

## INSTALLATION GUIDE

You've bought your refrigerator and you're ready to install it in your car, caravan or camper trailer. Please take the time to read the following information to ensure your refrigerator will run at its peak efficiency and guarantee you'll get a long life out of your fridge.

1. Unpack your new refrigerator and make sure all the parts are there, and that there is no damage to the cabinet.
2. Make sure the surface your attaching your mounting bracket to is level and solid.
3. Correct air flow and ventilation; this is probably the most important part of the installation. Please read the Cross Flow Ventilation section of this guide carefully.

**\*Important!:** The compressor and condensing coil in your fridge, is similar to the radiator and motor in your car. The radiator needs cool air passing across it to remove the heat, to stop your engine overheating and eventually failing. The same goes for a refrigerator; if cool air isn't supplied to the condensing coil, the refrigerator will stop performing and serious damage can be done to the compressor.

4. Make sure the unit is easy accessible and easy to remove, in case of a warranty repair; the unit needs to be uninstalled and delivered to Evakool or a recommended service agent as part of the warranty requirements.
5. Electrical wiring and installation should comply to the proper national regulations. See table in the manual (section 3, page 4) on correct sizing of cable. We recommend that all wiring be installed by a licensed installer.
6. Installing the fridge onto the bracket, see manual (section 6, page 8).
7. Installing the drain hose (silicone hose located on the back of the fridge). Your refrigerator will produce moisture inside the cabinet and this will need to be drained away.
  - Drill a hole through the floor behind the fridge.
  - Install the silicone hose through the hole.
  - Seal hole with silicone to prevent dust, water and pesky critters entering your car, trailer or van.
8. Connect the power to you fridge and away you go. Job done.

## CROSS FLOW VENTILATION

Cross flow ventilation ensures that there is sufficient fresh air entering the space where your refrigerator is operating and that the stale hot air is extracted from the area. Fresh air is supplied to the space, through openings or vents, preferably from the outside to reduce the risk of the hot air recycling through the condenser. The used hot air is extracted from the space either through natural convection or the use of an extraction fan. This results in cross flow ventilation.

## CROSS FLOW VENTILATION

### Natural Convection:

Warm air naturally will rise up, if you have vents of equal size at the top and bottom of your space, the warm air will naturally rise up and out the top vent which draws cooler air from outside through the bottom vent, this method naturally replaces the hot stale air with fresh cool air automatically. Cross flow, in one vent and out the other.

### Extraction Fan:

If your space is an odd size, shape or extraction has to go through cupboards or voids, then extraction fans are needed to create the flow of air from your cool air intake vent to your exhaust vent.

### Fan Selection:

Fan selection is a very important part of this process, the volume of the area where the fridge is kept, needs to be worked out. The fan selected needs to be able to remove this volume, this is measured in litres per minute (Ltr/Min) OR cubic feet per minute (CFM). The other is static pressure of a fan, and this is its ability to push or pull air through resistance, for example, through a vent, the fins on the condenser and around corners and obstructions.

As a rule of thumb if specification sheets are not available:

- 120mm DC fan (minimum)
- 7 blade and aggressive curved blades (air flow and static pressure)
- If noise is going to be an issue, 40dB-A and under is recommended

### Vent Sizing:

The bigger the better. For upright fridges, 95 litres up to 210 litres, we recommend supply vent and exhaust vent to be 480mm x 250mm this allows adequate ventilation and replenishment of hot stale air with fresh cooler air.

### Do not:

- Have only one vent to remove hot air, as this does not work. You need air in and air out, cross flow ventilation is the only way air will move.
- This also applies to fans. A sealed compartment with one opening with a fan in it does not remove the air, again you need cross flow ventilation; air in and air out.
- Different size vents, as this limits you to the smallest vent.
- Different size fans for drawing air in and exhausting air out, will limit you to the smallest fan.
- The above rule applies when fitting a fan if your fan is 120mm then as a minimum your supply opening needs to be the same if not bigger.
- If you are having a supply and extraction fans, they have to be the same in their specifications, or you can end up with the air cavitating and not moving at all.

With the introduction of "Dust Free" caravan and campers, this has created a whole new set of issues faced with supplying cool air to your refrigerator. Dust reduction filters and extraction fans, also correct the use of lockable hatches and vents are necessary to remove the hot air and replace with fresh cool air. This will ensure your fridge will be running at its peak efficiency and guarantee you'll get a long life from your fridge.