



COLDROOM CONSTRUCTION GUIDE

Read all instructions before commencing erection of coldroom.

Coldroom Floor

There are many different circumstances where coldrooms can be erected. These instructions will deal with the three most common floor applications.

Floor F1 - Existing Concrete Floor, No insulation

Set out room dimensions and mark with a chalk line. The squareness of the room is critical and the difference in the diagonal corner to corner measurement should not exceed 3mm. To allow for any discrepancies in the existing building keep 25mm clear of any walls etc. Cut the aluminium base "F" mould, mitre the corners and square cut the ends which meet doorways.

Apply 300mm wide strip of polythene with a 10mm bead of mastic to the concrete floor onto the perimeter line of the proposed construction.

Apply a 10mm diameter bead of mastic sealant to the underside of the aluminium "F" mould. Fix the aluminium "F" mould to the concrete through the polythene strip, using 32mm Hilti Nails or tappits at 400mm centres.

When fixing the aluminium "F" mould near door openings hold a straight edge across the discontinued portion to ensure correct alignment at this point.

Proceed to Wall Erection Section.

Floor F2 - Prefabricated Floor with Wall Panels on Floor

If the Prefabricated floor is in more than one section, place the matching panels in close proximity. Some floor panels maybe marked, be sure to locate these panels in the correct location. Slide the adjacent panels together with a 10mm bead of mastic applied to the bottom female slip-joint. Lay minimum 12mm construction grade ply sheet, or better, over the floor, starting with a 600mm strip at one edge of the room, this is the reference wall, until the floor is covered. Lay aluminium tread plate over the ply starting with a full sheet against the reference wall. Stagger the joints where possible. Seal the joints between the adjacent sheets of tread plate with silicone and clean off the excess.

Set out the aluminium base mould as for Floor F1. Proceed to the Wall Erection Section.

Floor F3 - Insulated Concrete Floor and Drop-in Panel Floor

Prepare and lay the aluminium "F" mould as for Floor F1.

Apply 300mm wide strip of polythene to the concrete floor adjacent to and onto the inside lip of the aluminium base "F" mould.

Roll out polythene strip over mastic bead, adhering it to both the aluminium "F" mould and the concrete

Proceed to Wall Erection Section.

After completion of the walls and ceiling continue to lay the floor as follows.

Sweep the floor clean and remove all projections.

Lay minimum 150 micron thick Polythene Vapour Barrier Membrane. Lap the polythene a minimum of 75mm (to the base of the panel) onto the polythene strip and seal with mastic sealant. In large rooms where there is more than one piece of polythene required, overlap the adjacent sheets by 150mm and seal with a mastic sealant between the two layers of polythene and a minimum of 50mm from any edge.

Install floor insulation ensuring that all joints are butted together, stagger the joints where possible. Cover the floor insulation with polythene sheeting and tape intermittently. Turn the polythene sheeting up the walls 50mm and tape to the wall with 50mm P.V.C. Tape.

Builder to install the concrete slab.

Wall and Ceiling Installation Section

The ASKIN Panel is provided with a male and female tongue & groove edge. The top of the panel can be manufactured with a haunch or the whole room can be kit-set at the factory.

Refer to the main plan and select a mitred corner panel. Erect two corner panels first. Tack in place with a short length of external corner section.

To allow the correct fitting of the panels, fix this corner section so that the inside of the angle is approximately 1.5mm clear of the outside metal. Fill the inside of the corner angle with a 10mm bead of mastic sealant. Apply a 10mm bead of mastic sealant to the groove of the aluminium base "F" mould for a distance greater than the width of the panel to be installed. Lift the panel into the aluminium base mould and prop into position. Apply mastic to the aluminium base mould and lift the adjacent mitred panel into position. Ensure the panels are tightly fitted and perpendicular in both directions and pop rivet into position. Fix the other leg of the corner angle and also the aluminium base mould to the bottom of the panel, check they are perpendicular before proceeding further.

The outside joints should receive a 6mm diameter bead of mastic applied to the female part of the joint during installation of each consecutive panel. For exterior applications, over-beading with a weather seal is advisable.

Once the method of joint sealing is determined select the next panel, apply the mastic to the aluminium base mould for that panel and slip the male edge into the female edge ensuring that the core surfaces are tightly butted together.

In the case of rooms 6m x 6m or smaller, continue to erect wall panels until the room is complete. On larger rooms it will be necessary to erect walls at one end of the room to form a "U" and then install the ceilings to adequately brace the walls.

Before erecting the ceilings, check the top line of the wall panels, with a string line, if there is a variance of more than 3mm it is advisable to trim back the skin, still maintaining the correct mitre/rebate height.

Cut the internal corner section to length, mitre the corners and fix to the inside skin using 4mm

diameter rivets or class 3 screws at maximum 300mm centres.

Lift the ceiling panels into position and fix to the internal angle sections. Install consecutive ceiling panels as described for the walls above. After all the ceiling panels are in position install the outer aluminium corner section (first mitre the ends, then apply a 10mm bead mastic sealant and rivet to the outer skin, butting the vertical corner angles).

To finish the room, place the aluminium corner sections into the corners at floor level, measure the length of the aluminium coving required, add 1mm to ensure a tight fit. Cut the aluminium coving and fix to the vertical wall corner joints and the wall to floor joints with 4mm rivets at maximum 300mm centres. The internal base of the panel walls is connected to the floor with plastic tappits at 300mm centres, and fixed to the wall with rivets at 300 centres. Internal aluminium coving can be used in place of angles for a higher level finish.

Sweep out the room, remove any protective film and clean down the panels.

Installation using aluminium sections will achieve a BCA group2 classification. Substituting steel sections and incorporating riveted ceiling slip joints at 1200mm centres elevates this construction to group 1 classification.

For BCA building Classes 7 and 8 where the coldroom is greater than 10% of the building floor area, the IPCA Code of Practice will apply.

Notes:

1. With Freezer Rooms using Insulated Concrete Floor and drop in Panel Floor remove the inside metal from the base of the panel for 75% of the floor insulation height.
2. Paying attention to setting out of square and perpendicular will save erection time.
3. The vapour barrier of a coldroom is most important in this type of construction. The vapour barrier is the outside skin thus it is important to ensure that all metal to metal joints on the outside of the room are sealed to form a complete envelope outside the insulation.
4. Where ceiling panels exceed recommended lengths or where they are supplied in two or more lengths, ceiling suspensions will be required.
5. Suspensions should be installed in the first 500mm of the unsupported ends of the panel, dimensions to suit a position vertically under a roof purlin.

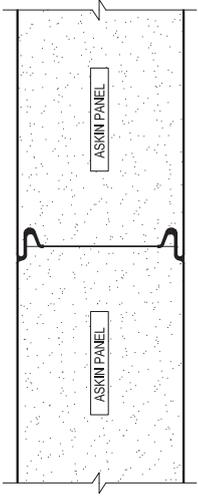
COMPONENTS:

1. PRE-PAINTED STEEL ANGLE
2. POWDER COATED ALUMINIUM ANGLE / RADIUS / COVE
3. POWDERCOATED ALUMINIUM RUB RAIL
4. 38mm REBATE
5. CONDUCTION CUT
6. 20mm PLYBOARD
7. 3mm ALUMINIUM TREAD PLATE
8. CABLE FLOOR HEATING SYSTEM
9. GROUT
10. CONCRETE FLOOR
11. CONCRETE WEAR SLAB
12. MUSHROOM HEAD CEILING SUSPENSION AND COMPONENTS
13. GRIPPLE HANGER AND STEEL CORE GALVANISED WIRE ROPE

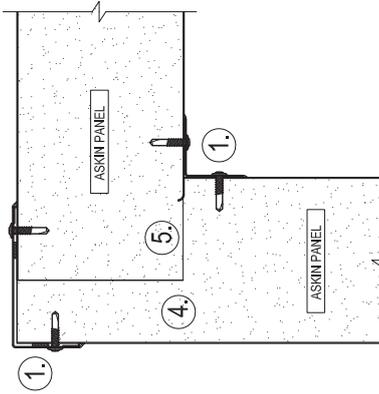
NOTE:

- WEATHER SEAL POLYURETHANE SEALANT REQUIRED WHEN EXPOSED TO WEATHER
- VAPOUR SEAL NON-SKINNING MASTIC APPLIED TO WARM SIDE (BEHIND ALL EXTRUSIONS / FLASHINGS AND INSIDE ALL PANEL TO PANEL JOINTS)
- OVER SEAL - FOOD GRADE SEALANT REQUIRED TO WASH DOWN AREAS
- FIXINGS AT SET CENTRES
- CONDUCTION CUT REQUIRED IN MEDIUM/LOW TEMPERATURE ROOMS. REMOVE SKIN AS DETAILED

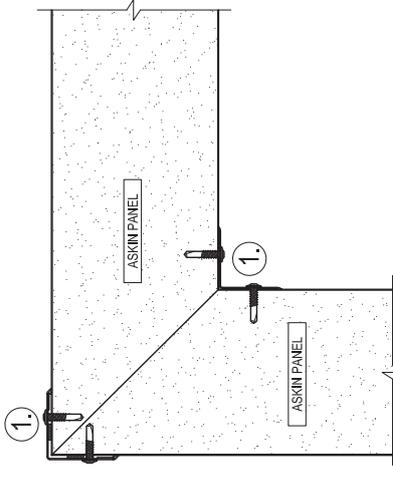
REFER TO STANDARD DETAILS FOR FURTHER DETAILS, INFORMATION AND SPECIFICATIONS



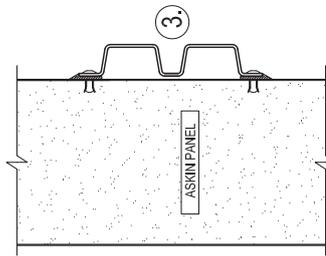
PANEL TO PANEL CONNECTION



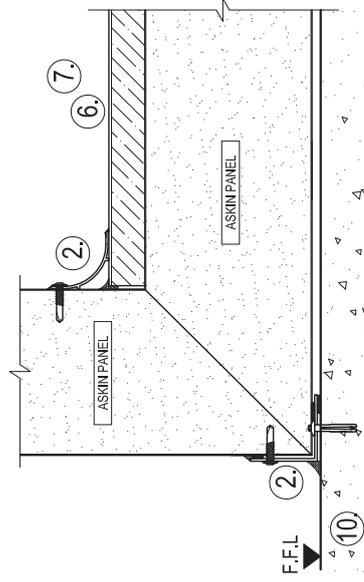
CEILING TO EXTERNAL WALL



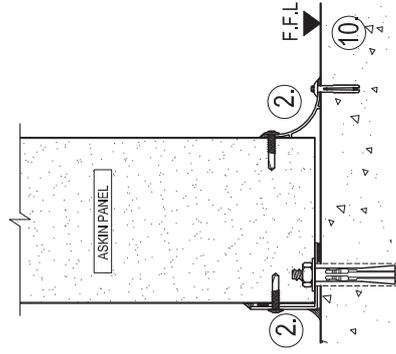
WALL TO WALL CORNER



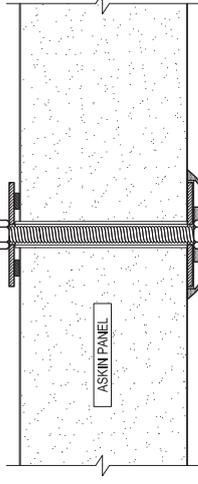
RUB RAIL SECTION DETAIL



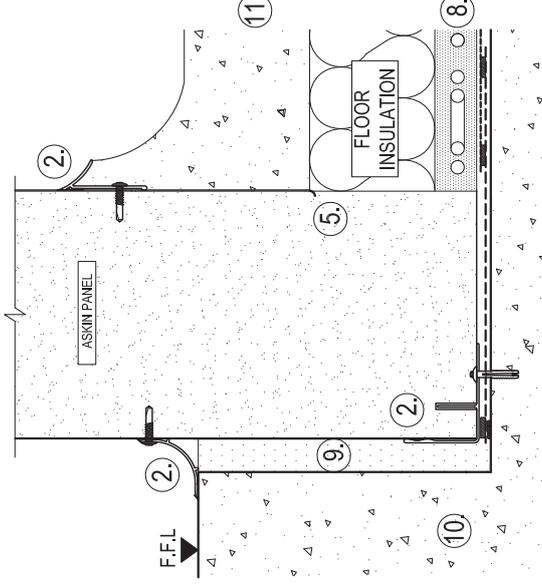
COOLROOM
PANEL FLOOR CONNECTION



COOLROOM
FLOOR CONNECTION



CEILING SUSPENSION



SET DOWN FLOOR CONNECTION DETAIL
FREEZER