

2~8°C Ice-lined Refrigerator

The refrigerators are designed for tropical climates to store all temperature sensitive products vaccines, blood products, Injectable, reagents and biological products for epidemic prevention, clinics, hospitals and vaccine storage centers

Chest type Ice-lined refrigerators maintain temperatures of +2°C to +8°C. Not more than 8 hrs. continuous or intermittent power should be sufficient per 24 hrs. to maintain vaccine temperature below 8 deg. C

Ergonomic Design

- **Internal:** Electro-polished Stainless steel 304 of 20-gauge sheet with an additional special ice lining consisting of icepacks covered by strong plastic shell to maintain the holdover time for internal temperature. Top and bottom of the baskets covered with horizontal water cool pack.
- **External:** White coloured external Corrosion and scaling free advanced PU coated CR sheet of 1 mm thickness used as external material. Same technology used in car outer body paint.
- Provision for drainage for the waste water.
- Solid door with handle with lock & key arrangement to avoid unauthorized access.
- All manufacturing done with GMP protocols through on complete CNC based machines to avoid sharp corners, welding burrs and manufacturing defects.
- Legs in the base with rotating screw type height adjustments to balance the weight on uneven floor with 100 mm ground clearance optionally.
- The unit is run to capable of operating continuously in ambient temperature of (-) 20 °C to (+) 50 °C and relatively humidity of 15-90%.

Temperature Control System

- Programmable micro-processor based temperature controller having facility to set of temperature with an accuracy for +- 0.5 °C
- ON/OFF Switch with power indicator
- 3 digit digital LED/LCD display (to one decimal point) of cabinet temperature. The sensor should be placed 25 to 50 mm above base of storage chamber.
- Audio (minimum 65 dB) and visual alarm against the violation of temperature range (less than +2°C)
- Min. & Max. cabinet temperature digital display of last 24 hrs. and breaches during last 24 hour can be provided optionally
- The unit is sealed to protect it from dust, moisture or condensed water falling over it
- Child lock facility and defrosting program.
- Provision to set minimum and maximum temperature at 0.1 °C to programmed the unit for continuous operation.

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inside structure



Lock



Controller

Refrigeration System

- Optimized and tropical refrigeration system design for continuous running without fail
- Compression Cycled, CFC-Free (both for refrigeration and insulation) All system tubing (suction tube, freezer tube and condensing tube) should be of minimum 99.97% of pure copper coil. Inlet of Capillary kept outside the PUF body.
- Temperature of a full vaccines to remain +2 °C to +8 °C during continuous availability of energy at ambient temperature +5 to +45 °C with intermittent/continuous electricity supply 8 hrs in a 24 hrs cycle. The temperature difference between any two points in the cabinet should not be more than +2 °C once stabilized.
- Target holdover time is more 24 hrs or more in a continuous even at external temperature of 43 °C and Humidity of 95 % Rh.
- Danfoss make Hot and cold compressor) starting at 172 volts (22% below rated voltage).
- All CFC and CHFC free non environmental friendly refrigerants used

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Accessories

- **Baskets**-PU Coated wired Vaccine Storage Basket allowing free circulation of air suitable to match the net volume requirement.
- **Stem Alcohol thermometer**- Glass Thermometer (Specification and standard as per MOHFW, WHO-PQS approved) - one piece per unit range of -30 to +50 degree centigrade.
- **Voltage stabilizer** - As per the MOHFW approved specifications and standard can be supplied optionally with an extra cost



Baskets

Standards and Safety

- Product is authentically CE certified by europiu union body.
- Authentic PQS certification done by WHO. Meets all regulatory requirements of WHO/UNICEF Standard WHO/PQS/E03/RF03.1.for Ice Lined Refrigerators. Uniq certificate no provided in the chart.



Model	HBC-70	HBC-200	HBC-340
Vaccine Storage Capacity	45L	94.5L	200L
Gross Volume	71L	198L	340L
Net/Gross Weight	64/70 (kg)	108/114 (kg)	152/181(kg)
	141.0/154.3 (lbs)	238.1/251.3 (lbs)	335.1/399.0(lbs)
Ambient Temp.	5 °C-43 °C	5 °C-43 °C	5 °C-43 °C
Compressor	Secop compressor	Secop compressor	Danfoss compressor
Refrigerant	R134a	R134a	R134a
Interior Dimensions(W*D*H)	400*360*610(mm)	976*336*610(mm)	1410*415*645(mm)
	15.7*14.2*24.0 (in)	38.4*13.2*24.0 (in)	55.5*16.3*25.4(in)
Exterior Dimensions(W*D*H)	673*663*818(mm)	1243*633*818(mm)	1650*650*855(mm)
	26.5*26.1*32.2 (in)	48.9*24.9*32.2 (in)	65.0*25.6*33.7(in)
Packing Dimensions(W*D*H)	755*760*880(mm)	1325*760*880(mm)	1705*760*1010(mm)
	29.7*29.9*34.6 (in)	52.2*29.9*34.6 (in)	67.1*29.9*39.8(in)
Container Load (sets)20'/40'/40'H	42/90/135	24/54/80	18/36/36
Holdover Time at 43 °C	more than 25hrs	more than 25hrs	more than 25hrs
Power Consumption: stable running	0.64 KW.h/24h	1.34 KW.h/24h	2.06 KW.h/24h
Power Consumption: cool down test	2.4 KW.h/24h	4.01 KW.h/24h	2.13 KW.h/24h
Certificate	CE,ISO 13485 & WHO/PQS	CE,ISO 13485 & WHO/PQS	CE,ISO 13485 & WHO/PQS
WHO PQS Reference No.	PQS/ E003/005	PQS/ E003/006	PQS/ E003/015