**Always turn the female coupling and hold the male coupling with the tubing.**

**Locate of Components**

Before the installation work is begun, the layout of the entire system should be considered, with particular attention to the following points:

a. Location and position of the cooling plate.

b. Point of tubing exit from cabinet.

c. Thermostat mounting position.

d. Route of refrigerant tubing.

Location of compressor/condenser unit

There are two basic positions which are acceptable for the cooling plate as shown in Fig. 3(a). Positions shown in Figs. 3(b) or (c) will result in unacceptable cooling performance. For operating efficiency, the position as shown in Fig. 3(a) is the most common. It is preferable to install the cooling plate as high in the box as possible to obtain good circulation of cold air and uniform temperature. Placement of compressor/condenser is very important, since ventilation in a major consideration. The unit depends upon the connection of air around it to remove the heat.

---

**DO NOT PLACE THE COMPRESSOR/CONDENSER IN A CONFINED SPACE WHICH RECEIVES NO VENTILATION.**

Availability of space for the compressor/condenser is usually bound behind or behind the compressor cover, located internally of the cabinet. At times, the engine compartment may be considered but many times not recommended because of the heat produced from the engine. The important point is that the space must be well ventilated. It is known that the area is at a room temperature. It may be possible to cut openings in panels and, if necessary, provide louvered panels (available at marine supply houses.) The best ventilation arrangement in a confined space is to provide an opening below, or low on the side, and an opening at the top, or high on the side. The size of the lower and upper openings should be an equivalent of 550 square cm minimum free opening for each.

---

**Reference: Duct and Cabinet Dimensions**

- **Length of A.C. Cord:** 3.2
- **Length of Suction Tube:** 3.6
- **Weight:** Approx. 12kg
- **Thermostat Box:** (Refer to Fig. 1, Point A.)

---

**Cutting of Refrigerant Tubing**

- Use extreme care in hand bending so as not to kink, flatten or damage the copper tube.

1. Insert the evaporator in storage compartment and secure it with screws provided on the vertical side wall of the evaporator standoff. (Fig. 2)

2. Make sure that the tube is bent in a tight U-shape at the nearest point to the evaporator.

3. Check all components are intact. It is best to complete connection to the lower coupling before making the final connection.

---

**GUIDE**

- **NORCOLD Inc.**

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**G. Connecting to Power Source**

Your refrigerator can be operated on A.C. (120 volts) from the wall socket or D.C. 12/24 volts from a battery. 10/24 volts with D.C. Operation in Your Boat, Trailer, Camper, Etc.

The car battery voltage varies with the type of car you own. Most cars and buses use a 12 volt system. Your refrigerator needs a 12/24 volt battery. See Fig. 10 if the battery voltage is too high. For example 32 volts with your refrigerator can cool. On the other hand, its cooling power will decrease if the voltage is lower than 12 volts.

Set the thermostat control knobs to "OFF". Connect two (2) wires from the Refering to Plus/Minus (+/−) Indications.

---

**H. Operation Checklist**

After completing the final installation details, an operational check can be made by switching the thermostat control knob to "ON" and turning the temperature control dial from 1 to 5 until the compressor starts. After a few minutes, the cooling plates should feel cool indicating circulation of refrigerant. Check on both A.C. and D.C. Operation.

**NOTE:**

- Built-in switches automatically to correct power supply.
- The refrigerator is operating on 120 volts A.C. (shore power connection at boat dock, etc.) and then the power source is disconnected as by a switch or by pulling the plug, the relay automatically switches the refrigerator to the 12/24 volts D.C. power source and continues to operate the compressor, providing, of course, the leads are connected to the battery.
- If the refrigerator is operating normally on a 12/24 volts battery, then, when 120 volts A.C. power is switched on or off by just plugging in the A.C. power cord, the relay switches the compressor over to A.C. operation. This will save on power consumption and keep your battery in good condition. Refrigerating temperature can be controlled by means of the temperature control dial.
- The interior temperature drops as the dial position is changed from 1 to 5. This control will be effective in maintaining a range of 4 to 7°C. To switch off, reverse the thermostat control knob to "OFF". The dash board do not cool below 0°C and 1°F.
- For efficient operation, regulate the temperature according to the type of food stored.

---

**CAUTION:**

Always turn the female coupling and hold the male coupling with the second wrench.

Use proper size wrenches on connecting body hex and union nut and tighten until coupling body "bottom" or definite resistance is felt.

Using a make and size wrench, a line is tightened from the coupling hex to the bulkhead. Then tighten as additional 1/8 turn to 1/4 turn. The tightening of the line will show the degree of tightening.

The final turn is necessary to insure that the knife edge metal seal tube into the brass sleeve of the connecting bushes, forming the joint plug. If torque wrench is used, the following torque values are recommended.

**Coating Spline No. 9: Torque: 800kg (1600 f-in) No. 7: 560kg (1200 f-in)**

After all coupling are tight, leak check the joint with soap solution.
4. NEVER USE A COMMERCIAL 120VAC D.C. TO 120VAC A.C. INVERTER OR CONVERTER for operating your refrigerator or A.C., since these devices do not hold the required constant frequency.

**Fig. 3**

![Diagram showing L-Type and Not Acceptable views](image)

**Fig. 4**

![Diagram showing N-Type and Not Acceptable views](image)

**Fig. 5**

![Diagram showing Spacer Snap and Cooling Plate](image)

**Fig. 6**

![Diagram showing N-Type view](image)

**Fig. 7**

![Diagram showing Thermal Box, Power Lamp, and Refrigerator Box](image)

**Fig. 8**

![Diagram showing AC Cond, Evaporator, Compressor, and DC Cond](image)

**Fig. 9**

![Table for Wire Size Selection](image)

<table>
<thead>
<tr>
<th>Length of Field Supplied Wire</th>
<th>Wire Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 5m</td>
<td>SWG #18 SWG #10</td>
</tr>
<tr>
<td>5m to 20m</td>
<td>SWG #16 SWG #10</td>
</tr>
<tr>
<td>20m to 40m</td>
<td>SWG #14 SWG #10</td>
</tr>
</tbody>
</table>

**Fig. 10**

![Diagram showing Battery Charger](image)

**Fig. 11**

![Diagram showing Condenser, Compressor, and DC Cond](image)

**Technical Data**

<table>
<thead>
<tr>
<th>Model</th>
<th>SCOT-400F11-1</th>
<th>SCOT-400F12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. cooling capacity with 5mm PU insulation thickness</td>
<td>1800 W</td>
<td>1800 W</td>
</tr>
<tr>
<td>0°C or less</td>
<td>0°C or less</td>
<td></td>
</tr>
</tbody>
</table>

It is data in ambient temperature regularity of 30°C, and an unobstructed condition.

- When the unit is to install the machinery on a level surface, when the machinery is installed at a 10° tilt, unusual sound may occur.
- When tilted, unusual sound from compressor may occur in the vibration from the outside. This is not unusual, but it performance not a function is influenced.