



Quick selection guide for insulation thickness



Selecting the appropriate thickness of insulation required for your requirements is critical for a cost effective solution. This can be arrived at by using classical heat equations of generation balanced with extraction with due compensation for the effect of radiant heat from the atmosphere, placed squarely in the domain of your refrigeration expert, or from the ready reckoner developed by us by our engineering team.

Based on the temperature differential that is proposed to be maintained the thickness of insulation required is determined. The recommended minimum insulation value for Cold stores is 10 W/m² heat gain. (See IACSC Code of Practice for the Design of Cold store Envelopes), and taking into consideration the two values of ambient temperature based on where the unit is being located.

Location	Ambient Temperature
Outdoor	55 °C
Indoor	35 °C

As a quick reference guide the typical operating temperature ranges of rooms based on end usage are as below.

Application	Temperature Range
Clean Room	18 / 24 °C
Food Processing	10 / 18 °C
Cold/Chill store	-2 / 5 °C
Freezer	-50 / 0 °C
Agriculture / Livestock	21 / 32 °C

It is easy to pick the most appropriate panel thickness from the temperature differential chart below, these are based on the thermal conductivity of PUR foam 0.024 W/m⁰K and for PIR foams 0.022 W/m⁰k.

