

REFRIGERATOR

“How to install a refrigerator in your Willing”

Bart G.J. Kaller

As you will know the Willing has a terrific ice-box close to the navigation-table only it is meant for ice cubes. To install an electrical 12V refrigerator for a nice cold beer or to preserve food you have to buy a cooling system with a separate compressor and cooling unit meant for the ice-box. The compressor can be installed in the space below the navigation table near to the inner hull of the ship. It should not be bigger than about 20x20cm. First of all cut out the bottom of the small cupboard situated just under the navigation table, with a jigsaw. Leave an edge of about 3 cm round in the bottom, so that you can lower the compressor through the hole. After this you make a foundation of wood in the “compressor room”, so that the compressor can be installed more or less levelled. Glue the small wooden plank on the inner hull with Sikaflex. Make sure that the compressor fits on the plank correctly. Then drill a wide hole from the inner side of the compressor room right through the flank of the ice –box. This is the most difficult part of the operation, because you have very little working space. The hole has to be as big as the cooling pipes and electrical wires together, so that you can put through those to the ice box. The ice-box flank is double and insulated with polystyrene and about 3 cm thick. If you succeeded to make the hole, put through the cooling connectors etc. from the ice-box side, which are not connected to the compressor yet. Mount the cooling unit on the straight side of the ice-box, with the delivered parker-screws. Also mount the thermostat. Now install the compressor on the wooden fundament and fasten it with four screws, through the hole in the small cupboard. Be sure that the Sikaflex is hardened well enough, which takes about 24 hours. Connect the cooling pipes with the compressor by taking off the protecting caps. Please read the instructions of the manufacturer very carefully. Now you are ready to connect the electrical wires (please note the right Ohm rate of the wire) from the compressor directly to the batterie(s) in your ship. The plus wire should be secured with a suitable fuse. Be sure that the system stops automatically when the voltage of the battery becomes too low. Read the manual.

To make everything insulated as much as possible attach insulation plates (3 cm thick) made of foam, which are used in the building industry (inner side of roofs), to the wooden parts within the ice-box. Make moulds of carton first. Cover the measured insulation plates, which you can cut with a sharp kitchen knife, with a glass non-woven fleece and coat it with a two component compound, so that you can clean the surfaces better. The surfaces are stronger too, because without the coating the plates can be damaged on the edges quite easily.

Finally fill up the hole to the ice box with Sikaflex on both sides and fit in a piece of plywood (0,8 cm) in the bottom of the small cupboard to cover up the hole made with the jigsaw. You can use your cupboard as usual.

Now you have a very good working refrigerator. Enjoy your cold beer or have a nice dinner on your boat. Another tip is to bring frozen meat, from your deep freezer at home and put directly in contact with the cooling unit in the ice-box. Your meat stays frozen for hours.

Greetings from,

Bart G.J. Kaller, Owner of the Willing 31, nr. 116, in the Netherlands.