



To Supply, Deliver, Install & Commission Cold Rooms & Refrigeration Systems at SIC1

## **Technical Specifications**

### **Cold Room & Refrigeration System (Level 1 Office)**

**No of units: 1**

- For chiller storage of all sorts of items
- Chiller storage temperature: 10 - 12 ° C
- Provides excellent thermal efficiency
- Cold room enclosure with suitable insulation walls & ceiling panels
- Wall insulation to be inserted into the subfloor in conjunction with the existing floor insulation imbedded to form a complete enclosure
- Floor insulation construct with 100mm thick polyurethane slab complete with polyethylene sheets in 2 layers. Joints to be overlapped and sealed with non setting flexible sealant
- To provide cut-off drain to drain excess water to nearby floor trap in the adjacent room
- Insulation panels construct with 75mm thick foamed-in place polyurethane core with facings of galvanized sheet steel
- Floor heating element system complete with thermostat and control
- Evaporator unit constructed with textured aluminum, complete with electric fans, copper tubes staggered and mechanically expanded into corrugated aluminum fins operate on electrical defrost mode
- Air cooled condensing unit consisting of Bitzer semi-hermetic compressor complete with necessary refrigeration components and accessories eg. hand valve, solenoid valve, expansion valve etc., all mounted on base frame
- Provide and install new refrigeration copper piping to connect the evaporator units with the air cooled condensing unit, complete with insulation for suction line
- Electrical control panel complete with Danfoss refrigeration controller and necessary electrical components
- Provide link for the new refrigeration controller into existing Danbus network and re-configuring existing monitoring system to incorporate the new chiller room
- Designed to operate efficiently up to 30°C ambient environments
- User friendly electrical control with large easy readable digital thermometer for set and actual temperature, high temperature acoustic alarm, on-off switch with power on indication lamp
- Suitable LED/fluorescent light fitting suitable for cold room application
- Wall insulation panels can be cleaned easily
- Coved corners for ease of cleaning
- Splash proof
- Easily replaceable heavy duty door gasket & door hinges
- Double-leaf swing door with at least 1.5m clear width for pallets movement
- Door lock
- General builders work which include the removal of existing window and door and patch up with concrete/grout material.
- Warranty period of 12 months
- All wiring system and control switches must be properly laid and comply with safety requirements
- Critical spare parts list
- Operating manual printed in English



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**Note:**

- The air cooled condensing units shall be located beside the staircase (S1) next to the receiving bays (Please see diagram 1 below for the location).
- Refrigeration pipe shall be provided across the ceiling at the AC receiving area as shown indicatively in diagram 2.

**Price to include the following works (Additional Works)**

- Final connection of the electrical control panels
- First charge of refrigerant R404a and compressor oil
- Testing & commissioning of refrigeration system



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Technical Data		Projected by Consultant	Designed by Contractor
Adjustable temperature	° C	10 - 12	
Insulation	mm	75 – 100	
Thermal conductivity of insulation	W/mk		
<b>Condenser</b>			
Refrigeration capacity	W		
Refrigerant evaporating temp.	K		
Refrigerant		R404a	
<b>Electrical</b>			
Voltage	V		
Connected load	kW		
Protection enclosure	IP	55	
<b>Heat emission</b>			
Latent dissipation	kW		
Sensible dissipation	kW		
<b>Internal dimensions</b>			
Length	mm	7300	
Width	mm	4330	
Height	mm	3000	
<b>External dimensions</b>			
Length	mm	7600	
Width	mm	4630	
Height	mm	3500	
<b>Manufacturer</b>			
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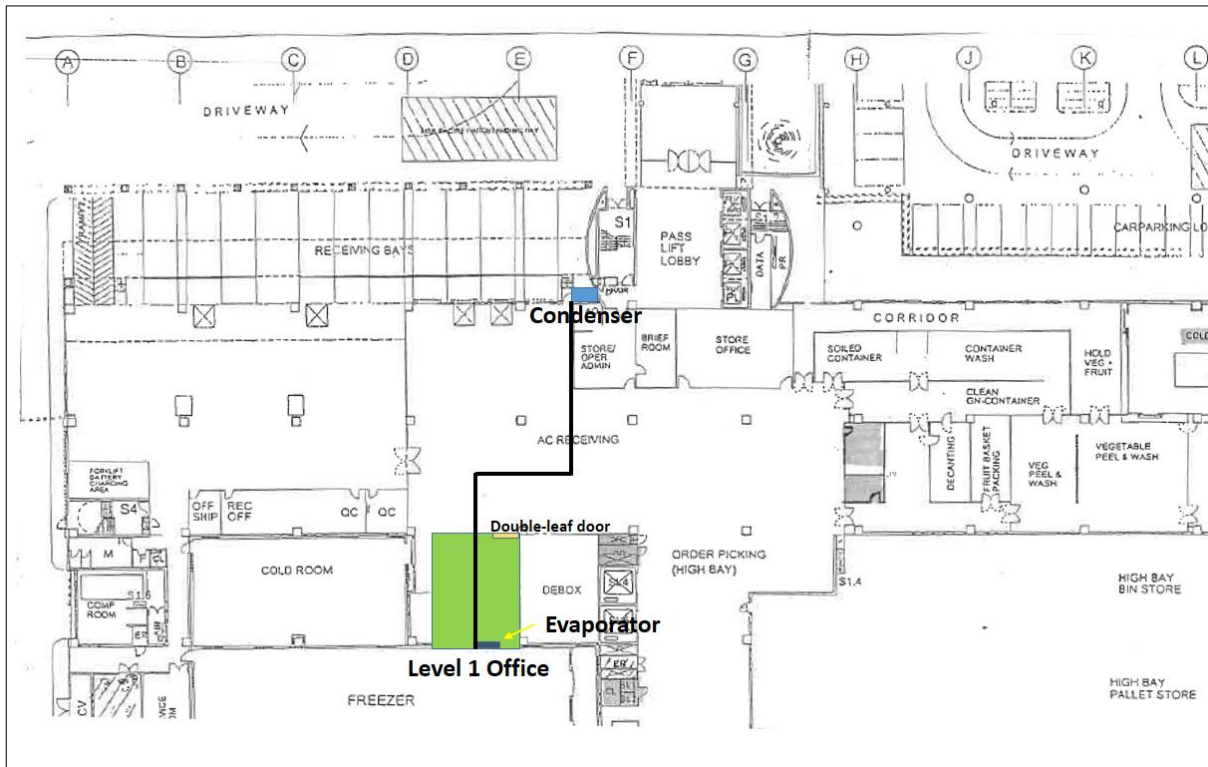


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Type

Comments

**Diagram 1 (General Layout of Refrigeration System):**





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**Diagram 2 (Layout and Indicative Dimension of Level 1 Office) :**

