



▶ Metal Finish and thickness

KOLDTECH panels are available with many types of metal finish to suit your job requirement, ranging from stainless steel, Colorbond steel, galvanized steel, Zinalume steel and Stucco aluminum. Metal finish is grooved every 5 inches to increase the structural strength and improve the look. Each panel is coated with scratch proof PVC film which protects panels finish during transportation and installation. The film can be peeled off after installation.

Polyurethane panel thickness is available from 60 mm to 160 mm. Table below shows KOLDTECH panel thickness with corresponding specification. KOLDTECH polyurethane panels are CFC free and exceed UL 94 fire retardant standard. We regularly monitor and test our product, by independent laboratory, to ascertain that it meets our high standard.

▶ Koldtech Panel Specification

Thickness	mm	60	90	100	130	150
Heat transfer efficient	K/cal	0.33	0.22	0.20	0.15	0.12
Suggested operating temp	°C	0	-30	-32	-40	-45
Recommended minimum temperature	°C	-18	-35	-38	-50	-60



▶ Eccentric lock

Eccentric lock is custom designed and manufactured to our specification. It is made from high impact ABS plastic with rust resistance GI steel. During the foamed-in-place process, the locks are embedded every 800 mm. for the wall panels and every 400 mm. for ceiling and floor panels. During the installation, a hexagon Allen key is used to latch the male and female eccentric locks together. The locking action is in two steps, firstly to latch the locks and secondly pulling the panels together to form a tight seal, preventing cold air to escape from the cold room. After the latching process a flush PVC cap is used to close the hexagon key access hole.

▶ Modular panels

KOLDTECH panels are produced with the foamed-in-place process, where two chemicals are injected under pressure between two metal skins to form Polyurethane insulation panels. Chemical reaction produces high heat and high pressure during curing. Pressure of over 500 tons is applied to the panel resulting in high structural strength, high density and thus high insulation value of the Polyurethane panel. KOLDTECH panels come in standard size but can be custom designed to fit your available space and your requirements.

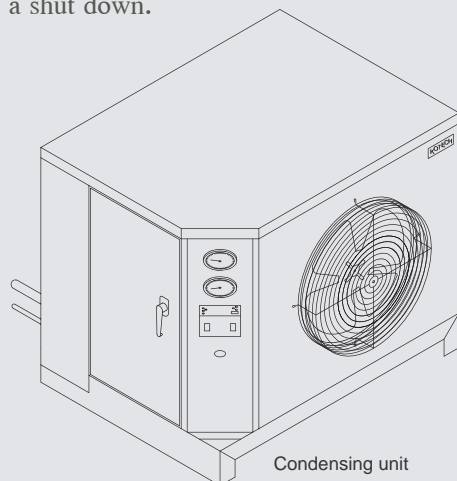


Panels are manufactured in sections and assembled at work site like putting together pieces of puzzle. Panel width is 400 to 1200 mm, with length of 400 to 6900 mm. Ceiling, wall and floor are latched together using eccentric locks. Tongue and groove with Polyethylene gasket joint ensures that the installation is completely air tight.

▶ KOLDTECH REFRIGERATION SYSTEM.

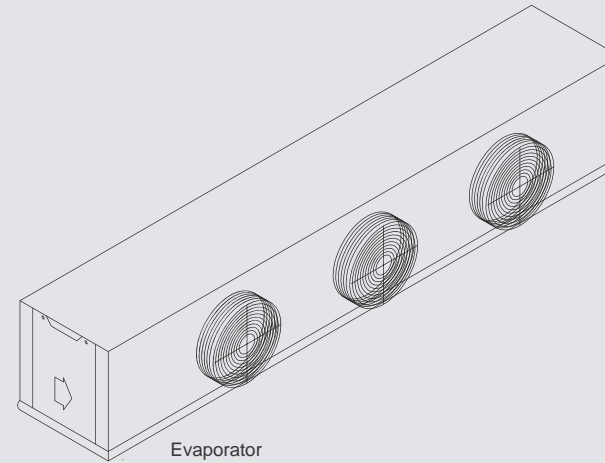
Koldtech coldroom system has been throughly field tested. It has been improved upon based feedback from technicians and customer. Our stringent QC department, using sophisticated testing equipments assure that the system will work well according to specification. With reasonable care, the system will give you years of trouble free service.

Koldtech system offers wide range of coldroom system for your different operating requirements. We offer both Hermetic and Semi hermetic systems, operating on non-CFC or R-22 refrigerant. The unit is available with both air cooled and water cooled. Marine upgrade is available to minimize effect from salt for seaside installation. The system requires three phase 50 Hertz power supply, with 60 Hertz voltage as option available. KOLDTECH refrigeration system is also equipped with phase detector to protect it from fluctuation voltage supply. There are many other built-in safety functions to assure that our system is well protected from unstable power supply. Delay circuit is built-in to delay the compressor start up after a shut down.



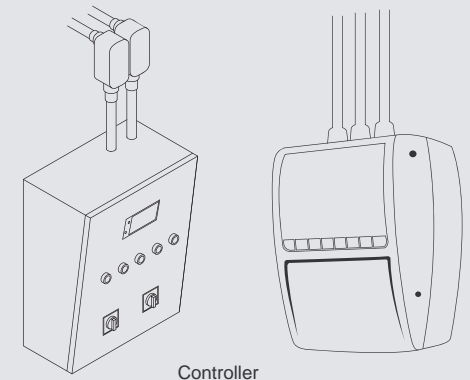
Condensing units can be installed remotely. Standard length is not more than 20 m. from the evaporator unit. For distance longer than 20 m. we may need to increase the pipe size or increase the compressor capacity.

Multiple compressors can be connected together in a rack system, providing more efficiency and system back up.



We design and manufacture our own evaporator coil. The aluminum fins are coated for easy cleaning. After fully tested for leakage, high pressure nitrogen gas is sealed in the coils during storage. Any undetected leakage will be evident when the coil is unsealed during the system assembly.

Controller Box is installed in front of the coldroom. Many options are available, for example, remote monitoring and controlling system, where all systems can be monitored, controlled and diagnosed remotely from the control room or from another part of the world through internet connection.



▶ Please contact us for coldroom and system design, configuration and quotation. With years of experience in this field, we can provide you with professional recommendation to fulfill requirements and provide you years of trouble free operation at a reasonable price.

▶ PU Panel Specifications

Density	38-40 Kgs / cu.m.
Fire hazard classification	UL 94
Width	400 mm.to 1200 mm.
Length	400 mm. to 6900 mm.
Eccentric lock spacing	Every 400 mm. for Ceiling & Floor panels Every 800 mm. for Wall panels
Floor Loading stationary	3000 kgs / sq. m.
Floor Loading with trolley	500 Kgs on four rubberized wheels

▶ Panel Material Thickness

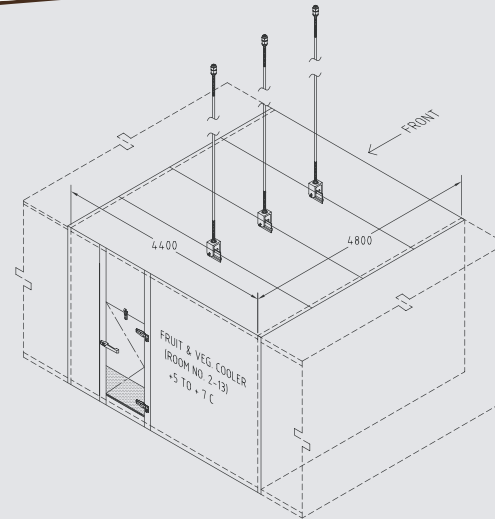
Stainless steel	0.6 mm.
Colorbond steel	0.45 mm.
GI Steel for floor panel	1.2 mm.
Aluminum Stucco	0.7 mm.
Zincalume steel	0.45 mm.

▶ Floor Panel

GI Steel 0.5 mm.
GI Steel with aluminum checkerplate 0.5 mm. + 1.5 mm.
GI Steel with stainless steel checkerplate 0.5 mm. + 1.6 mm.
Stainless steel
Bare PU with reinforcement concrete (by others)

▶ Ceiling Support

Ceiling support is necessary for ceiling panels over the length of 3 m., to prevent any sagging due to the weight of the ceiling panels. Ceiling panels can be suspended from existing building structure by means of wire or wire sling. In case the suspension from existing building structure is not suitable, a self support system can be employed. KOLDTECH offers several types of ceiling support as follows:



▶ Metal plate

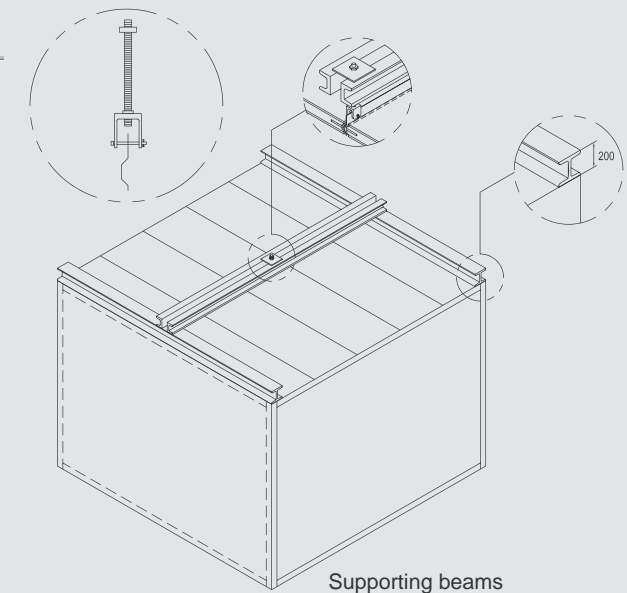
A small GI steel plate is sandwiched between the ceiling panel eccentric locks and attached to the supporting wires. The supporting wire is, in turn, attached to the building structure and transfer part of the ceiling panel weight to the building structure.

▶ Self support system

If the existing building structure can not be used to support the weight, a self support system has to be employed. Using this method, the weight is transferred to the wall panel through the supporting beams which run along the whole length of the coldroom.

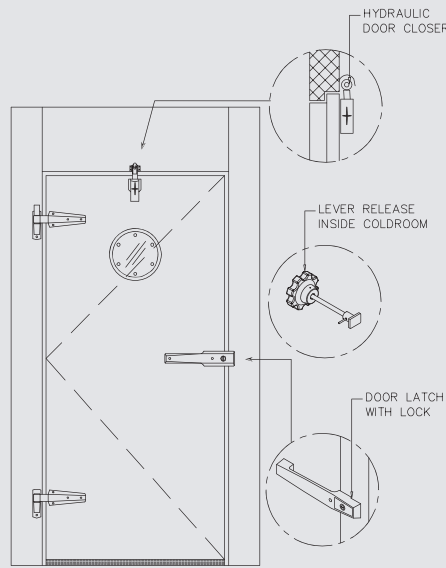
▶ Accessories

PVC strip curtain minimizes heat gain and excess humidity from entering the cold room when the door is left opened while loading and unloading, PVC or strip curtain is installed on the door opening. The strips are see through 200 mm. wide, 2 mm. thick PVC installed on stainless steel frame with 10 mm. overlapping. The curtain can be customized to different door sizes and heights.



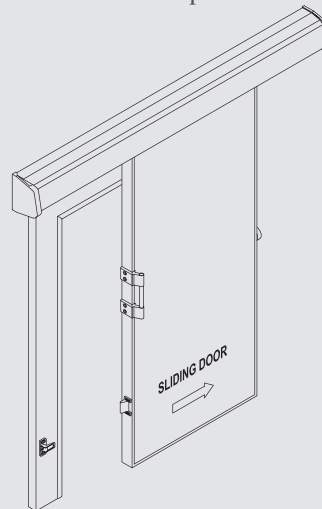
Door

KOLDTECH hinged door is integrated into our standard wall panel. Our standard door size is 900 x 1900 mm. and 1000 x 2000 mm. The door comes complete with a door latch, a keyed cylinder lock, a safety door release from inside, self closing mechanism, hydraulic door closer. The spring action integrated into the door hinge closes the door by itself if it is left open less than 90 degree. The hydraulic door closure latches the door tightly to prevent any cold air leakage.



Water proof light switch with vapor proof interior light is included. Door finish and Polyurethane insulation thickness are the same material and thickness used for the wall panel. Heater wire is installed in the door frame to prevent condensation. For Freezer room, easily replaceable heater wire is also embedded into the door leaf. Other options available are viewing windows, kick plate, door ramp. The figure above shows different components and accessories for KOLDTECH hinged doors.

Sliding door is also available. KOLDTECH doors use heavy duty hardware which has been field tested and improved upon. Different models are available depending on applications. For larger doors, heavy duty door frame is available to support the weight of the sliding door. Automatic and electric doors can be ordered as option for heavy traffic cold rooms.



Jointings

