optional).
 - Digital temperature readout provides permanent indication of the chamber temperature.
 - The built in alarm system with audible and visual warning indicates exceeding of the high & low temperature alarm setting ($\pm 3^\circ\text{C}$ and $\pm 7^\circ\text{C}$) or power failure. A remote alarm contact allows connection to a central alarm system.
 - Due to large glass door and interior light source. The inventory items are clearly visible.
 - The unit features the ultimate door system, glass door, soft self –closing mechanism. Lock to prevent unauthorized access and inner acrylic doors for additional insulation leave nothing to be desired.
 - The cooling unit ensures silent operation free from vibration. An important demand for proper storage of cell-containing samples. The background noise is almost imperceptible.
 - The inventory system can be varied with shelves to hold storage baskets for various kinds of inventory.
 - Models can be equipped with drawers for quick access and clear arrangement.. Each drawer has divides for storage of varied inventory items.
 - Stainless steel interior cabinet and drawers make the unit easy to clean and to disinfect.
 - The unit has been designed constructed in complete accordance with environment demands. The insulation is rigidly foamed – in place using PUF.
 - The fully automatic defrosting and electric water evaporation allows continuous operation. If required of hygienic reasons thawing water can be drained.
- The independent temperature recorder provides daily recording of the temperature reading for each month. Once fed, paper lasts for one week/month.

Accessories/ Consumables/ Optionals

Alarm: Alarm system with audible and visual warning operated by a rechargeable battery. To be placed at the unit or on any other place.

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temperature control and printout with monitoring of the alarm points.

PC Adaptability: Temperature control by PC and alarm indication. Serial interface output.

Storage modes: Stainless steel special racks with water repellent card board boxes.

Lab Refrigerator Range

Range:

- 90 ltrs
- 200 ltrs
- 450 ltrs
- 600 ltrs

Total refrigeration solutions:

- Cool and cold room solutions
- Deep Freezers / LT Freezers / ULT Freezers
- Thawing thermostat
- Portable Refrigerator.

Specifications:

Technical:

1. **Type:** Lab Refrigerator
2. **Cabinet type:** Vertical
3. **Climate class:** Any climatic conditions
4. **Cooling type:** Forced Draft
5. **Refrigerant:** HFC
6. **Noise level:** <50 dBa
7. **Temperature range (°C):** upto+2°C

Controls:

1. **Controller:** Polfrost Indigenous / Polfrost Brainy- PLC / Polfrost Genius- PLC / Ion Controls / Sub Zero
2. **Display:** 65536 colour TFT / Monochrome TFT / LED as per controls selected

Electrical data: 1.Power supply: 240V / AC / 1PH

Functions:

1. High / Low alarm
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Accessories:

1. **Castor:**
2. **Foot:** ●
3. **Testing hole:** ●
4. **No. of shelves / inner doors:** Subject to capacity / Special Requirement
5. **Temperature recorder:**
6. **USB interface:** ●
7. **CO2 backup:** ●
8. **Racks & boxes:** ●
- Voltage Stabilizer** ●

Certificates: CE, ISO 9001, 14001, 13485.

[●=Optional]





REFRIGERATED LAB EQUIPMENT:

- Freezers -20°C to -86°C for Labs – Pathology, Medicine, Life Science, Pharma.
- Circulating Baths - Cryostat
- Blood Bank Cold Chain : -14°C, -30°C, -45°C to -86°C.
- Platelet Agitator Incubator, Cryobath, Centrifuge, Bag sealer, Blood Bag Collector, Vaccine carrier.

COOL & COLD ROOMS:

- +22°C to + 4°C, -10°C, -25°C, -45°C, -70°C. Digital Microprocessor / PLC Controls.

INDUSTRIAL REFRIGERATION:

- Chillers : 5 to 5000 Liters; 22°C to -70°C; Process & Industrial Circulation, Digital Microprocessor / PLC Controls.
- Unit Coolers, Condensing Units.
- PUF / Insulation Panels.
- Door Systems.
- Tailor made refrigeration & HVAC products.

Contact us:



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