

WALK IN ULTRA LOW TEMP. COLD ROOM



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Plot no. 38 , Kh No 52/5 , Nangli Poona Village ,Delhi-110036 :





The **-40°C/-60°C/-80°C Refrigerated Cold Room** are most commonly employed for the preservation and long term storage of microbial cells, human cells, tissues, cellular components and tissue based products and other eukaryotic cell lines. They are particularly important for the storage of stem cells and hematopoietic progenitor cells and find widespread usage in blood banks, stem cell banks, pharmaceutical and biotech industries and various scientific and research laboratories. Apart from this, the Ultra Low Temperature Cold Room are also employed by the food processing and dairy industries for the preservation and storage of ice creams and other dairy products and for the ripening process. Storage at such low temperatures increases the shelf life of the product and also ensures the stability of the product during prolonged storage.

The Hapten **-40°C/-60°C/-80°C Cold Room** come equipped with an advanced control panel and microprocessor based controllers for highly precise temperature control and fully automatic operation. They use a digital thermostat for displaying the working temperatures and maintaining accurate, stable and optimum storage conditions within the cold room. These walk-in cold rooms have a sturdy and reliable stainless steel construction and are designed to withstand the rigors of such extreme low temperature environments. They are made up of high quality PUF insulated panels and feature smooth and non-corrosive surfaces made up of mild steel or stainless steel sheets. The units use high quality insulation material of appropriate thickness for maximum energy efficiency. The ceiling, walls and floor panels of the cold room are joined using cam-locking arrangement ensuring perfect alignment of the panels and firm joints. All the joints are perfectly sealed to ensure smooth and non-leaking surfaces. The **Walk in Refrigerated Cold Room** also come equipped with high quality stainless steel shelves that are easily removable and easy to clean. They are available as easy to install, fabricated units that come in both standard as well as customized sizes. Each unit is tested for quality and reliability and comes equipped with CE certification.

SALIENT FEATURES:

- Energy efficient
- Economical and cost effective
- Light weight fabricated units
- Microprocessor based controller
- Highly advanced control panel for fully automatic operation
- Anti-condensation control and defrost control for trouble free operation
- audio and visual alarms for over-temperature
- Non-toxic, anti-rusted, heat insulation

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These - Hapten $-40^{\circ}\text{C}/-60^{\circ}\text{C}/-80^{\circ}\text{C}$ walk-in cold rooms are modular structures that come with an option of flexible panel sizes for maximum space utilization. They are aesthetically designed and come equipped with many standard features including high quality electrical fittings and controls, sealed light panels for illumination and other added features. They feature highly efficient and cost effective refrigeration units comprising of hermetic or semi-hermetic air cooled compressors and non-CFC refrigerants for excellent refrigeration control. The refrigeration units are compatible with the structural design of the cold room and are usually wall mounted. They are designed for maximum energy efficiency and are independently controlled.

DETAILED DESCRIPTION ALONG WITH SALIENT FEATURES ARE AS UNDER FOR REFRIGERATION MACHINE CONDENSING UNIT

AIR-COOLED CONDENSOR


Air-cooled condenser is internally grooved finned copper tubes used for high heat transfer area, which not only reduce power consumption, but also bring down the condensation faster. This unit is designed & verdigris & reduces the resistance, saves energy consumption and ensure good heat exchange.

COMPRESSOR:

- **HERMETIC COMPRESSOR** : Single stage Reciprocating Compressor. Give the High Efficiency compared to sealed compressors, Less Power Consumption , Accessible for repairing, low noise level, Less Vibrations, Wide Voltage Range, Designed for Extremely High Ambient etc.
- **COOLING SYSTEM** : The compressor is mounted perfectly to ensure recommended level of sound and vibration.

REFRIGERATION CONTROL

- **Low and High Pressure switch of RANCO/Danfoss** : Which ensures the compressor and refrigeration system when low pressure will occurs it trip off the compressor. This is the only operator friendly switch can easily reset.
- **Hand Shut off Valve** : Is the only Condensing Unit, which is equipped with it. This valve is used for pump down the total gas in to the condenser & receiver in the faulty condition.

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- **Liquid Dryer of Danfoss make** : Which is equipped in the liquid line for ministration of moisture in the liquid. It will collect all the moisture in side the refrigeration line as well as gas.
- **Solenoid Valve of Castle make** : In most refrigeration applications, in order to automatically control the flow of fluids in a system, it is necessary to be able to start or stop the flow in the refrigerant circuit. An electrically operated solenoid valve is usually used for this purpose. Its basic function is the same as a manually operated shutoff valve, but it can be positioned in remote locations, and may be conveniently controlled by simple electrical switches.
- **Oil Separator of Stainless Steel 304** : The oil separator intercepts the oil mixed with compressed gas and returns it into the crankcase of the compressor, thus assuring an efficient lubrication of its moving parts. Also, it improves the overall efficiency in the system.
- **Suction Accumulator** : Maximum Efficiency of the relief device (expansion valve) because it is supplied with sub cooled Liquid.

TECHNICAL SPECIFICATIONS:

MODEL	HB-WULTCR
Size	As per customer requirement
Construction	PU Foam panels
Insulation	PU foam of density of 40±2 kg/m ³ as insulation
Working Temperature	-40°C/-60°C/-80°C
Temperature Controller	Digital Temperature Controller
Temperature Tolerance	± 1 deg. C
Temperature Sensor	PT-100
Power Requirements	220/230V, 50/60Hz (three phase in Bigger Sizes)

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