برودان
Brodan

Coldrooms

Our unique technologies

Doors

Flush swing doors

The third generation doors have evolved significantly into:

- **Self-closing:** Reduce the impact on temperature when door is open.
- **Self-lifting:** Reduces the potential of gasket tear and wear and thus eliminate thermal leakage when door is closed.
- **Flushed Multi Step:** Esthetically the door looks much more slick and has additional barrier to prevent thermal leakage.

Sliding doors:

The sliding door frame design with a self-closing mechanism significantly reduces heat leakage and saves energy and maintenance costs.

In addition to the lever handle designed to pull it, the door does not need a latch or lock. So you won't need to push the door when closing it.

Panel

The third generation panel is uniquely designed to offer great value with no additional cost and great saving in energy. The new standard overlapping joint design helped achieve two important elements:

Thermal insulation

higher thermal insulation with added mechanical strength to the room.

Aesthetic value and hygiene

Increased aesthetic value and hygiene as there is no need to finish joints with silicon with virtual absence of seams between panels.

Door Handle Safety

As a safety measure the door handles illuminate from inside the room to help worker reach to handle immediately if the door suddenly closes and lights go out.

Cooling unit

This feature of the new design eliminates the space previously occupied by the evaporator and allows the entire interior chamber space to be used for storage.

Digital Controller

A sleek-looking double/single room controller with no exposed wires and a temperature alarm. Controllers with optional remote temperature monitoring and control are also available.

Homogeneous cavity

The corner bar cavity system is characterized by homogeneous bends that facilitate cleaning and minimize dirt accumulation

FREEZER - CHILLER ROOM

COLDROOM SPECIFICATIONS Construction Of The Room:

Construction Of The Room:

- Installation, Commissioning and Engineering are to be supervised by Professional Refrigeration Engineers. For a Freezer, the expected temperature target is as low as -20° C. For a Chiller, expected temperature target is as low as +1° C.

Room Material Specifications:

Panels:

- Insulation:
  - CFC Free, Rigid Injected Polyisocyanurate Foam.
- Insulation Density:
  - 42 kg/m3.
- Thickness:
  - 100 mm both for Positive and Negative Room Temperature.
- Cladding:
  - 0.5 mm Metal, Antibacterial polyester coated, white, or other options: Coated Galvanized steel, Stucco Aluminium, Stainless steel.
- Construction:
  - Panels are joined together by two systems Male-Female + Cam-Lock.

Flooring:

- Panel Flooring:
  - 100mm insulated panels with 1.5mm Checkered Aluminum on top.
  - 100mm insulated panels with 1.5mm Galvanized or Stainless Steel cladding.
- Floor-less:
  - 50mm insulation foam with 100mm concrete slab on the top.

Doors:

- To supply single left/right hinged manual doors with. All fittings including rubber gasket Internal Safety Handles are to be standard white or special order of any suitable color to be specified by the client.
- Door hinges rise the door body as they open so as not to rub the floor, and fall as they close to insure no thermal leakage and full insulation. As a safety measure the door handles illuminate from inside the room to help worker reach to handle immediately if the door suddenly closes and lights go out.
- Wall-Ceiling Joints are designed with hygienic monolithic arrangement with no sharp edges to avoid an accumulation of dirt and germs (look above PVC cove and angle). o Lighting: Heavy Duty, Water Proof, Low Energy, Florescent Lighting.

Lighting:

- Heavy Duty, Water Proof, Low Energy, Florescent Lighting T5.

Installation:

- **Panels:** Pre-Fabricated as per site dimensions and client requirements.
- **Condensing Units** and Evaporators: Pre-Wired to suit site conditions.
- **Installation Time:** Installation time is from 1 to 2 days, thanks to Pre-Design works.

Cooling Material Specifications:

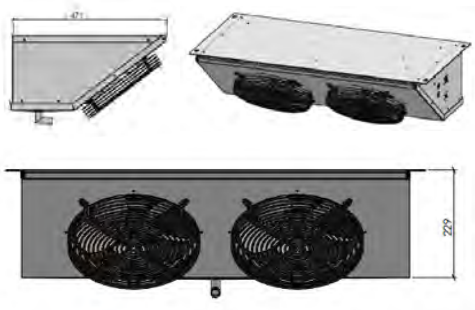
- Condensing units:
  - Zanotti/Sicaf remote unit. Zanotti/Sicaf remote unit.
  - **Frame:** Closed frame for outdoor installation
  - **Compressor Brand:** Bitzer
  - Anti-vibrating system in both suction and discharge lines
  - Liquid receiver with safety valve
  - Oil separator
  - Liquid separator
  - Drier filter with molecular sieves, sight glass and shut-off valve on the liquid line
- Evaporator:
  - Zanotti/Sicaf made in Italy.
- Zanotti/Sicaf:
  - R-404
- Electrical Rating:
  - 380v/3ph (unless otherwise specified)

Monoblock

Remote

Sliding Door

Remote Condensing units



Evaporator

FREEZER - CHILLER ROOM

COLDROOM SPECIFICATIONS Construction Of The Room:

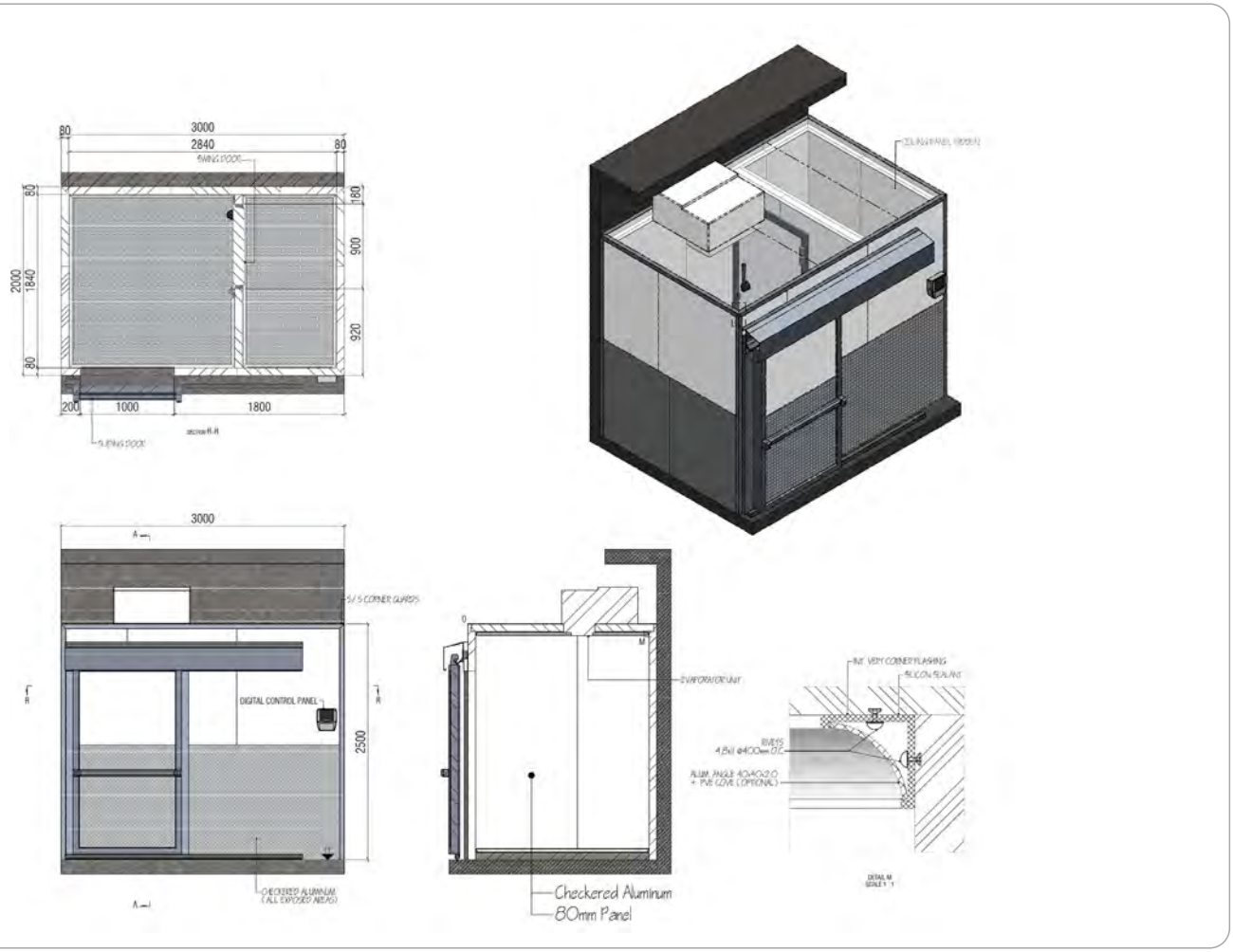
Site Requirment:

- Separate electrical circuit breakers for each room's condensing unit(CP). The circuit breaker needs to be located as per Raqtan electrical design drawing.
- Floor and walls need to be perfectly leveled.
- Condensing unit location must be within 6 meter from evaporator with max 4 meter vertical rise. If need to be higher it must be re-evaluated to cover additional material and CU HP costs. CU stand must be installed as per Raqtan drawing**. If CU location will require a crane, it will be expected that it is located in required location before installation**.
- All utilities as per Raqtan design to be prepared before installation.

Panel Material Specifications:

- Product dimensions:
  - Maximal length L: 2.8m.
- Materials:
  - GI Raw or Pre-painted, Color RAL9003, 0.5mm
  - Stainless Steel, 0.5mm
  - Stucco Aluminum, 0.5mm
- Insulation core:
  - Polyisocyanurate (PIR), CFC Free. 42kg/m3
- Fire Properties:
  - B s2 d0
- Performance:

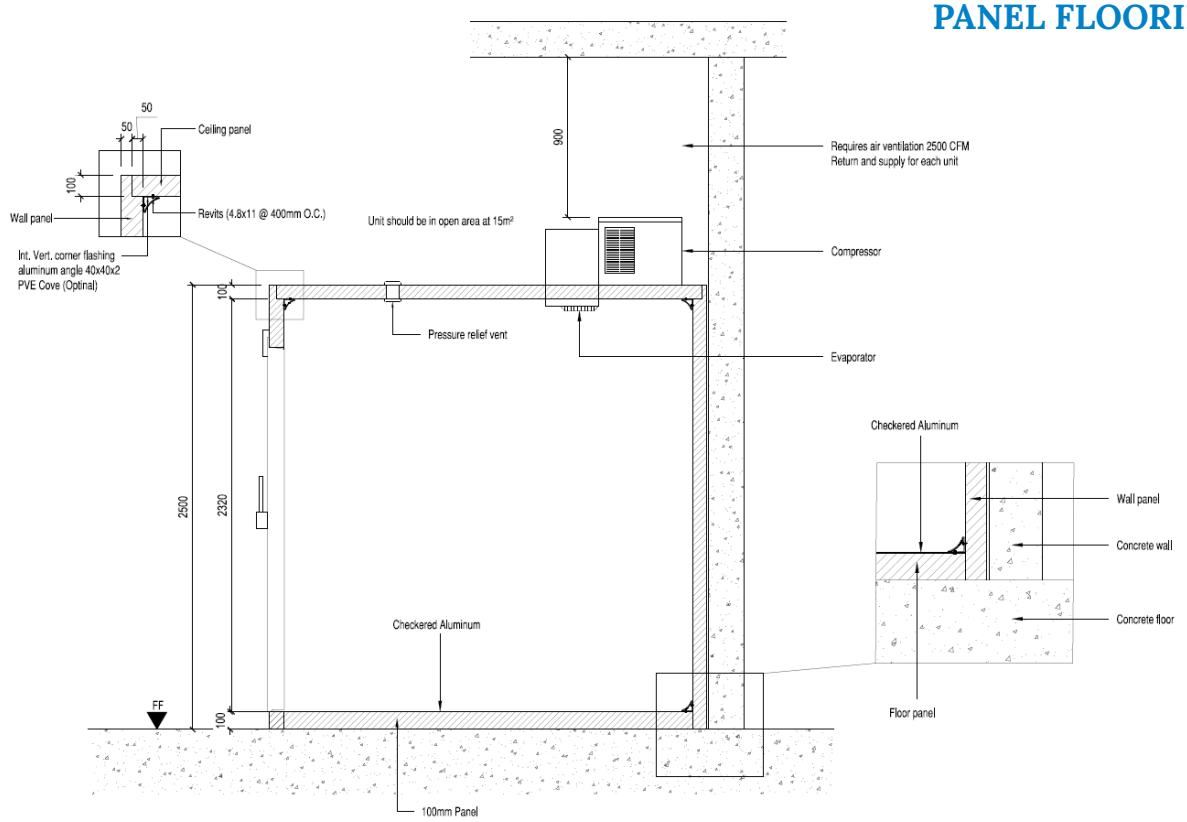
Core thickness (mm)	K-Value (W/mK)	U-Value (W/m2K)
100	0.0236	0.236



FREEZER – CHILLER ROOM

COLDROOM SPECIFICATIONS Construction Of The Room:

PANEL FLOORING



FLOOR LESS